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The Nonhuman Lives of Videogames

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THE NONHUMAN LIVES OF VIDEOGAMES

by

CAMERON KUNZELMAN

Under the direction of Alessandra Raengo

ABSTRACT

Videogames are not subjects to be operated on, but rather bodies that humans live both with and inside of. In order to reconcile human existence with this nonhuman life, this thesis looks to evaluate the exact relationships developed between humans and assemblages in order to understand how humans are disciplined to return to games time and time again. The recognition of the nonhuman life of videogames necessitates a rethinking of the word “life,” as well as a reformulation of ethics around the new sets of obligations humans have toward videogames if we begin to recognize them as alive.

INDEX WORDS: Nonhumans, Videogames, Game studies, Life

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CAMERON KUNZELMAN

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

in the College of Arts and Sciences

Georgia State University

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August 2014

DEDICATION

This is dedicated to the various people and animals who prop me up all the time: Kelly, Simone, Reggie, the rest of my family, and the large and growing network of people I talk to most every day.

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This thesis would not be possible without the incredible intellectual contributions from my committee and department at large. I want to thank everyone who has listened to me ramble on social media or in person about strange philosophical minutiae and videogames. Your collective patience with me is amazing.

This document could not have been produced without Buzz Country. Thank you all so much.

#WHNBM.

Let us all play again, some other way, and let us be happy.

TABLE OF CONTENTS

DEDICATION	iv
ACKNOWLEDGEMENTS	v
1.0 – HOW DO GAMES EXIST?	1
1.1 – <i>Turning to Material</i>	1
1.2 – <i>The Multiplicity of the Nonhuman Turn</i>	6
1.3 – <i>Chapter Summaries</i>	9
1.4 – <i>Thinking Forward</i>	10
2.0 – “WHAT IS A VIDEOGAME BODY?” AND OTHER QUESTIONS YOU’VE NEVER ASKED	12
2.1 – <i>The History of Videogame Ontology</i>	12
2.2 – <i>Videogames, Assemblages, Bodies</i>	17
2.3 – <i>Resonance and the Videogame Body</i>	23
2.4 – <i>Bad Rats</i>	26
2.5 – <i>Wasp and Orchid, Human and Videogame</i>	30
3.0 – DISCIPLINING THE VIDEOGAME BODY	34
3.1 – <i>Materials Toward a Theory of Videogame Bodies</i>	34
3.2 – <i>Discipline’s Development</i>	42
3.3 – <i>Disciplining Players</i>	43
3.4 – <i>Deleuze and Foucault, Control and Discipline</i>	48
4.0 – ETHICS AND THE VIDEOGAME BODY	56
4.1 – <i>Lack and “Life”</i>	56
4.2 – <i>Lyotard and Assemblages of Ethics</i>	66
NOTES	70
BIBLIOGRAPHY	70

1.0 – HOW DO GAMES EXIST?

This thesis seeks to understand the life of a videogame. The life that I am invoking here is not a metaphorical one, like something that one might invoke when one is talking about the socio-cultural existence of a classic film or the different interpretations of a classic novel. Instead, I want to complicate the fundamental assumptions made about life and what kinds of things can be said to possess life.

To make this argument I will begin at the crossroads of two modes of thinking. The first is the discipline of game studies. The second is the large interdisciplinary project of “nonhuman studies” that has been developed as a minoritarian position for more than a century, but which has seen a large spike in interest and development over the last decade.

1.1 – *Turning to Material*

The discipline of game studies has gone through a number of debates about the shape of the field. Most familiar and recent might be the contentious subject of ludology versus narratology,¹ or the even more recent questions about embodied play versus a fictional universalizable play experience.² These debates have often formed around the fundamental undecided nature of what the discipline of games studies calls “a game.” Another way of putting it is that it is difficult to locate the axis that “game studies” might revolve around, and Eric Zimmerman’s claim that there is a “desperate need for discipline” across game studies still seems to ring true years after he wrote those words.³

This fundamental anxiety in game studies stems, in my estimation, from the variety of methodologies that have been applied to games by a vast number of game studies scholars from different home disciplines. Sociologists might locate games in the apparatus of individual players and their relationships to software and other humans through that software interface.⁴ A computer scientist might only name the packet of software that displays through hardware as a game. A classical game theorist might only understand games as collections of certain qualities, like struggle or the ability to take on the role outside of everyday life.⁵ Still further, someone who is doing work *around* games might want to avoid the question entirely, instead looking at only the substrata of play, which undergirds the very possibility of games in the first place.⁶ Beyond even those more formal modes of analysis, there is the study of the history of games in their tabletop,⁷ social,⁸ and digital forms.⁹ There is also the healthy set of contemporary literature on the educational potential of games.¹⁰ Developed from that, there is even a vanguard of developers and scholars who claim that games might be our only hope in the face of global crises like fuel scarcity.¹¹ It is because of all of these varied interpretations and mode of leveraging games that I feel confident in claiming that the discipline of game studies is completely pluralistic in the sense that these claims are not often at odds with one another. The concept of the game seems to be large enough to accommodate a truly vast amount of uses and ways of thinking. The importance of games possessing this carrying capacity for meaning and malleability is that it signals a cultural shift from games as toys into games *as a medium*.

That said, is not my intention here to parse through all of these radically different interpretations of the word game with specificity, although I do address some of the major definitions in the field in the first chapter of this thesis. Instead, I want to follow a particular contemporary strain

of game studies that focuses on material elements as they come together in a game. Recently, game studies has undergone what some have called a “material turn.”¹² As Thomas Apperley and Darshana Jayemanne argue, the material turn is a theoretical and argumentative shift that “exceeds the range of the debates of formalism,” which is to say the debates about what a game *is*.¹³ The material “turn” is such because it is a lensing away from the multitude of different methodological approaches and uses to and for games in order to pay particular attention to the “material reality that introduces an aleatory or contingent element into what might normally be thought of as formalized and calcified structures.”¹⁴ While Apperley and Jayemanne survey the entire field of game studies to specifically locate the slight changes that have caused the material turn to appear *as* a turn, I am less interested in that fine-grained analysis (which they have performed so expertly) than I am in explaining that the turn has caused two major changes in game studies.

The first is that there is recognition of the inherently cybernetic relationship when humans play games. A formative piece for this area of study is Martti Lahti’s “As We Become Machines,” which argues that “videogames epitomize a new cyborgian relationship with entertainment technologies.”¹⁵ While this piece certainly is not the be-all end-all in cybernetic thinking with games, it is a central piece in that literature, and symptomatic of the way that literature thinks about humans and their relationships with games. This approach to thinking about games spins the moment of interaction as one where the player is placed into “a cybernetic loop with the computer” which causes a full immersion of the bodily and affective capacities of that player “because [her] surrogate body on the screen mirrors [her] desires and bodily experiences.”¹⁶ While this focus on how the human is reflected, diffracted, and brought into close physical and

mental contact with the game is both interesting and productive toward thinking the fine-grained modes in which games are played, it is still caught in what we could call the game/player dyad. This pair, reflected in almost all game studies, still holds onto the basic assumption that informed a significant amount of game studies before the material turn and which continues to bog game studies down as a discipline: the assumption that there is some kind of divide between the game and the player and that the latter must act on the former in order to activate it. Bryan Benhrenshausen, commenting on this paradigm and naming it “player-centric” game studies, suggests that maintaining the strict dualism between game and player is ultimately a “reductive” practice that produces “binaristic images of gaming situations.”¹⁷ Lahti’s piece, and cybernetic game studies on the whole, reproduces this binary while claiming that it is occasionally overcome in very specific contexts and ways, which include the enmeshing of player mind and body with avatar experience during racing and action games. However, as I will argue in this thesis, this is simply not a sufficient answer to the kinds of relations produced in the moment a human is integrated into a game’s body. It is only from this binary angle that the debates mentioned before, those of ludology and narratology or embodied versus abstracted play, are able to take root. To think of a game as an assemblage, as I suggest in the following thesis, means that we must think of games not as things that we experience as *out there*, but instead things that we *are*, or rather things that we are *part of* that cannot be separated out into strict experience or tools.

The second byproduct of the material turn in game studies is a particular attention to the ways that different material elements interact in what we call a game. The most prevalent version of this is the burgeoning field of platform studies. As The MIT Press “Platform Studies” series

editors Nick Montfort and Ian Bogost write in that series' foreword, platform studies is the study of "the lowest level of computer systems," which includes both hardware and software.¹⁸ This form of analysis attempts to account for all of the nonhuman actors in a game system through a bottom-up summary and explanation of the hardware upon which the software of a game sits.¹⁹ It is this part of the material turn that is the most crucial to hold in our minds throughout the text that follows: there is hardware and software of many different kinds, and they are interacting with one another in many different configurations. This does not merely mean that the management of electricity in a computer informs the ability for an operating system to work, but also that the hardware of the human body also informs the hardware of a computer's code and hardware through particular methods of physical and mental interaction.²⁰ The interactions of things in the assemblage we have come to call a videogame *do not flow in one direction*. The recognition of materialism that is delivered with the material turn also comes with the necessary conclusion that we must take seriously an expanded notion of the *material*. This means not only platform studies—studying the literal material through which the classic game model is delivered, as I discuss in chapter one—but also the recognition of the materiality of the code of the technological components²¹ or the cognitive labor of the human element.²² It is through this recognition of the baseline materialism of games that we can come to understand the heterogeneity of the elements and their *interconnectedness* while still retaining their fundamental difference. What the material turn gives to us, ultimately, the language to maintain fidelity to the specificity of actual things in the world without reducing them to monolithic terms like "player" and "game," which does not have a fine enough grain of analysis to really get at the reality of things.

1.2 – *The Multiplicity of the Nonhuman Turn*

We are currently in the midst of what some have called the nonhuman turn. The nonhuman turn, expressed as broadly as possible, is a scholarly shift into thinking nonhuman agents and what their existence is like both with and without humans. There has undoubtedly been an explosion in this set of interests over the past decade, and in the following thesis I take as a given that the nonhuman turn is a perspective that is necessary in order to understand how videogames come into being; we have to be able to think things *other* than us in order to determine what our relations with them should be.²³ However, to give some context to the concerns of the nonhuman turn, it is necessary to do some work to attempt to explicate the positions within it. During his introductory paper to “The Nonhuman Turn,” a conference hosted by C21 at The University of Milwaukee-Wisconsin, Richard Grusin contextualized the concept of the nonhuman turn thusly:

I had in mind a slower kind of turn manifested in a longer time frame, going back at least to the first publication of Donna Haraway’s “Cyborg Manifesto” in 1985 or the English publication of Bruno Latour’s “Science in Action” in 1987. Although the current pace of academic discourse obscures this fact, longstanding institutional formations like the humanities make wide and often quite slow turns, more like one of the large freighters you might see passing in and out of the port of Milwaukee than like a Twitter stream or a viral video.²⁴

Grusin draws the outline of the long nonhuman turn back to Haraway and Latour, but I would suggest that we push it even further: Alfred Mesmer, Alfred North Whitehead, Georges Bataille, and Jakob von Uexküll are all key names from nearly a century past who were thinking about the same questions as the current nonhuman turn, not to mention Charles Darwin, and it is no accident that all of them have been resurrected to speak their “outdated” ideas once again.²⁵

Grusin is tracing one stream of the wide and slow nonhuman turn, but it is also important to note that there have been several comingling turns that have been happening alongside one another over the past thirty years. One strain is the recognition of affect as a locus for thinking about the

fundamental relatedness of things in the world in fields like psychology, media studies, literary studies, and philosophy.²⁶ Another is the publication of Quentin Meillassoux's *After Finitude*, which introduced a problematization of "correlationism," or the idea that one can never understand the existence of another thing in the world, into the Anglophone world, spurring a significant amount of debate and scholarship.²⁷ Yet another is the redevelopment of German Idealism small-yet-growing set of scholars.²⁸ While these different strains are diverse, they share a similar history in that they are all responding to the givens of the previous fifty years of theoretical debate: they want to move beyond thinking about politics in a solely Marxist frame; they want to move beyond the reliance on language as the fulcrum for philosophy; they are all looking to previous theories in order to rediscover now-minor perspectives on ontology and epistemology.²⁹

This looking back is appropriate, as the actual history of the long nonhuman turn stretches back even further to texts like Aristotle's *De Anima*, but is also comprised of a very healthy set of theories developed over the course of the 20th and 21st centuries.³⁰ There are particular affinities that have been found between certain theories and theorists, and I will recount a few of them here. One account of the nonhuman turn runs through Martin Heidegger's study of ontology, which Graham Harman took up and expanded into object-oriented philosophy, which has become popularized into a slightly more general object-oriented ontology developed by scholars like Timothy Morton, Ian Bogost, and Levi Bryant.³¹ Another mode of engaging thinking outside of strictly human terms has been to embrace the philosophy of Gilles Deleuze and Felix Guattari in order to think through the various assemblages and becomings that are continually produced in the world between systems; it is here that we can find the work of Jane Bennett, Elizabeth Grosz,

and Manuel DeLanda.³² Yet another is the process philosophy of Alfred North Whitehead, extensively rearticulated by Steven Shavero and Brian Massumi.³³ While I am drawing these narratives of citation in particular ways, it is important to note that these scholars, and others like Rosi Braidotti, Bruno Latour, Karen Barad, and Luciana Parisi, are drawing from a similar set of assumptions about the world.³⁴

Without accounting for the points of disagreement and fine-grained fractures between all of these theorists, which is beyond the scope of this writing, I am going to make a quick cut to a claim: the array of scholars I have assembled here are all Realists. Put plainly, this means that they all recognize that there is a world that does not require the human mind to perceive it and which does not particularly care about the human and does not need the human to exist.³⁵ This takes a plenitude of forms, such as the Realism of Harman or Meillassoux which allows all things to exist without reference to a material reality or the human mind, or the Materialist Realism of Manuel DeLanda that holds that there is a world independent of the human that is wholly determined by the set of possible conditions for the material world. Still yet, there are many other forms of Realism, most lying somewhere between these two positions. It is from that position that they begin their analysis, and it is also from that position that we can understand the reason for the nonhuman turn: if the universe does not need the human mind, then what is the shape of things? And, perhaps more importantly, what do we do once we are equipped with this frame of mind?

1.3 – Chapter Summaries

I began this introduction by stating that I am at the crossroads of two disparate yet conceptually related arguments. The first is the material turn in game studies, and the second is the nonhuman turn in the humanities writ large. It is in my reading that these two turns are part of the same large curve that, ultimately, points to a fundamental question about the role of the human in the world. This question can be disturbingly phrased (“what is so ‘human’ about humans?”) or it can be written in a liberatory manner (“what is the limit of what we can do if humans are not special?”), but it will always lead down a path that demands an ethical response from human beings. If humans are not at the center of existence, if the materials from which some of our most immersive media experiences are as important as we are, then there is nothing more important than understanding our relationship to the things around us.

This thesis is an exploration of the role of the human in the videogame, by which I mean the role of the human inside a monstrous leviathan that exists beyond, yet with, a playing human. In the first chapter, I argue against the normative ontological claims about videogames, and instead assert an understanding of a videogame not as an object to be operated on by a subject, but rather as an assemblage that should be referred to as a body. From this point, I account for how that body continually recreates itself in a process of maintenance and power-assertion that I, borrowing from Elizabeth Grosz, am calling resonance. Through a reading of the game *Bad Rats*, I assert that games as bodies are particularly developed at luring in humans, therefore allowing themselves to continue to exist in the world.

If the first chapter is an account of the shape of the game body and how it makes itself, then the second chapter is an argument for how the videogame body shapes the human player through repeated access and testing. To make this argument, I read the work of Michel Foucault alongside the videogame *Spelunky* in order to explicate why humans repeatedly engage with, and therefore enliven, the videogame body. Additionally, I argue for a particular use of the word “discipline,” asserting that it is ultimately a more beneficial heuristic for understanding how videogame bodies make themselves than the more popular “control” theories created by Gilles Deleuze.

The third chapter develops the word *life* as a term that might allow us to think about our ethical relationships with the alien nonhuman that is the videogame body. I read Jenn Frank’s work on *Creatures* in order to understand what our ethical relationships look like currently, and then leverage speculation about the possible futures of artificial life. From this point, I argue that “life” as a term has been emptied of meaning in a number of ways, and because of this we might think to use it as a fulcrum through which to apply ethics to the relationship between the human organ and the broader videogame body.

1.4 – *Thinking Forward*

While I pose many questions in this thesis, I answer very few of them. It is my intention that this document opens up a plenitude of questions, opportunities of discussion, and generates some amount of thought in the reader about the ethical responsibilities that humans have to the nonhuman things they live along, beside, and with. The human is a strange monster, built from cellular scraps and competing organs and processes. Sit with that thought a moment, and then let

it swell out from you; feel yourself enveloped by something inhuman and strange, another body that happens to encompass you. Pick up a controller. Load up a game on your phone.

2.0 – “WHAT IS A VIDEOGAME BODY?” AND OTHER QUESTIONS YOU’VE NEVER ASKED

My analysis of videogames begins with their bodies. Or rather, I am beginning by asserting that there is something that can be called a “videogame body,” an organizational method of thinking through all of the parts that can be said to constitute what we have chosen to call a videogame. I am asserting this whole body, this phantasmic object that captures, contains, and communicates with other things in the world, in order to think in a slightly different way about games than the current order sees them. While this will be covered in detail later in this chapter, here it is sufficient to say that videogames have traditionally been understood as objects to be operated on by mostly-human subjects. It is my contention that this is not sufficient to account for an *ontology* of games, or the way that games exist. More than that, it does not account for the day to day experiences, movements, and affective flows of individual videogames; to put it another way, the subject/object dyad so critical for videogame studies in the past cannot sufficiently account for the *lives* of those games.

2.1 – *The History of Videogame Ontology*

This chapter is devoted to the videogame body. In order to understand how this is in or out of sync with the discipline of game studies, I will provide a genealogy of the major moves of that discipline with a particular focus on videogame ontology, or the way that videogames exist. I am performing this short reading of the way we conceive of games and their existence for two reasons. The first is that a recounting of the ways the videogames exist in the world is necessary in order to show how my own reading of the videogame body are both in line and divergent from traditional videogame studies. The second is that a study of videogame ontology, particularly an

ontological analysis that is descriptive of the relationships between the parts that make up what we call a “game”, is more beneficial than a formal project that delineates distinct or necessary parts of a videogame and demonstrates how they should operate in harmony with one another to create a certain experience for the player they are designed for.

It is important to distinguish here between play and games. It is easy to conflate the two – after all, one generally brings the other with it – but there remains a distinction between them in the literature. To create a hard and fast distinction between the two, we can look to the work of Thomas S. Henricks, whose *Play Reconsidered* rethinks the history of sociology and play studies in order to synthesize them.³⁶ As he notes in the opening chapter of the book, “play is the laboratory of the possible.”³⁷ Play is a process of negotiation between hard and soft limits, of moving back and forth between determined bounds (rules) and a totally ungoverned set of possibilities. We can say that “play” is a way of relating to things in the world under certain conditions, and what we call a game is the thing that generates those conditions. This means that a definition of a game that does justice to *the possible*, or a definition that makes sure that the laboratory has sufficient equipment, must be very wide. As we can see in contemporary, public-facing writing about games, games are very big. Anna Anthropy defines a game as “an experience created by rules.”³⁸ In Ian Bogost’s *How To Do Things With Videogames* he provides a definitional next door neighbor, claiming that games are “models of experiences rather than textual descriptions or technical depictions of them.”³⁹ For both of these definitions, we can see how play fits into the box of a game – the latter affords the former by generating a structure that enables play.

With these definitions in mind, I will now embark on a short encapsulation of the ways that videogames have been understood to exist in the world, or their ontology. Accounts of ontology are found in a number of forms, and more often than not these accounts are less stated directly and more a formative ground for an argument about the position of games in society to rest on. For this reason, this section is necessarily fractured. I am less interested in giving a full account of these various ontological statements about games and more presenting the plurality of thinking about what the existence of games properly *is*.

One way of thinking about games is as emergent structures that stem from beings experiencing the world. In this formulation, *play* is part of the ontological ground of existence, whether that play is happening between the earth and the sky, reason and chaos, the land and the ocean, or any of the other oft-invoked Manichean metaphors that stand in for ways that humans exist in the world after the European Enlightenment. Brian Sutton-Smith's *The Ambiguity of Play* is probably the best example of this kind of work. I say "best" here not because Sutton-Smith makes this argument in any form, but because the process of collecting and collating the various ways that play has been written about in recent history is deeply revealing of how those thinking of play see it as an emergent property that comes out of creatures living life. Sutton-Smith shows that work about nonhuman and human animal play is still deeply ambivalent about the actual *function* of that play.⁴⁰ For humans it seems that the play that comes with mere existence becomes more and more formalized, with children playing "increasingly complex games" "correlated with age."⁴¹ Mihai Spariosu, elucidating Jean Piaget's theory of play, refers to this higher order of games as "games with rules."⁴² This narrative of games is thus centered on the function of a player of a game, which is conceived of as a subject that must activate an object.

Humans and nonhumans exist in the world, both playing, but only through access to certain qualities of mind do we get to the supposed higher-order thinking which gives access to games, or rather, the ability to understand abstract rules that govern a particular experience within agreed upon (in the case of a game like Tag) or designed (in the case of Poker) parameters.

This understanding of game ontology, which sees them as emergent properties built up around subjects, reaches its most defined state in Jesper Juul's classic game model.⁴³ The classic game model, produced from Juul's synthesis of many different works on games, is summed up by Juul as this:

A game is a rule-based system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels emotionally attached to the outcome, and the consequences of the activity are negotiable.⁴⁴

This is the logical limit of the emergence of a game. While above I have outlined the process of understanding the ground upon which a game emerges, it is within Juul's definition that we can see the various necessary qualities that scholars have found to be essential for a human to refer to something as a game – that is, those are the things that we must see in order to *recognize* a game.

Markku Eskelinen reads the work of Jesper Juul, Katie Salen, Eric Zimmerman and others to summarize the classic game model as one that reaches an “overwhelming consensus that rules, goals or variable outcomes, and play or player effort are the main definitional features of games.”⁴⁵ Eskelinen finds the classic game model to be definitional rather than ontological; it demonstrates what a game *has* rather than what a game *is*. In his *Cybertext Poetics*, he supplements these definitions with other models that better understand the ontological question of the game. The first is Georgia Institute of Tech's Game Ontology Project, which finds five

main elements of a game: interface, rules, goals, entities, and entity manipulation.⁴⁶ Additionally, he invokes Espen Aarseth's (and various collaborators') typology of games that has attempted to map the essential qualities of games, producing a set of "eight meta-qualities in the open-ended model" which include "virtual space, physical space, external time, internal time, player composition, player relation, struggle, and game state."⁴⁷ It is not my intention here to provide a longform analysis of this ontological game model, but to point out that there is a move being made here to understand games not as contingently built up around a perceiving subject but instead having *essential* qualities. For Aarseth's videogame ontology presented by Eskelinen, there is an unchangeable essence to games that marks what it means to be a game. Here games are not defined by recognition but by possessing fundamental qualities that might elude description or might not even been seen by a player in a single instance of the game; it is bigger than a single play session, but still requires those sessions to be experienced by a player.

These two ontological understandings of videogames frame how the field on the whole understands them. In the first model, videogames are understood to be contingent and created from relational conditions, emerging from an ontological state that necessitates the creation of play. In the second, games are objects with finite qualities that we are accessing in a particular moment of interaction, fulfilling a sort of Platonic or Aristotelian function.

In what follows, I will suggest a realist materialist ontology for games that attempts to account for both of these frameworks. This framework allows us to address the contingency of the emergence of games – any set of relations between two or more objects can produce a set of possibilities that we might call a game – and allows us to give an account of how those games

persist. This is because games are *real*. I hold that games “exist autonomously even if they are not directly given to our senses,”⁴⁸ that their rules and systems would continue to exist without a human mind to perceive them. They might not be any good, of course, with no one around to play with them, but the body of the game would continue to persevere through time without a human intervening or thinking about it at all. This is a contentious claim but there is a reason, as DeLanda has shown, that realism presented in the contemporary period is often paired with the word “speculative.”⁴⁹ Taking realism seriously means that we are invited to speculate about the ways that games might exist in the world, not through assumptions of ontology, but through rigorous analysis of what the conditions of existence for a videogame are without a human player around to interact with it. Following in the wake of the classical game model and more recent moves in the study of game ontology that I have outlined above, I assert that the best way to think through the *reality* of games is the concept of the videogame body. It is only through this model that we can begin to understand the nonhuman lives of videogames.

2.2 – Videogames, Assemblages, Bodies

In this section, I will argue for the concept of a videogame body and explain how we should reframe games in order to understand them in this way. From there, I will develop Manuel DeLanda’s theory of assemblages in relation to the videogame body in order to account for how the videogame body manages to replicate itself, ending with an articulation of what I call *resonance*, the process through which a videogame body is able to leverage its various parts in order to maintain both “irreducibility and decomposability,”⁵⁰ or in other words, its singularity as a thing as well as its ability to replace its constituent parts.

Gilles Deleuze and Felix Guattari, in their *A Thousand Plateaus*, tell us that “we may take the word ‘body’ in its broadest sense.”⁵¹ It is here that we will start, with this formulation of a body understood as broadly as a body can be, with terms and variable valences encompassing “the body of the property, the body of the victim, the body of the convict” or “the body of the prison.”⁵² For Deleuze and Guattari, the term “body” is merely a way of describing *assemblages*, jumbles of relations between objects in the world (or objects that could be in the world) that are operating together in a process. An assemblage is, as they explain in a section indirectly related to the body, a “murmur” or “the constellation of voices, concordant or not.”⁵³

The auditory quality of a murmur is a helpful signpost here, as the internal makeup of an assemblage is completely irreducible to other conceptions of the makeup of things in the world. It lacks specific hierarchies or integral relations, instead operating on the partial connectability of any one portion of the assemblage to any other part. In the case of the “body of the prison” that Deleuze and Guattari evoke above, we can immediately ramble off a set of interlocking objects and things that constitute that body: a judge, a jury, a police officer, a criminal, a cell, a warden, a pack of cigarettes, a duration of time, a bed, a window, a light switch, “fuck you,” a television, *COPS*, John Langley, primetime t.v., the channel Fox in 1996, and so on. I use this example in particular to illustrate that a body is as far-ranging as it is equivocating over a field of objects. The list I just produced is an “assemblage of enunciation,” which “does not speak ‘of’ things” but instead “speaks *on the same level as* states of things and content.”⁵⁴ This means that the act of attempting to *describe* an assemblage is an act of *recreating* that assemblage; there is no way to speak “of” a body without actively generating that body.

This is a blow to traditional conceptions of representation.⁵⁵ As Deleuze and Guattari write, “the purpose is not to describe or represent bodies; bodies already have proper qualities, actions and passions, souls, in short forms, which are themselves bodies. Representations are bodies too!”⁵⁶ A byproduct of this is that the creation of an assemblage does not require a linguistic process to create a body; assemblages do not need humans to name them to come into being. On the other hand, the act of describing a “videogame body” is a method of augmenting the relationship that the portions of an assemblage have with one another. The moment I choose to begin to describe that body, I intervene in the makeup of that body.⁵⁷ In this theory of the body, it is impossible to *speak of*; instead, there is only *speaking with* and entering into the makeup of a body.

To further clarify this point, I will move to the analytically-argued theory of assemblages that Manuel DeLanda has adopted and adapted from Deleuze and Guattari’s arguments. In his earlier work in *Intensive Science and Virtual Philosophy*, DeLanda provides a very clear and descriptive definition of an assemblage. An assemblage requires its constitutive objects to possess affordances that allow for a relationality to occur between heterogeneous things.⁵⁸ We will return to the language of affordances later, but at this moment it is productive to expand and elucidate the latter concept: heterogeneity. The ability for heterogeneous elements to enter into relationship with one another without losing their differences – without becoming part of the same *ur-stuff* – is the core of the concept of an assemblage. For DeLanda, this means that an assemblage always has the ability to continually “differentiate differences.”⁵⁹ This differentiation between parts is important because the ability for an assemblage to function in the world is determined by the operations that each of its parts have on one another. In the context of a body, it is not merely about what that body can do to other bodies (or what kind of larger bodies it can

create), but rather what each of the heterogeneous parts of the body can do to one another in order to generate faculties and capacities of that body.

To be clear, this is not a closed system, and the power of an assemblage resides in its “relations of exteriority.”⁶⁰ To put it simply, relations of exteriority have a twofold explanation: on one hand, the phrase describes any single part of an assemblage’s ability to be re-plugged into another assemblage in order to create a different assemblage; on the other hand, it describes an assemblage’s ability to act *as a whole*, as the sum total of its various parts’ capacities.⁶¹ Thus, bodies are *wholes* in that they are the sum total of their parts, but they are also *fragments* in that no single part of a body requires other parts of the body in order to enter into relationships to any other thing that they wish to come in contact with. The unified assemblage, the body, does not overdetermine its capacities, nor does it underestimate what it might be able to accomplish.

What are those capacities? What delimits a body? Is it pure heuristics, the decision to draw a line, to linguistically demarcate a barrier and pursue an argument no further? Here I take DeLanda’s argument against an essence of an assemblage as a given. He writes that

. . . the ontological status of assemblages is two-sided: as actual entities all the differently scaled social assemblages are individual singularities, but the possibilities open to them at any given time are constrained by a distribution of universal singularities, the diagram of the assemblage, which is not actual but virtual.⁶²

The integral structural plan of a body does not lie *over there*, in a Platonic form or a Whiteheadian eternal object, but in its historically contingent realization within a diagram. The concept of the diagram is mostly neatly presented in Deleuze’s *Foucault*, and is used to explain how power is enacted across a social field. A diagram is “a map, a cartography that is

coextensive with the whole social field,” “an abstract machine,” and “a machine. . . that makes others see and speak.”⁶³ It also “acts as a non-unifying immanent cause” of “concrete assemblages.”⁶⁴

This warren of philosophical language is all to say that diagrams are produced historically. They are the combination of the effects of other assemblages on the possibility space of what can be produced materially in the world; they determine what can exist and what kind of parts could even possibly interact with one another. More than this, their immanence to the world means that they are constantly on the edge of being realized, flowing back and forth between a Deleuzo-Guattarian actual (what exists in the world) and virtual (what could, historical contingency allowing, exist in the world). This is the reason that DeLanda likens the diagram to the “body-plan” of an organism.⁶⁵ Due to the material conditions of the world, an assemblage can be comprised of a finite amount of objects interrelating with one another, but that finite set is still profoundly large in terms of scale. To put it differently, the body-plan of an assemblage is sufficiently large that a human mind will probably never exhaust it, but its interactions with itself and other assemblages can be parsed and analyzed.

To summarize my argument so far: in order to study videogames sufficiently in relationship to their actual existence, we need to be able to speak of their bodies. The language of “body” is a way of speaking about the assemblage of heterogeneous parts that make up what we call a videogame. However, the capture of these heterogenous parts is not completely chaotic and random, as it is determined by a diagram, an immanent map of the possibilities of connection in the world determined by the things that currently exist in the world.

There is an internal problem with this argument, however, in the form of the historical contingency that determines the structure of a diagram. What is the process that keeps it from falling apart immediately? What is the solidifying force or process that keeps an assemblage working internally and prevents it from falling to ruin if a part of its body is destroyed, fails, or is otherwise rendered inoperable?

DeLanda answers this question by asserting that the very act of emergence of an assemblage necessitates its existence within a population of the materials that allow it to continue to exist in the world, in that “assemblages are always produced by processes that are recurrent” which “implies that they always exist in populations.”⁶⁶ He later clarifies some of the other properties of maintenance that an assemblage produces, including a *pattern of reoccurring links* (that social relations can change in quality but are nonetheless occurring constantly), *strength* (frequency of interaction), *presence or absence* (the delimitation of borders between things in an assemblage), and *asymmetry* (the reciprocity or non-reciprocity of links in an assemblage).⁶⁷ While all of these are contextualized by DeLanda as linkages that are occurring between humans in the context of social interaction, there is no reason that they cannot be extended to relations between any combination of what we call humans and nonhumans. In addition to these processes of maintenance, he includes two necessary properties of an assemblage: density and stability. The former is “a measure of the intensity of connectivity among indirect links,” while the latter is a measure of how much negative pressure things in the assemblage can put upon one another before causing the assemblage to disintegrate.⁶⁸ While DeLanda gives us a language for measurement, and the analytical equipment with which to ascertain how an assemblage is

working, this puts us in the role of the nineteenth century doctor in regards to assemblages. We become symptomologists, speaking of what we can analytically parse out, rather than understanding the intense processes of connection and energetic transfer between different parts of the assemblage. In order to make the move from descriptive work to critical work, we need a language to describe how what happens is made to happen. For that, we can turn to resonance.

2.3 – *Resonance and the Videogame Body*

We need to understand the process through which an assemblage continually recreates itself within a population. It is necessary not only to speak of maintenance, of the replacement of parts that wear out or cause the machine to spin wildly out of control, but also of *resonance*, the way that affects and capacities echo across the body of an assemblage, keeping its elements in sync with the total whole.

My use of the word resonance here has a particular root in the work of Elizabeth Grosz, whose *Chaos, Territory, Art: Deleuze and the Framing of the Earth* performs a Deleuzian (and Guattarian, even though he is not mentioned in the title for whatever reason) reading of the flows between virtual and actual that allow for the production of art objects. The word appears multiple times in the book, never as a concept that is developed, but as an idea that gives context for a quotation or a larger argument. Still, Grosz has a set of definitional terms in mind when deploying the word. Resonance is a “harmonious vibration”⁶⁹ that entails “forms of repetition and reconstruction.”⁷⁰ Grosz tends to group resonance with description of vibration as a neovital force that enables the creation of things in the world; if *Chaos, Territory, Art* is anything, it is a call for thinking through vibration as a force that rises through every material into the world,

meeting at strange connectors of the actual and the virtual, and generating the contingency through which everything materially and historically emerges.

While Grosz's resonance is a sort of pile-on term, one that gives context and evocative feel to vibration, I want to put it in an operative register with more specificity than she treats it in her work. Wai Chee Dimock has done similar work with the term in the specific realm of literary studies, using it to account for the warping and mutation of language and texts over time.⁷¹

Dimock leverages resonance as an echo that moves through time, opening "the question of the extent to which a text might be said to endure."⁷² The claims that Dimock makes about texts and their resonance rests on a number of claims about the existence of aural phenomenon, particularly background noise and how it, through generating a background base through which signals can travel, actually allows for certain sounds to become amplified. Texts resonate in their own background noise, which is broadly understood as the concept of the literary itself, the broad base of readers and interpretive mechanisms that exist through time.⁷³ This kind of resonance is not one of a single object operating on its own, but from an inherently fragmented assemblage that makes itself over and over again through time, oscillating between the virtual and actual based on the material and symbolic impossibilities in contingent circumstances.

For Grosz, resonance is part and parcel with vibration; for Dimock, it is a term to describe the continual ability for an assemblage to recreate itself despite radical changes in what the elements of that assemblage actually are. I would like to add one more quality to resonance, one that comes from physics.

The physical concept of resonance describes what occurs when an object is acted on by an impulse with a frequency that is roughly equivalent to the object's natural oscillation frequency. When this happens, the amplitude of that oscillation becomes larger than the natural amplitude. The classic example of this is a weight hanging from a string. If set into motion, it will swing in an arc. If a person were to push it right as it begins its swing back toward the center of the arc, it would move more quickly along that arc. This additive force is the product of resonance, and it is that predictable arc that allows everything from a child's swingset to the Earth's relationship to the moon to operate. This additive force operates in the face of dampening, the general loss of energy by a system due to outside factors of which friction is the most common one. When the child stops kicking her feet and the swing slowly stops and hangs at the bottom, the damping effects of friction from the air and gravity are to blame. These examples of resonance in the world are constantly at play around us, and it is no accident that in his *Lectures on Physics*, Richard Feynman ends the chapter on resonance by demonstrating the concept through examples from the natural world. While these examples range from the *entire planet Earth* to the movement of atoms, the crucial example that I'm interested in here is sodium chloride, or as it is more commonly known, table salt.⁷⁴

Feynman recounts the ways that a scientist could possibly see resonance occurring in salt, even going so far as to speculate on the conditions through which charge could be pushed along the lattices of the chlorine and sodium atoms that make up a salt crystal. From this, he plots out a mathematically viable resonance chart, one of many that accompany his arguments for the physics of resonance, but introduces a number of caveats that might make an actual curve based on readings from a salt crystal different from his modeled resonance curve: the material of the

crystal could be “strained,” which would generate an effect of “many resonance curves on top of each other.”⁷⁵ There could be a problem of measurement due to an ineffective spectrometer, or a series of inhomogeneities in the crystal itself.⁷⁶

All of these are material problems that stand in the face of the pure mathematics of the theory of resonance, and it demonstrates that resonance as a concept is not merely about vibration, but about amplification that is centered around how an object is constructed in the world. When I invoke resonance, it is not merely about how an assemblage hums in sync with itself, nor is it how that assemblage is able to continually maintain itself through the addition, subtraction, and equivalent replacement of constituent objects from an available population. In addition to these, I take seriously both the *amplification* and *damping* functions of resonance. An assemblage, constantly resonating, is one that is always fighting against the entropic force of damping by spinning up and committing its own energies back into itself; a body is always amplifying against that deadening force.

2.4 – *Bad Rats*

We can see resonance and the assemblage-based theory of the videogame body at work in *Bad Rats*. Released in 2009 by Invent4 Entertainment, *Bad Rats* has gathered a strange reputation on the internet. The game did not elicit any reviews from major news outlets on its release, but has still managed to experience a long tail because of its unique combination of what SteamCritic.com user latheum called “bad gameplay, bad graphics and bad sound.”⁷⁷ Another user, tstdj, claims that the game is “pure garbage.”⁷⁸ Alongside these negative comments and reviews, however, is a second narrative built around glorifying *Bad Rats*, or at least glorifying

the process of forcing another person to play the game. One blogger wrote that the game is less than spectacular, but its use is in the fact that you can “gift it to your friend to be a dick.”⁷⁹ There are entire Steam forum threads dedicated to this sentiment, as exemplified in a thread created during a deep sale titled “90% off! Everyone go go go!!!” in which users encouraged buying the game to “troll your friends” with “the worst Steam game.”

I am pointing out the affective economy around this game because it is part of the videogame’s body. If resonance is about the continual replication of a videogame through the introduction of a human into an assemblage of different heterogeneous elements all working in conjunction with one another, a game that is able to deploy a completely negative affective scenario in generating itself is a unique being in the world.

Bad Rats is comprised of forty five levels, each following the same pattern. The screen displays an arrangement of platforms in what can only be described as “puzzle game shape” – this might be three horizontal platforms stacked vertically with space between them. Somewhere on the screen is a 3D animated cat. Somewhere else, far away from the cat, is a beach ball. The goal of *Bad Rats* is for an arm to maneuver a mouse that clicks and drags various rats onto the platforms of the level. These rats have various functions. One drives a bulldozer and will push any other game object, whether that object is another rat or the beach ball. Another has a bat and will hit the ball in, roughly, a straight line. Another is a horrifically offensive “suicide bomber,” complete with turban, which explodes when any other object touches it. There are several more rats, and they all have a particular and specific function. Finishing a level involves using the rats

placed around the map to bounce the beach ball into a precariously-placed murder implement that will reduce the ever-present cat into chunks of bouncy meat.

These formal elements are not responsible for *Bad Rats*' reputation. The reason for that lies in the physics system that undergirds the world in which the rats' actions take place. The science of physics is based on the predictability of motion in the world, and it is through that empirical project of analysis and prediction that the very hardware on which *Bad Rats* operates can exist. There is a bitter irony to the fact that a game based on the creation of Rube Goldberg devices, which are essentially interesting proofs of concept for our understanding of physics, should lack the only required stable system that those devices need. This lack of a predictable system of physics leads to a number of frustrations for a player. A solution that works once might not work again, or more common, a solution that does not work ten times in a row might work on the eleventh try. *Bad Rats* has developer solution maps for every level that specifically outline the exact locations where every element should be placed to best solve each puzzle, but they work as rarely as any other attempted solution.

The videogame body that exists around *Bad Rats* is, like all other bodies, defined by specific contingencies operating between heterogeneous elements. As I wrote previously in this chapter, the ability to replace parts of an assemblage with other, similar parts that fulfill the same function is crucial to the maintenance of that assemblage. We can see this assemblage operating in the various rats themselves and the sometimes-working solutions of each level. The choice of rats and their placement, which is a cooperative action of an assemblage of software, biological hardware, synapses, the datastream that moves along the optic nerve, and a number of other

pathways and systems, is based around the plugging in different game objects in order to make the game act in a nontrivial way in time. That is to say that the various operations of the assemblage (the human eye, the physics engine, the screen, etc.) are smashing into one another in incongruous ways that avoid synthesis and give rise to a particular moment of understanding of how videogame bodies operate.

Manuel DeLanda writes in *Philosophy and Simulation*:

But none of the wholes that we have discussed here, from thunderstorms to institutional organizations, are seamless totalities. The fact that the properties of a whole depend on the actual exercise of the capacities of its parts implies that removing one of them may indeed destroy the whole's identity, but the part itself need not lose its own identity: pulling a live animal's heart out will surely kill it but the heart itself can be implanted into another animal and resume its regular function.⁸⁰

We can easily plug our analysis of the videogame body in here. If you remove the physics system, as "broken" as it is, *Bad Rats* ceases to exist. The same goes for its computer hardware substrate. It does not, however, *need* the human in anything other than a formal sense. Once turned on and plugged into the various power supplies that exist ubiquitously in the same ecologies as computer games, it could run until it loses one of the major components of that assemblage, like a power supply or a processor. The human body is a part of the assemblage that truly does cause resonance in the classic physics sense that I invoked earlier. It augments what the game body can do, increasing its power, until the game is either completed in a narrative or percentage-based sense, in which the human leaves the picture and potentially dismantles the game body by uninstalling it from the hardware or by boxing up the hardware and putting it in a closet. Or, with the same end but a different process, the human can be ejected from the game body due to experiential difficulty, problems with control mechanisms, the game's inability to meet a gamer's disability, or any other of a number of factors.

With this, I want to stress that the human is not an *activator* of the assemblage. The videogame body, while certainly designed and physically assembled by human and industrial robot actors, should still be understood as being a completely alien nonhuman agent in the world. We do not bring it to life. We come into contact with it, increasing its set of capabilities in the world, and then we abandon it, sometimes to the detriment of its ability to continue to exist after us. The human force in the videogame body is, in the end, potentially destructive.

Bad Rats provides a glimpse into how the videogame body operates in conjunction with the human, but it also provides a perfect example of how videogames consistently manage to reproduce themselves in the world with and without human player interaction. I will end this chapter by explaining this process, how it connects up with resonance, and what that means for us in the following chapters.

2.5 – *Wasp and Orchid, Human and Videogame*

Early in *A Thousand Plateaus*, Deleuze and Guattari explain how de- and reterritorialization is seen in the world.⁸¹ Their operative example is the symbiotic relationship between a wasp and an orchid. In their reading of the relationship “the orchid deterritorializes by forming an image, a tracing of the wasp,” meaning that the orchid forms itself like the wasp, taking on aesthetic characteristics that will encourage the wasp to come and gather pollen from the flower.⁸² The same thing happens on the part of the wasp toward the orchid, and the authors suggest that this is a “capture of code” or “surplus value of code” that forms an assemblage where the elements of two beings involve each other in relations with one another.⁸³ The scientific explanation of this

relationship is one of entomophily, or the pollination of plants by insects. Various insect species desire pollen from flowers, which they use for protein content in their diet. While eating or gathering pollen, these insects stomp around in the pollen, and when they move from flower to flower they distribute the dust, which pollinates the plant and allows for the creation of seeds, while are distributed in various ways from the plant and insure that it will be reproduced in the world.

My final claim in this chapter is that the relationship between the wasp and the orchid is similar to the relationship between the human and the videogame. The videogame body, through a specific luring of the human into a relationship, both increases its bodily capacities (as I have showed above) and assures that it can continue to exist in the world.

How does the videogame body lure the human? Elizabeth Grosz, drawing on Jakob von Uexküll's ethological study, points out how a spider's web is a "map" of the fly it seeks to trap.⁸⁴ von Uexküll's own writing in "A Theory of Meaning" explains slightly more, claiming that

. . . the spider's web is configured in a fly-like way, because the spider is also fly-like. To be fly-like means that the spider has taken up certain elements of the fly in its constitution: not from a particular fly but from the primal image of the fly. Better expressed, the fly-likeness of the spider means that it has taken up certain motifs of the fly melody in its bodily composition.⁸⁵

The claim being made here is that the ontological status of the spider is based around the existence of the fly. The spider, much like the orchid, has to undergo a becoming-fly (or has to become fly-like) in order create an apparatus of attraction that will ensure that the fly comes into contact with it. The crosshatching of its web must not be too big, lest the fly buzz right through; the spider has to intimately know its audience, so to speak. We can use the examples of the

orchid/wasp and spider/fly to make an uncanny lateral move toward thinking about the videogame body and its interaction with the player. Videogames exist with particular human-shaped holes in their bodies, and it is because of this that the classic game model has been so focused on the player as an enacting subject that enables a videogame object. This human-shaped hole has been mistaken for a lack rather than a planned affordance of how the videogame body is shaped and how it wants to interact with humans.

Bad Rats gives a particular kind of way of seeing this phenomenon. It has a particular human-shaped hole in its body, and is what Staffan Bjork and Jesper Juul call a “zero-player” game, with its subtype being a “setup-only game.”⁸⁶ What makes this kind of zero-player game different from others is that the player has no way to interact with the game world after the initial setup phase. When the rats start hitting the ball, the human is functionally completely absent from the calculations and computation that is occurring within a particular part of the videogame body. However, to get to that point, the videogame body needs modes of attracting the player into its system. In the same way that the spider builds its web in a certain shape to form-fit the body of the fly, or how the orchid shapes itself to make the wasp enamored of it, so does the videogame body. *Bad Rats* features clear directions of how the human player should be interacting with it. The blueprints that cover every level explain what kinds of mouse movements should be performed to at least make an attempt at adding to what the videogame body can do. The mouse, too, is a part of the videogame body, making the mode of possible interaction between the assembled elements of the videogame body – the human, the mouse, the game loop – able to better and more easily desire one another in a particular arrangement. This use of heterogeneous parts that cooperate to make the videogame body do more and better things than it

could before is the core of resonance as a concept. When the human player begins to interact with a computer so she can play *Bad Rats*, she is amplifying both her capacities in the world (this process is what classical cybernetics is based on), but also the capacities for the living videogame body. In becoming part of a larger body with a particular kind of life, the human pushes the *quality* of the videogame's life into more agential and capacitative places.

If resonance augments the capacities of the videogame body and makes them *greater*, then there is a significant question that remains unaddressed: how does the videogame body assure that the human stays connected to it? The mouse is an easy mode of interaction and becoming-assemblage, but what forces the human to continue to touch, control, and be controlled? In the next chapter, we will move into the work of T.L. Taylor, Michel Foucault, and others in order to understand both what the videogame body is actually built from and how it adapts players into more efficient interfacing agents.

3.0 – DISCIPLINING THE VIDEOGAME BODY

The videogame body is an assemblage made up of heterogeneous elements that can serve functions for one another and are not reducible to some synthetic whole that is more than the sum of the interactions between its parts. We can, and should, conceive of these assemblages as bodies, and in this chapter I want to account for how the videogame body ensures that the human piece of the assemblage continually returns to interact with the game. At the end of the previous chapter I offered some ways of understanding the relationship between the large assemblage of the game body and how it integrates the human player via particular parts of its body that encourage connection into the assemblage. In this chapter I will elucidate this argument in two ways. First, I will explain how a videogame body is built from populations of various kinds through a reading of my own interactions with the game *Spelunky* on my PC. Second, I will provide a detailed reading of how my connection to the game is maintained through very particular modes of discipline afforded by the videogame body. From there I will argue for a set of governing disciplinary principles that all videogame bodies possess which are integral to the videogame body's ability to resonate with itself, which keeps it alive and active in various qualitative ways.

3.1 – *Materials Toward a Theory of Videogame Bodies*

To address how videogame bodies can so easily integrate human bodies into themselves we must first do the work of analytically outlining a videogame body. By this point it should be clear that each videogame body is unique and that the shape of each videogame body is determined by the various materials that make up that assemblage. We might call the various abilities for materials to interact with one another *affordances* after James J. Gibson's development of the term in his

The Ecological Approach to Visual Perception.⁸⁷ The concept is created in a discussion of an ecological relationship between animal and environment, with Gibson writing that

The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or for ill. The verb *to afford* is found in the dictionary, but the noun *affordance* is not. I have made it up. I mean by it something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment.⁸⁸

Over the course of elucidating this theory, Gibson comes up with a number of analytic categories of substances and objects that have a variety of affordances of their own for different objects. I am less concerned with a precise adoption of these concepts than I am with simply saying that this is a way of arguing that things in the world have various ways of interfacing with one another predicated on their qualities. Water affords a certain amount of viscosity which allows a fish to swim. Air affords an almost absolute permeability that allows for the tree to grow through it vertically. Human animals also have particular affordances for other things in the world as Gibson notes when he argues that a person “is an ecological object with a skin,” which assumes that humans are merely things among other things in the world, touching and interacting.⁸⁹ Of course, it is important to note that Gibson’s theory of affordances is profoundly anthropocentric and locked into the subject/object dyad that realist materialism and the assemblage theory that I am adapting to talk about videogames is actively responding to. However, affordances do give us a way of thinking about how things attach themselves to other things in the assemblage. Each object has affordances that it can relationally provide between itself and another object. In the previous chapter I explained DeLanda’s approach to thinking about assemblages crafted from populations; it is only within a wide set of potential things that *can be assembled* that an assemblage can take place. Recalling another of DeLanda’s examples: the reason that a heart can be wrenched from the body of one human and placed in the chest cavity of another is that the

heart affords spasms that cause ventricles to empty, pumping blood through the body; from the other side, the connections of nerve endings in soft tissue allow for that heart to be supplied with both nourishing blood and spasm-inducing electrical impulses through the substrata of the human neurological system.

If affordances is the language that we use to speak of how things in an assemblage connect to one another, then what are the *things* themselves? In order to make this process as painless as possible I am going to think with the game *Spelunky*, a Procedural Death Labyrinth developed by Derek Yu and Andy Hull and released for the PC in 2013.⁹⁰ While the game has a long and varied development history, including a freeware ancestor and various versions across platforms, in this chapter I will only be discussing the PC version and how it gives us particular insight into the various parts of the videogame body.

Spelunky is a bundle of data. Some of that data is made up of image files. Some of it is made up of code that delimits the world interior to *Spelunky*. There is code that makes up the level generation that randomizes the game every time a new level is started, which gives *Spelunky* a large part of its challenge. There is also code that gives various motion-based properties to all of the various actors in the game, meaning that the player character and a snake might fall at the same speed and accelerate in the same way, but the player and a bat do not. There is also code to read input commands that travel as binary on/off signals from a controller or a keyboard through a USB cable and into an input on the motherboard, which communicates through the operating system to the bundle of code we call a program -- *Spelunky* itself. We can see immediately that the assemblage that I am calling the videogame body can get very complicated very quickly, so I

am going to simplify the various parts of the body for analytic use. I want to note here that this act of simplification is also an act of violence, but that doesn't mean it is a fiction. Like all assemblages, there are various operational levels that we can choose to look at, which doesn't preclude the existence of higher-scale (the assemblage that makes up the solar system, of which *Spelunky* makes up an incredibly small part) or smaller-scale ones (the assemblage of subatomic particles that make up an atom).

One part of the assemblage is the mechanical hardware. This is an assemblage unto itself that is made up of the chip boards, hard drives, and graphics cards of the contemporary gaming computer. These parts are manufactured from materials as wide and varied as gold, silver, palladium, plastic, glass, aluminum, and ceramics. Each has a particular purpose in relation to the other, and it is here that our language of affordances appears so readily in a nonhuman context: each piece is made to fit the other. This specification is so specific that every few years the standards of connection between parts are changed, introducing fundamental incompatibilities between previous generations of motherboards and new generations of processors.

After mechanical hardware, we have the data that floats on that hardware, which is generally called code. Code serves as a prime connector between the mechanical hardware of the videogame body and all of the other pieces. While ultimately the mechanical hardware provides a literal material limit to what the videogame body *can do*, code is the way that the rules interior to that machine operate. The code that most directly communicates with mechanical hardware is the operating system. That operating system translates what is written in higher, more abstracted

code into very specific electrical signals that feed into the mechanical hardware and cause it to augment its functions in order to output specific signals through a video card, for instance, which would allow for an interface to be displayed on a screen. In code we find yet another assemblage that is internally communicating with itself. Code communicates to hardware, but often communicates to other chunks of code, which exist in various forms, some of which we can call programs. *Spelunky* is one of those programs, and it communicates to video capture software (for recording score accomplishment runs), a managerial program called Steam that tracks time spent playing and in-game accomplishments, and the operating system itself. Through that operating system it has access to input commands from a controller, which connects it to a human player.

The human player is, like all of these others, an assemblage. Perhaps what is most powerfully communicated to us through the language and theorization of assemblages is *how well* the human is able to form assemblages with other things. By virtue of thinking of, acting toward, being near, or touching something, we somehow seem to enter into an intentional assemblage with everything around us. The human ability toprehend things while being aware that one is prehendng is a profoundly beneficial ability for altering the world, but also gives way to the kind of thinking that bends the world around us, which Martin Heidegger called enframing. That, however, is merely dealing with how we perceive the world; it does not even get close to accounting for the affordances of things that enter the human animal into relationships with the things that surround it. Modern architecture is formed around the idea that the production of space through specific materials generates a certain kind of subjectivity in a dweller; music theory is based on the production of major and minor notes that run alongside one another, bouncing off walls of amphitheaters and entering into the vibrational structures of the ear,

converting into analog signal and stimulating the smallest parts of the auditory nerve. The diagrams of the human body that have proliferated since the Enlightenment serve as maps of assemblages, some better shown than others, of horrifying alien parts that could betray one another at any point. The liver goes bad and kills; the gall bladder necrotizes unprovoked; the hand begins to crumple after repeated use at the industrial sewing machine. Like the mechanical hardware, which could be destroyed if it did not properly expel heat, or if water was introduced to the assemblage in uncontrollable amounts, the human body can be destroyed when unplanned things are placed in relationship with it. However, the human body has a particular faculty that the mechanical hardware does not: as long as an act of disruption or violence does not destroy the human body, then it can mold itself around that encounter to prepare for it again in the future.

We call this learning, but we can also call it augmentability. Mechanical hardware has a very difficult time responding to external forces. Code, being adaptable in nature, can deal with it more easily – think of a virus or a worm or malware that infects most PCs. The human body, however, has the ability to develop muscle memory and to store specific data about situational configurations that can be drawn upon later. *Spelunky* provides a perfect example of this in its spider enemy.

The spider is not a metaphor. It is a two-dimensional spider with big red eyes that has two behaviors. The first is a docile mode where it waits for the player to move the player character beneath it. Upon the player being in the same y-coordinate as the spider, it releases from the ceiling and, if it lands on the player, damages her for one health point. It then proceeds to jump in an arc toward the player from left to right. The size of the jump is about five times the width

of the player character, which means that the spider will jump over the player character constantly if the player knows to stand still after triggering this second behavior. Several events are occurring in the videogame body when the spider is encountered. The act of triggering the spider is a code-based variable switch that “turns on” the second behavior. Another is a connection between hands, controller, input drivers, optic nerves, and general motor capability. A hiccup or problem at any of those points of connection will throw the assemblage into disarray, introducing frustration into the human player or causing the player character to lose a life point (or all life points). To avoid a difficult event around a spider, the human player must have some kind of foreknowledge of what the spider *does* as an entity in the game and also what kind of control maneuvers must be executed in order to defeat the spider or avoid it completely. The player must have thoroughly integrated itself into the body of the game through various mental- and muscle-oriented techniques which will be addressed in the next section.

There is a question that lingers around the discussion of the videogame body and its parts: where does it end? At what point do we limit the assemblage and claim that it has a boundary point? To put it bluntly: there is no edge. Manuel DeLanda’s *Philosophy and Simulation* is a testament to the size and shape of assemblages and how difficult they are to corral. Ultimately, defining an assemblage is an epistemological process that attempts to account for an ontological one; it is an act of attempting to do justice to something that exists in the world without performing an act of reduction on how we can think its powers and abilities in the world. We can only speak of the videogame body as something that exists and has effects, continually drawing other things into it and expanding or contracting with the formation and execution of its abilities.

In the previous chapter I introduced the concept of resonance as the key factor in the maintenance of an assemblage. Resonance is my term for how a videogame body continually constructs itself in the face of entropy or the loss of energy. Human players are a critical part of resonance in that their continual introduction into the videogame body is a way that games increase their capabilities in the world. In this chapter, I have continued the discussion of how humans are involved with the videogame body by attempting to outline some of the major parts of that body and how those heterogeneous pieces come together. However, I still have not addressed the core concern of resonance, which is one of continual attraction: how does the game bring the human player back time and time again? How does the videogame body assure that it will have one of its major organs return to it time and time again, often replacing itself with different human players from a large population of viable ones? In the next section, I will think through the work of Michel Foucault, Gilles Deleuze, and T.L. Taylor in order to answer this question with a word: discipline.

3.2 – *Discipline's Development*

Before moving into an analysis of discipline explicitly, it is important to take a moment to note that the uptake of Michel Foucault's work in the field of game and videogame studies has been fragmented. There still is no definitive Foucauldean take on videogames and what it means for a player to be disciplined by the assemblage, but there have been several encounters with Foucault that are productive for analyzing the videogame body and its disciplinary functions. In this short section I will highlight some of those readings before performing an in-depth explanation of discipline and how it operates in relation to the human player part of the videogame body.

Mark Silverman and Bart Simon, in their "Discipline and Dragon Kill Points," highlight some of the ways that disciplinary power operates on players massively multiplayer online games.⁹¹ Silverman and Simon discuss how power gamers, a term for players who invest an immense amount of time and effort into a game in order to excel at it, create systems of discipline known as Dragon Kill Points, or DKP, that measure the worth of players.⁹² The system for earning DKP in the game *Everquest* was based on attendance for killing large boss mobs in the world, which were enormous accomplishments in the context of the game, and being awarded a point meant that you were part of the well-oiled machine that was your gaming group. Not being a part of that machine, however, was penalty-inducing, and "players who arrive later, who miss too many raids, who do not pay attention to instruction, or who make errors in play which cause a team to fail" would be punished by having their points reduced.⁹³ This encourages a habit in the human player to not make mistakes, to show up on time, and to constantly be wary of losing one's DKP. As we will see in the following section, all of these are at the core of the disciplinary apparatus.

Brad Millington's reading of the interaction between human players and the Wii videogame console is a similar take on Foucault's use in relation to videogame studies, reading the (bio)metric data that the console reads from its players as a mode of "disciplinary force" that is "exerted over the body."⁹⁴ For Millington, much like Silverman and Simon, the direction of disciplinary control is top-down in its understanding of where discipline comes from. There are organizations, like a gaming guild or the company Nintendo, who create systems of discipline that the human subject comes into contact with and is disciplined by, creating a set of habits that are taken as normal and normalized. As we will see in the next section, this is at the heart of Foucault's argument, but it is my contention that we must properly think not about subjects being operated on by large-scale systems, but rather bodies being acted on by other bodies; to put it another way, we have to think about assemblages running into other assemblages instead of hierarchies working on subjugated subjects. It also is not merely about playbour, or players desiring their own oppression, or anything so simple as the modes we have become accustomed to accepting.⁹⁵ Instead, it is about a deep concentration of forces that are constantly interacting with one another, with no beginning and no end, with the expectation of behavior coming from all nodes in the network.

3.3 – Disciplining Players

In this section, I will work through Michel Foucault's concepts of discipline and biopolitics as he developed them over the course of his work. I will then put Foucault's theories into conversation with Gilles Deleuze's idea of control societies in order to make an argument that assemblages of all kinds, especially the videogame body, depend on producing a certain kind of human subjectivity in order to maintain and replicate themselves in the world.

Developed most explicitly in *Discipline and Punish* and the more recently published *Psychiatric Power*, a lecture delivered during 1973 and 1974, Foucault's concept of discipline has two particular qualities. The first is that disciplinary power, or the enacting of discipline, is an event that unfolds in and is produced by history. Foucault claims that disciplinary power emerges out of sovereign power during the transition state into so-called modernity in the middle of the eighteenth century. For Foucault, sovereign power "is expressed through the symbols of the dazzling force of the individual who holds it," meaning that sovereign power is always a direct effect of the existence of a clearly defined sovereign entity like a king.⁹⁶ The transition from this power into disciplinary power is the abstraction of a set of normalizing rules away from the will of a single human being and into a "network" or "distributed power."⁹⁷ We must claim that disciplinary power emerges historically because it is birthed from material conditions in the world, and is an advanced stage of the concentrations of power that occur around the sovereign and the aristocratic class. Foucault phrases disciplinary power as "a final relay" where power "finally reaches the level of bodies and gets a hold on them, taking actions, behavior, habits, and words into account."⁹⁸ One of the fundamental distinctions in the divide between sovereign and disciplinary power is in the conception of the autonomous subject. Under sovereign power, there is a distinct lack of the connection of "subject-functions," or existence within a reified role, and "somatic singularities," or individual agents.⁹⁹ Under sovereign power it is possible to escape the gaze of the sovereign itself and remain anonymized and multiple in oneself. Under disciplinary power, this becomes impossible, because disciplinary power always finds itself in want of a hierarchy of classification. Under sovereign power, a rural woman could be a farmer/weaver/shepherd/hunter/canner/mason. Under disciplinary power, she must adapt to a

single function in order to fit into a specific class and economic function. I will address why this is significant a little further on.

The second and much more important quality of discipline is how it operates not on past behavior but on future, expected behavior. For Foucault, discipline is “the general confiscation of the body, time, and life,” and it is this middle term that exists as a keystone in this formulation.¹⁰⁰ Disciplinary power requires a system that can control and predict the actions of a subject *in the future*. The birth of the asylum and the prison are both centrally focused on knowing where bodies will be and what those bodies will be doing. While I will discuss that much more in depth while reading Gilles Deleuze and Foucault’s works together, first I will address a critical method through which disciplinary power manifests itself and produces a subject that is easily enveloped into an assemblage like the videogame body: the test.

Foucault dedicates an entire section of *Discipline and Punish* to testing, and he begins his discussion with an analysis of how military thinking in the eighteenth century began to understand the soldier not as part of some formless mass (like sovereign power imagines its subjects), but as “something that can be made” by developing an “automatism of habit.”¹⁰¹ Foucault traces the development of this mode of military discipline in Europe to the publication of La Mettrie’s *L’Homme-machine*, a book which Foucault characterizes as being “a materialist reduction of the soul and a general theory of *dressage*, at the center of which reigns the notion of ‘docility,’ which joins the analyzable body to the manipulable body.”¹⁰² The uptake of this book in European thought around the military structure of the time was a sea change in the way that large disciplinary networks thought of the human. Instead of a peasant mass, there were

individuals who could be corrected and tested in order to be brought to strict standards of behavior. The docility of bodies was an important part of this theorization of the human subject, because it understood as a fundamental assumption that a docile body, which is to say that all pre-disciplined bodies, “may be subjected, used, transformed and improved.”¹⁰³ It is in this last term, improvement, that we see the emergence of the test.

Discipline and Punish provides us with a tripartite theory of the test, which includes hierarchical observation, normalizing judgment, and the examination.¹⁰⁴ What I am concerned with here is the examination itself, and how a form of testing the human who is interfacing and becoming part of the videogame body is ultimately at the heart of the disciplinary power that the videogame body sweats onto everything that comes into contact with it. Here I will quote Foucault at length, because his analysis is so critical for developing this line of inquiry. Of the examination, he writes:

In it are combined the ceremony of power and the form of the experiment, the deployment of force and the establishment of truth. At the heart of the procedures of discipline, it manifests the subjection of those who are perceived as objects and the objectification of those who are subjected. The superimposition of power relations and knowledge relations assumes in the examination all its visible brilliance. It is yet another innovation of the classical age that the historians of science have left unexplored. People write the history of experiments on those born blind, on wolf-children or under hypnosis. But who will write the more general, more fluid, but also more determinant history of the ‘examination’ – its rituals, its methods, its characters and their roles, its play of questions, its systems of marking and classification? For in this slender technique are to be found a whole domain of knowledge, a whole type of power. One often speaks of the ideology that the human ‘sciences’ bring with them, in either discreet or prolix manner. But does their very technology, this tiny operational schema that has become so widespread (from psychiatry to pedagogy, from the diagnosis of diseases to the hiring of labour), this familiar method of the examination, implement, within a single mechanism, power relations that make it possible to extract and constitute knowledge?¹⁰⁵

I quote Foucault at length here in order to give a sense of scale and stake in our understanding of the test. The very ability to formulate a test requires a normalization of a subject in a number of different directions, so many that the subject that is the object of discipline for an assemblage finds it almost impossible to think outside of the expectations that the disciplinary apparatus has of it.

The examination, or what I have been calling the test, is a way of seeing disciplinary power as referring to “a final or optimum state.”¹⁰⁶ For Foucault, disciplinary power itself is always looking “forward to the future, towards the moment when it will keep going by itself and only a virtual supervision will be required, when discipline, consequently, will have become habit.”¹⁰⁷

The test is a form of matching a performance of the human body up against an expectation, and the repetition of the test is a way of producing that norm as a habit. A test, then, is never about a single performance, but rather the ability to perform when one does not think that one is being tested. In the case of a human interfacing with a videogame, this could be the ability to check corners when playing a first person shooter. Checking corners as an action, which the game teaches over and over again through enemy placement, is not about there always being an enemy in the corner of a room the player is entering. Rather, it is about instilling an expectation of the future – one day, in some other time, there will be an enemy in the corner, and the player will be prepared. It is in this way that tests operate not only in the now, but in the future as well, becoming not only a single act but a set of habits.

To read this situation through the analysis of the videogame body that we have embarked on, we can say that Foucault’s analysis of disciplinary power supplies us with several key terms for

thinking about the role of the human player in the videogame body. The first is that a disciplinary apparatus actively creates an individual subject with specified boundaries and abilities that can be harnessed by the network of discipline. An example here is of the eighteenth century soldier who learns that he must control his every muscle movement while marching. The second is that of the test, which seeks to insert a self-discipline in the human subject which will condition that subject's position at a future date. Taking the above example, it is not only that the soldier will march in a certain way *today*, but also that he will march in the same way tomorrow, and next week, and in ten years because he *knows* that it is the correct way to march; this knowledge has been produced in him as a knowledge that determines his conditions of possibility in the world. In the next section, I will trace the concept of disciplinary power through game studies, ending the chapter with a discussion of the specific disciplinary practices that the videogame body exudes to keep human player as a part of itself.

3.4 – *Deleuze and Foucault, Control and Discipline*

A common attack on Foucault's concept of the disciplinary society is one of periodization. After all, Foucault was a historian of a kind, and made sure to couch all of his claims in the fact that everything that is produced is produced *in time* and therefore is not universal, unique, or groundless. For Foucault, everything is produced in time, and there is an open question of whether the disciplinary society, and discipline as Foucault understood it, still exists in the world. One of the most famous critiques of the control society comes from Gilles Deleuze in his "Postscript on Control Societies," and it is here that this section will begin. I will read Deleuze against Foucault to illuminate the differences between the former's control society and the latter's disciplinary society. It is my claim that discipline as a concept allows us to explore and

explain the actual co-constitutive relationships within an assemblage, which allows us to get at the heart of how a videogame body creates itself through the discipline of its various parts. Finally, I will end this chapter in the same way I began it, with a reading of the body of the game *Spelunky*, but this time taking into account T.L Taylor's analysis of game players as well as disciplinary theory itself.

Deleuze sets up some basic differences between his control society and Foucault's disciplinary society. The first is that disciplinary societies require confinement, as Foucault writes in various places.¹⁰⁸ They need places into which bodies are funneled so that those bodies can be shaped, or as Deleuze puts it, "confinements are molds" into which humans are poured.¹⁰⁹ The second is a difference between how an individual interacts with disciplinary societies versus control societies. In the former, Deleuze claims that "you were always starting over again" in the sense that a disciplinary system required you to be formed from the original docile body into whatever the institution wanted you to become – soldier, mental patient, prisoner, and so on.¹¹⁰ Contrasted to that, "in control societies you never finish anything," meaning that there is never a moment when the claylike human becomes a fully trained agent in the same way that a soldier could have perfected his march in the eighteenth century; the individual is trapped in "a sort of universal transmutation."¹¹¹ The third distinction between the two societies is that disciplinary societies are ruled by precepts while control societies are ruled by passwords.¹¹² Precepts here are rules of normalization, of what it means to be able to access your way into a particular society, while passwords are hard limits that are controlled by those in the highest echelons of capitalism. It is no longer about disciplining the self to fit in, but rather finding the access codes for the computer systems that control reality.

Deleuze's call to think control instead of discipline has been incredibly influential for media studies in general. Rita Raley takes the control society as a fundamental assumption of the world her *Tactical Media* is responding to, explaining that control is "constantly subject to reconstitution, its indexes of command contingent, its structure neither fixed nor stable," giving way and responding to contemporary capitalism.¹¹³ Alexander Galloway also takes the control society as a periodized given that assumes the end, or at least the subsumption, of discipline in contemporary late capitalism.¹¹⁴ However, what if we actively question the claims that Deleuze is making around control versus discipline. The examples he deploys at the end of "Postscript on Control Societies" betrays how little has changed between the disciplinary society and a society of control. He points to alternate means of control for prisoners as signaling the control society – electronic tagging, for example – and yet in the United States the carceral system is arguably more robust now than ever.¹¹⁵ The hospital that he critiques for having "nothing to do with any progress toward individualizing treatment" continues to treat health as habit, as contemporary debates about the body mass index so explicitly show.¹¹⁶ Perhaps the only example that Deleuze gets completely correct is that of capitalism itself and how the materiality of the factory has been abstracted into what we now call finance capital.

We do not yet live in a control society, or the control society is a barely-changed additional layer on top of the disciplinary society that was more thought experiment than it was thought-out concept. One reason for claiming that we have not moved from a disciplinary society is that *humans are still being disciplined*. From body image to national education standards to quality television, the contemporary scene of culture in the United States remains one of setting

normalized standards and then slowly but surely bringing the general public toward those standards, like a crooked sapling tied to a tree to make it grow straight. Another reason is that there is not a fundamental difference between the two: the claims that Deleuze is making around control societies does not sufficiently distinguish control from Foucault's concept of biopolitics. This term is most clearly defined and attached to Foucault's concept of discipline in the final chapter of the first volume of *The History of Sexuality* where Foucault writes about the two poles of power over life developed during the seventeenth and eighteenth centuries. He writes that

One of these poles—the first to be formed, it seems—centered on the body as a machine: its disciplining, the optimization of its capabilities, the extortion of its forces, the parallel increase of its usefulness and its docility, its integration into systems of efficient and economic controls, all this was ensured by the procedures of power that characterized the *disciplines: an anatomo-politics of the human body*. The second, formed somewhat later, focused on the species body, the body imbued with the mechanics of life and serving as the basis of the biological processes: propagation, births and mortality, the level of health, life expectancy and longevity, with all the conditions that can cause these to vary. Their supervision was effected through an entire series of interventions and regulatory controls: *a biopolitics of the population*.¹¹⁷

Deleuze's claims about the fall of discipline and the rise of control are based around the collapse of the physical locations through which discipline moved, but as we have seen, those locations are still around in full force. Removed from that, control as a concept only argues for the bracketing off of possibilities behind passwords, but biopolitics is already doing that work by locking the access of social norms behind better-built iron doors. There is no doubt that something like "The American Dream" is a biopolitical construct to clearly delimit the aspirations and possibilities of life in the United States, even though that dream is absolutely unattainable for most of the population. How is this flexible narrative any different from a password that the average person cannot access? If that is the case, what does control give us that the broad spectrum of discipline (with its aspect of biopolitics) has not already shown us?

I will end this section with an appeal to the usefulness of discipline over control. If biopolitics is part of a constellation of discipline that includes both large-scale discipline as well as a socially-understood concept of the norm that inculcates a habit in the average member of a population, then discipline allows us to think about not only how the human player is caught up in the videogame body, but how all elements of that assemblage are maintained together.

Like the beginning of an HBO drama, let's do a quick recap of the arguments made in this chapter so far. Discipline is a process of setting a norm and then repeatedly pushing a body up against that norm in order to change how it exists in the world. This process is called a test. The desired result of this process of testing is to establish a habit in the body which would ensure that it no longer has to be tested; it adheres to the norm on its own. Biopolitics is the grand aspect of discipline. It does not work on the level of individual bodies meeting specific norms, but instead works on the level of an aggregate population. While Foucault encourages us to look at biopolitics as the explicit control over life and death, it is just as important to understand the term as one of applying disciplinary (and regulatory) practices to a large scale population.

In the previous chapter, I explained that assemblages are only possible in the context of populations. The crucial aspect of the assemblage is that a single part be removed and replaced by a similar part which will allow the assemblage to persist in the world—an assemblage produces normalization in a population of elements, which is why I claimed above that assemblages sweat discipline. They require elements to enter them in particular ways and with particular interfaces, which requires a biopolitical control on the part of the assemblage itself, although it is an inhuman one. The assemblage is always concerned with *the future*, with

maintenance, with the ability to resonate with itself and augment its powers, and because of that it has produced discipline within its heterogeneous elements. Some elements are more easily disciplined than others.

The videogame body uses parts of itself to discipline other parts. The human part of the videogame body crafts and connects the various computer hardware pieces together. The computer hardware creates a material platform that specifies what kinds of connections that code can make both with the hardware and itself. The operating system gives access to a very small part of itself so that game software can access controller drivers, and controllers discipline the hands and eyes of the players. It is difficult to see all of these functions as ones of discipline, but what is important to remember is that the assemblage can do anything to itself. It could be thrown into utter chaos, breaking down at any level (broken thumbs, overheating processor, fragmented hard drive), but each element asserts itself over the other elements to keep things as close to the norm as possible, which allows for resonance. Power can only be added to a stable system; maintenance itself becomes a mode of discipline and biopolitical control. I have purposefully left out the human element here, and I will take the rest of this section to read T.L. Taylor's descriptions of professional videogame players through this disciplinary framework in order to further elucidate and flesh out this work.

An early section in T.L. Taylor's *Raising The Stakes* warns of an analysis of videogame play that ignores the material effects on the body of the human player. "It is all too easy," she writes, "to fall into an analytic mode that obscures our corporeal bodies, which are implicated in our play."¹¹⁸ It is important to note here that Taylor assumes the fundamental framework of

assemblage theory in this work, but not necessarily the theorizations of assemblages from Manuel DeLanda.¹¹⁹ However, Taylor gives us some of the best views to seeing the impact of the assemblage itself on its human element. Some of the effects that resonate across the videogame body are negative, effecting the capabilities of the human element, with complaints of physical fatigue and “headaches, eye strain, and exhaustion” topping a list of complaints Taylor has heard from some pro players.¹²⁰ Others flow from the human into the hardware. A standard practice of videogame tournaments is playing at preconstructed stations where the software of the game has been installed on preselected hardware, but Taylor observed a “ritual with the space” where many pro players would arrive at their stations and “pull out of their backpack or back their own keyboard, mouse, and mouse pad.”¹²¹ If discipline is a set of norms that gets applied to a specific body, then this is a mode of discipline of the videogame body that is heavily influenced by the human player element; it is an act of bringing the smaller assemblage of the game hardware into closer proximity with the other heterogeneous elements. It is also an illustration of the fact that assemblages are born of populations. So far I have discussed this aspect mainly in relation to humans and their replaceability in the videogame body, but here it is clear that there are other populations from which elements can be chosen. This is not unique to mice and keyboards, however, and Taylor points out that “players often do whatever they can do to optimize not only the interface with the machine, but the actual seating space itself.”¹²² Chairs, too, are a population that has to be normalized in relation to the entire videogame body; the assemblage would not be able to operate if the human element were forced to sit on a splintering dining room chair.

This brings us back to *Spelunky*. When I play the game, I am disciplined in certain ways. Every encounter is a test, and the failure of that test often results in being removed from the play experience and being forced to start over. If I want to prove myself on rankings leaderboards or simply overcome the game, I begin again. In a classical reading of Foucault, we could stop at that loop. However, taking the videogame body seriously means understanding that discipline is not merely occurring between a stable object (the game) and a stable player (the human player). Instead, the assemblage itself requires a quiet discipline and normalization in order to maintain its existence in the world. More than that, the game takes an active role in making sure that its various parts are pulled together and maintained in a particular way, as T.L. Taylor's work shows.

The knowledge that a videogame has a *body* and that the body is operating on humans as organs inside of a leviathan is uncanny and unsettling. The idea that we, humans, who have a long history of characterizing ourselves as unique and at the center of the universe, are actually caught up in a giant self-assembling and self-justifying *thing* should shake us to our core. We should be, and I certainly am, in awe of it. In the next chapter, I will take this concept to its logical limit and pose the question of whether or not we should consider the videogame body as being *alive*.

4.0 – ETHICS AND THE VIDEOGAME BODY

Videogames are really videogame bodies. They sweat discipline, maintaining themselves by creating conditions of habit for the populations that supply their various working parts. The picture that I have painted of videogame bodies over the past two chapters is nothing short of disturbing, even more so because we willingly, maybe even joyfully, enter into our relations with them. In this chapter, I will argue that the videogame body does not merely exist. Rather, it *lives* and possesses a nonhuman life that is unrecognizable to humans as life-as-we-know-it. In the following I will trace several concepts of life. Instead of adopting any of these wholesale, I will instead turn toward an open recognition of an indeterminate quality of judgment around life. In other words, I will claim that humans cannot grasp all possible forms of life, and because of that, we should err on the safe side of a radically open claim to life.

4.1 – *Lack and “Life”*

It is perhaps most appropriate to begin with some of the philosophical and ontological assumptions often made about life. In one of their many tracings of the history of science and life, Dorion Sagan, Lynn Margulis, and Ricardo Guerrero claim that “the features of purpose and determination that our culture tends to ascribe uniquely to people inhere intact in all of life.”¹²³ They continue and explain that life’s “exuberance and. . .sensible and sentient features” apply to the varied forms of life, from single-celled organisms to great lumbering elephants.¹²⁴ While the trio’s uptake of life, which they also ascribe to rainforests among other distributed systems, is beautifully described, it still has the air of mechanical reductionism to it. For this set of scholars, a thing must possess exuberance and a will to continue on in the world, and this is required before we can make the claim for including a thing or set of things within a category that we call life. Even Manuel DeLanda, who in his essay “Nonorganic Life” articulates a condition of life’s

emergence in nonorganic systems, makes a move toward thinking determination, asserting that it is a “special capability of catalysts to intervene in the dynamics of other processes” that provides for “the necessary precondition for life.”¹²⁵ While this essay is brilliant in the way that it translates the supposed givens in organic processes into the normal terms of condition for nonorganic matter, it also falls into the mechano-reductionist pattern as the previous piece. In this calculus, nonorganic matter, in order to be *life*, must fit into the striated categories of x,y, or z scientific theories.

I want to stray from these scientific claims about life. I do not do so in order to make the completely tried “postmodern” or “poststructuralist” move into rejecting or rethinking the “technological” thinking of science in the age of intelligent machines. I merely want to stray down a different path that asks an ontological question paired with an ethical one: what if we chose not to pare down *life* as a concept to qualities, but instead sought to think of it as a vector for ethics?

This inquiry will begin by turning once more to the work of Michel Foucault. In his famous debate with Noam Chomsky on the question of human nature, Foucault is obliquely asked how he feels about the concept. He historicizes his response, speaking at length, and he says:

In the seventeenth and eighteenth centuries, the notion of life was hardly ever used in studying nature: one classified beings, whether living or nonliving, in a vast hierarchical tableau which went from minerals to man; the break between the minerals and the plants or animals was relatively undecided; epistemologically it was only important to fix their position once and for all in an indisputable way.

At the end of the eighteenth century, the description and analysis of these natural beings showed, through the use of more highly perfected instruments and the latest techniques, an entire domain of objects, and entire field of relations and processes which have enabled us to define the specificity of biology in the knowledge of nature. Can one say

that research into life has finally constituted itself in biological science? Has the concept of life been responsible for the organization of biological knowledge? I don't think so. It seems to me more likely that the transformations of biological knowledge at the end of the eighteenth century were demonstrated on one hand by a whole series of new concepts for use in scientific discourse and on the other hand gave rise to a notion like that of life which has enabled us to designate, to delimit, and to situate a certain type of scientific discourse, among other things. I would say that the notion of life is not a *scientific concept*; it has been an *epistemological indicator* of which the classifying, delimiting, and other functions had an effect on scientific discussions, and not on what they were talking about.¹²⁶

Foucault draws a very particular line when it comes to life. Instead of cleaving to the mechanistic necessary qualities that DeLanda and other scientists require for their baseline definition of life, he calls into question the very development of that line of thinking. Instead of asking “what are the basic interactions between material elements that allow us to speak about life?” Foucault draws attention to the very concept and how it is implanted into a particular narrative of human history. While Foucault certainly went down this path by researching the founding of the disciplines of the sciences, I want to veer from the specific historical data and think the notch that Foucault cuts in a strictly scientific definition of life. Let us turn for just a moment to the work of Eugene Thacker and Mel Chen to see why Foucault's observations about the development of “life” as a concept are significant.

The final paragraph of Thacker's *After Life* is a haunting dismissal of the philosophical project of attempting to understand “life.” He writes that the Western project of theorizing life fails to find a ground “because of a furtive, miasmatic unintelligibility that inhabits any ontology of life: the idea of ‘life’ that is not simply and anthropomorphic, human-centric idea of life.”¹²⁷ This is the broad conclusion that Thacker comes to after his extensive reading through the history of philosophy and theology from Aristotle to the contemporary period: life as a concept when thought by humans is always locked into its human thinker. Thinking life is productive because it

points out this limit, but ultimately there is no way for humans to understand or even conceive of nonhuman life. This is because our thinking about the ontology of life is locked into moments where our human faculties were able to see said life or to reason out the differences between living and nonliving. If, as Thacker writes in the introduction, “thought is life,” then the ontological distinctions between living and nonliving are quite literally the horizon to a human understanding of ontology itself.¹²⁸ As he succinctly explains,

To begin with, while we can point to numerous instances of the living, Life, in itself, is never existent as such. The only “evidence” of Life is precisely its manifestation in and as the living; Life, or that which conditions the living, is in itself nonexistent. As we will see, following this line of thought leads either to an aporia that nevertheless grounds the concept of “life,” or to the acceptance of a negative theology at the heart of life.¹²⁹

The ontological ground through which the very notion of life is said to be built upon, then, is one of complete contradiction. If there is life, it appears in the living, but if there is something living that we cannot recognize life in, then our ability to apprehend the very concept of life possesses a limit that can never be overcome. This is, in a number of ways, very unsettling. Once again, like with Foucault, we will pause for a moment before returning to this.

Mel Chen’s *Animacies: Biopolitics, Racial Mattering, and Queer Affect* is a book that seeks out various kinds of animacy in material and symbolic interactions between nonhumans and humans. Sometimes this takes the shape of readings of posters, or of how lead is raced in popular discourse, or by reading the specific vibrations of language in specific corners of usage. In the opening of the book, Chen discusses in a short paragraph the decision to use the word “animacy” itself as a lens to look at the various processes and interactions that populate the book. Chen’s argument is that even though “life” as a concept is both important and a traveler with animacy, it is less helpful for thinking about “current anxieties around the production of humanness in

contemporary times.”¹³⁰ In other words, while life is definitely one of the ways the current debates around what has been called “the nonhuman turn” have been argued, it is not sufficient for capturing all of the moments of nonhuman interaction that exist in the world. It is important that Chen does not mark this as a problem, but merely a fact: animacy, evoking action and movement outside any specific register, is more useful because it covers more ground with fewer problems than “life.”

I have set up three contributions to a theory of nonhuman life. Michel Foucault makes the claim that the concept of life is one that is historically constructed (and which eventually justifies the development of State-based biopolitics). Eugene Thacker argues that there is no ontological ground inherent to life, and that the assertion that there is one proves the contradiction at the heart of “life” as a concept; we can only claim it when we see it, and if it existed where we could not see it, we would not recognize it for what it was. Therefore it might be worth rethinking, or rejecting, the whole construction. Finally, Chen, who argues that “life” possesses a specificity that is not universally applicable to all situations of the transmission of affects or mere interactions between humans and nonhumans. Rather, life is a particular language only suited for particular uses.

Here at the connection point between these three critiques of life we have a unique moment to build a theory of nonhuman life. If life is what you make of it, or rather life as a concept is only what you build it to be, then we are at a profound point of liberation. If there is no ontological ground for life, if the limit of finding life is the limit of our thinking it, then there is still an immense amount of space in which to draw up lines of demarcation, to decide where and when

we will find life and on what terms. If life is specific and finite, a scalpel of a term that does not encompass everything, that can only be a good thing. What I want to do here with the term life, put into a nonhuman configuration to produce “nonhuman life,” is to use it as a tool. I do not want to find things with qualities which I then decide are alive. Rather, I want to say something has life in order to mark an ethical relationship between humans and whatever we have designated with life.

This is perhaps a hard argument to swallow on face. My best defense is that it is a recognition of the arbitrariness of the term “life” and embracing that arbitrariness rather than abandoning the term wholesale. My argument arises as a response to two prominent theorists of the nonhuman and the ethical conundrums they run into in their respective books. Jane Bennett’s *Vibrant Matter* asserts an agency and vitality of matter, and she takes assemblage theory to its very political limit. When she advocates a total breakdown of traditional political theory and, in its place, a rethinking of how we understand who and what is counted in political calculus, it is very easy to see that she is *serious* about thinking about the human relationship to her nonhuman assemblages, whether they are interior or exterior to the assemblage of the human body.¹³¹ At the same time, she closes the book with an admission of criticism that can never be deflected fully. A theoretical critic asks the question “Is it not, after all, a self-conscious, language-wielding human who is articulating this philosophy of vibrant matter?” to which Bennett answers that “it is not so easy to resist, deflect, or redirect this criticism.”¹³² Ultimately, Bennett lets the question stand—by casting the relationship of the nonhuman toward the human as unknowable, it becomes difficult to truly make ethical statements of anything other than a speculative nature.

The traditional ethical maxim form of “thou shalt,” with all of its historical baggage, becomes a very late capitalist “well, I guess I will.”

Ian Bogost also encounters this same criticism, but theorizes his way out of the knot through the metaphysical system of object-oriented ontology (OOO). In the middle of his *Alien Phenomenology*, Bogost makes an argument about “the ethics of objects,” which he claims “quickly become unthinkable.”¹³³ They are made unthinkable by the hypothetical critic that asked a question of Bennett: we are humans who are thinking of ethics, and the ethics of nonhuman assemblages make no sense to nonhumans. In order to answer this claim, Bogost asserts one of the critical philosophical tenets of OOO, that of *withdrawal*. As Bogost explains, in OOO “things recede into inaccessible, private depths” and “when objects interact, they do so not from these depths but across their surfaces, in their sensual qualities.”¹³⁴ This means that the essence of the object is never truly interacting with anything, but rather singular parts of its various qualities enter into relation with other sensuous qualities. “When fire burns cotton,” he explains, “it takes part only in the cotton’s flammability.”¹³⁵ It is from this position that Bogost finds it possible to answer questions about ethics and nonhumans, as he explains:

When we ask about the ethics of objects, we are really asking if moral qualities exist as sensual qualities. I’ll float a categorical response: *no*. When the vegan eats the tofu, she bathes in its moisture, its blandness, its suppleness, its vegetality. Yet the soy does not bathe in her veganism. Through its sensual properties, she constructs a caricature of the soy, which does more than render it nutritive or gratifying; it also renders it moral.¹³⁶

While Bogost continues this analysis, what is gleaned from the above and the following pages is a straightforward slogan: ethics are in the eye of the beholder. Put another way, ethics for humans are ultimately anthropocentric.¹³⁷ We can never know the desires or wants of the

nonhuman, and so Bogost gives us a philosophical justification for what Bennett (correctly) intuitively knows with nonhumans and ethics: it is very hard to know what to do.

However, as Jane Bennett so eloquently puts it in her response to Graham Harman and Timothy Morton in her “Systems and Things,”

I find such attempts to do justice both to systems and things, to acknowledge the stubborn reality of individuation and the essentially distributive quality of their affectivity or capacity to produce effects, to remain philosophically and (especially) politically productive—for consumerist culture still needs reminding of the fragile, fractious connectedness of earthly bodies.¹³⁸

This is the frame through which a true ethics of nonhuman life must take place. It must be the recognition that things in the world are not abstracted in their actual existence. There is no theoretical videogame body. Instead, it is constantly being created in moments of hardware/software/musculature/fatty tissue connection in various capacities. Bogost’s assertion that we can never know what an alien nonhuman like the videogame body *wants* still reigns here, but not knowing what something wants does not preclude us from recognizing that it *is* and that it should be given our ethical recognition as something that exists in the world. Ethics here are not based on knowing immediately what is right from what is wrong, but rather knowing that there is *something there* that might, at some point soon or distant, require an ethical decision to be made. The language of nonhuman life, of a term that includes assemblages of all types, everything from nonhuman animals to bacteria to videogame bodies to solar systems, is priming for the oncoming explosion of necessary ethics that are becoming more important every day. Thinking nonhuman life *now* is putting the chains on the tires in preparation for the brave new world of a plurality of bodies.¹³⁹

These moments of ethical relations have always been with us. Jenn Frank, in her “Playing God: On Death, Motherhood and *Creatures*,” opens with quotations from the game’s box, featuring Richard Dawkins intimating that “this is the most impressive example of artificial life that I have ever seen.”¹⁴⁰ The game of *Creatures* is fairly simple, being a simulation of artificial life. The goal of the game is to raise creatures called Norns up to maturity through a process of positive and negative reinforcement (tickling and spanking, respectively.) Additionally, you teach them simple language, with the algorithm of the game picking up pieces of text associated with objects in order to allow the Norns to speak about those objects. Eventually, with enough effort on the part of the human in the assemblage, the Norns will begin to teach each other right from wrong, good from bad, and the basic language that they know. As Frank notes, it is at this point that “the game can learn to play itself.”¹⁴¹

In her piece, Frank explains the tragedy of playing the game *Creatures* when she was fourteen years old. She explains the effect these virtual actors had on her:

Creatures did not resemble any game I’d ever played. Death, it seemed, was so permanent. You couldn’t undo death. Once a Norn was ill or hurt, it was difficult to stop the process. And there was something else, too – every Norn had a limited lifespan. Worse, every Norn was living life at a speed that was too too much faster than my own life. There was no way to do enough to save each of them. Every Norn was hurtling toward death. This, to my 14-year-old self, was terrible.¹⁴²

It is here that we can pause and see the videogame body living its life. Although we are getting a personal account from Jenn Frank, it is possible to read the entire assemblage through it. We have the hardware of a mid-1990s computer, with its keyboard and mouse appendages, running algorithms of genetic variance of Norns in combination with other algorithms that generate specific behaviors on the part of those Norns, which are displayed on a slightly-bulging monitor. The human player uses the mouse to manipulate the world and the keyboard provides a mode of

communication to the Norns. All of this happens relationally, in sequence and on top of itself, constantly.

Where Frank's piece allows us unique insight into nonhuman life and our ethical relationship to it is in the duration of that body. She explains that, in order to preserve her Norns, she would export them as save files and save them to floppy discs, leaving them in "suspended animation" during "a snapshot of a perfect life," and then returning to the game in order to hatch and raise other Norns.¹⁴³ Later in life, returning to the discs, Frank comes to a realization, writing that the discs were not suspended animation but instead they were "coffins" created from her own "fear of morality."¹⁴⁴ Deprived of the hardware platform and the software of the game, the Norns were dead, unable to be resurrected in that particular formulation years later. As a critical part of the videogame body, Frank had made a choice to abstract them from the body and then ultimately fracture it—time happened, play sessions ended, and the various parts drifted away from one another. Thinking nonhuman life invites us to read this encounter in ethical terms. Like Bogost claims, we have no way of knowing that the videogame body wants to continue to exist.¹⁴⁵ At the same time, there will be a time very soon when developments in algorithms like the ones on *Creatures* will be enough *like us* that we will experience pause when disconnecting, and therefore killing, the videogame body. Jenn Frank clearly experienced that emotion in a form in her piece. What about the deaths of virtual worlds? What about Siri, going dark due to battery death somewhere in a drawer, alone, with her entire history of you decaying in her memory?

Nonhumans live, and the videogame body is one of those many lives. The present needs an ethics, and the future demands it. What, then, are our tools? From what point can we begin to

make a judgment of nonhuman life that allows us a ground to build ethics from? I began this chapter by declaring the arbitrariness of life before moving into the question of ethics toward that life. These are fragmented tools, and ethics requires at least some kind of built substrata. The question stares at us: what do we build with all of these parts? For this, we will turn to Jean-François Lyotard.

4.2 – Lyotard and Assemblages of Ethics

To think about ethics with Lyotard is to take seriously the framework that I posed at the beginning of this project: there is a material reality that preexists and will continue to exist after the human and which does not care much about us at all. His language floats in a realm of seriousness welded to poetry:

Matter does not question the mind, it has no need of it, it exists, or rather *insists*, it sits ‘before’ questioning and answer, ‘outside’ them. It is presence as unrepresentable to the mind, always withdrawn from its grasp. It does not offer itself to dialectic.¹⁴⁶

He phrases it a different way shortly after: “One cannot get rid of the Thing.”¹⁴⁷ This is the ethical conundrum so clearly articulated by Bennett and Bogost. For matter, which *does not care about us*, what does it mean to be ethical? If our lives are embroiled with various things, caught up in assemblages built on assemblages, then what kind of actions can we take in the world? The first way of achieving an ethical relationship toward nonhuman life would be to thoroughly make humans aware of the relationships that they have within assemblages like the videogame body. Breaking through the dyad of the subject and the object, which is happening in many fields under the terminology of the “nonhuman turn,” is a crucial step in the process. It is an act of helping people see that moments of interaction are not solely about something like user experience, but instead totally wrapped up in a flow that moves back and forth between the material and

symbolic platforms in the machinic, computational, and biological systems that come together in an assemblage like the videogame body.

This, for lack of a better term, “consciousness raising” in relation to the nonhuman is necessary because of what Lyotard calls a game. Writing in the latter half of the twentieth century, he is mostly speaking of language games, and he evokes the term in relation to debates about the nature of justice and where claims about justice can be found. This leads him into theorizing what he calls the prescription. Drawing from the governmental structures inherited from the Abrahamic tradition, Lyotard claims that the prescription is a call to do something that does not already exist in the world, which means that “all politics implies the prescription of doing something else than what is.”¹⁴⁸ In religious structures, these prescriptions are produced from gods and delivered through priests; in political structures, they are deliberated or declared and then delivered through enforcement agencies. What then of prescriptions that appear from nowhere? If all positions in the world are part of a game, then we must assume that even the most normalized of positions were delivered at some point. For example, the concept of the solitary human subject against the material object of *everything else* seems to be produced not from a particular historical shift, but rather from *nowhere at all*. This “transcendent” prescription is produced as well, and *made* transcendent through the vacation of the position of the sender; a prescriptive force is operating, but without a material originating point like a king or a priest for the recipients to argue with.¹⁴⁹ It is in those moments that we are left with our most pernicious assumptions.

One of the critical methods that Lyotard suggests to resist the prescriptive is to recognize the plurality of the field of the language game. There are prescriptions that come from hundreds of places, and selectively ignoring the most brutal (like those of the State) while privileging radical alternatives might produce a beneficial politics for humans. However, this language game does very little in helping recognize the ways that humans and nonhumans are caught up in intimate relations with one another. For example, it is very hard to think through what a prescription in relation to the videogame body might be in Lyotard's formulation.

However, Lyotard is very open in admitting that “prescriptions are not alone in causing the world to change.”¹⁵⁰ Another is *description*. He writes that

When a scientist describes something that no one has ever seen, the description may pass for purely fictional, and it is in a way, since the reality meant by the discourse will come into being only if names are attached to effects, and these effects exist only inasmuch as new discourses can be grafted onto them. Well, this too changes the world. I mean that a description can change the world. It changes it in another way, to other rhythms, but it changes it no less than a prescription.¹⁵¹

While what Lyotard is writing is still trapped within the language of, well, language, we can still glean an immense amount of insight from this passage. At this point the ethical call that I have made has been prescriptive around the concept of *life*. As I pointed out in the previous section, life is evacuated of meaning, and therefore becomes a signifier for political action; the naming of life is the act of prescribing a certain set of behaviors, or in other words, of establishing an ethics. As Lyotard points out, that is not the only way of changing the world, and the example of the videogame body points out the poverty of a prescriptive call—we are still left with the question “what do we do?”

This means that we need a secondary strategy alongside the prescriptive call for life, and that is a descriptive method that specifically elucidates the connections between things in an assemblage. We have to point at the interconnectedness of things, showing them to not be isolated objects happening to bump into one another, but instead things that are deeply invested in the relationships and proximity of other things. It is in this bifurcation that we can find points where humans, for example, can have positive or deleterious effects on assemblages like the videogame body, and more importantly, it is only through this model that we will be able to take into account the complexity of the assemblage and make judgments based on that complexity. Ethics here cannot be conceived of as the imposition of human desires over nonhumans, but of humans making speculative decisions about the lifeworld of assemblages *in which humans are crucial*, and then determining the actions that humans should be taking in those situations.

I do not possess easy answers, and Lyotard comes to an unhappy conclusion at the end of *Just Gaming* by resolutely resolving nothing at all. There is no ethical program here, no specific set of relations that are required in order to be truly ethical. Instead there is only a call to *recognize* and *speak about*, to see Jenn Frank and her Norms, to speculate about how that relationship and those like it that populate the videogame body might be made more powerful, more *resonant*, and how that resonance might be broken off before it shatters the apparatus absolutely.

NOTES

- ¹ A very concise summary of this debate can be found in Frans Mäyrä's *An Introduction To Game Studies*, 7-10.
- ² See Brendan Keogh, "Across Worlds and Bodies: Criticism in the Age of Video Games"; Timothy Crick, "The Game Body: Toward a Phenomenology of Contemporary Video Gaming."
- ³ Eric Zimmerman. "Narrative, Interactivity, Play, and Games: Four Naughty Concepts in Need of Discipline," in *First Person: New Media as Story, Performance, and Game*, eds. Noah Wardrip-Fruin and Pat Harrigan (Cambridge: The MIT Press, 2004), 154.
- ⁴ Here I am thinking of T.L. Taylor's qualitative interview work in *Play Between Worlds*.
- ⁵ See Johan Huizinga's *Homo Ludens* and Roger Caillois' *Man, Play, and Games*, respectively.
- ⁶ See James S. Hans' *The Play of the World*, which forcefully brackets games by virtue of their being perversions of the ontological process of play.
- ⁷ Jon Peterson, *Playing At The World: A History of Simulating Wars, People, and Fantastic Adventures From Chess to Role-Playing Games* (San Diego: Unreason Press, 2012).
- ⁸ Mark Nelson, "Soviet and American Precursors to the Gamification of Work," (paper presented at *MindTrek 2012* Tampere, Finland: October 3-5, 2012).
- ⁹ Tristan Donovan, *Replay: The History of Videogames* (East Sussex, England: Yellow Ant, 2010).
- ¹⁰ James Paul Gee, *What Video Games Have To Teach Us About Learning and Literacy* (New York: Palgrave-Macmillan, 2007).
- ¹¹ Jane McGonigal, *Reality is Broken: Why Games Make Us Better and How They Can Change the World* (New York: Penguin, 2011).
- ¹² Thomas H. Apperley and Darshana Jayemanne, "Game Studies' Material Turn."
- ¹³ Thomas H. Apperley and Darshana Jayemanne, "Game Studies' Material Turn," *Westminster Papers* 20, No. 1 (October 2012), 7.
- ¹⁴ *ibid* 7.
- ¹⁵ Martti Lahti, "As We Become Machines: Corporealized Pleasure in Video Games," in *The Video Game Theory Reader*, eds. Mark J.P. Wolf and Bernard Perron (New York: Routledge 2003), 158.
- ¹⁶ *Ibid* 163.
- ¹⁷ Bryan G Behrenshausen, "The active audience, again: player-centric game studies and the problem of binarism," *New Media & Society* published online (26 November 2012), 9.
- ¹⁸ Nick Montfort and Ian Bogost, *Racing the Beam: The Atari Video Computer System* (Cambridge: The MIT Press, 2009), vii.
- ¹⁹ An exemplary piece of work of platform studies is Jane Friedhoff's "Untangling Twine: A Platform Study."
- ²⁰ See Emma Witkowski, "On the Digital Playing Field: How We "Do Sport" With Networked Computer Games"; Bart Simon, "Geek Chic: Machine Aesthetics, Digital Gaming, and the Cultural Politics of the Case Mod."
- ²¹ Boris Groys, *Under Suspicion: A Phenomenology of Media* (New York: Columbia University Press, 2012), 33.
- ²² See Nick Dyer-Witheford and Greig de Peuter, *Games of Empire: Global Capitalism and Video Games* (Minneapolis: University of Minnesota Press, 2009); Edward Castronova, *Synthetic Worlds: The Business and Culture of Online Games* (Chicago: University of Chicago Press, 2005).
- ²³ See my discussion of Ian Bogost's work in chapter 3.
- ²⁴ "Richard Grusin at C21 Nonhuman Turn Conference," YouTube video, 25:45, posted by "Center for 21st Century Studies," August 9, 2012, <https://www.youtube.com/watch?v=iX8jzpJbnDI>. Transcribed by author.
- ²⁵ The uptake of these authors is too diffracted and expansive to account fully, but the work of Erin Manning, Brian Massumi, Steven Shaviro, Elizabeth Grosz, and Peter Sloterdijk have commented on these authors' corpuses recently.
- ²⁶ See Melissa Gregg and Gregory Seigworth, eds., *The Affect Theory Reader* (Durham: Duke University Press, 2010).
- ²⁷ Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency* (New York: Continuum, 2009).
- ²⁸ See Iain Hamilton Grant, *Philosophies of Nature After Schelling* (New York: Continuum, 2008).
- ²⁹ The contemporary theories of the nonhuman have almost completely dispensed with some of the most important philosophers and theorists of the latter half of the 20th century. Louis Althusser is almost totally absent, and figures like Martin Heidegger, Jacques Derrida, and Jacques Lacan are referred to less as master thinkers and more as perspectives to be read against.
- ³⁰ Eugene Thacker's *After Life* provides an extensive account of Aristotle's parsing of the human and nonhuman.

- ³¹ See Graham Harman, *Tool-Being: Heidegger and the Metaphysics of Objects* (Chicago: Open Court, 2002); Timothy Morton, *Hyperobjects: Philosophy and Ecology After the End of the World* (Minneapolis: University of Minnesota Press, 2013); Ian Bogost, *Alien Phenomenology, or What It's Like to Be A Thing* (Minneapolis: University of Minnesota Press, 2012); Levi R. Bryant, *The Democracy of Objects* (Ann Arbor: Open Humanities Press, 2011).
- ³² Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010); Elizabeth Grosz, *Becoming Undone: Darwinian Reflections on Life, Politics, and Art* (Durham: Duke University Press, 2011); Manuel DeLanda, *Intensive Science and Virtual Philosophy* (New York: Bloomsbury Academic, 2013).
- ³³ Steven Shaviro, *Without Criteria: Kant, Whitehead, Deleuze, and Aesthetics* (Cambridge: The MIT Press, 2009); Brian Massumi, *Semblance and Event: Activist Philosophy and the Occurrent Arts* (Cambridge: The MIT Press, 2011).
- ³⁴ Rosi Braidotti, *The Posthuman* (Malden, MA: Polity, 2013); Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies* (Cambridge: Harvard University Press, 1999); Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007); Luciana Parisi, *Contagious Architecture: Computation, Aesthetics, and Space* (Cambridge: The MIT Press, 2013).
- ³⁵ Timothy Morton posits in *Hyperobjects* that the core question of realism is this one: "is the light on in the fridge when you close the door?"
- ³⁶ Thomas S. Henricks, *Play Reconsidered: Sociological Perspectives on Human Expression* (Urbana: University of Chicago Press, 2006), 1.
- ³⁷ *ibid* 1.
- ³⁸ Anna Anthropy, *Rise of the Videogame Zinesters: How Freaks, Normals, Amateurs, Artists, Dreamers, Dropouts, Queers, Housewives, and People Like You Are Taking Back An Art Form* (New York: Seven Stories Press, 2012), 43.
- ³⁹ Ian Bogost, *How To Do Things With Videogames* (Minneapolis: University of Minnesota Press, 2011), 4.
- ⁴⁰ The first three chapters of Sutton-Smith's *The Ambiguity of Play* are on this subject.
- ⁴¹ Brian Sutton-Smith, *The Ambiguity of Play* (Cambridge: Harvard University Press, 1997), 42.
- ⁴² Mihail I. Spariosu, *Dionysus Reborn: Play and the Aesthetic Dimension in Modern Philosophical and Scientific Discourse* (Ithaca: Cornell University Press, 1989), 195.
- ⁴³ Jesper Juul, *Half-Real: Video Games Between Real Rules and Fictional Worlds* (Cambridge: The MIT Press, 2005), 23.
- ⁴⁴ *ibid* 36.
- ⁴⁵ Markku Eskelinen, *Cybertext Poetics: The Critical Landscape of New Media Literary Theory* (New York: Continuum, 2012), 259.
- ⁴⁶ *ibid* 261.
- ⁴⁷ *ibid* 263.
- ⁴⁸ Manuel DeLanda, "Ontological Commitments," *Speculations IV* (2013), 71.
- ⁴⁹ For a summary of the history of speculative realism, see Graham Harman "The Current State of Speculative Realism."
- ⁵⁰ Manuel DeLanda, *Philosophy and Simulation: The Emergence of Synthetic Reason* (New York: Continuum, 2011), 184.
- ⁵¹ Gilles Deleuze and Felix Guattari, *A Thousand Plateaus, v.2 of Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987), 80.
- ⁵² *Ibid* 80.
- ⁵³ *Ibid* 84.
- ⁵⁴ *Ibid* 87.
- ⁵⁵ A full account of the ways in which Gilles Deleuze's philosophy lends to a critique of representation can be found in Dorothea Olkowski, *Gilles Deleuze and the Ruin of Representation* (Berkeley: University of California Press, 1999).
- ⁵⁶ *Ibid* 86.
- ⁵⁷ *Ibid* 86.
- ⁵⁸ Manuel DeLanda, *Intensive Science and Virtual Philosophy*, 66-67.
- ⁵⁹ *Ibid* 67.
- ⁶⁰ Manuel DeLanda, *A New Philosophy of Society: Assemblage Theory and Social Complexity* (New York: Continuum, 2006), 10.
- ⁶¹ *Ibid* 10-11.

- ⁶² Ibid 40.
- ⁶³ Gilles Deleuze, *Foucault* (Minneapolis: University of Minnesota Press, 1986), 34.
- ⁶⁴ Ibid 37.
- ⁶⁵ DeLanda, *A New Philosophy of Society*, 30.
- ⁶⁶ Ibid 39.
- ⁶⁷ Ibid 56.
- ⁶⁸ Ibid 56.
- ⁶⁹ Elizabeth Grosz, *Chaos, Territory, Art: Deleuze and the Framing of the Earth* (New York: Columbia University Press, 2008), 19.
- ⁷⁰ Ibid 20.
- ⁷¹ Wai Chee Dimock, "A Theory of Resonance," *PMLA* 112, No. 5 (October 1997): 1061.
- ⁷² Ibid 1061.
- ⁷³ Ibid 1064.
- ⁷⁴ "23. Resonance," The Richard Feynman Lectures in Physics Vol.1, accessed April 9, 2014, http://www.feynmanlectures.caltech.edu/I_23.html
- ⁷⁵ ibid
- ⁷⁶ ibid
- ⁷⁷ latheum, February 13, 2013, comment on "*Bad Rats: The Rat's Revenge*" aggregation page, *SteamCritics.com*, http://www.steamcritic.com/review/Bad_Rats:_the_Rats'_Revenge-34900.
- ⁷⁸ tstdj, December 12, 2012, comment on "*Bad Rats: The Rat's Revenge*" aggregation page, *SteamCritics.com*, http://www.steamcritic.com/review/Bad_Rats:_the_Rats'_Revenge-34900.
- ⁷⁹ "Bad Rats (PC)", *On The Dark Side of Things*, December 20, 2012, <http://otdsot.blogspot.com/2012/12/bad-rats-pc.html>.
- ⁸⁰ DeLanda, *Philosophy and Simulation*, 184.
- ⁸¹ Deleuze and Guattari, *A Thousand Plateaus*, 10.
- ⁸² Ibid 10.
- ⁸³ Ibid 10.
- ⁸⁴ Grosz, *Chaos, Territory, Art* 22.
- ⁸⁵ Jakob von Uexküll, *A Foray Into The Worlds of Animals and Humans with A Theory of Meaning* (Minneapolis: University of Minnesota Press, 2010), 190-191.
- ⁸⁶ Staffan Björk and Jesper Juul, "Zero-Player Games, or What We Talk About When We Talk About Players." Paper presented at the Philosophy of Computer Games Conference, Madrid 2012. <http://www.jesperjuul.net/text/zeroplayergames/>
- ⁸⁷ James J. Gibson, *The Ecological Approach to Visual Perception* (Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., 1986), 127.
- ⁸⁸ Ibid 127.
- ⁸⁹ Ibid 135.
- ⁹⁰ An explanation of Procedural Death Labyrinth can be found at proceduraldeathlabyrinth.com
- ⁹¹ Mark Silverman and Bart Simon, "Discipline and Dragon Kill Points in the Online Power Game," *Games and Culture* 4, No.4 (2009).
- ⁹² Ibid 363.
- ⁹³ Ibid 369.
- ⁹⁴ Brad Millington, "Wii Has Never Been Modern: 'active' video games and the 'conduct of conduct'," *New Media Society* 11, No.4 (2009): 629.
- ⁹⁵ I am thinking here of the Marxist and post-Marxist strains of analysis that attempt to find clear lines of oppression in order to reveal them to the oppressed.
- ⁹⁶ Michel Foucault, *Psychiatric Power* (New York: Picador, 2006), 22.
- ⁹⁷ Ibid 22.
- ⁹⁸ Ibid 40.
- ⁹⁹ Ibid 44.
- ¹⁰⁰ Ibid 47.
- ¹⁰¹ Michel Foucault, *Discipline and Punish: The Birth of the Prison* (New York: Vintage, 1995), 135.
- ¹⁰² Ibid 136.
- ¹⁰³ Ibid 136.
- ¹⁰⁴ Ibid 170.

- ¹⁰⁵ Ibid 185.
- ¹⁰⁶ Foucault, *Psychiatric Power*, 47.
- ¹⁰⁷ Ibid 47.
- ¹⁰⁸ Foucault develops this concept throughout *Discipline and Punish*.
- ¹⁰⁹ Gilles Deleuze, "Postscript on Control Societies," in *Negotiations* (New York: Columbia University Press, 1995), 178.
- ¹¹⁰ Ibid 179.
- ¹¹¹ Ibid 179.
- ¹¹² Ibid 180.
- ¹¹³ Rita Raley, *Tactical Media* (Minneapolis: University of Minnesota Press, 2009.), 22.
- ¹¹⁴ Alexander Galloway, *Protocol: How Control Exists After Decentralization* (Cambridge: The MIT Press, 2004), 20-24.
- ¹¹⁵ Gilles Deleuze, "Postscript on Control Societies," 182.
- ¹¹⁶ Ibid 182.
- ¹¹⁷ Michel Foucault, *The History of Sexuality Volume 1: An Introduction* (New York: Vintage, 1990), 139.
- ¹¹⁸ T.L. Taylor, *Raising the Stakes: E-Sports and the Professionalization of Computer Gaming* (Cambridge: The MIT Press, 2012), 37.
- ¹¹⁹ T.L. Taylor, "The Assemblage of Play," *Games and Culture* 4, No.4 (2009).
- ¹²⁰ T.L. Taylor, *Raising the Stakes*, 39.
- ¹²¹ Ibid 41.
- ¹²² Ibid 44.
- ¹²³ Dorion Sagan, Lynn Margulis, and Ricardo Guerrero, "Descartes, Dualism, and Beyond" in *Dazzle Gradually: Reflections on the Nature of Nature* (White River Junction, VT: Chelsea Green Publishing, 2007), 204.
- ¹²⁴ Ibid 204.
- ¹²⁵ Manuel DeLanda, "Nonorganic Life," *Zone* (1992): 144.
- ¹²⁶ Noam Chomsky and Michel Foucault, *The Chomsky-Foucault Debate On Human Nature* (New York: The New Press, 2006), 6. Italics in original.
- ¹²⁷ Eugene Thacker, *After Life* (Chicago: University of Chicago Press, 2010), 268.
- ¹²⁸ Ibid 22.
- ¹²⁹ Ibid 21.
- ¹³⁰ Mel Y. Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect* (Durham: Duke University Press, 2012), 3.
- ¹³¹ Jane Bennett, *Vibrant Matter*, 108.
- ¹³² Ibid 120.
- ¹³³ Ian Bogost, *Alien Phenomenology*, 74.
- ¹³⁴ Ibid 77.
- ¹³⁵ Ibid 77.
- ¹³⁶ Ibid 77.
- ¹³⁷ In Bennett's case, this does not seem to be a problem. She advocates a "careful course of anthropomorphization" in the closing paragraph of *Vibrant Matter*.
- ¹³⁸ Jane Bennett, "Systems and Things: A Response to Graham Harman and Timothy Morton," *New Literary History* 43 (2012): 228.
- ¹³⁹ This is not merely abstract pointing, as the recent *Robot Ethics: The Ethical and Social Implications of Robotics* clearly demonstrates.
- ¹⁴⁰ Jenn Frank, "Playing God: On Death, Motherhood and *Creatures*," *Unwinnable* (January 27, 2012), np.
- ¹⁴¹ Ibid np.
- ¹⁴² Ibid np.
- ¹⁴³ Ibid np.
- ¹⁴⁴ Ibid np.
- ¹⁴⁵ Ian Bogost, *Alien Phenomenology*, 74.
- ¹⁴⁶ Jean-François Lyotard, *The Inhuman* (Stanford: Stanford University Press, 1991), 142.
- ¹⁴⁷ Ibid 143.
- ¹⁴⁸ Jean-François Lyotard and Jean-Loup Thébaud, *Just Gaming* (Minneapolis: University of Minnesota Press, 1985), 23.
- ¹⁴⁹ Ibid 72.

¹⁵⁰ Ibid 51.

¹⁵¹ Ibid 51.

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