

IMAGINED FORTRESSES: VIDEO GAMES AS LANGUAGE

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To my mom and dad, with love.

... dans un recoin obscure de l'une des tours ce mot, grave à la main sur le mur:

ΑΝΑΓΚΗ.

— Victor Hugo, *Notre-Dame de Paris*

A NOTE ON TRANSLATIONS AND SPECIAL CITATIONS

This dissertation makes significant use of texts in translation, and their citation deserves an explanatory remark. All quotations in the body of the dissertation are rendered in English using the translations cited at the end of this document. Where page numbers appear in parenthetical citations, they universally refer to works in translation. Where words and phrases are rendered in the original language, they are italicized in the text or italicized and bracketed if they appear within a quote. (Italics for emphasis are present in the original text unless otherwise noted.) Citation of the original, un-translated works in question are likewise listed in the "Works Cited" section. In the case of Ancient Greek, transliterations to the Latin alphabet are my own. Where French, Spanish, Italian, and Portuguese are rendered in the original, I have preserved typographical features such as diacritics.

Several works cited in this dissertation deserve special note. Citations of Plato are given using the Stephanus pagination (for example, 2.369a). Where Wittgenstein's *Tractatus Logico-Philosophicus* is cited, the numeration refers to the order of the work's propositions (for example, 5.632). Likewise, citations from Wittgenstein's *Philosophical Investigations* use textual subdivisions demarcated by a section symbol (for example, §72). In each of these cases, this dissertation follows typical and traditional styles, which are intended to unify citations across disparate editions and translations. Lastly, in the case of Mallarmé, the reader will find no exclusively French edition listed as a reference because the edition cited uses a facing-page translation.

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LIST OF ABBREVIATIONS

- AV “The Actual and the Virtual” (Deleuze and Parnet)
- BDT “Building, Dwelling, Thinking” (Heidegger)
- D *Dissemination* (Derrida)
- DL “A Dialogue on Language Between a Japanese and an Inquirer”
(Heidegger)
- DR *Difference and Repetition* (Deleuze)
- L “Language” (Heidegger)
- OG *Of Grammatology* (Derrida)
- PAT “The Provenance of Art and the Destination of Thought” (Heidegger)
- PI *Philosophical Investigations* (Wittgenstein)
- PMD “... Poetically Man Dwells...” (Heidegger)
- T *Tractatus Logico-Philosophicus* (Wittgenstein)
- W “Words” (Heidegger)
- WD *Writing and Difference* (Derrida)

SUMMARY

This dissertation argues that video games, as virtual worlds, are composed and experienced as language, and that they function as textual and philosophical machines essential to understanding virtuality, language, and finitude in today's world. To this end, I describe how language manifests variously as material for video game design and play. In one regard, I argue that worlds emerge from the prescription of certain linguistic limits: the nonsensical, the inexpressible, or the impossible. Far more than agency and immersion, delimitation within the constraints of a video game's language world defines the act of play. "Can I jump up there? Can I pet this dog?" In these cases, either the language of the game world holds the answers to these questions, and it will reveal them in turn, or it takes the questions themselves to be meaningless. The ledge is too high. You see a dog, but you cannot pet her. Traversing these limits, players paradoxically attempt to use language to escape language. As part of my comparative method, I locate a literary precedent for this paradox in the fiction of Mallarmé, Borges, Lispector, and Calvino. Mirroring the theoretical preoccupations of their poststructuralist counterparts, these postmodern authors reveal the implication of language in compounding formal and material spheres. Thus, this dissertation concludes that video games are virtual worlds in language which reveal their own enclosure and explore the very nature of delimitation.

CHAPTER 1. INTRODUCTION

You are sitting across a table from the Italian postmodern writer Italo Calvino. On the opposite side of this otherwise featureless room, behind the writer, are thousands upon thousands of pages. Some pages are stacked from the floor to the ceiling in irregular columns; others are loose, strewn about, or slipped into various folders and binders. You can see, albeit not very well, that each sheet of paper is covered with orderly type-written text.

Calvino himself is constantly at work. In front of him is an electric typewriter at which he now types, now takes hold of his page, now sets it atop a growing column to his side, now loads another. At times he stops typing and stretches; at other times he stops and tears apart the page he is working on. But always, always, he is at work.

Now and then Calvino hands you a page to read. In simple, declarative sentences, he describes a fantastical world. In this one, for instance, he writes about a white farmhouse atop a hill. Although you have tried to respond aloud to the text (and the circumstances), the author pays you no mind.

Your only avenue for communication is equally strange. Affixed to your end of the table is another piece of paper containing a finite list of words; next to this sheet is a stack of blank paper and a pen. You have intuited by now that Calvino will accept your communication only in the form of words from the list written with the pen on a sheet of paper slid across the table to him. Writing him a note with any word that is not on the list will provoke no response. But upon receiving the proper kind of note he will look over

your correspondence, consider it for a moment, and set off from his seat in search of some very particular page from his vast collection.

Knocking over stacks and leafing through folders, Calvino eventually finds his mark, returns to his seat, and loads it at once into the typewriter. What he types, in your imagination anyway, references your last written communique. Indeed, most of the words on the list are verbs, you note—such that, after reading about the white farmhouse, you write a note that reads “walk,” and Calvino returns you a description of a path leading up to the house and of the house viewed up close.

Presently, Calvino hands you a page describing a dog. You want to read a description of petting the dog—the feel of its fur, the happy wagging of its tail—but the word “pet” is absent from the list on the table. You are frustrated, so you write another word instead. In this way things proceed, as they have proceeded now for hours.

Now imagine that, instead of passing you the pages directly, Italo Calvino instead passes them to a sketch artist to his left. Reading the page, the sketch artist sets to work drawing a representation of what the page describes on a canvas facing you. Still, you pass your notes to the writer, but your attention is otherwise focused on the artist and the drawing.

Now imagine that the sketch artist shares the page with yet another figure, this one seated behind a large sound mixing console. From a selection of tapes commensurate to Calvino’s collection of pages, the mixing engineer plays segments of sound and music befitting the scene of the written text and the sketch artist’s rendering.

The dog appears on the canvas now, in front of the farmhouse, accompanied by the whirl of wind and a few stray barks of excitement. Nevertheless, you cannot pet the dog. The list in front of you remains the same. There is still no “pet” available. Now imagine that your list of words has been transformed into a series of arbitrary electrical inputs: a dozen buttons, above which are labels onto which each of the words from your list have been transferred. The “walk” button, apart from its label, looks exactly like the others. Your inputs, you imagine, are transmitted to Calvino by these means. Still no “pet.”

Now imagine you can no longer see Italo Calvino. His side of the desk is obscured behind a curtain. So too has the mixing engineer been hidden. And the sketch artist. In front of you now is a video screen on which you are shown a live feed of the canvas, albeit without the artist. Drawings appear now by themselves. From speakers below the screen you hear the work of the invisible engineer. And at your fingertips remain the controls. You are playing a video game, as you have been all along.

Game designers and critics often speak of video games in terms of “objects,” “verbs,” and other parts of speech. On the one hand, this is simply metaphorical shorthand: we talk about jumping in *Super Mario Bros.* (Nintendo R&D4) as if we were talking about the word “jump.” But this device is under-theorized. Does it make sense to compare game mechanics to language? If so, why? One path forward takes, as its starting point, a philosophical approach to virtuality. Deleuze defines the virtual as *real, but not actual*. Although his definition remains just one point on a long trajectory of the word—from *vir*

to *virtù* and virtue—it reads today not unlike our ordinary sense of the word, meaning “in effect.”

Setting aside, for the moment, terms of art like “virtual reality,” we can say plainly enough that a video game is one kind of virtual world—a world, in effect. But this being virtual is not unique to video games, which hold virtuality in common with other kinds of worlds, like those found in tabletop role-playing games, or even those of children playing pretend. Virtuality, in these cases, is a function of language. A virtual world is one that is composed and experienced in language. And the same holds true for video games.

The connection between language and video games, on the basis of virtuality, provides us with an answer to the questions above. Perhaps more notably, however, it puts us in conversation with a lineage of continental thought—exemplified by Heidegger and Derrida among others—which takes seriously the structuration of the (actual) world through language. Video games become literal instantiations of such thought, whereby players experience, by way of computation, the figuration and configuration of (virtual) worlds in language.

To be sure, there are other kinds of language-worlds, such as those found in novels, in poems, in stories, and in myths. What distinguishes the virtual world from these other language-worlds is that the virtual world is uniquely *explored* in language. Parts of the virtual world, inasmuch as they are built in language, are revealed by language. An ancient example of virtuality can be found in Plato’s *Republic*, wherein Socrates and his interlocutors construct and explore an “ideal city in speech.” The rule of their dialogue is *necessity*. Having outlined their citizenry, for instance, they turn to the necessary question

of who will defend it. Socrates and his interlocutors, like ancient tabletop role-players, build and explore a world discursively and dialectically. I discuss these points in Chapter Two.

A video game is not built or explored in speech, however. The language of a video game is *written*—and in several ways, as I describe in Chapter Three. A video game, as its name implies, is written, in one sense, on a screen. Writing on-screen can happen by way of scan lines, or pixels, which produce the characters and images we see. Less visibly, a video game is also written in code, and it needs to have some way to record the state of play to a memory. Such kinds of writing comprise inscription: they record onto a material substrate. But another kind of writing reveals itself in the phenomenal experience of play, and it is this phenomenal writing, described by Derrida as the play of language itself, which truly realizes the virtuality of the video game's world. This kind of writing differs from speech in that it lacks a speaking subject. Nothing, or no one, is announced by writing itself. Video games, in that they lack speakers like Socrates in the *Republic*, are languages without subjects. Chapter Four presents an analysis of this power of language, which is ultimately responsible for the phenomena of virtual worlds without subjects.

A question is raised: if a virtual world in writing is without a subject, where is the player positioned? The basic relationship of the player to the world of a video game is exemplified by the screen itself. The player is not *in* the screen, of course, but plays *at* the screen. In other words, because of the screen, the player is always positioned at the visual limit of the world. This relationship, in its delimitation of the world, is analogous to the position of the player in language, as we will see in Chapter Five. The play of video games takes place not in their virtual world, but at the limit of that world. Wittgenstein, regarding

the relationship of the subject to a language-world, writes that the subject is like an eyeball, positioned not within, but at the limit of its field of vision (T, 5.632-5.6331). In language and in video games subjectivity is the limit itself. Limited as they are, the world of the video game is utterly enclosed: its language is always prescribed as a finite set. Heidegger, speaking to delimitation and finitude, writes that humans speak only by responding to language always already present. Similarly, the player experiences the being of the virtual world of a video game only in response to the language that constitutes it.

The exploration of the limits of a virtual world, at the limit of the virtual world, is play. Play, therefore, becomes a movement along the limit. This movement of the player, however, is double: in exploring the limit, it seeks to escape it, but in moving along the limit, it is always reinscribing it. In that the virtual world of a video game is written, it becomes a literal text, and in that the player explores the limit of the world, the player becomes the literal writer of the text. A popular Twitter account, @CanYouPetTheDog, documents video games in which the player can and cannot pet dogs where dogs appear. In exploring the limit of canine affection, the player reinscribes it, in the language of the video game, into being. Indeed, the player who explores the limits of a world through the play of language begins to resemble the literary subject of authors like Stéphane Mallarmé, Jorge Luis Borges, Italo Calvino, and Clarice Lispector: struggling, albeit within the confines of a story that is not itself virtual, to write their own escape from a virtual force of language that delimits them. I undertake a close reading of works from these four authors, in light of the force of language, in Chapter Six.

Thus, the intent of this dissertation is threefold. First, it takes recent discursive developments in game design and criticism—developments which seek verbal metaphors

like “objects” and “verbs” to describe video game mechanics—and grounds them in a comprehensive theory of language in order to reveal that these metaphors are not at all metaphorical but seem so natural precisely because the phenomenal experience of playing video games is linguistic. Second, this dissertation recuperates the poststructuralist tradition in language philosophy and literary theory to radically revise the cybernetic structuralism of orthodox game studies. In doing so, this dissertation suggests that language and textuality share common ground with the field’s preeminent forms of cultural critique, which view video games in material, political, and social contexts, and which, in many respects, represent a continuation of the poststructuralist project of critical theory. Third, this dissertation advances the medium of the video game as a relevant and essential site of contemporary literary theory and continental philosophy, which have broadly ignored the aesthetic objects brought about by computation in favor of discussing the abstract impacts of computation and networked computing. In the end, this dissertation argues that the video game is a productive philosophical machine.

It has long been imagined that the ideal video game is one wherein anything is possible, one wherein players possess absolute agency in a totally immersive world. Nothing could be further from the truth. Yet to understand this is not to deny video games their peculiar pleasures. It is, instead, to recognize finally that the video game is what it is: an experience of inescapable and profound delimitation which readily reveals the scope and nature of its delimitation. The medium whereby this revelation occurs is language; and the force whereby this language distances a video game’s player from the center of its world—whereby it eliminates the agency of that player to make sense of anything which

has not always already been prescribed—emerges as none other than the same patron to whom Plato paid homage, *necessity*.

1.1 Game Studies and Poststructuralism

Attempts to reconcile the relationship between games and language have thus far been partial and disjunctive. Nonetheless, these disparate approaches tend to revolve around a shared vocabulary. Most notably the word "text" is deployed in a variety of contexts, often with little regard to its essential connection to language. Considering the relationship between games and language, one encounters textuality as a shared function of two principal avenues of research. In the first place is structuralism, which seeks to anatomize the structure of the video game into its elemental components, such as rules, story beats, or hardware platforms. In the second is cultural studies, which seeks to survey the video game as a form of cultural production among other cultural productions and systems. The fact that both structuralism and cultural studies make use of the word "text" to define their objects of study, albeit to different ends, nonetheless assures us that we are pointed in the right direction as concerns the relationship of games and language.

In order to synthesize the textuality of these two paradigms, structuralism and cultural studies, we must consider how their division broadly aligns with historical disjunctions in the humanities. Throughout the 20th century, effectively until its final quarter, varieties of literary theory, critical theory, and film theory were contained within what we can imagine as a bubble of structural linguistics, sometimes called "grand theory." Within this mode, such humanistic inquiries sought to understand their respective media by isolating what was most unique and most elemental in each case: the play of color in

painting, prosody in poetry, or montage in cinema. The method was indebted to structural linguistics in that it developed generalizable theories about uncountable wholes by analyzing some subset of constituent parts, much in the way that linguists had begun to do with syntax and semantics.

Partway through the 20th century, various disciplines began to break away from the central tenets of structuralism, eschewing the kind of grand theory it purported. They differentiated themselves not just from linguistics, but from each other. The result was an explosion of "studies," each developed in accordance with methodologies tailored to individualized objects and histories. Film theory became cinema studies, critical theory became cultural studies, and out of a conjunction of influences was born media studies, alongside which developed game studies. It should not be assumed that these divisions happened all at once, however, and it is precisely because they did not happen all at once that we find early experiments with game studies which effectively reflect the structuralist paradigm the discipline would eventually move away from.

Meanwhile, concurrent more or less with the dissolution of grand theory, poststructuralism in literary theory and continental philosophy would extend language itself beyond the limits imposed upon it by strict linguistic doctrine, rendering it as a material medium by which we experience the world. The basic idea: in that we exist in the world, we make sense of the world through language. It is this poststructuralist tradition to which this dissertation is most indebted, and it is to this tradition we must turn if we are indeed to get to the bottom of the linguistic underpinnings of both structuralist and cultural studies approaches to video game textuality. In effect, the historical shuffle out of which game studies was born, the movement away from structural linguistics and grand theory

toward differentiated media and cultural studies, causes game studies to miss out on the linguistic reconciliation of poststructuralism, that is, the idea that language exists at once as a combinatorial system and as a discursive environment. Thus, recuperating the ideas of poststructuralism emerges as a productive way to synthesize our disparate understandings of games.

What is all the more reason for investigating video games using a poststructuralist lens is that poststructuralism and video games invite the exact same question: how does a world emerge from language? We have in front of us these strange conjunctions of hardware and software called video games. They are written in coding languages, they are inscribed on circuitry, and we interact with them as players through the input of arbitrary signs (just take a look at your computer keyboard or the nearest game controller). Language and writing are integral to the material instantiation of the video game, and indeed from this linguistic foundation a world, a virtual world, emerges. As a mode of inquiry, poststructuralism is uniquely suited to investigate not just how such a world comes to be, but how we thereby experience it as a phenomenon.

The basic thesis of this dissertation is twofold. First, as virtual worlds, video games are composed and experienced as language. And second, video games operate as textual and philosophical machines to illuminate virtuality, mediation, and finitude. In the next sections of this introductory chapter, I provide an overview of historical approaches to video game textuality and its basis in language. In the chapters that follow, I engage with five themes that are essential to understanding how a world emerges from language in the case of the video game: virtuality, writing, world, limit, and necessity.

1.2 Structuralist Textuality

Most reckonings of the place of language in video games focus on the textuality of the medium. In recent years, however, the direction of textual analysis in game studies has tended toward purely cultural criticism. Although this movement is analogous to similar trends in literary and media studies more broadly, there remains a stark contrast between today's discourse of games-as-cultural-texts and yesterday's games-as-formally-textual. The textuality of games presently seems to be regarded like any other meaningful product of culture, which does it a disservice. Something has been lost in this transition, and it is the intent of this dissertation to investigate what. The proper analysis of games as texts—not just as cultural productions, but as linguistic texts in their own right—was left undertheorized by the shifting winds of disciplinarity. As Bogost has written in “Game Studies, Year Fifteen,” structuralism was achieved and more or less reified via the outwardly opposed approaches of ludology and narratology. Yet, as Anable has argued in *Playing with Feelings*, game studies at large appears to have left off without fully reckoning with the implications of poststructuralism: the disappearance of reference, the infinite chain of signifiers. Whereas Anable locates the missing link in the relationship between cybernetics and affect theory, I propose its location to be amidst virtuality and language. In the following sections, I survey the landscape of game studies through its various approaches to textuality in order to highlight where a more comprehensive notion of language would serve to clarify longstanding problematics.

One of the earliest and most influential treatments of digital media and textuality is Aarseth's *Cybertext*. This work pioneered and popularized much of the terminology by which early debates in game studies were fought; in some cases, it introduced the debates

themselves. It's worth mentioning that Aarseth's theories, as applicable as they would become to games, were not at all intended to apply to them alone. The Aarseth of *Cybertext* is writing at the height of hypertext fiction, and IF more broadly. While games are relevant and implicated in his theoretical project, they are rarely his only focus—at least in this work. In light of the dwindling relevance of hypertext forms, what stands out today is how textual theorists studying video games perpetuate the same continuum of textuality, distinguishing what are considered proper texts from games with textual elements from interactive experiences devoid of cultural significance. Aarseth's work never instantiated this approach, but it does set its terms.

Aarseth's principal contributions are, as he calls them, “the two neoteric terms, *cybertext* and ergodic” (1). The former combines information feedback loop of cybernetics with structuralist notions of textuality: input and output merge with signifier and signified within “the mechanical organization of the text” (1). The word “ergodic” for its part refers to the kind of interaction afforded to a user by such an organization. Derived from the Greek *ergon* and *hodos* (“work” and “path,” respectively), ergodic literature requires “nontrivial effort... to allow the reader to traverse the text” (1). In other words, cybertexts operate on a feedback loop whereby input mechanically or digitally determines significant output, and whereby this input, that of the reader or user, is one way or another more involved than reading through pages in a book or passively receiving audio-visual stimulus. Aarseth goes on to describe his frustration with contemporary literary theorists, most of them poststructuralists, who confused “the variable expression of the nonlinear text” he was attempting to describe with “the semantic ambiguity of the linear text” with which they were familiar (3). In the latter case, the meaning of the work was simply contingent

on the experience and interpretation of the reader, whereas in the former the very structure of the work was contingent on the experience.

Aarseth points on several occasions to non-digital, non-mechanical examples, such as the work of Queneau or the *I Ching*. In contrast to these works, which necessitate some involvement, the ordinary reader of an ordinary text “however strongly engaged in the unfolding of a narrative, is powerless,” writes Aarseth (4). Here, then, we find one origin of the association between textuality and action that has haunted the discourse and discipline of game studies: the idea that influence on the outcome of a text, or the illusion thereof, is the distinguishing feature of traditional texts from their cybernetic or virtual companions—and, significantly, that this influence marks a definitive action overtaking a rather passive textuality. In an especially revealing paragraph, Aarseth writes:

The study of cybertexts reveals the misprision of the spacio-dynamic metaphors of narrative theory, because ergodic literature incarnates these models in a way linear text narratives do not. [...] The cybertext reader *is* a player, a gambler; the cybertext *is* a game-world or world-game; it *is* possible to explore, get lost, and discover secret paths in these texts not metaphorically, but through the topological structures of the textual machinery. This is not a difference between games and literature but rather between games and narratives. (4f)

While Aarseth admits that the line between these categories is by no means clear-cut, what remains curiously absent from his conception is an explanation of the role of language itself, something essential to the poststructuralists like Barthes and Derrida to whom the very concept of cybertext is indebted. If the cybertext is to be understood as the

proper topological and phenomenological incarnation of the literary labyrinths of Eco, Calvino, and famously Borges, then we cannot ignore the material out of which they are, physically or virtually constructed. Language is in play; and play is in language.

In only one regard, Aarseth attempts to account for language, but the results are rather structuralist. Considering a text as “any object with the primary function to relay verbal information,” (62) Aarseth defines the cybernetic elements of this communicative object as “scriptons,” or “strings [of signs] as they appear to readers” and “textons,” or “strings as they exist in the text” (62). Meanwhile, the “traversal function” of a text dictates “the mechanism by which scriptons are revealed or generated from textons and presented to the user of the text” (62). In this system, the ergodic process of the cybertext reader or player consists of the interplay between the scriptons one sees, the textons one does not, and the traversal function that runs between them. Such an approach to textual anatomy—very much in the vein of the structuralist projects of early Barthes—reveals an attention to signification on a mechanical level that rarely rises to the occasion of genuine meaning. It approaches the signs without explaining how one actually derives meaning from them, assuming rather that they must point to something or other. Perhaps, in this respect, Aarseth assumes a reader’s familiarity with broader semantic theory, but his own theory, for its part, seems to ignore the rupture of the concept of the sign that preceded it.

Aarseth’s semiotics is limited because it takes for granted that the signs present in the cybertext appear to us as signs that are or that resemble those with which we are already familiar. His theory has no room for the unfamiliar sign or the unfamiliar system of signification. It ignores what others have posited as the essence of virtual play, namely, the puzzling out of the sensible. Aarseth assumes the cybertext will communicate with us in a

sign system we already understand, and he assumes that this recognition and comprehension is the very locus of the meaning of the signs in question, begging the question of the definitive referent. The uncertainty posed by Aarseth's ideal player, "Let's see what happens when I do *this*," (4) is perhaps better phrased, "Let's see if this is a sign—let's see if this makes sense." This revised motivation, far more than the repetitive revelation of signs we already and immediately recognize, is the fascinating play of language found only in virtuality.

A later work of textual criticism, Ensslin's *Literary Gaming* builds on Barthes' distinction between readerly and writerly texts; he proposes playerly to describe "digital books that can be played," and readerly to describe "digital games that can be read" (1). The term literary gaming refers to both of these possibilities: "where literariness in the sense of linguistic foregrounding is part of the authorial intention and where human language (spoken or written) plays a significant aesthetic role" (2). These games, he goes on, are proper works of "verbal art" in that they share "an aesthetic concern with structural and thematic elements of their own form, genre, or medium," and in that they self-reflexively acknowledge this concern (2). Thus, Ensslin's definition is at once inclusive and narrow. Inclusive, in that it accounts for multifarious forms: console games to combinatorial poetry. Limited, in that it relies on a vague notion of literary intent: easy to find in Queneau, harder for Nintendo. Even if we were to disregard the intentional fallacy, we stumble again on the necessary self-consciousness of Ensslin's taxonomy. It is by no means unreasonable that Ensslin would limit his framework to the analysis of what is effectively avant-garde: artwork that acknowledges itself in either modernist or postmodernist capacities. Furthermore, this approach leaves aside the profitable critique of

language in the most ordinary of cases, a concern which proves to confound all assumptions, as we shall soon see. Self-consciously himself Ensslin excludes “videogames that we cannot read in the sense of close-read and close-play for their artistic verbal and ludological forms and contents” (3). One has to ask, are some texts really not worth reading? What makes something properly unreadable?

Ensslin’s taxonomy soon expands, albeit to similar effect. “Game art” he contrasts to “art games”: the former, products of the art world, the latter “actual video games” (4). Actual, in the sense of containing “ludic mechanics,” or “digitally programmed or analog mechanisms that afford gameplay” (5). Ensslin constructs a “literary-ludic spectrum” to account for these variations within his admittedly narrow band (43ff). Building on a distinction outlined by Huizinga and Caillois between unregulated play and its codification into games, Ensslin takes his readers on a tour of ludic literary styles—Oulipo, modernist stream of consciousness, postmodern pastiche. Ensslin argues that what have been deemed game-like texts are more properly “playful activities: literary play between reader, writer, and text” (27). He applies the same logic to his overview of play as a component of literary theory and philosophy: Kantian imagination, Nietzsche’s Dionysus, Wittgenstein’s language games, Gadamer’s aesthetics, Fink’s play as world-symbol, and poststructuralist bricolage and deconstruction (20ff).

Ensslin concludes, however, that “ludic (print) literature in the traditional sense... does not provide the ludic mechanics... needed for an artifact and users’ interactions with it to merit the terms *literary game*, *gameplay*, or *gaming*” (28). His case in point: while rereading a print text may afford a new interpretation, playing or replaying a game is an entirely different experience each time. Indeed, he writes, “the rules and structures of a

game open up an almost infinite array of gameplay experiences, which are far more diverse phenomenologically than different readings of a standard (print) text—no matter how literary its intent” (28). One can see how Ensslin’s scaffolding leads him to this hyperbolic conclusion, but its overwrought delineation leads him to mistake a scant few taxonomical reference points for a representative sample of a whole. He misses, in other words, the point that Heidegger, Derrida, and Wittgenstein are making (introducing no small amount of unnecessary confusion to the German *Spiel*, meaning “play” and “game”)—the point, namely, that language itself is the playful game of the world. If this were indeed our starting point, worlds actual and virtual, we would find that the same principle applies to all sorts of games, video games among them. The play has to do with the game in ways far more nuanced than the mere introduction of rules, points, and win-lose conditions. This is not a shared quality of games and language, but evidence that they are very much alike. Ensslin’s graph, which plots various items on axes of literariness and ludicity, suffocates its subjects with its narrow nomenclature, missing the ordinary ludicity of, say, a common cookbook, or the unspoken literariness of a mindless phone game.

This restriction is all the more evident in Ensslin’s description of “literary games,” which “have to be seen as a highly regulated, rule-bound, and structured subtype of literary play” (41). Such a game “embeds literary elements but has conceptual and interactive emphasis on the ludic structures of the artifact at hand” (41). Yet again, returning to the philosophers of language Ensslin cites, one asks what sort of literary element does not itself possess an underlying ludic structure? Indeed, what type of ludic structure has no basis in language? Ensslin himself cites the very philosophers, theorists, and authors who pose this question again and again. The reason Derrida, Wittgenstein, and others were so concerned

with language was not because they thought it separate from other human activity, like games. But because they considered it inextricable from such activity. A thorough understanding of the relationship between games and literature cannot be founded on a principle of exclusion, based on the perception of literariness. Rather, it must be grounded in the essential analogy of play and language. Ensslin claims “to conceptualize the main phenomenological differences between reading and gaming” (39), but this phenomenological difference reveals itself to be artificial. If we take poststructuralism seriously (and, granted, there are as many reasons for doing so as for not doing so), we find that the phenomena in question have very much in common—and are very much the same.

1.3 Text Games

If one wants to comprehend the place of textuality in game studies, it stands to reason to include the video games that prompted such early textual investigations, namely, what we would now refer to as text games. Montfort’s *Twisty Little Passages* is a theoretical and historical treatment of one such genre: interactive fiction (IF), a kind of text-based computer program that has a complicated historical relationship with video games. Montfort’s definition is specific: “computer programs that display text, accept textual responses, and then display additional text in reaction to what has been typed” (vii). An essential part of IF, says Montfort, is natural language processing. A user/player/interactor writes something they understand—a verb-object command like “take lamp”—and the computer understands it, too. The IF program updates and changes in response, oftentimes rendering a description in equally plain language. “You pick up the lamp.” There are two parts of the program that make this interaction work: a parser that lets the computer read the user input, and a world which is simulated and “represented

computationally in some sort of data structure or collection of objects” (viii). The relationship might be summarized: *interactive fiction = parser + world*. Interpretation and simulation. The two work so well together because the world necessarily limits the scope of what the parser can understand. “Take lamp” is meaningless to the parser in the absence of a lamp in the world. The world, that is, contains and “represents the physical environment of the interactive fiction and the things in that environment,” as well as “the physical laws” that govern it (ix). Montfort intends the book to be an “approach” to IF (xi) which situates the form among its historical precedents (riddles, role-playing games, computer games) and its formal and material grounds. However, the relationship between parser and world—between language and its use—has important philosophical ramifications.

Montfort’s first chapter surveys the work of Barthes alongside early theorists of digital literature in order to frame IF as a successor to poststructuralist formulations of textuality. Montfort claims that Barthes’ notion of the “writerly” reading of literature—whereby a reader is ultimately responsible for the production of the text in front of them—is mere metaphor beside the active authoring of the text performed by the interactor of an IF program. The interactor, unlike Barthes’ reader, Montfort writes, “is actually contributing writing that is part of the text and serves to operate the program, causing it to produce additional text that is interleaved with that of the interactor and meaningfully responds to it” (4f). Like Jones, Montfort cites Genette (and Prince) to describe IF as “potential,” that is, “as narrative *in the process of being generated*” (14). To conceptualize this process, the specifics of the data structures and programmatic elements of IF programs, in many cases, can be simplified—or “black-boxed”—into input and output. The cycle

between the two becomes the essential function that separates IF, as “an interactive computer program” from narrative as such (25). As narrative is the “content plane” of fiction, a world is that of IF (26). What Montfort encourages in the analysis of IF is thus not narrative itself, but the process of its creation via input and output. A good example comes in the form of user commands—like save, quit, and the like—which need not affect the narrative as such in order to configure the world of the program.

In many cases, but not always, this interaction between input and output takes the form of a game “with an optimal outcome” (13). Many IF programs are rife with puzzles that the interactor needs to solve in order to achieve an end goal: escaping the dungeon, saving the kingdom. Montfort’s own categorization of input and output is hyper-specialized in its applicability to IF, but much of his theory is broadly applicable to other kinds of computer-world interactions. In particular, Montfort discusses how IF and video games both use computation to hold back information. Unlike chess or other traditional games, where players have all the information in front of them (excepting their opponent’s decision-making), video games and IF programs meaningfully disguise or obscure their processes and mechanics. “Learning to operate the text,” Montfort writes, “and discovering what language is accepted and understood, is part of the pleasure” (34). Montfort quotes Jim Menick’s 1984 *Basic Adventure and Strategy Game Design for the Apple*: ““The first step for the player is figuring out what language the game speaks.... One of the joys of adventuring is that discovery of the extents and limitations of the game’s vocabulary”” (quoted in Montfort, 34). In essence, what is at stake in the game-like qualities of IF is the obscurity and discovery of language itself, both as it is interpreted by a parser and as it describes a world. The major shortcoming of Montfort’s approach is its unshakable

grounding in so-called natural language. This is the term of art used by computer scientists and game designers, but it is certainly not what is actually going on. As Montfort's citation of Menick reveals, the language at play in these contexts is, in spite of its apparent legibility, far from natural. The languages are decidedly unnatural, and we merely naturalize them by playing.

Salter's *What is Your Quest?* chronicles the subsequent developments of interactive fiction into the adventure game.. As a genre, adventure games typically involve guiding a well-defined protagonist around a fantastical world, talking to characters and solving puzzles in order to achieve an ultimate goal and complete the arc of the storyline. Adventure games are often associated with "point-and-click" mechanics, in reference to their relatively slow pace and reliance on computer mouse interactions. Like Montfort's treatment of IF, Salter's critical apparatus is tailored to its subject. Adventure games being more or less grounded in narration and language, however, make for an important touchstone in the development of a linguistic understanding of gameplay.

Salter's history begins with the formalization of three precursors to the adventure game genre: "structured collective oral storytelling (*Dungeons & Dragons*); gamebooks and *Choose Your Own Adventure* stories; and interactive fiction and text-based games" (11). For Salter, these forms, like the adventure games that would follow, were fundamentally participatory. Unlike traditional print media, these participatory literatures reintroduce into the interaction of storytelling the dynamics of the campfire oration (an image Salter derives from Ong's work on orality versus literacy). Of course, participation is never unlimited, and the limits of participation are an important prefiguration of form. "*Dungeons & Dragons* offers a model where complex fantasy can be modeled

systematically based on rules established in the manual.... A video role-playing game, in contrast, provides a specific visual world with particular characters to interact with following a set of rules. The game cannot deal with any interactions it is not programmed to handle, unlike a Dungeon Master” (13). One way of thinking through this distinction is not as a distinction at all. Rather, the limitations of the video game simply resemble, albeit more restrictively, the natural limitations of language itself. After all, Salter herself admits that the systematization of *Dungeons & Dragons* is founded upon not just conversation among players, but the regulation of a written manual.

Among Salter’s predecessors to the adventure game, perhaps the *Choose Your Own Adventure* (or CYOA) book is the most unique, or the least understood. As Salter explains, the genre’s popularity was brief and tenuous, lasting only a few decades in the latter portion of the twentieth century, and hardly achieving any sort of mainstream or literary notoriety. CYOAs were obscure amalgams of children’s fiction and activity book, prompting readers to turn from one page to another, non-sequentially, depending on choices in the fiction. Do you swing your sword (turn to page 55), or raise your shield (turn to page 17)? As Salter is keen to point out, however, the genre’s own precedents are, in their own way, obscurely avant-garde. Take, for instance, Raymond Queneau’s *One Hundred Trillion Poems*, a book of sonnets sliced line-by-line into combinatorial strips. We will need to return to these literary conundrums later, but suffice it to say here that Salter notes but underemphasizes the mechanism underlying these works and those that are her main concern. “Queneau created the content, the reader has the power to arrange it, and the system determines the limits of what’s possible,” she writes (15). But what of the system that determines Queneau? What of that which determines the reader?

Deepening her analysis of the systematicity of her subject, Salter distinguishes the adventure game and its predecessors from the action video games that arose contemporaneously in the 1980s and 1990s. Unlike adventure games, action games infrequently develop the character enacted by the player, and in lieu of a defined protagonist, the player emerges as “the one doing the shooting,” writes Salter (20). Adventure games and RPGs, on the contrary, render “a virtually embodied representation” (21) of players’ avatars and actions by representing them from a third-person perspective. Thus, Salter places the impetus of virtual action in its representation on-screen and in-fiction. More complex, personal, and novelistic stories became the norm in adventure games because, like other kinds of fiction, characterization happened apart from the player.

Indeed, Salter’s characterization of the formal and technological movement from text adventure games to graphic adventure games extends this logic. Graphic adventure games eschewed systems wherein “the player was literally relating to the world with words, using combinations of verbs and nouns to progress the story” (29)—eschewed “the world of words” (31)—in order to realize their fictions imagistically. Typed commands like “go west,” common in IF, would be replaced by contextual mouse clicks and tables of verb interactions. This shift, according to Salter, is a profound one. “The menu options leave no need for guesswork in determining what actions are possible at any point in the game, giving the player a visual codex revealing the possible interactions with the world. By contrast, the text parser offered players an open point of entry where the limits of interactivity had to be probed to be known” (39). Even the mouse itself was implicated, smoothing over “some of the gap between a player’s actions and a character’s actions, enforcing the connection even as the third-person camera view discourages the player from

adopting the character's gaze" (39f). Thus, the graphic adventure distinguished itself from its forebears via more visible, more visual, limits. Whereas working through the solution to a text-parser puzzle "made this exploration feel limitless," it "only offered the illusion of limitlessness. In reality, the only actions possible in either system are those intended by the designer" (40). Mouse interfaces, and verb tables especially, appear more obviously restrictive in that they deny the player the ability even to try out a nonsensical or nonstandard solution. In so doing, they represent for Salter a strengthening of a player's identification with the capabilities of the narrative protagonist and familiarity with the rules of the game world.

We can conclude, then, from her history of the form that Salter views adventure games as an intensification of the forces already at work in CYOAs and IF text-parser games. If indeed "the most important thing about an adventure game is that it must be playable," and if "playing a game implies an interaction that reading a text does not," then adventure games represent a movement away from reading as a primary form of interaction (51). Whether or not the mechanics at play are really different—one can imagine a graphical adaptation of *Zork* (Infocom, 1980) or a text-based *Secret of Monkey Island* (Lucasfilm Games)—Salter argues that the experience of play is more deeply entrenched in the experience of the narrative via visual representation, not just of action, but of the limits of interaction.

1.4 Cultural Texts

More recent textual analyses have strayed from the formal and structuralist precedents set by Aarseth and others. A work of textual studies by a textual theorist, Steven

E. Jones' *The Meaning of Video Games* claims that video games are social texts like any other, and that their meanings are myriad: collaboratively constructed in play and among players. Like other texts, games are necessarily intertextual. "The meanings of video games," Jones writes, "are functions of their use within social networks, which link up to other forms of media, texts, institutions and groups" (2f). Jones positions this textual approach as a reconciliation of the ludo-narrative split. He preserves the configurative and systemic specificities of games while adapting strategies developed to study other media.

Text, for Jones, is distinct from narrative or story, but not necessarily linguistic. He draws on Gerard Genette's typology of texts to make these claims. Peritexts (secondary texts that accompany a primary text), together with epitexts (secondary texts that refer to a primary text) make up the paratext of a text. A paratextual analysis of video games reveals their inherent potentiality. Games "extend" as texts into "a collective and *potential* reality, a transmedia, multidimensional grid of possibilities" (10). Citing McKenzie Wark's *Gamer Theory*, Jones uses alternate-reality games (ARGs) as an example of how textuality can extend games and their metaphors into everyday life. The extensibility of texts similarly leads Jones to a critique of Huizinga's (1938) magic circle, which he considers reductively Romantic in its cordoning off from the social. (One wonders, however, whether this critique is not something that Huizinga, an anthropologist, would readily agree with.)

Jones explains the potentiality of text using a metaphor derived from designer Will Wright's conceptions of games as possibility spaces. Playing a game is, in part, a negotiation of the boundaries of the text. The possibility space of a game is like the possibility space of a text in that it can be extended into different directions and configurations. "Developers and players [...] must agree to trace and then play within such

a space (or test its outer limits to see if they'll break, which is probably more common" (15). According to Jones, the work of textual scholars is to trace such trajectories culturally and materially. In his analysis of the *Halo* (Bungie) series, Jones focuses on the games' cultural impact and expanded multimedia universe. Continuing the metaphor of possibility space, he explains how Bungie developers would record the gameplay and telemetry of hundreds of playtesters—thousands of game sessions—in order to reveal and comprehend the possibility spaces they had created. Thinking of possibility space as such a map of interrelated data becomes a way to understand the game as text—and the extensive textuality it engenders. I quote at length:

As with the complex verbal texts we study, we need to understand games such as *Halo* as existing at the center of a kind of spreading possibility space, a multidimensional virtual grid running off in many directions, the imagined vectors of any number of possible moves, performances, or instances of game-play, all of which are contained, in potential, within the 'code' of the object itself, whether or not any particular state of the game or sector of the grid is activated at any particular time. The whole possibility space, then, would be a model of the game's own reception history waiting to happen. Such a grid of realized and realizable possibilities seems to me the most accurate way to imagine what we mean when we speak of the *Halo* universe. (96)

Jones' exploration of textuality as potential and virtual is especially clear in his analysis of *Façade* (Procedural Art) wherein he argues that the game's clear and apparent shortcomings, while undermining traditional immersion, instead produce a more interesting, nuanced, and engaging textual experience. The game, for all its experimental

faults—its jank—is “a *more* effective theatrical experience in the Brechtian or improv sense (if a less polished work of dramatic art): a non-immersive, self-conscious, reconfiguration, profoundly improvisational experience” (121). In this regard, I would argue that Jones’ assertions have been validated by history. Designed as an experimental work of neo-Aristotelian drama, the game is perhaps best known today for its use in comedy videos. Jones aptly summarizes the experience of toying with the natural language text parser employed by the game’s two characters: “You find yourself playing something like the ‘interact with the AI’ game” (121). In such a moment of play, one finds oneself immersed not in the game as such. Rather, as Jones would have it, one achieves immersion, via potential and social extensions, in the text itself—or more properly, in textuality.

Another approach to the question of the textuality of video games comes from Christopher A. Paul’s more recent book *Wordplay*. Paul combines traditional rhetorical analysis with new media criticism to examine, in equal measure, “the *words* within and surrounding video games, the *design* of games and society, and the practices of *play* in games” (2). He continues, “wordplay is about how games and their surrounding texts participate in a process by which meanings are created, identifications are built, ideas are circulated, and persuasion is attempted” (3). The use of the passive voice in the preceding quote is representative of Paul’s approach, which seeks to unite involved criticism with a more detached analysis of social groups and their discourses. While this is by no means uncommon in contemporary game studies, it stands out as a more structured engagement with the socio-cultural productions of meaning that Jones placed at the center of video game textuality years earlier. Unlike Jones, however, Paul aims to synthesize “the procedures within games and the elements surrounding them,” (8) building off of Bogost

and Galloway's rhetorical analyses of gameplay itself. Paul writes, "all games are subject to a context beyond their control," (13) and wordplay is his attempt to marry an understanding of that context to the designed and experiential aspects of the form.

In one especially compelling analysis, Paul unpacks the use of the phrase "welfare epics" by a *World of Warcraft* (Blizzard Entertainment) designer—and subsequently, the game's playerbase—to describe powerful items disseminated as ingame rewards for what was perceived by some players as nominal effort. Paul's analysis of the phrase reveals how "WoW players were normalized into a design and play structure that considers work and fiscal metaphors appropriate to describe efforts in online gaming" (128). Nonetheless, whereas Paul writes that "words are at the foundation of both wordplay and video games," (162) in their content and context, he refrains from making the jump from words themselves to their structurations, that is, to language. Words shape design, as seen in the exchange rates between virtual and real-world currencies in *EVE Online* (CCP Games); design sets the table for discourse, as seen in the character creator of *NBA 2K11* (Visual Concepts); and games themselves diversely situate their players and their play—"the 'who' and the 'how'"—as seen in the perception of casual games (161ff).

However, these examples and Paul's analyses thereof seem, more often than not, to consider words, design, and play as interrelated but utterly distinct elements of his methodological frame. Wordplay encompasses all three factors, but treats them separately. Words affect design, but they are not design. Players express themselves with words, but they do not play with them. Language becomes the very thing that wordplay, as a concept, lacks—ironic, given that it's the very thing its name seems to imply. For how else does a pun work if not by the relation between two otherwise unlike concepts, related

linguistically? Wordplay, more linguistically understood, would not be a method or toolset, but a plaything—a game—in its own right.

However, Clara Fernández-Vara’s recently revised account of video games and textual criticism, *Introduction to Game Analysis*, provides perhaps the best example of the status quo of textuality. Written as an overview of the field and handbook for its methods, Fernández-Vara’s work elegantly explains how to approach games aesthetically and culturally. “The foundation to a more sophisticated discourse on games,” she declares as a mission statement, “is to understand them as *texts*” (5). She makes clear to her reader that there exists a long history of understanding innumerable objects, artifacts, performances, and activities as texts, even those that aren’t necessarily written. “This broad understanding of the term allows us to approach games as texts,” she continues, and to engage with them “as a cultural production that can be interpreted because they have meaning” (6). Meaning, that is, not just in themselves or in play, but in their contexts, “where the text is interpreted and by whom” (6). The rest of the book is dedicated to guiding readers and practitioners through the process of writing such an analysis. It invites them to examine the context of a game, its formal and mechanics characteristics, and its relationship to other games and to the medium at large.

While Fernández-Vara’s guide is eminently useful, it nonetheless demonstrates a confusion, common throughout game studies, as regards the originary claim of textual, structuralist, and poststructuralist criticism. To his credit, Barthes—whose *Mythologies* Fernández-Vara cites as instrumental in broadening the definition of the word text—did not “examine the cultural status of items such as red wine and detergents to activities such as professional wrestling or striptease” (6) in and of themselves. Not in the least. Rather,

Barthes did so from the perspective and using the tools of contemporary linguistics. That is, these phenomena were texts, in Barthes' reckoning, because they existed in or exhibited the characteristics of language. This was the driving factor in the critique. It is for the same reason, and by no coincidence, that his contemporary Foucault described the body as discursive, and Heidegger, existence itself as poetic. If we are truly to treat games as the texts they are we must return to a more judicious meaning of the term. The word "text" is not at fault, but it cannot be separated from the language to which it belongs. To do otherwise is to miss that language has been in play all along.

1.5 Virtuality

In game studies, there are few engagements with virtuality from a philosophical or theoretical perspective. One of the earliest and most influential is Ryan's *Narrative as Virtual Reality*, recently revised as *Narrative as Virtual Reality 2*. Like Aarseth's *Cybertext*, this work set the table for two decades of debate, popularizing a dichotomy between interaction and immersion. In the years since its first publication in 2001, "for the literary scholar," Ryan writes in her new preface, two essential changes have come to pass: first, "the loss of the prominence of hypertext," and second, "the waning of the influence of what I call 'textual' theories of literature" (ix). The former we have encountered already in the writings of Montfort, Salter, Aarseth, and others who worked to understand hypertext either in its heyday or in its present position as revolutionary oddity.

Ryan's second point, however, has profound implications for any textual undertaking, and is perhaps responsible for the particular decline of textual criticism in game studies. By "textual," Ryan means "theories such as New Criticism or deconstruction,

that conceive the literary text as a play of signifiers and regard its language as essentially self-referential” (ix). Against such a framework, Ryan poses literary elements like “content, mimesis, reference, emotional involvement with characters, and immersion in fictional worlds” (ixf). These elements, it comes as no surprise, broadly coincide with Ryan’s own theoretical undertaking, which approaches “the fullest reconciliation of interactivity, immersion, and narrativity” via “the participation of the virtual body” (xi). We can examine the terms of this important argument—interactivity, immersion, and narrativity—in turn. Doing so will allow us to see where the dichotomies brought about by Ryan’s theories have brought us in our understanding of virtuality itself.

The foremost dichotomy proposed by Ryan is that between immersion and interactivity. “The history of Western art,” she writes, “has seen the rise and fall of immersive ideals and their displacement, in the twentieth century, by an aesthetics of play and self-reflexivity that eventually produced the ideal of active participation of the appreciator—reader, spectator, user—in the production of the text” (2). To wit, is the reader in the world of the text, or does the user create the world of the text? Ryan draws out this historical shift: Renaissance *trompe-l'œil* and the realist novel are supplanted by abstract expressionism and metafiction. Immersion, in high art, is transfigured into interaction over the course of the twentieth century. Alongside this sea change, immersion itself comes to be regarded as pedestrian, in part due to its “resistance to theorization” (6). This is until digital media, for scholars like Aarseth in the late twentieth century, becomes emblematic of interactivity, even as immersion itself returns as a commodity in the form of computer graphics and virtual reality. Within this apparent paradox, Ryan realizes “what is (for me) the ultimate goal of art: the synthesis of immersion and interactivity” (7). She turns to

phenomenology and the notion of being-in-the-world to prefigure this synthesis and to account for the “imaginative relationship to a world *projected by a text*” (9). In summary, she writes, “whereas the aesthetics of immersion implicitly associates the text with a ‘world’ that serves as environment for a virtual body, the aesthetics of interactivity presents the text as a game, language as a plaything, and the reader as the player” (10).

Thus, Ryan associates the playfulness of games with the quality of interactivity. In doing so, however, she elides a meaningful difference, exemplified by Derrida’s dreaded deconstruction, between interpretation of text as a sign-system and the play of language itself. Indeed, the extent to which language, for all its playfulness, is “interactive” in Ryan’s sense of the word is itself debatable, given the fact that language necessarily pre-exists any one of us. Ryan argues that player interaction in narratives can be broken down into two concomitant dichotomies: internal interactivity, whereby a user “plays the role of an individuated member of the storyworld,” is opposed to external interactivity, whereby the user is situated outside the world of the text (162). Likewise, exploratory interactivity, whereby “the user looks at what exists in the storyworld but has no creative power,” is paired against ontological interactivity, whereby a user’s “actions create objects that become a part of the storyworld or cause events that bring lasting changes” (162). Ryan endeavors to plot the interactions present in a variety of texts along these axes: hypertext is external-exploratory while computer RPGs are internal-ontological.

These dichotomies themselves raise several questions, however. Is there really ontological interactivity in most computer games if the user is simply engaging one game state after another? Moreover, do internal and external interactivities conflate the phenomenological experience of so-called immersion with the ontological presumption of

a world as such? Ryan assumes “the inherent interactivity of digital media,” (161) without stopping to question the grounds of this very particular intuition. Does digital media have to be interactive? Do games? By announcing ourselves as the locus of interaction, perhaps we ignore the ways games and other pieces of digital software act far more so on us.

Similar confusions arise from Ryan’s conception of the world as being inherently immersive. This stems from a particular, but not unimpeachable reading of the phenomenological concept of being-in-the-world. A world in this sense, to expand on Ryan’s image of “taking a swim in a cool ocean with powerful surf,” (6) need not be any more immersive than a swimmer’s being-in-the-water while floating upon its surface. If anything, immersion is a far more absolute and unfathomable condition than being-in-the-world necessarily implies. The two concepts are by no means so synonymous. So focused on the antitheses of immersion and interactivity, Ryan overlooks that their synthesis—in world, game, and language—occurs, as we find in Heidegger, Derrida, and Wittgenstein, nowhere other than at the limit itself. The swimmer atop the surf. The eye at the edge of its own field of vision.

Nor is her concept of virtuality immune from these implications. As she writes, “the meaning of *virtual* stretches along an axis delimited by two poles. At one end is the optical sense, which carries the negative connotations of double and illusion...; at the other is the scholastic sense, which suggests productivity, openness, and diversity. Somewhere in the middle are the late-twentieth-century associations of the virtual with computer technologies” (19). Ryan goes on to align these poles to the works of two “influential and eloquent spokesmen in recent French theory: Jean Baudrillard for the virtual as fake, Pierre Lévy for the virtual as potential” (19). Another French theorist, however—and one just as

often cited in such debates—proposes a conception of the virtual that cuts through and illuminates this very disjunction. As we shall later see, Deleuze’s virtuality—that which is not at all fake, but real—and that which is neither actual nor (its causal precursor) potential—provides the more elegant account of the kind of virtuality we encounter in virtual worlds.

In that they are quite phenomenologically real, and in that they need not necessarily be ontologically potential, Ryan is quite correct to locate the virtuality of digital textuality at neither pole. But in placing it nonetheless upon this divisive spectrum—immersing it in this gulf—she denies this unique virtuality the peculiarities of its own order. To speak no ill of its rigor or influence, this revised edition of Ryan’s volume, if anything, reveals all the more the taxonomical confusion the original left in its wake. Axis upon axis is founded on dichotomy after dichotomy, leaving us with little more than an idea that certain texts exist somewhere in the middle of things. What is necessary, then, is to fundamentally rethink the textual grounds of the things we call digital, computer, or video games, so as to clear the way for a properly phenomenological and textual understanding of what it means to play them.

Standing against theorists who claim that “the goal of interaction is to disappear in service of immersion,” Welsh’s *Mixed Realism* invokes what Salen and Zimmerman (in their *Rules of Play*) call the immersive fallacy. In Welsh’s rendering, the immersive fallacy is “the assumption that media should strive to present a fictional world so convincing that its audience would forget the real world in which they interact with the media” (54). Perhaps, indeed, this is the ultimate synthesis at which Ryan had aimed. Welsh remains skeptical and points to the controversial *Super Columbine Massacre RPG!* (Danny

Ledonne) as a provocative and obvious example of how immersion is, in this instance, complicated by the relationship between a real event and its virtualization. “This is the paradox of real virtuality,” he writes, echoing Deleuze. “We know very well that the media-generated virtualities that fill our lives are not what they represent.... But these virtualities are *something*” (5). To assume total immersion, or even the possibility thereof, as many do, is to ignore this meaningful paradox. What distinguishes *Super Columbine Massacre RPG!*, in Welsh’s estimation, from other violent, political, or satirical games is precisely “a kind of interaction with the actual Columbine shooting” (12). The one is necessarily implicated in the other; the virtual “participates” (12).

Drawing inspiration from literary nonfiction, postmodern novels, and contemporary action video games, Welsh proposes the category of “mixed realism” to define “the ways media-generated virtualities reframe or recontextualize the real-world activity of interacting with them,” and “the capacity for virtual objects to situate their users within social, material, and ethical contexts” (16). What mixed realism affords, then, is a more comprehensive understanding of the interaction between virtuality and actuality themselves, rather than the common oversimplification of the interaction between an actual user and a virtual environment.

What’s more, without much difficulty, one can interpolate Deleuze’s virtuality—the real, but not actual—into the mode of mixed realism. At the risk of distorting Welsh’s own nomenclature, one could say that the admixture of realism at hand is not the simple addition of realism to virtuality, or vice-versa. Rather, mixed realism may refer to the reality shared by the virtual and the actual. Whatever role is taken on by the player in a virtual game, it is one inherently implicated in reality, and by extension actuality.

Throughout video games, writes Welsh, “The reader or player’s self-aware engagement with the fictional brings the ‘incoherent’ generated world in contact with the ‘real’ world” (61). Consider, however, the engagement and the contact as real, and the worlds as virtual and actual, and Deleuze’s nomenclature nicely affirms the central claims. If, furthermore, we add to Welsh’s claim the clarifying world-making of language, we discover likewise how the incoherency of the virtual resembles, in play, the incoherency of language in the ordinary sense: ambiguity, variability, the playing of games. “Gaming requires players to discover and push the boundaries of a game’s rule system, which is what makes them a fundamentally demystifying practice,” Welsh concludes (60). But this conclusion could just as easily be said of language.

1.6 Verbs and Objects

Given the tendency of game studies to ignore or downplay the linguistic aspects of textuality, it is fascinating to observe that, in one particular discursive mode, an especially linguistic metaphor has gained traction. For some time, game designers and critics have taken to describing game mechanics using the term “verbs.” They have even extended the grammatical metaphor to incorporate the “objects” taken by verbs in a sentence structure. “See” is a verb. “See Spot,” a verb and its object. The result is to say that Mario can *jump*, and that, while *jumping*, Mario can *stomp an enemy*. One could argue that this is simply what has always been done by anyone talking about a video game, and that the phenomenon is in no way different than a viewer describing what happens in a movie, or a reader summarizing a book. This is not totally incorrect. After all, using verbs is the way people have always talked about these things. However, these video game verbs differ from others in their critical capacities and phenomenological peculiarities. The latter concern makes

for the bulk of this dissertation; but to examine the former we need look no further than an introductory, if especially astute, textbook on game design: Anna Anthropy and Naomi Clark's *A Game Design Vocabulary*.

Without diminishing the efficacy of methodological boldness of the work, one could say that textbooks are among the least radical kinds of publication. They rely on established concepts. Their intent is rarely to break the mold, but to elegantly describe it. But this by no means makes them uninteresting. Textbooks, by definition, allow one to survey a field from 10,000 feet. Anthropy and Clark contend that game design is suffering because game designers lack “a language for talking about design” (8). The authors argue that what video game discourses have instead is marketing speak: buzzwords, selling points, and blurbs—“immersion” among them. Character design, for instance, is often discussed in terms of graphical fidelity, rather than in terms of visual iconography. Addressing this concern, the authors offer the following design principle: “Recurring visual motifs allow us to develop an ongoing vocabulary of game rules that the player understands. If the player learns that one spiked thing is dangerous, she’ll expect other spiked things to be dangerous” (103). The authors enumerate dozens of these items throughout the book with the express intent of expanding the vocabulary with which designers discuss and describe design.

Most important for our purposes is Anthropy and Clark's discussion of rules. “Games are made of rules,” they write (14). “Surround stones of the opposite color with stones of your own color to capture it. Complete a line of blocks to make it disappear,” they continue. In their chapter on the subject, they propose “a basic vocabulary with which to discuss and understand rules and how they function in a game—a grammar” (15). Note

well the choice of word. To establish this grammar they liken a game's rules to the characters in a story: as characters develop over time, so do a game's rules. Next, they propose that some rules are more important than others, like the protagonists in a story. I quote at length:

Verbs are a kind of rule; they're the most important rules of a game. By a 'verb,' I'm referring to any rule that gives the player liberty to act within the rules of the game. Any rule that lets the player change the game state. Any rule that lets the player *do something*. Verbs are the rules that allow the player to interact with other rules in the game: 'jump,' 'shoot,' 'fall,' or 'flap' in the case of *Joust* [Williams Electronics, 1982]. Without verbs we have a simulation, not a collaborative story-telling system. (15)

Some verbs, the authors explain, affect other verbs—Mario can *run* before he *jumps* to leap further. Other verbs have multiple effects: Mario's *jump* also breaks blocks above his head. Moreover, verbs exist in a context, and the better integrated they can be with the aesthetics, story, and themes of a game, the stronger the player's understanding of the world and its rules will be. Mario's *jump* would be totally out of place in most action games, but fits its own fantastical tone. Soon enough, the authors propose "objects" as the complement of verbs: "the objects that complete their sentences" (22).

Here and everywhere, we find a similar elision of grammar and design. Are verbs the metaphors designers use to talk about games, or are they the material of the design itself? This ambiguity is productive, but only hinted at in the book itself. "Rules are how we communicate," Anthropy and Clark argue. "Verbs are the rules that allow [the player]

to communicate back [to us, the designers]. The game is a dialogue between game and player, and the rules we design are the vocabulary with which this conversation takes place” (15). In effect Anthropy and Clark propose a grammar for discussing game design that resembles the grammar of game design itself, which in turn resembles the grammar of language. Yet, the question remains unanswered: is it language? It’s no surprise that this question is not a concern of the authors. Their audience is designers seeking better words to describe their art and their processes. The authors’ intent is not to probe the textuality of the medium. Nonetheless, their work reveals the same gap we observe elsewhere in more rigorously textual studies, namely, the place of language itself. Why does it make sense to discuss video games by appropriating terms from language, grammar, and linguistics? Because video games themselves are linguistic and grammatical, and are, at base, language at play.

CHAPTER 2. VIRTUALITY: THE CITY IN SPEECH

2.1 Plato's *Republic*

This chapter proposes a reading of Plato's *Republic* through the lens of Deleuze's virtuality: the real, but not actual. It argues that Socrates and his interlocutors engage in the creation and exploration of a virtual city in speech. Furthermore, it contends that this city in speech is analogous to other kinds of virtual worlds such as tabletop role-playing games and video games. Virtuality becomes implicated in the exploration of language as language—writ large, in the case of the *Republic*. Furthermore, this chapter argues that Plato's *Timaeus* explicitly defines the relationship between virtuality and language as a dialectic between personified Intelligence and Necessity in the creation of the cosmos. Finally, the chapter connects this dialectic with the contemporary phenomenon of tabletop role-playing games, using as evidence a close reading of the city building RPG, *The Quiet Year*.

The virtuality of a virtual world refers to its composition and to the way we experience it. Virtual worlds are, fundamentally, worlds made out of language. There are other kinds of language-worlds, such as those found in books, in poems, in stories, and in myths. What distinguishes the virtual world from these other language-worlds is that the virtual world is uniquely explored in language. Parts of the virtual world, inasmuch as they are built in language, are revealed by language. Language operates within virtual worlds as material force. An ancient example of virtuality can be found in Plato's *Republic*, wherein Socrates and his interlocutors construct—and explore—an ideal city. The rule of their dialogue is necessity. Having outlined the citizenry of the city, they turn to the

necessary question of who will defend it. Having defined its guardians, they turn to the necessary question of their education. In a manner very different from Socrates' retelling of myths elsewhere in the dialogue, Socrates and his interlocutors build and explore a world discursively and dialectically. With a little more formalization, the same thing happens when a group of friends gather to play a tabletop role-playing game. Video games can be understood in the same way: as languages, and as virtual worlds that confront the necessity of their digital constraints. Building upon Plato's account of cosmological genesis in the *Timaeus*—and the figures of Intelligence and Necessity, especially—the following chapter charts the development of these and related ideas.

The course of Plato's *Republic* sees Socrates and his interlocutors on the hunt for what makes justice, in itself, good. The objection is raised early on in Book II, that most accounts of justice frame it as beneficial only in light of the consequences of being caught doing injustice. Justice is good because in being just, and more importantly, in being seen as just, one will not incur punishments for injustice. But we so desperately want to believe that justice is good in its own right. Glaucon poses to Socrates the challenge of accounting for the good of justice itself. What good is one's own being just? "I want to know what justice and injustice are and what power each itself has when it's by itself in the soul" (2.358b). The question of one's own being just is a valid approach toward justice itself, but Socrates proposes another path. Instead of looking at justice at the scale of the individual, he argues, it would be easier to think of justice in terms of the city, that is, as Socrates phrases it, writ large. Here, then, is Socrates' first admission of the linguistic mode of their discussion. Since there is no city one can point to as being perfectly just, Socrates proposes

that they invent one, that they observe, the coming into being of a *city in speech*: “*polin logoi*” (2.369a).

The city in speech is *in speech*, as it were, in two ways. First, it is in speech in that it is built, sentence by sentence and phrase by phrase, in the language of a dialogue. Neither Socrates nor his interlocutors bear so much as a single brick in the construction of their ideal “*Kallipolis*,” their beautiful city. Yet the city is no less “founded” as a result of its being built in speech. “You and I, Adeimantus, aren’t poets, but we *are* founding a city” (2.378e). As Socrates and his interlocutors pose and answer questions, the speech out of which their city is composed grows not only larger, but clearer. If Socrates’ aim is to observe, “*theasaimetha*” (2.369a), the coming to be of a city, then he does so by observing above all else the language of the speech itself. He is conscious, at all times, of the constructive character of speech, and of the kind of becoming it constructs. Several times, Socrates even pauses the discussion to reflect on what was either just said, or what was said much earlier. “Will inquiry into that topic bring us any closer to the goal of our inquiry...?” (2.376c) Pausing for these reflections, Socrates is not merely thinking through his own imagination of the city but thinking through what was actually said about it. The general form is this: “I couldn’t see a way out, but on reexamining what had gone before...” (2.375d). Speech, in these cases, becomes all the more apparent and concrete—to very nearly the same extent as a row of mortared bricks, or the plow lines that mark farmland. Speech becomes material for building a city.

But the city in speech is also *in speech* in another way. It is in speech in the same way that an actual city is in space, namely, as not only built, but in addition, explorable. In other words, just as one may explore an actual city in space, one explores *Kallipolis* in

speech. This is distinct from, albeit related to, its construction in speech. In that a city is constructed, it can be explored; but, in the unique case of the city in speech, it is by exploration that the city grows and develops in its construction. Exploring in speech builds in speech. Exploration in speech follows the logic of the dialogue in that it reveals the parts of the city that have not yet been sufficiently spoken into their becoming. That is, since the building material of *Kallipolis* is speech itself, exploration in speech is used by Socrates to construct the city along a logical path. To use an anachronistic metaphor, Socrates' exploration of the city in speech has him laying the track in front of the train. Where the dialogue ventures, the city is built just ahead of it. And where the dialogue retraces its steps, it finds along the way the speech that brought it there.

2.2 Necessity

The question remains, however, as to what force compels the direction of the interlocutor's discussion. What guides them? Curiosity would be a fair enough answer, but it becomes rather insufficient. Guided by simple curiosity, the dialogue of the *Republic* might just as well turn to the issue of what sort of food would be popular in *Kallipolis*, or what form its official calendar might take. These are questions about which we ourselves might be curious, and curious we can imagine Glaucon and Adeimantus. In the same way that one curiously approaches a new or foreign city in actuality, guided by whims or fleeting interest in an oddly shaped building or the performance of a busker, one could explore the city in speech. But this is not at all how Socrates conducts his exploration. In the *Republic* we find no such haphazard meandering. There is, on the contrary, a kind of current that runs forcefully throughout the dialogue—a current which is felt even as the discussion at hand branches off into tangential streams and rivulets before rejoining the

mainstream and its white-water rush ahead. This current is language, and its driving force, necessity.

According to Socrates, the coming to be of the city in speech should present itself to his party without too much trouble. All they need to do is account for their and their city's needs: "*khreia*." In Socrates words, "Come, then, let's create a city in theory from its beginnings. And it's our needs, it seems, that will create it" (2.369c). This proves to be no easy task. Several times, Socrates stops to consider whether the subject at hand indeed addresses a pressing need. For instance, during the first discussion of the guardianship of the city, Socrates asks Glaucon whether it would be worthwhile to consider the earliest education of their warriors: the poetry and songs they would be taught as children. "We want our account to be adequate, but we don't want it to be any longer than necessary" (2.376c). Glaucon, for his part, thinks the issue seems important, and so begins the dialogue's infamous excision of poetry. "Just as if we had the leisure to make up stories, let's describe in theory how to educate our men" (2.376d). When Socrates asks an interlocutor, in this manner, where their discussion should turn, he is, for one, exploring the city in speech and seeking what parts may still need building, as explained above. But he is doing so, in this case, in an explicit attempt to follow the city's needs. His question to Glaucon—should we discuss this?—may also be expressed: does the city *need* this? Better yet, does the city, *for our purposes*, need this? Need becomes integral to the creation and exploration of the city in speech. But its cause is still greater.

It is no coincidence that the beginning of Plato's *Timaeus* appears to carry on directly from the discussion that comprises the *Republic*. "The four of you were my guests yesterday and today I'm to be yours" (17a). In the beginning, Socrates reiterates the basic

facts of the city in speech: its citizenry, its guardians, its myths. “I talked about politics yesterday and my main point, I think, had to do with the kind of political structure cities should have and the kind of men that should make it up so as to be the best possible” (17c). After this introduction, the two dialogues diverge in structure. Plato centers the *Republic* on Socrates’ dialectic; but he centers the *Timaeus* on the singular cosmological account of its eponymous character. One way of understanding the connection between the two dialogues is this: whereas the *Republic* concerns the creation of a city in speech, its apparent sequel, the *Timaeus*, concerns the creation of the entire universe. When read alongside its predecessor, however, the *Timaeus* reveals itself to be not only a mythological account of the coming to be of the cosmos, but above all else a patently logical account of creation itself. After all, as Socrates says in the *Republic*, “You know, don’t you, that the beginning of any process is most important.... It’s at that time that it is most malleable and takes on any pattern one wishes to impress on it” (2.378a).

In what way, then, does the cosmology of the *Timaeus* reveal the cosmology of the *Republic*? Broadly, the *Timaeus* recounts the origin of the universe: a negotiation between Intelligence, or “*Nous*,” and Necessity, or “*Ananke*,” whereby the former—in the form of a divine artisan, or “*demiurgos*”—crafts the cosmos according to the innate and emergent properties of its elements: earth, fire, water, air, and space. Intelligence is the first concern of the character Timaeus, an “expert in astronomy,” who “has made it his main business to know the nature of the universe” (27a). Intelligence, in the form of the Demiurge, fashions the coming to be of the world as we perceive it, taking as a model the perfect and unchanging world of being. This distinction, between “*ousia*,” being, and “*genesis*,” becoming or coming to be, is key, as it is elsewhere in Plato’s corpus. Something that has

being—something that properly *is*—is unchanging and ideal. As such, it is totally inaccessible to perception. To use the famous example: making a chair, a carpenter draws on well-reasoned and intelligent knowledge of the eternal form of a chair in order to craft the becoming of a chair in the world, namely, what we would then be able to perceive and use as a chair. As noted by John Cooper, editor of the *Complete Works*, the word “*genesis*” had, for the ancient Greeks, far less than we are like to imagine of a temporal or causal connection to being as such. The typical English translation of “becoming,” or “coming to be,” does us a disservice with respect to *genesis*, which does not necessarily imply an eventual being, or *ousia* (1234, n.8). The universe as we know it—that is, as we perceive it—is described by Timaeus as an intelligently crafted becoming, based on the model of an unchanging being. What this means is that the world, unlike the eternal form of the good, unceasingly changes. Change, in this sense, is one aspect of Necessity, that in light of which the divine intelligence of the Demiurge must craft the world. Necessity is necessarily removed from the control of the divine intelligence, and this is its very essence. It is that which is not intelligent. That which is not by design.

Of note is that the intelligent creator, in Plato’s understanding, is by no means omnipotent. The Demiurge is good and only produces good, even though there are, of course, things in the world that are not good. Yet it is evident even in the *Republic* that this poses no problem for Socrates. There are simply things that are not caused by the gods. Poetry, according to the dialogue of the *Republic*, should not represent the gods as anything but good: perfect and unchanging. But therein lies the gap that Necessity fills. In the accounts of divinity found in both dialogues, the gods are only responsible for what is good. Reductively, then, the intelligent maker does not make everything, but rather makes the

best of things. This cannot but be the case, since its only model is the perfect good itself. From what could the Demiurge even model that which is not good? In the scheme of the *Republic*, Socrates leverages a similar act of intelligent creation to uncover the logical nature of justice in the soul, working within the constraints of necessity to encounter in speech its eternal form. While the dialogue of the *Republic* takes the shape of a political organization, it is important to remember that Socrates' true aim (to which we will return) is not an actual city, but rather the ideal of justice that will emerge from the imagination of the city.

Necessity, then, is a preexisting condition of the cosmos; but in another sense, it is always also a consequence. If the good is unchanging, and Necessity is not necessarily good, then Necessity, like everything else that isn't the perfect good, by its own right, changes and must change. Moreover, having itself no power over being, over what *is*, Necessity changes in response to what comes to be. What is becoming is thus engendered by and engenders Necessity. The double movement of Necessity—engendering and engendered, ever-changing—mirrors the double movement in speech by which Socrates and his interlocutors construct and explore their city. The needs they derive and come upon are needs by Necessity. That is, by Necessity, these needs arise logically, in theory, and in speech. An earlier example can now be recast: a need arises, in the estimation of Socrates and Glaucon, that the elementary education of their city's guardians must be talked through and observed in speech. Neither Socrates nor Glaucon planned for the logical path of their city to take them to this juncture, but here nonetheless their reasoned Intelligence meets a need. The force out of which this need arises from this logical course—as if to block its forward progress—we now recognize properly as Necessity. Indeed, *Ananke* can be

translated as both “necessity” and “force.” Driving the very language of the *Republic* is precisely this Necessity.

But the same word, *Ananke*, can also be translated as “constraint,” and it is this aspect that defines the inner workings of its negotiation with Intelligence. Necessity cannot be reasoned with. Reason is constrained to its accommodation and appeasement. Fire, to use an example from *Timaeus*, burns; it “cuts” by virtue of its elemental composition. We know today that fire does not burn as a result of the sharp angles of its triangles: “the fineness of fire’s edges, the sharpness of its angles, the minuteness of its parts and the swiftness of its motion” (63d). However, this by no means frees us from Necessity. A modern way of understanding Necessity would be to think of it in terms of mechanics: what *must* happen, or better yet, what *happens*. The city in speech has needs, and those needs arise out of Necessity, but these needs must be thought—and in the case of the dialectic, sorted out, met, and observed—always within the constraints of Necessity. Socrates and Glaucon, seeing that their speech has presented them with the need to educate their guardians could simply address this need by saying, “Well, perhaps we will be blessed by chance with a whole generation of children preternaturally predisposed to the just and the good—a new golden age of heroes—which will free us from the need for proper education.” But while this addresses the need, it does not do so within the constraints of the world that has come to be. Were this to be the solution, the city in speech would no longer prove analogous to our own experience of the world. Worse, its justice would no longer resemble our own, and the point of the exercise would be defeated, its political metaphor dissolved. The above approach would be fine for fantasy, but it would no longer

be consistent. We would have, as it were, a *deus ex machina*, a god in the machine: in our case, reason in the mechanics.

2.3 The Real but not Actual

We know as well as Plato that the mechanics of our world are not intelligent. And it is the purpose of the dialogues at hand not to ascribe to the mechanics around us an intelligence that is not there, but rather to pursue by our own reasonable intelligence the forms outside the necessary constraints thereof. In this light, we can consider the method of the *Republic*—the method revealed by the cosmology of the *Timaeus*—like so: the *genesis* of the city in speech proceeds not in terms of what is strictly possible, nor yet toward any semblance of actuality, but rather in keeping with a reality that is no less present, in spite of its impossibility and inactuality. This is what Gilles Deleuze comes to call the *virtual* (AV, 148-152). And the city in speech is just that, a *virtual world*, crafted and explored by Intelligence within the limits of Necessity. Thus the city in speech distinguishes itself from the stories and myths recounted elsewhere in the *Republic*. The telling of a story remains purely intellectual, suffering no hint of the necessary, which would, by its dual movement, provide for exploration and create needs and problems along the way. The teller of tales does not explore the tales in their telling—or at least, where one does, the tale becomes something else entirely.

Having brought ourselves to the virtual in order to understand the creation and exploration of the city in speech, we should now turn to the question of how the city in speech can expand our understanding of virtuality in its contemporary applications. Deleuze defines the virtual as the real, but not actual (DR, 208). He writes, “*The virtual is*

fully real in so far as it is virtual. Exactly what Proust said of states of resonance must be said of the virtual: ‘Real without being actual, ideal without being abstract’; and symbolic without being fictional” (DR, 208). To be sure, this definition is distinct from popular notions of virtual reality, but these two developments are not totally exclusive. The history of the virtual, as a concept, is long and convoluted. The Oxford English Dictionary accounts for its etymology, which paints a partial picture, as follows:

< post-classical Latin *virtualis* of or relating to power or potency (frequently from 12th cent. in British sources), that has the power to produce an effect, potent (13th cent. in British sources), morally virtuous (from 13th cent. in British sources) < classical Latin *virtus* virtue *n.* + *-ālis* -al *suffix*, after classical Latin *virtuōsus* virtuous *adj.* Compare Middle French, French *virtuel* that is such in essence, potentiality, or effect (1480), of or relating to a faculty of the soul (1481 in a philosophical context), possessing particular physical virtues, powerful (1526).

It is from this sense of “power or potency,” for instance, that Machiavelli infamously drew for his use of the word “*virtù*,” meaning a kind of noble manliness. Indeed, uniting many of the earliest senses of the word, is an alarmingly patriarchal connection to the Latin “*vir*,” meaning itself “man.” Albeit with less of an emphasized connection to gender, the word “virtual” follows suit today in its connotation of effectuality. In English, we commonly use the word to mean something that is only in effect, if not in actuality. “Her doubles team is virtually unbeatable.” “My project is virtually complete.” Or, “the opportunities are virtually endless.”

Even from these commonplace examples, we gain some understanding of what Deleuze means by “virtual.” Ideas themselves are virtual: real, but only insofar as they are virtual, not to the extent that they are actualized. “The virtual... is the characteristic state of Ideas” (DR, 211). The possible becomes the not-yet actual. But the virtual is utterly unlike the possible; it is, in itself, real. “The virtuality of the Idea has nothing to do with possibility,” Deleuze writes (DR, 191). For our purposes, we must come to understand the city in speech as virtual, because to do otherwise would be to misread it, as many have, as possible, or worse, actualizable in the first place. This important political point bears repeating: *Kallipolis* is not a prescription, but rather a framing through which to understand a problem as if magnified. It is virtual to the extent that, as Deleuze writes, the virtual realizes a problem. Deleuze: “The virtual possesses the reality of a task to be performed or a problem to be solved: it is the problem which orientates, conditions and engenders solutions, but these do not resemble the conditions of the problem” (DR, 212). The city in speech realizes a problem. It realizes the problem of justice, to the end of solutions which do not themselves resemble the city in speech. This is the very mechanism by which the *Republic* operates: it explores in virtuality the reality of a problem. The solutions to the virtual problematic of the city in speech are not, that is, themselves in speech. Socrates intends for them, of course, to be perfectly actual! But we should remember to take Plato at face value when Socrates proposes the virtuality of a city in speech. The discussion at hand is logical, in the sense of following reason, and in the sense of its basis in “*logos*,” meaning “word.” In speech, the virtual city becomes explorable not just by one, but by several. It is a shared virtuality. Socrates and his interlocutors build and explore *Kallipolis* in speech and, befitting the spirit of the dialectic, in friendship. To speak in political terms,

its creation and exploration are collective projects, albeit projects exclusive to a particular Athenian social class.

Indeed, friendship is an essential component of cosmological creation, as the *Timaeus* makes clear. “This is the reason why these four particular constituents [fire, water, air, and earth] were used to beget the body of the world, making it a symphony of proportion. They bestowed friendship upon it, so that, having come together into a unity with itself, it could not be undone by anyone but the one who had bound it together” (32e). In the *Republic*, language forms a collective subjectivity, a dialectic, when speech and friendship work thusly, hand in hand with necessity. Yet the virtuality implied by speech and in friendship is not so foreign a concept as it first appears.

Imagine a group of friends, gathered around each other, inventing in speech a world all their own: seeing what it needs and where their conversations take them. Today, we might find precisely this interaction in the form of some kinds of game play, namely, tabletop role-playing. In these games, players have conversations with each other in order to play out fictional scenarios. In some games, like the famous *Dungeons and Dragons* (Wizards of the Coast), players portray individual characters, and they take turns describing the actions these characters take in the world. When called upon by a player called the “Dungeon Master,” who coordinates and facilitates the world of the game, players roll dice to decide the effectiveness of their actions—whether they successfully pick a lock or hit their mark with an arrow. But, in spite of the game’s impact on popular culture, we should note that not all tabletop role-playing games work like *Dungeons and Dragons*. Not all, that is, use language exclusively to battle or to pillage, but instead to express of dialectical

collaboration, even to the extent that they reckon with the nature of speech itself. In fact, many newer games resemble the dialogue of the *Republic* nearly note-for-note.

2.4 *The Quiet Year*

An independent tabletop game, *The Quiet Year*, designed by Avery Alder, is one example of such a collective experience. The premise of the game has a group of players drawing onto a sheet of paper a map of a fictional community. Prompts read aloud at the start of the game allow players to define basic aspects of the lives of their community members. Who lives here, where does their food come from, what natural landmarks are nearby? Generally, every new feature generated by the players is marked on the map in whatever way players decide. One group may use an evolving, arcane symbology, while another might sketch representative drawings. Play of the game occurs by drawing from a standard deck of fifty-two playing cards, divided into its four suits. Each card is associated with a set of questions, listed in an appendix of the rule book. Players take turns drawing cards, answering the associated questions, and filling in the map on the table, in order to build and explore the game's central community. Play proceeds from one suit to the next as the timeline of the game moves, from Spring to Winter, through the four seasons of the titular quiet year. As the game goes on, questions get tougher, and they start to force players to make difficult decisions. Eventually, one player's answer may affect the contributions of another. Tension ensues.

The "quiet" part of the game's title refers to a rule whereby players are not allowed to speak unless they are actively taking a turn. This rule is in place, first of all, to foster a lonely and melancholy atmosphere around the table, in keeping with the game's somber

themes. But the rule also exists to prevent players from discussing every decision as a collective. The movement of play from person to person is thereby able to model the inconsistency of real-world communities. One player may build a well, during one turn, in the hopes of using it to counteract the drought that was introduced in the last turn. Another player down the line, however, may destroy that well in an earthquake, having been forced by a card to get rid of something useful to the community, and being unwilling to take out one of their own contributions. Players are able to express dissatisfaction over the outcome of a turn, but only in silence, by laying down their supply of grievance tokens during another player's turn—but this expression of dissent has no impact on the turn itself.

What comes to pass during the playing of *The Quiet Year* is the construction and exploration of a community in speech. Although there exists a record of play in the form of the game's central map—it is advertised as a “map-making game,” after all—the fact remains that the play of the game happens primarily, in speech, and only secondarily in inscription, or writing. The community that comes to be in the play of the game is thus a virtual one. Although its problems are arbitrary, and do not seek to locate something so weighty as the form of justice itself, the method by which its communities are virtualized is nearly identical to that of the *Republic*. What comes to distinguish the two approaches are the respective Necessities they engender. Socrates intends for his discussion to produce a reasoned, logical account of the coming to be of a perfectly just city: the needs of its Necessity are based on this virtual problematic. The Necessity of the *Republic* is an obstacle to be comprehended in reason, and moreover, in a dialectic. Three heads, Socrates figures, are better than one! Part of its Necessity, ironically, becomes its rationality. What is irrational must be excised. On the contrary, *The Quiet Year* confronts its own prescribed

Necessity by stopping a dialectic from forming. It breaks up the combined reason of its players, and fosters in them, by virtue of its game mechanics, a sense of dreadful and irrational force. Things happen, the players are supposed to feel, *just because*. An estranged dialectic emerges, one that comprises the Intelligence of players' good sense and the Necessity of their inability to organize their cooperation. The protracted turn-by-turn constraint on speaking forms the linguistic plane of this struggle.

Although they differ in their respective rationalizations, what *Kallipolis* and the communities of *The Quiet Year* share, then, is a virtuality of Necessity. Force is realized in its inactuality. But many of today's most pressing concerns over virtuality do not revolve around philosophical dialogues or weekend game nights. Networked computers are everywhere. Do we therefore live in an increasingly virtualized world? Should we be worried about it? In these contemporary cases, too, the cosmological *genesis* of virtual worlds, as exemplified in the *Republic* and the *Timaeus*, remains relevant. The virtuality of a computer is perhaps more like that of the city in speech than one might assume. However, it is important, in the first place, to distinguish the virtual from the digital, since these two words are often conflated.

What is digital is based on circuitry, and on the binary state of being either on or off—a one or a zero. The critical theorist McKenzie Wark has argued in *Gamer Theory* that the digital is something that spreads out into society from computation and computerization. The plight of global capitalism, Wark writes, with its zero-sum, win-or-lose logics, is founded on an essentially digital conceptualization of the world and its inhabitants. A person, or even an idea, is always either-or. Wark describes an all-encompassing game of digital binarism that threatens to engulf all experience. Video games

will not come to resemble warfare; on the contrary, warfare increasingly resembles video games. We find ourselves, as Wark would have it, stuck in the game—in a game of games. The circumstance she even likens to Plato’s allegory of the cave. In her telling, however, we retreat from the cave always into other caves, digital worlds deeper inside our own digitized worlds. But the digital, understood in this sense, is far from the virtual. What is virtual is indeed the imagining of the cave system itself. As Socrates and his interlocutors virtualize the city in speech, following its integral Necessity to the conclusion of justice, so too does virtualization of the digital render the critique of its own problematic.

2.5 Speech and Writing

The virtual, as always, is a process of circumscription: as Deleuze writes, “complete without being entire” (214). Virtuality surrounds and frames. Perhaps the way to understand the digital, then, is through virtual worlds that directly confront it. If this is the case, then the most interesting instance of the virtual confronting the digital is the video game. With an understanding of the virtual, as presented above, we are able to see how video games do not meaninglessly reproduce the digitalism that they appear to embody, but rather confront it as a form of Necessity. Our question becomes, what virtuality emerges from the digital? We concluded that the virtuality of the city in speech stems from its *genesis* in speech. This insight provides us with our answer. What emerges from the digital is, likewise, a virtuality *in language*. There is, we have already seen, a relationship between language and the virtual. Something made in language, like the city in speech, is necessarily virtual: it is clearly not actual, but it is real nonetheless. This relationship works both ways. What is virtual, likewise necessarily, is in language. Furthermore, it is only in and through this language that we explore and experience the space of virtuality. The

virtual world comes to be in language. Virtuality and language thus form a tautology, albeit one distinct from other conceptions of discursive being. In that language is a tool for exploring the virtual, virtuality is a method for exploring language.

By the virtuality of language, we should not mean to imply that a video game is a kind of speaking with a computer. A computer does not speak. One could, certainly, activate certain computational processes by voice input, but the transposition of speech into input makes it into something else entirely. That something else is what we seek. The computer knows nothing like we would call speech—but this is not to say that our engagements with digital systems lack any kind of language. For one, a digital language of input and output codes all interaction into the binarism of operations and protocols. But when we venture to create and explore worlds in virtuality, another kind of language is employed: a language proper to the virtual itself. In its virtuality, this language is, paradoxically, analog. As digital-Deleuzian theorist Brian Massumi writes in *Parables for the Virtual*, “*The processing may be digital—but analog is the process. The virtuality involved, and any new possibility that may arise, is entirely bound up with the potentializing relay [of the digital]. It is in not contained in the code*” (142). In this virtual language, then, we become true interlocutors, working together not with a computer per se, but *with language*, in response to the Necessity of the digital, to build and explore. Unable to speak, and always mediated into the necessary constraint of binary operation, the speech out of which the virtual world of the video game comes to be is, namely, writing. But it is a writing that is, itself, virtual. This, too, is a Platonic notion.

In the *Phaedrus*, Socrates divides written language into two kinds: in the world and in the soul. Let us recognize this division now as between, respectively, the actual and the

virtual. Actual writing—writing, for instance, on paper, or in stone—in the *Phaedrus*, is taken, ironically, to be a tool for forgetting. What one writes down, one does not need to remember. This is the conceit of the alleged Egyptian parable that Socrates recounts to his young interlocutor. The invention of writing, the Egyptian king concludes, ““will enable them [the Egyptians] to hear many things without being properly taught, and they will imagine that they have come to know much while for the most part they will know nothing. And they will be difficult to get along with, since they will merely appear to be wise instead of really being so”” (275b). In other words, actual writing becomes insufficient for the knowledge of the true virtuality of ideas. However, Socrates’ final speech supposes another kind of writing, a true kind of writing dedicated not to forgetting, but to remembering. Socrates proposes a writing of the soul. This is the kind of writing, Socrates says, that a true teacher inscribes on the soul of a student. The teacher sows the writing of the soul for the harvest of the student: remembering. An alphabet, a code of oppositions, becomes a collection of seeds for the flowering of knowledge. “The dialectician chooses a proper soul and plants and sows within it discourse accompanied by knowledge—discourse capable of helping itself as well as the man who planted it, which is not barren but produces a seed from which more discourse grows in the character of others” (226e). Not unrelatedly, in the erotic context of the dialogue in full, one can imagine how this true writing could be inscribed just as well by the madness of love on the souls of lovers. Sex, after all, is rendered as “*erotikais anankais*,” erotic necessity, in the *Republic* (5.458d).

What distinguishes true writing from actual writing is precisely its inactuality. That is, the writing of the soul is real, like the city in speech, in that it is necessarily virtual. When a player presses a button in a video game that player writes in actuality: circuits open

and close, as if pen were meeting paper. Characters, likewise, dash across a screen in actuality, their movements guided by processes actually encoded into a piece of software. But in the phenomenal exploration of virtuality, as mediated by a digital computer—by the digital—mediated, that is, by needs that arise from particular and changing Necessities—the language is virtual that explores virtuality. The video game becomes a virtual kind of writing, as in speech the virtuality of *Kallipolis* found its *genesis*. The computer, that is, takes actual input and produces actual output: images, sounds, haptic feedback. But all of this is in service to an underlying virtuality which invites a player to confront their digital constraint. Do video games write on the souls of their players? Perhaps not. Or not always. But they nonetheless manifest a virtual language in which the player must learn to converse, virtually. Massumi: “The challenge is to think (and act and perceive) the cooperation of the digital and the analog, in self varying continuity” (143). Virtuality, as we find it as early as Plato, is one site of this cooperation. The act of playing a video game becomes a mediation of the actual and the virtual toward the Necessities of its own construction. It becomes a play of limits. Play pushes at these limits, at the constraint of the sensible, but this is where virtuality is at its most productive—as idea, as problem, as problematic and as paradox. *What if I...? If I... then would...? What happens when...?*

CHAPTER 3. WRITING: ABSENCE AS PRESENCE

3.1 Grammatology

This chapter may take the furthest leap. In it, I will claim that the kind of language we have already established emerges from the virtuality of a game world is properly a written one. I will claim that video games are a kind of writing. More specifically, I will argue that video games exemplify what I oversimplify in calling *phenomenal* writing. This notion I derive principally from French philosopher and literary theorist Jacques Derrida. Such writing is a natural inversion of our predisposition toward speech: the affirming experience of listening to a real live person vocalize in front of us. In writing, there is no present origin. The source of the text—its author, say—is necessarily separate, both from text itself and from us, its readers. It is necessarily elsewhere; it is absent.

Inscribed always in writing is this strange absence. The result is a peculiar kind of presence that seems to defeat itself. (Here lies the basis for Derrida’s infamous project of “deconstruction,” the idea that ideas contain their own opposites.) The text is here, but the author is not here. The author may be nowhere, long dead or anonymous. Thus, distinctly unlike speech, writing represents the lack of a subject that brings it into being, and it portrays this lack by way of what Derrida refers to as a “trace” (OG, 74). Whereas speech centers itself on the speaking subject—the one who is speaking—the trace of writing reveals an essential centerlessness. Within this centerlessness, language operates in “free-play” (WD, 289), an infinite movement of meaning through a finite text. This is not to say that speech cannot be interpreted in various ways, but only that the very fact that speech is spoken *by someone* lends it a certainty unavailable to writing. The production of speech

is unbounded, a speaker can always say more, but this aspect actually narrows its capacity for free-play. The presence of the speaker collapses the meaning of the speech. The essential absence of writing sets it free.

Lacking a speaking subject, writing preexists any entrance into it. To draw once more upon the same comparison: with speech, we stand before someone who speaks. Our subjectivities and the subjectivity of the speaker take precedent; they are established up front, before any speech begins. Writing, on the contrary, is something that already exists by the time we get to it. In this way, Derrida argues, writing is like language itself. We are thrust into it, and we make our own way through it. None of us invented the language we use. Indeed, Derrida takes things a step further. Language itself becomes a kind of writing, an “arche-writing” (OG, 61) that transcends the inscription of symbols on a medium.

Language, as writing, becomes a preexisting condition of culture, a text that has no individual author but to which, even in our individualized utterances and speech acts we all contribute. The video game, I argue, is this condition in miniature. It is a written language into which we voluntarily enter—and it is such a language materially. As Deborah Goldgaber has recently argued in *Speculative Grammarology*, it is a misreading of the project of grammarology—as Derrida called his inversion of the speech-writing dichotomy—to conclude that its application is exclusively textual or literary. She writes, “*Of Grammarology* claims that writing is absolutely general. This obliges us not only to think the ‘materiality’ of arche-writing, but also the textuality of ‘matter’” (8). Indeed, grammarology becomes a peculiar kind of material science. In this chapter, video games will likewise reveal this quality—not through the specious facility of immersion, but through its opposite: the de-centering of the player as a subject in the world.

But why go through the trouble of using this very peculiar concept of writing to understand video games? What makes it so apt? In *Plasticity at the Dusk of Writing*, philosopher Catherine Malabou argues that “the enlargement of the concept of writing was authorized,” for her own doctoral advisor Jacques Derrida, “by the initially undefined cultural suggestivity of the ‘model-images’ of *inscription*, *code*, or *program*, which activated this culture” (14). She goes on to say that, as a “motor scheme” or “pure image of thought,” Derrida’s notion of writing functioned “as a type of tool capable of garnering the greatest quantity of energy and information in the text of an epoch” (14). In other words, she contends that writing suggested itself. Amidst a 20th-century culture of codes, cultural productions, and burgeoning cybernetics, writing emerged to describe the ways people were already discussing the experience of the world. Per her book’s title, Malabou herself concludes that such a time is at its end, and she proffers plasticity as today’s eminent motor of critique.

While the 20th century is increasingly long gone, I argue, in keeping with Malabou’s metaphor, that the sun of writing has not so much set as it has been occluded—and by what else than the cloud of computation. Our experience of writing today is everywhere mediated by the digital, and nowhere is this mediation more clear than in the case of video games. Here we find explicitly and materially written systems for which we have little to no phenomenological vocabulary to describe our experiences appropriately. In this chapter, I seek to make the writing of video games clear and, in doing so, exemplify the entanglement of writing in and in resistance to the cybernetic project. Goldgaber: “cybernetics awaited what grammatology promised to provide” (147). In Malabou’s words,

writing remains a necessary motor scheme if we are to comprehend our perpetual return to grammar—to verbs, objects, and subjects—within the discourse of video games.

Derrida’s notion of writing is therefore most helpful for understanding the material cause of the player’s willing relegation to delimitation within the harsh and immutable constraints of a virtual language. But before engaging at greater length with the phenomenological implications of this situation, it may prove helpful to examine the more obvious ways video games exhibit modes of inscription, the other ways video games are written, namely, in an encoded game state, on-screen, and in memory. These essentially technical textualities will allow us, as Goldgaber puts it, to see that “the materiality of the trace [...] refers not to any substrate (of the graphic trace) but to the essential modifiability of textural structures” (12). To wit, we must learn to see the script and the inscription that produces it before we can account for our phenomenal experience of the writing itself. We seek, in the end, a virtual world in language beyond its instantiation in silicon; but we begin with an account of how video games function in written computer code according to a progression of discrete and quantifiable states.

3.2 Game States

Many games, on a functional level, are made up of discrete states. Chess provides a clear example: the position of all the pieces on the board, along with the absence of any pieces already captured, comprises the state of the board, or the *game state*. As soon as one of the players takes a move, the game state will have changed to a new state. The rules of chess say that once a particular game state called “checkmate” is achieved—once a king left inescapably vulnerable to capture—the game is over, and a winner is declared.

Professional players are able to see checkmates on the horizon, forfeiting games that, in their minds, they have already lost. They imagine future game states and consider how to achieve or avoid them. Part of becoming a skilled chess player comes from studying the recorded history of chess games, developing a mental catalog of game states and the movements between them. Chess problems—puzzles wherein one must achieve a certain game state in a certain number of moves (for instance, “mate in 3 moves”)—work in the same way. They challenge solvers to think of the game as a series of discrete, quantifiable states. Play-by-mail games take a similar approach as players receive their opponents moves in form of letters, e-mails, or text messages and thereupon might choose to visualize each new game state on their home chess boards. The acuity which allows players to quantify the chess board into abstract states is what allows for masters of the game to play a roomful of opponents at once.

Board games seem to naturally align themselves with this sort of quantization. What was said above of chess applies just as well to checkers, or backgammon, or even card games like blackjack. Things get messy when we try to apply the same logic to games like sports. Still, games like basketball or soccer possess discrete elements, the most obvious being score. When, in baseball, we describe the home team as having 7 runs to the opponent’s 3 we are describing one kind of game state. We do so again when we use a cliché to say that the “bases are loaded.” Unlike chess, these descriptions of game states do a poor job explaining many of the most salient points of the game: which team is under-performing, the fact that a player is injured, or the recent missed call by a referee.

Conclusion: with sports, we can describe the game in terms of states, but we cannot describe the whole world the same way. Whereas every essential movement in a chess

match can be reduced to a factum of discrete states of the board, it would be impossible to do the same for a live sport, even if one were to record each and every moment of play via comprehensive video, audio, and advanced biometric telemetry of individual players. It would be like fighting a battle against time itself. Movement, which most sports rely upon, is simply not digital, but decidedly analog.

Video games are much more like chess in this way. They comprise discrete states. Although video games make up virtual worlds, every part of these worlds is perfectly accounted for—necessarily, because they have to be computed. The written encoding of a video game, as a piece of software, documents the mechanisms by which every possible game state can be rendered. For the computer, there are no surprises. Every position on the board, so to speak, can be traced back to a logical process, to a written instruction that tells the computer's hardware what to do and when to do it. In this manner, the whole of a video game's virtual world is necessarily inscribed. But it must be inscribed somewhere—that is, onto some material substrate. Two such substrates are a computer's memory and its screen.

3.3 Image and Memory

The fact that a video game has discrete game states, when combined with the fact that these game states must be recorded in some way in order to respond to input, means that states and the movement between them form a basis for writing. Game states, in one way or another, are recorded to computer memory. They are inscribed into sequences of 1s and 0s and, by extension, into physical circuitry. It is no coincidence that this process is most commonly referred to as “writing” to memory. The mechanism by which this writing is accomplished varies from game to game and from platform to platform, but a concrete

example will be helpful. To that end, we can turn to a formative work in the field of “platform studies,” a sub-discipline of game studies that analyzes the design and functionality of computer hardware to understand the constraints and affordances they bring to the development of games and other software. Ian Bogost and Nick Montfort coined the term in *Racing the Beam*, their book-length study of the Atari Video Computer System (VCS), also called the Atari 2600.

As Bogost and Montfort demonstrate, the VCS is an anomalous and atypical machine. However, if the technical functionality of the Atari VCS is indeed unlike any other platform, it may yet serve our purposes all the better. It will focus our attention on the principle at hand—writing—not because we will see how it is done at all times and in all cases, but because we will find that writing is the thing itself that unites the idiosyncrasies of the VCS with the standardized solutions that followed it. The VCS writes in a manner distinct to modern consoles and computers; but it nonetheless *writes*.

The unique system architecture of the VCS mandates adherence to principles as strict as they are arcane, including one nearly unbelievable tenet which lends the authors the title of their work, *racing the beam*. Developers working with the VCS, it turns out, had to write their code that ran not just efficiently, but also with precise timing. This was to account for the console’s inability to automatically synchronize with the movement of a cathode-ray tube television’s electron gun, which drew images line-by-line across the screen. If a character or an enemy on-screen needed to move, then the part of the game program that dictated why and how needed to say so in the split-second before the electron gun returned to the spot where it would appear.

Whereas modern computers employ a frame buffer to compose and display an entire screen of graphics all at once, the VCS, as Bogost and Montfort note, was “not equipped with enough memory to store an entire screen’s worth of data,” (27) necessitating manual control of the mechanism via “synchronizing the 6507 processor instructions to the television’s electronic gun via the TIA [Television Interface Adapter] (28). Bogost and Montfort record in great detail the commands, controls, and configurations that VCS developers needed to account for when designing their games, all in service of producing the space and movement of a virtual world.

In one revealing passage, Bogost and Montfort write:

From a player’s perspective, the Atari VCS displays its games on the two-dimensional surface of a television display. But from the machine’s—and the programmer’s—perspective, the television picture is a comb of horizontal lines, each section rendered on CRT phosphor with the color set at the last alteration of the TIA’s registers. (28)

In other words, what appears to the player as an image is, from a certain point of view, a mode of phosphorescent inscription, a tracing of meaningful patterns along a material substrate, or rather, in the strictest sense, writing. While modern displays apply more advanced computational solutions to the problem of rendering images on a screen, the foundation remains the same: a computer program tells a computer when and how to organize discrete visual elements as needed and in the order prescribed by some creative intention. Where we see computer generated imagery, we find writing on-screen.

The use of memory in the VCS is equally revealing of its underlying writing. Video games use various types of memory for reading and writing. Two basic kinds of memory are volatile and non-volatile. Non-volatile memory will save data even when it receives no power. Volatile memory keeps what is written to it only while it is powered. A USB flash drive, a music CD, and a computer hard-disk drive are examples of non-volatile memory. If they were volatile, they would be just about useless. A common type of volatile memory is random-access memory (RAM), which allows a computer to retrieve and store information much faster than it can with most non-volatile memory. For this reason, when computers need to process information quickly but not permanently—as with temporary files, working data, and so on—they tend to use their volatile memory storage. In other words, volatile memory is the sticky note to non-volatile memory’s file cabinet.

The particular kind of non-volatile memory popularized by the Atari VCS was read-only memory (ROM), which the system’s industrious engineers managed to fit onto a single chip in nearly every game cartridge sold. As Bogost and Montfort explain, “A mask ROM, the classic type of ROM and one that is still in use today, is a memory that is hardwired at the time of manufacture and cannot be reflashed repeatedly or even programmed once in the field. This sort of ROM is produced like any other integrated circuit, in a lithographic process that uses a set of photomasks to etch a wafer” (21). They continue: “reusing the console’s microprocessor in combination with a variety of different programs, each stored on a mask ROM, was very cost-effective, in addition to being very flexible” (21). In other words, while the particular hardware solutions employed by the VCS engineers were unique in their time, the methods employed have remained the bases of computing and video gaming technology.

Thus, if video games rely on computing and computing relies on circuitry then there exists a clear, direct, and material connection between video games and the process of inscription, a process which yields no script legible by humans, but which nonetheless renders into the world an organized index of meaning which carries the trace of its once-present but now-absent production. But is this all we mean by *writing*? That onto some surface—an encoded game state, a computer chip, a television screen—some meaningful sequence of material has been etched? Such writing is merely, as was explained above, a *graphic* trace, a visible exponent of a grander process of writing which holds within itself the entire possibility of language: a virtual language that is our object. In other words, we have established by now that video games are writing in the sense of an inscribed graphic trace, but now we must turn our attention to what forces this inscription exerts on our phenomenal experience of play. When we encounter the graphic trace of writing in a video game, what does it do to us? How do we react?

By way of example, we will now examine the well-known concept of high scores alongside the leaderboards onto which they were recorded in the bygone era of the arcade cabinet. Rather than imagining a scenario from scratch, however, we turn instead to a reading of two postmodern parables, each of which illustrates the experiential entanglement of play and writing in video games, before we conclude with an analysis of writing itself, on its own terms, in pure virtuality.

3.4 High Scores

Of all things, an episode of the American sitcom *Seinfeld* (Ackerman) effectively traces the drama of writing in video games. A-plot protagonists Jerry and George return to

the pizza parlor of their youth on the occasion of its imminent closure. There, George spots a *Frogger* (Konami) arcade cabinet. After a quick game he concludes that it must be the very same one at which he spent his hours as a nerdy teenager chasing high scores: his own initials are still, after all these years, at the top of the scoreboard. The perennially down-on-his-luck George is, for once, on top of the world. No sooner can he celebrate than he realizes that his glory will be erased as soon as the restaurant closes for good. So, he buys the arcade cabinet to preserve his victory, to prove his skill, and to attest forever the virtual virility of his balding, chronically emasculated personage.

But George's plan suffers a complication. As his friend Jerry explains, the high score will not survive the memory wipe caused by unplugging the machine. To a modern audience, especially to those like myself who only experienced the tail-end of the American arcade boom, this sounds like a writer's contrivance. Surely arcade machines would store something so integral to their enjoyment as high scores in their non-volatile memory. But history validates Jerry's concern. *Frogger* was a relatively early example of arcade cabinetry. It lacked the more sophisticated storage solutions that would allow later machines to permanently store player data like high scores. Even without turning to the original hardware diagrams, we can find evidence of this fact in the popularity of after-market modifications that solve this exact problem for this exact machine. One enthusiast's webstore, MikesArcade.com, even advertises an upgraded replacement for the cabinet's Zilog Z80 microprocessor chip: a "High Score Save Kit" for the game. "The kit that Seinfeld's George Costanza would have died for," it reads.

Granted, we must suspend our disbelief that no power outage had struck this New York pizza in the decade-and-a-half since George last saw it. But we must also suspend

our disbelief that amateur electrician “Slippery” Pete could feasibly connect the machine to a battery without first unplugging it from the wall. In the end, George devises a convoluted system of backup power and extension cords to transport his beloved cabinet from the pizza parlor to his apartment. But as his luck would have it, “Slippery” Pete drains the battery while sneaking in a quick game on the street corner. The pizza parlor closed for good, George is faced with an immediate need to plug the cabinet into an outlet. His only option is the pharmacy across the street, but there is no quickly accessible crosswalk. George, assuring Jerry that he has prepared for this moment his whole life, grips the machine on its dolly and sets off pushing it straight across the busy Manhattan avenue. Here the show’s camera cleverly pulls back into a pastiche recreation of *Frogger*’s top-down camera angle, complete with sound effects. George hops through three lanes of traffic only to reach the other side just as a cargo truck barrels toward him and the cabinet. Valuing his life above his glory, he barely manages to dodge the truck as it smashes through the machine, erasing every trace of George’s high score.

The irony is that even the perfect transference of George’s virtual skills to the actual world is not enough to save the inscribed record of his virtual victory. But note that this irony is the result of a conscious choice. The record is less important to George than his own life. It would be absurd to imagine the opposite, but this is precisely the contrast that the show so often plays upon: the insignificant becoming significant. Once, in an interview portrayed in the 2002 documentary film *Derrida* (Ziering and Dick), a British reporter asked Jacques Derrida if he had ever seen *Seinfeld*. It so perfectly captured the essence of deconstruction, she argued, especially in its relentless recursion to irony. As the show’s tagline goes, *it’s a show about nothing!* This is not deconstruction, Derrida replied.

Deconstruction has nothing to do with sitcoms, he said, the genre sounding at once unfamiliar and distasteful in his mouth. Anyone who thinks deconstruction has anything to do with sitcoms should read—should do their homework and read.

One could argue that deconstruction has about as much to do with sitcoms as it has to do with video games. But these modes have very much to do with each other precisely because they each function, in the best of cases, as levers for the action of thinking. They propose concepts and offer testing grounds for them. Stupidity—failure—is the point. *Seinfeld*'s misanthropic protagonists, eventually tried and convicted for their petty offenses in an infamous finale, work best when their ironic reversals operate not as a general mode but in the most particular cases. The *Frogger* cabinet achieves the importance of a prestigious diploma, a professional accolade, or sexual prowess.

An episode of a different sitcom, aired nearly four years after “The Frogger,” even more clearly illustrates the particular distinction between speech and the writing of video games. “The One Where Joey Dates Rachel” (Schwimmer), is an episode of *Friends* wherein friend Phoebe gives a *Ms. Pac-Man* (General Computer Corporation) arcade machine to her friends Chandler and Monica on the occasion of their wedding. Monica is thrilled because she loved the game as a teenager, but when she comes home from work she finds her husband Chandler has spent all day advancing from novice to expert, his finger muscles cramped into a joy-stick grip. As she inspects his high scores, Chandler brags about the curse words he has managed to enter into every three-letter name on the leaderboard. After the obvious choice, he says, he had to get creative by breaking the foul language across multiple high scores. Monica is unimpressed, especially since Ben, the young son of their mutual friend Ross, is coming over soon to try out the game. The curse

words have to be overwritten—and the only way to do it, they figure, is to set even higher scores, to play and play and play.

Monica and Chandler call in Phoebe to help. During a particularly high-scoring run, however, Phoebe makes a mistake and gets a game over. Her anger gets the better of her and she screams a flurry of curses, ironically, just as Ross and the young Ben walk into the apartment. Ross hugs Ben close to him in an exaggerated attempt to cover his ears as the show's soundtrack cuts the dialogue in favor of the climactic finale of "O mio Fernando" from Donizetti's *La Favorita*. Noticing Ben's arrival, Phoebe politely greets him before scrambling to cover the cabinet's leaderboard with her arms. "Don't look at the machine!" she yells as the laughter of the studio audience closes out the scene.

Although Derrida himself may not have admitted it, this episode of an American sitcom does a more than admirable job articulating the premises of his distinction between speech and writing, and more importantly, the precedence of the latter over the former. Phoebe's outburst, and Ben's witness to it, represent an essential authority present in all speech acts. Here, before us, is someone speaking. That speaker has an identity—in this case Aunt Phoebe—whose relationship to us is informed by the speech itself. Phoebe becomes in this moment, for Ben, one from whom vile language could conceivably spew forth. In this respect, she is different than she was moments before the door opens. This is the origin of Ben's father Ross' horror: that Ben will associate such language with Phoebe, that bad words will diminish in severity or will even attest to admirable character on account of one such as Phoebe, Ben's quirky but otherwise respectable aunt, saying them. Parents everywhere face the same problem with their children. How do they convince

children not to say bad words when children hear them all the time, even from people they are supposed to listen to or emulate?

Media complicate the issue of language. The obvious absurdity of the situation derives from the natural assumption that hearing something in speech is somehow more powerful, more authentic, or more real than reading the analogous thing in writing. Derrida calls this tendency “logocentrism” (OG, 105) and it spurs the major critique of his early work. We can outline the joke in greater detail. Suppose Chandler’s befouled high scores had remained on the leaderboard when Ben arrived to play the game. It would be easy enough for the adults in the room to explain that the bad words were put on-screen by the cabinet’s previous owner and that they were absolutely not to be repeated. Ben, for his part, may not even have recognized many of the words, given Monica’s initial difficulty piecing together the three-letter fragments Chandler had organized. Suddenly, no one in the room—least of all anyone Ben knows personally—is responsible for the writing. In the absence of a speaking subject all responsibility is obliterated. It cannot be leveled against anyone.

Of course, Ben could still ask tough questions. Maybe he would know what one of the words means, but would inquire about another. In this way, he could potentially discover new bad words: precious gifts for young children who will undoubtedly go on to share them with their friends. None of these words, however, would carry endorsement of his aunt, nor of anyone else in the room. In that none of the adults recognize the obvious control they wield over the words on screen, the situation is laughable. All the more absurd, they elect to contend with records of their own making in order to erase them. By the mechanical necessity of the game, however, they are unable to simply erase their mistakes,

but must write over them—must *overwrite* the data that stores them. In the common sense, the charge is just and noble. Phoebe, Monica, and Chandler attempt to protect the innocence of a child. Hence, we should think of the writing of Chandler’s *Ms. Pac-Man* high scores as the opposite of George Costanza’s high score in *Frogger*. Whereas George’s high score represents his own nobility, Chandler’s high scores represent delinquency.

In stand-up comedy, a joke’s punchline can be followed by what is called a “tag,” extra chatter usually appended to the joke by the comedian to keep momentum going: to keep the folks who are laughing laughing and to give the folks who have finished laughing a little more to laugh at before the next joke. Rodney Dangerfield, upon finishing a bit about his wife or his in-laws, used his catchphrase, “No respect, I get no respect,” to do just this. Understood more broadly, joke tags are used in all sorts of comedy, including sitcoms, especially those filmed in front of a live studio audience, like *Friends*. After a punchline, a tag gives characters something to do in the scene. They might fumble with the broken remnants of a priceless vase or make a face in response to a zinger. The punchline of “The One Where Joey Dates Rachel” arrives when Ben walks in on Phoebe cursing. The laughs begin when Phoebe starts yelling; they increase in intensity as Ross writhes in shock. But the tag that follows is equally important. Phoebe rushes in front of the screen to shield the boy’s eyes from the game screen.

Phoebe’s reaction to Ben’s arrival is, in this respect, particularly Derridean. She alone recognizes the threat of the writing itself. Among her friends Phoebe is the mystic. At times, her characterization even aspires to the holy fool. Perhaps for this reason she illuminates the oblique approach to the situation, recognizing that the obvious absurdity masks a deeper trouble. Precisely because the writing on the game screen is anonymous, is

without a present subject, its appeal may be all the more tantalizing for such a young one. The inscription and the fact of its record in the high score leaderboard has proven to be a far more lasting mark on the word. Once Phoebe recognizes Ben she stops screaming. But only she recognizes that the room is still powerless to remove the language of inscription. Equally impossible: to disguise the implication of the possibility of inscription. Anyone can say a bad word and pay the social cost for doing so. (Kids, especially.) But only in writing can the word linger perfectly. Only in writing can the word cast itself into the future where any passerby may see it. Profane graffiti—not street art, but plain and simple naughty words—is a favorite pastime of children and adolescents for this very reason.

Although neither they nor their writers phrase it this way, what Phoebe, Monica, and Chandler (to say nothing of Ross, who may or may not know about the leaderboard) actually want to prevent is not that Ben will see a bad word or two, but that Ben will learn that he himself has the power to inscribe them into a remarkable medium—that he can do this not only through the application of his own skill, but that he can do this anonymously, can witness the results of his mischief safe in the personal satisfaction of his own abilities. This is the seductive thrill of the leaderboard. In other words, Phoebe, Monica, and Chandler want to prevent Ben from doing as Chandler did—from writing what he wants. This is the phenomenal power of writing. The bemused and frustrated looks on the faces of Monica, Chandler, and Ross show that they do not understand this. They believe the damage is done.

But what we witness in this scene is not a child learning about profanity. Rather, we see a child learning about the possibilities of writing itself: the idea that it preexists a reader's encounter with it, that it attests presence via absence, and that it does so in response

and according to functions of language which must be learned and developed, in this case, via motor control of a joystick. Moreover, we see how the materiality of the video game itself offers a form of language that mediates the act of play into a record of itself, a process that occurs both diachronically, coincident with the movement of the game from state to state, and synchronically, as a evidence of a state of cessation or completion. Thus does the finite and digital writing of a video game become—as Derrida argued of other types of writing—spatially, temporally, and materially infinite.

3.5 Writing in Itself

Thus far, we have examined the idea that parts of video games are written, *inscribed*, in a traditional or graphic sense. But, as we have already repeated, this chapter’s claim is not that video games *contain* writing, but that they *are* writing. So how *is* a video game writing? How is a video game *written* not just through the movement of game states and in records of play set to memory, but in and of itself, that is, *in play*? How does one *play in writing*? To answer this question we must look more specifically at how writing manifests in its own terms, something Derrida also helps to explain.

Derrida’s critique of speech and writing responds to the assumptions of Western metaphysics, beginning with Plato and Aristotle, evolving into Christian theology (“onto-theology,” as he calls it, meaning the equation of being and God), and influencing even the then dominant paradigm of structural linguistics introduced by Saussure. What holds these metaphysical siblings in common, and what damns them equally in Derrida’s vision, is their fixation on *presence*. Being, in metaphysics, requires a thing to be present. (Deleuze’s definition of virtuality, as discussed in the first chapter of this dissertation, represents an

alternate yet related critique of the same concept.) It is this grounding in ontological presence which causes metaphysics to privilege spoken language above all other kinds, including writing or otherwise recorded speech. Indeed, the issue is just this, that writing is nothing more than recorded—and necessarily corrupted—speech. Derrida refers to this proclivity as both “logocentrism,” from the Greek for “word” or “speech,” and “phonocentrism,” from the Greek for “voice.” In his influential early work, *Of Grammatology*, Derrida enumerates the varied and networked associations of this assumption:

One already has a premonition that phonocentrism gets mixed up with the historical determination of the meaning of being in general as presence, with all the subdeterminations which depend on this general form and which organize within it their system and their historical concatenation (presence of the thing to the sight as *eidos*, presence as substance/essence/existence (*ousia*), temporal presence as point [*stigmè*] of the now or of the instant (*nun*), self-presence of the cogito, consciousness, subjectivity, co-presence of the other and of the self, intersubjectivity as intentional phenomenon of the ego, etc.). Logocentrism would thus be solidary with the determination of the being of being [*étant*] as presence. (OG, 13)

Writing, in the classical sense inherited from Plato’s *Phaedrus*, becomes an evil thing in the sense that it dissolves presence. And this is, indeed, what it appears to do. The author of the language need no longer appear beside it. As Socrates argues, a text’s author is not even around to defend an argument from criticism, or clarify it in the case of misunderstanding. (Plato, for his part, must have been aware of the irony embedded in his

own dramatic accounts of dialectical speech.) As Derrida tells it, playing on the dual meanings of the Greek word, writing causes a “departure of the logos from itself” (OG, 40), a departure of word from speech. As he goes on to argue, however, the unidirectionality of this equation—whereby writing essentially and always derives from speech—is indefensible and more or less defeats itself. “We would wish rather to suggest that the alleged derivativeness of writing, however real and massive, was possible only on one condition: that the “original,” “natural,” etc. language [*langage*] had never existed, that it had never been intact, untouched by writing, that it had itself always been a writing.” (OG, 61)

The assumption of natural, spoken language—as proposed by the metaphysical tradition and as reiterated by Saussure—is revealed by Derrida, operating through deconstruction, to contradict itself. If speech is composed of signs, and if writing is composed of derivative signs, then writing becomes “a sign of a sign” (OG, 46). Within a Saussurean system, each signs are distinguished from each other by an irreducible array of differences, rather than by positive characteristics: “bed” is distinct from “bad” phonetically, by the vowel that separates them, and semantically, as a place to sleep (distinct from “cot” and “mattress”) and as a maladaptive quality (distinct from “unsuitable” and “evil”), respectively. However, speech is never reconstituted wholesale in the moment of its utterance. No one invents a language on the occasion of speaking it. Therefore, speech must itself be a sign of something, of some other order of sign. That other order of signs, then, must be by far the most essential of all, stretching (with variance) across geography, culture, and time itself. The fact that certain stone carvings remain indecipherable to us is testament to this: in the absence of the most necessary inscription

of a sign, only the base inscription on a physical surface remains. Thus, Derrida writes, “if ‘writing’ signifies inscription and especially the durable institution of a sign (and that is the only irreducible kernel of the concept of writing), writing in general covers the entire field of linguistic signs” (OG, 48). In other words, in a reversal of the hierarchical operation instigated by metaphysics, writing attains philosophical precedence—albeit a precedence that eliminates the very possibility of metaphysical precedence, as well as “all relationships of natural subordination, all natural hierarchy among signifiers or orders of signifiers” (OG, 48). Derrida, achieving his grammatology, continues:

In that field a certain sort of instituted signifiers may then appear, “graphic” in the narrow and derived sense of that word, regulated by a certain relationship with other instituted—hence “written,” even if they are “phonic”—signifiers. The very idea of institution—hence of the arbitrariness of the sign—is unthinkable before the possibility of writing and outside of its horizon. Quite simply, that is, outside of the horizon itself, outside the world as a space of inscription, as the opening to the emission and to the spatial distribution of signs, to the regulated play of their differences, even if they are “phonic.” (OG, 48)

What exists then, in writing, lies beyond opposition, even between itself and speech. To this end, Derrida proposes the neologism “arche-writing,” something never to be reduced to “the *object of a science*” (OG, 61) on account of its ouroboros-like metaphysicality. It can never be the center of something. To do so would be to reinstate what Derrida most often refers to as the “transcendental signifier,” that space of absolute orientation in meaning, occupied in traditional metaphysics by the the form of the good, by God, or by scientific progress. Arche-writing becomes “that very thing which cannot let

itself be reduced to the form of a *presence*” (OG, 61, emphasis original). It is the aspect of language that remains removed from presence, remains absent, and finds its instantiation in speech, in graphical inscription, in analog or digital recording, and, as we have seen in the material of computer memory.

At this point, what remains essential to writing—a name, following Derrida, we should continue to use in favor of the arcane appellation “arche-writing”—reveals its most particular relation to the medium of video games. The origin of this relation is in two parts. First, punning again on Greek, Derrida writes that “whether it has essential limits or not, the entire field covered by the cybernetic *program* will be the field of writing” (OG, 9) We have already elaborated on this aspect above, but suffice it to say that the Derrida of the mid-century was proven correct by the continued predominance of micro-circuitry and the gravity of an information economy increasingly quantized into binary operators. Nonetheless, reading Derrida with a contemporary perspective on computing reveals just as well a manner whereby, as he says, “the theory of cybernetics can dislodge by itself all the metaphysical concepts—all the way to concepts of soul, of life, of value, of choice, of memory—which until recently served to separate the machine from man” (OG, 9). The way forward here, contra Derrida’s expressed position, is not to invent a new denunciation of cybernetics, but to re-engage its essential connection to writing.

Here, it serves us well to quote Derrida at length, attending in particular to his use of the word “play”:

From the moment there is sense there is nothing but signs. *We think only in signs.*

Which amounts to ruining the notion of the sign at the very moment when, as in

Nietzsche, its exigency is recognized in the absoluteness of its right. One could call *play* the absence of the transcendental signified making play boundless, that is to say as the shaking up of onto-theology and the metaphysics of presence. [...] Here we must think of writing as play within language [*langage*]. (The *Phaedrus* [277e] condemned writing precisely as play—*paidia*—and opposed such childishness to the adult gravity [*spoudè*] of speech). This play, thought as absence of the transcendental signified, is not a play *in the world*, as it has always been defined, for the purposes of *containing* it, by the philosophical tradition as well as the theoreticians of play (or those who, following and going beyond Bloomfield, refer semantics to psychology or some other regional discipline). To think play radically the ontological and transcendental problematics must first be seriously *exhausted*; the question of the sense of being, of the being of being [*étant*] and of the transcendental origin of the world—of the worldness of the world—must be patiently and rigorously worked through, the critical movement of the Husserlian and Heideggerian questions must be effectively followed to the very end, to conserve their effectiveness and legibility. Even if this were done under erasure [*sous rature*], for otherwise the concepts of play and writing to which one will have recourse will remain caught within regional limits and an empiricist, positivist, or metaphysical discourse. The party that the holders of such a discourse would oppose to the thrust of the precritical tradition and to metaphysical speculation would be nothing but the worldly representation of their proper operation. It is therefore *the game of the world* that must be thought first; before attempting to understand all the forms of play in the world. (OG, 54f.)

Writing itself is play. Indeed, “the advent of writing is the advent of play” (OG, 7). But in what manner, specifically, does this play result in the production of a world? And in what way does this production of a world require writing—require language itself? We encounter language, always, in its movement, in a state of flux. Our every utterance reflects this fact, whether we reproduce a cliché or coin a novel pun. That the cliché is recognized as such depends upon its propagation in language, in the arche-writing of a cultural context—the pun, likewise, upon words, in some sense, having a life of their own, captured in fleeting moments of homonymy or some such coincidental pairing. Language, as arche-writing—the system into which we are born and acculturated—plays off itself, and our subsequent use of it in the forms of speech and graphical inscription is perpetually derivative. A delimited system, the total sum of all possible linguistic permutations in a given language—or in language itself—escapes the closure that would spell its end. Because meaning can never be fixed, Derrida argues, there remains an infinite possibility within a finite space. Some physicists make an analogous claim about the shape of our physical universe: that it is *finite, but unbounded*.

Accepting this conclusion, we are prepared to confront how the play of language (understood as arche-writing) defines our phenomenal experience of the world—something which productively and necessarily entails the mediation of virtual worlds in language and writing, namely, the play of video games. Therefore, we should take Derrida’s advice, and follow the path of Heidegger’s phenomenological revision of Husserl to its end. Indeed, Heidegger’s later writings increasingly reveal a parity with Derrida, especially on the grounds of language and its relation to the genesis and experience of worlds. These forces comprise the subject of the next chapter.

CHAPTER 4. WORLD: GAME DASEIN

4.1 Cybernetics

In order to answer the question of how a world emerges from language, this chapter surveys Heidegger's late work on the subjects of technology, cybernetics, language, world, play, and being. Rejecting the input-output loop of cybernetic gameplay, the chapter expands the concept of virtualization into the phenomenological experience of the world, or worlds, in language. Understanding space and thinking gives us insight into where the play of video games happens. Understanding words and language informs us of the linguistic material of their virtual worlds. Finally, understanding Heidegger's conception of finitude (shared with Wittgenstein) emphasizes the impossibility of the ideal of the infinite virtual world. A game in which you could do anything at all would be not only nonsensical, but literally senseless.

In this chapter we will reject the traditional mode of game studies which treats video games as an essentially cybernetic medium, an art of human-computer interaction, feedback loops, and calculability. We will do so in order to ground the phenomenal experience of playing video games in the experience of virtual worlds in language. As part of her critique of the encroachment of zero-sum, win-lose rhetoric in society, McKenzie Wark writes in *Gamer Theory*, "All games are digital. Without exception. They all come down to a strict decision: out or in, foul or fair, goal or no goal. Anything else is just 'play'" (79). Scholars such as Alexander Galloway have similarly focused on the video game as vanguard for "algorithmic culture" (see *Gaming*). Meanwhile, in *Playing with Feelings*, Aubrey Anable applies a poststructuralist lens to examine "how [affect theory] and video

games are the conjoined legacy of cybernetics,” whereby “computational metaphors ceased being metaphorical” (xi). For critics and theorists of cybernetic culture, a video game is an instantiated media object through which we can understand the digitization of society: the normalization of rule-based and game-like binarism. While it impossible to ignore or disregard the historical connection between video games and cybernetics, there is yet a danger of taking the cybernetic as the telos of the form, as its endpoint. Ask, “what are we doing when we play a video game?” Is the answer simply, “using a computer”? Do video games essentially reflect their cybernetic logics, or, on the contrary, do they mount a profound critique thereof? In our pursuit of the second possibility we will encounter language itself as the medium whereby they do so.

Heidegger reminds us that cybernetics is a form of enclosure. The techno-industrial human subject is trapped in the feedback of information and regulation of the world-as-object. Messages are transmitted not by natural, human speech, but in code. His essay, “The Provenance of Art and the Destination of Thought,” describes cybernetics in terms of its Greek root, *kybernetes*, meaning helmsman or pilot, in the sense of one who steers a ship. Cybernetics becomes an attempt by humans to steer the world itself toward calculability. The mechanism by which this operation occurs—the “cybernetic blueprint,” as it were—is the “feedback control system” (PAT, 122), whereby messages transmit information, in an endless positive feedback loop, from autonomous regulators to regulated events and back again. Calculability expands ever outward from this cybernetic loop, eventually rendering humans and automata indistinguishable. As far as “indiscriminant” information is concerned, all becomes “homogenous—and in this sense universal—calculability” (PAT, 122). Industrial society, caught up in the profit of cybernetic

expansion, begins to reinforce the egoism and subjectivity of humankind: *futurum* and *logos* merge in this “futurology” (PAT, 124). In the reign of cybernetic technology, even art, which Heidegger describes as the genuine heir to the Greek *techne* (meaning art or craft), threatens to succumb.

It would not be difficult to align this critique to video games writ large. After all, what medium has appeared more insidious in recent years? We could think of video games, being digital, as perversions of narrative and experience. Interesting, too, might it be to imagine what Heidegger himself would have to say about video games—the *PONG* (Atari) craze began four years before his death. But perhaps most pressing is the question of whether there lurks in video games the unavoidable cybernetic danger, the identity of human and machine. To this point, we can use Heidegger’s own critique of cybernetics, and its basis in language, to productively distinguish the material inscription of the video game from the phenomenal experience of its virtual world in language. In so doing, we can reveal how video games work against the *cyberneticism* that the field of games studies has hitherto ascribed to them. For Heidegger, escaping the enclosure of cybernetics is no forgone conclusion: no one can simply *do* it (PAT, 126). Nonetheless, the enclosure must be first and foremost *thought*. Throughout his late work, Heidegger emphasizes that that the enclosure must be thought in language, and indeed poetically. As Heidegger writes, the question concerning cybernetics becomes, “What is it that prevails in this being enclosed?” (PAT, 126) The video game is just such a thing.

The purpose of the present work is to explain how video games are played, not via the input-output feedback loop of cybernetics, but in language—how they, to interpolate Heidegger, *are* in language. In order to clarify this being-in-language, I will turn to

explanations of Heidegger's own concepts, followed by discussions of their applications toward understanding video games themselves. Understanding *space* and *thinking* gives us insight into where the play of video games happens. Understanding *words* and *language* informs us of the linguistic material of their virtual worlds. And finally, understanding the *limit* of these worlds reveals the subjectivity of the player and the movement itself of this very strange kind of play. Following these discussions, I present a brief reading of one of the most popular video games of all time, *Tetris*, through the lens of Heideggerian language.

4.2 Enclosure

We can begin by saying that a video game is enclosed art that reveals its enclosure. In what is the video game enclosed? It is enclosed in cybernetics, to be sure. But it is through its enclosure in language that this cybernetic enclosure is revealed to the player. In other words, through the phenomenal experience of language, the video game reveals the nature of enclosure. Video games are the art of total enclosure; their play is the thought of enclosure as such. But, perhaps most importantly, the position of the player is not itself enclosed. Rather, the position of the player is the limit of the enclosure. From the limit of enclosure, the player's thought of the enclosure occurs not, as has been theorized, through *action*, nor through *interaction* between human and machine. The player is never wholly present in the world of the video game. As we will see, the player is positioned at the point where presence meets absence, namely, at the remove of writing. Rather, thought of the enclosure is undertaken, as Heidegger makes clear, in and through language. The way out, so to speak, from cybernetic enclosure must be found in the freedom of the enclosure. Such

a freedom can be found in the thinking, in language, of the limit and from the limit, that the video game uniquely affords.

To speak of video games in this way runs counter to the prevailing cyberneticism of game studies. A recent example of the cybernetic mode of thinking, which has a legacy quite distinct from continental philosophy, can be found in an article by Jukka Vahlo, “An Enactive Account of the Autonomy of Videogame Gameplay”. Vahlo's argument is logical and internally consistent, yet it relies on an orthodox cyberneticism which must be countered to fully understand games in the phenomenal sense. Vahlo draws on cognitive science and activity theory—*enactivism*—to conclude that “gameplay arises as autonomous organization that is both self-sustaining and precarious.” Through *coordination*—working to achieve an intended effect—and *exploration*—engaging the game to “traverse and test, bend, and even break the rules” of the game—players form a precarious *coupling* with the game system that resembles a reciprocal, social relationship between two intentional, autonomous agents. Here we run straightaway into Heidegger's fear, namely, that cybernetics invariably leads to the dissolution of any distinction among autonomous agents, be they human or machine. Autonomous systems like humans, in Vahlo's framework, continually constitute themselves via processes that are internal and self-sustaining, albeit precarious. They are systems that act independently on the world. A game, meanwhile, is a dynamic system: “heteronomous... other-governed and state-dependent.” Gameplay, that is, the coupling of an autonomous human and a game system, “achieves temporary autonomy... as an *autonomous form of social participation*.” In order to engage in this strange form of social participation, however, one must adopt, as a player, a “lusory attitude” that situates oneself “*as an object*,” as a player-as-object. The player

calculates their own position in and through calculability—becomes, as Heidegger frames the situation elsewhere, an objective standing reserve for the technology of play. The game, for its part, responds to this coupling via its own input and output.

Thus objectified, Vahlo's player acts on the responsive game system in keeping with the impulses of coordination and exploration. The dynamic game "is designed to be responsive to the player's self-regulative and coordinative acts," and the result is the "co-ordination" of the coupling of player and game. Vahlo succinctly summarizes the situation like so: "The game belongs to the *environment*," but its design resembles "the dynamic patterns of social interaction with an autonomous other." The game is environment *and* other. The game, that is, "responds to our communicative acts." In other words, we are presented with a feedback loop. A video game, for Vahlo, is essentially a cybernetic feedback control system of computerized social interaction. "Playing a videogame is a practice of re-encountering the other 'participant,' i.e., the game system." However, the balance of participation is, Vahlo admits, totally lopsided. The author writes that "enactivism argues for an imbalance between a living beings [sic] and its environment." Only the autonomous former acts on the passive latter. Passivity is indeed emphasized elsewhere: "our environments cannot impose a condition on us which would dictate how we act." A video game becomes an environment that fakes being an other, but one which asks a player nonetheless to become an object in social participation. The situation seems insidious—yet here, we are supposed to find openness. Vahlo writes, "a game generates opportunities and possibilities for actions, i.e., affordances." But the enclosure of the cybernetic loop, in this case, seems taken for granted. In this taking for granted lies Heidegger's concern. Can we only play video games toward ever more

universal calculability? Not if we consider them otherwise. Not if we consider them elsewhere.

4.3 Space and Thinking

As virtual worlds, video games are played in space. But the space they take place in is not necessarily space as it is present around us. Video games are spaces in thinking. Yet, even in thinking, these spaces have presence. They *are*. In “Building, Dwelling, Thinking,” Heidegger writes, “Even when we relate ourselves to those things that are not in our immediate reach, we are staying with the things themselves” (BDT, 154). He invites us to consider a bridge—in his case, the Old Bridge in Heidelberg, Germany—but, in our case the Brooklyn Bridge works just as well. Heidegger invites us to consider this bridge to make the point that, in considering this bridge, that is, in really thinking about it, we are nearer to the bridge itself than is someone crossing it at this very moment, without a thought. The bridge exists here, in presence, in the moment of our thinking of it, despite its not being present with us. Nor is this bridge merely a bridge-in-thought, or a mental image of the bridge—*it is the bridge itself*. In this way, disconnected from the material reality of the present, we emerge into spaces. The word Heidegger uses to describe the opening up of spaces is “building,” and the word he uses to refer to our inhabiting them is “dwelling.” Humans, for Heidegger, *are* on the earth by dwelling and by building—by building that in which they dwell. In order to dwell, we must build, and in order to build, we must think. And this is precisely our relationship to space.

Heidegger presents us with an image of him crossing the room and leaving the classroom he’s presently lecturing in. But the way he describes it is peculiar. “I am already

there,” he writes (BDT, 155). He is already out the door. The distance from lectern to threshold has, in thinking, already been traversed. And, since it has been thought, as space, the Being of this movement already made present there. To use Heidegger's word, it *presences*. Nor could the philosopher hope to ever make it across the lecture hall without this being the case. In this way Being and possibility share a language in space. Only by thinking of spaces, Heidegger seems to say, can we ever hope to go through space—can we ever hope to *move* in space. In that humans build spaces and dwell in them (BDT, 156)—and indeed build by dwelling (BDT, 157)—thinking is essential to the presence of space. Even, we may now conclude, to the presence of virtual spaces.

Video games are virtual worlds but, in thinking, real spaces. They are as real as any other space. Real, that is, but not actual—a definition of virtuality discussed at length in Chapter Two. In order to open the door to leave the room one has to already be, in some respect, at the door and opening the door. This is the same notion of virtuality that underscores video game play. But how can a fictional space be as real as any other? To this question Heidegger provides an answer, namely, in poetry. Heidegger titles an essay “...Poetically Man Dwells...,” quoting a phrase from Hölderlin’s poem “In Lovely Blue.” The quotation is especially resonant for Heidegger, who writes that “the phrase ‘poetically man dwells’ says: poetry first causes dwelling to be dwelling. Poetry is what really lets us dwell. But through what do we attain a dwelling place? Through building. Poetic creation, which lets us dwell, is a kind of building” (PMD, 211). In other words, not any ordinary building, but a poetic building, is necessary for the essential dwelling of the human. This is similar to what was said, just a moment ago, of thinking and building. Indeed, poetry does not leave the earth—as a flight of fancy—but brings humans to the earth and to

dwelling. In this sense, then, poetry is the same as thinking: not equal or identical, but the same in that they belong together, bound by difference. Poetry and thinking “[gather] what is distinct into an original being-at-one” (PMD, 216). Poetry and thinking are modes of building that in which we dwell. Whether the space that is cleared by building is “real” or “fictional” is of no importance to the mechanism itself. Poetry brings us as near to space as our earlier thinking of the Brooklyn Bridge. This is how the virtual world of a video game achieves its genuine spatiality: in thinking, that is, in poetic thinking.

Elsewhere in his discussion of Hölderlin, Heidegger writes that poetry is a kind of measuring, and that the distance it measures is the span of human dwelling (PMD, 219). Humans—mortals—are bounded, in Heidegger’s account. Earth below, sky above. Divinities beyond. This relationship he calls the “fourfold” (BDT, 147ff.). Mortals measure the span of their dwelling between earth and sky against the unknown divinities. The “strange measure” (PMD, 221) by which they dwell in the world is poetry: “the measure taken by poetry yields, imparts itself... to what is familiar...” (PMD, 224). In contrast to science, which reveals the unknown by means of the known (a ruler or a scale, for instance), poetry measures the known by means of the unknown (God, the divinities, and so on). What is important to recognize here, for our purposes, is that poetic thinking finds its freedom, not in spite of, but because of its essential finitude. Poetry reveals the familiar in such clarity precisely because the unknown quality by which its measure is taken remains unknown. Heidegger: “The poet calls, in the sights of the sky, that which in its very self-disclosure causes the appearance of that which conceals itself, and indeed as that which conceals itself” (PMD, 223). The movement in this regard is the play of poetry, and, as we will see when we return to the question of limits, the poetry of play. First, however, we

must answer the question, in what does the space of the virtual world of a video game, as thinking, consist, and in what way do we dwell within it? The answer, luckily for us, is not dissimilar from Heidegger's basis for poetry. In fact, it is one and the same: language itself.

4.4 The Thing

What is language? For Heidegger, language is language; yet this is no mere tautology. It is, indeed, a tautology, but as a tautology it reveals what it intends to: it stays in place, with the subject of its statement, as uncomfortable as that may be. Language, according to Heidegger's essay by that name, isn't grounded—it has no ground, and it does not ground anything. It is, rather, an abyss. The abyss has no ground; where ground is expected, there is none. But Heidegger's leap into the abyss of language leads, in his words, not into a void, but “to a height” (L, 189). In the same essay, Heidegger objects to the prevailing notion that language—speech, in this case—is a human activity, that it expresses, presents, or represents whatever a person wants it to (L, 191). We find, as ever in his work, that these notions are correct, but untrue. His method, then: to “seek the speaking of language in what is spoken” (L, 192). “Language speaks,” says Heidegger (L,188). To understand this, all we need to do is listen carefully.

Poetry speaks purely—that is, as language—so Heidegger takes it up. In this case, he chooses “A Winter Evening,” by Austrian poet Georg Trakl (L, 193). The poem describes a winter evening. It is not, of course, a description of a *real* winter evening—a *present* winter evening—but neither is it a simple composition or expression. Although Heidegger does not use this word, the poem is, as it were, virtual. As we have already seen, the poetic thinking of the poem is a building, and it builds in several ways.

For Heidegger, the speaking of the poem derives not from the poet or from the figuration of the poem's speaker. Rather, the speaking of the poem is the poem as such. The speaking is poetic language speaking for itself. In "A Winter Evening," the speaking of the poem first names thing. This naming "calls into the word," that is, "the naming calls" (L, 196). Naming, as calling, brings into nearness the *thing*. This we have already noted. The poem, like our earlier thought of the Brooklyn Bridge, calls things to presence, but not to the present, as such—that is, not to the things around us. It calls, instead, to "a presence sheltered in absence" (L, 197). Things called by naming *thing* (a verb)—and by *thinging* they bear, unfold, carry out, gestate, or birth *world*. This, Heidegger says, is what Trakl's poem does in its first stanza: it speaks a call, a call that names things, things that thing and bear the world. It calls things to the world. Such a calling is Heidegger's basic poetic movement.

The second stanza of the poem calls the world to things. It calls the aforementioned fourfold (earth, sky, divinities, mortals) itself, not by name, that is, not metaphysically (theological *mundus* or physical *kosmos*), but calling into itself the world. "Things bear the world. World grants things" (L, 199). The image by which the poem calls the world, bids it come, is a simple tree. This tree poetically united world and thing such that they are "different but not separated"—they are "intimate and interrelated in dif-ference" (L, 199). In this dif-ference, hyphenated to estrange our common sense understanding of the word, we hear echoes of earlier notions of sameness, like poetry and thinking: two things belonging together in their difference.

The poem's third stanza, says Heidegger, calls to the united middle of world and things: the dif-ference, the intimacy, as it were—the pain. The call to dif-ference is

“primal” (L, 203). And this “authentic bidding,” this “nature of speaking,” this “speaking of language,” is “bidding the bidden, thing-world and world-thing, to come to the between of the dif-ference” (L, 203). Things repose in the world; things stay the world. Dif-ference, according to Heidegger, stills. It stills the things thinging and the world worlding. Out of themselves and into the stillness of intimacy the dif-ference bids world and things: “language speaks as the peal of stillness” (L, 205). So, language speaks in calling to this dif-ference—stilling the intimate between of world and things. So too can we understand in dif-ference the entanglement of presence and absence that Derrida locates in writing.

How, then, do humans relate to this primal speaking? Only out of the speaking of language can the human speak. Language, for Heidegger, is a force that allows speaking. Conversely, only through and using humans can the speaking of language sound. Pure mortal speech bids the coming of dif-ference: it is poetry. Everyday speech becomes “a forgotten and therefore used-up poem” (L, 205). Utterance and expression don’t define language, then. Rather, mortal speech is only ever a response to language—a response that accepts and returns its response by listening. Mortal speech receives and replies to language. In summary, Heidegger concludes:

Man speaks only as he responds to language.

Language speaks.

Its speaking speaks for us in what has been spoken. (L, 205)

Language in video games works the same way; it is not “expressive” in the usual sense. In a video game, language speaks: it calls the virtual world and virtual things into a

stillness. There are no surprises to the enclosure of a video game's world. Players experience the language only as they receive it—only as the game allows it them access to it. The language of the video game is the original, that is, the speaking that allows a player to build, dwell, and think in virtual space. If video games are languages, they speak first. Play—and players—must be content to accept and respond, even parrot. In a video game, one finds a speaking language—in some ways, an artificially thinking language—that one is constantly listening to and responding to, out of that language. As opposed to the written text of a book, a video game is not constructed in any language we already know. It isn't constructed in any language that exists outside of itself. But we come to know this language—we come to respond to it—nonetheless. In our response to the force of language that bears our experience of the world we find a movement opposed to the agential privileging of the human found in cybernetic game studies.

There is another figure that Heidegger draws out of “The Word,” a poem by Stefan George that clarifies this relationship between language and, in our case, player. The figure is a well. In the poem, a traveler (a poet and a man, in Heidegger's reading) journeys into dreams and returns with wondrous treasures. A treasure in hand, he travels to the border of his country; there he meets a norn, an ancient Germanic goddess of fate. From her magic well, the norn draws up the name of whatever the poet has brought before her. So named, the treasure shines with its proper brilliance. One time, however, upon returning with an especially beautiful and fragile treasure, the poet comes to the norn who, for her part, cannot draw up its name. The name of the treasure is not in the well! Promptly, the treasure vanishes from the poet's hand. The poet renounces the word—or word itself—and concludes that where there is no word, there may be no thing.

The implications of this parable are profound for Heidegger, who repeats here what we have seen above, namely, that “the word first bestows presence, that is, Being, in which things appear as beings” (W, 146). The poem renounces the word for the treasure—and in doing so, reveals the concealment of the treasure: of *word* itself. In language, word makes the thing a thing; it *bethings*. But there can be no bethinging of that which itself bethings. In other words, there is no word for the Being of word. The Greek *logos*, Heidegger reminds us, refers both to Saying and to Being. Another sameness is revealed. Poetry is to Saying, perhaps, as thinking is to Being.

The figure of the well itself is even more intriguing, for our investigation anyway. Note that the poem’s traveler never travels outside the borders of his own country. His travels are in dreams. His only venture takes him to the norn, to the place of her well, that is, up against the limit of his own world. Heidegger writes, “The strand bounds, it arrests, it limits and circumscribes the poet’s secure sojourn. The bourne [sic], the well from which the twilight norn, the ancient goddess of fate, draws up the names is at the edge of the poet’s land—or is the edge itself the well?” (W, 144f). Is the well, in other words, a figure for the very limit of language? Its contents, the names it conceals, “are like a staple supply coordinated with the things and retroactively given them for the portrayal”—but when “this source no longer bestows anything” (146), the primacy of the word is revealed. The well becomes the very thing that delimits the portrayal of things, *as* things. The word precedes the presence as Being of the thing: “with the absence of the word the treasure disappears. Thus, it is the word which first holds the treasure in its presence, indeed first fetches and brings it there and preserves it.” (W, 146) Holding, fetching, preserving into presence, the word bethings the thing. This, the poet comes to realize not from the center of his world—

nor indeed from the center of language, where we often fancy ourselves—but from the limit thereof.

The norm and her well are quite like the system of a video game in that they *pre-scribe* and *circum-scribe* the total set and limit of the sensible. What is not in the well, what the norm cannot draw from it, simply *is not*. We imagine the half-baked remnants of a level removed during production from a computer game, filed away deep within the source code and inaccessible in play. Or we recall a schoolyard rumor of how to unlock a secret character who was never actually there. The player names things in a video game; but the names that be things things to thing—to bear the world, as it worlds—are set and limited. One is always constrained. Accordingly, given that a video game is a constrained language, and given that the player speaks only by accepting and responding to this language, the pleasure of playing a video game must be said to emerge from this very constraint. And it is to the nature of this constraint that our analysis must finally turn.

4.5 Finitude

The delimited relationship of the player to the world of a video game is exemplified by the screen itself. The player is not *in* the screen, of course, but plays *at* the screen. In other words, because of the screen, the player is always positioned at the visual limit of the world. The screen, in its delimitation of the world, is analogous to the position of the player in language. In every case, and indeed in language, the play of video games takes place not in the world, but at the limit of the world. Wittgenstein draws the same connection. “The limits of my language mean the limits of my world,” he writes (T, 5.6). Regarding the relationship of the subject to a language-world, Wittgenstein writes that the subject is like

an eyeball, positioned not within, but at the limit of its field of vision—its world (T, 5.633). The eyeball is not in the field itself; it is at the limit of the field. Moreover, there is no discernable presence of the seeing eye in its own field of view. Thus, Wittgenstein concludes, “the subject does not belong to the world but is a limit of the world” (T, 5.632).

If we return to “The Provenance of Art and the Destination of Thought,” we find that the Wittgensteinian view toward and from the limit aligns with what Heidegger describes as the gaze of Athena. Through the figure of Athena, Heidegger seeks to reconcile the division between art and technology—*poiesis* and *techne* as forms of making and ordering the world—introduced at the beginning of this chapter. Who is Athena? Heidegger answers, “the resourceful counsellor, *polymetis*, she with the clear glance, *glaukopis*, and *skeptomene*, the Goddess who mediates on the limit.” (PAT, 122) Not content with Dionysus or Apollo, Heidegger turns to Athena for guidance on art. She has import because art is *techne*, a kind of knowing—really, a view of the structure in advance of the structure. Technology, notably, is no *techne*. The *technites*, is not technician or craftsman, but artist. Athena’s owl-eye sees the invisible, knows in advance. It shines. In the Acropolis relief, Athena is “the meditating one” whose gaze is turned to the “boundary stone, to its limit” (PAT, 120). A limit, here, means not an end but a beginning, where something gathers to presence. Her gaze turns to *physis*—distinct, for Heidegger, from *natura*. *Physis* is, namely, “that which arises from out of itself into its respective limit and here comes to dwell” (PAT, 121). Heidegger considers *techne* and *physis* to “belong to each other” (PAT, 121). They become, once again, the “same.” And indeed they are precisely the same, in the virtual world of the video game. The verb with which Mario (of *Super Mario Bros.*, Nintendo

R&D4) can jump is predicated on the internal physics, the necessary mechanism, of gravity—and both of these factors are, ultimately, predicated on language.

The connection between Heidegger and Wittgenstein, on the basis of their consideration of limits, is by no means original. In *Groundless Grounds*, Lee Braver argues that Heidegger and Wittgenstein both base their critiques of philosophy and metaphysics on the notion that we have always tried to understand philosophy through a distinction of the finite and the infinite, despite our having no conception of the infinite. Wittgenstein and Heidegger both argue, according to Braver, that we must build philosophy on an *original finitude*, that is, a finitude not as distinct from infinitude, but as readily available in its own right and for its own sake (Braver, 9). In this regard, video games provide for us a kind of pleasurable way of engaging with the otherwise disturbing thought of utter finitude. I do not wish to say that experience of a negative circumstance is somehow pleasurable for its own sake; nonetheless, it should be clear that, as we are limited in the language around us, we for that reason find interest and fun by inventing the pretend languages of virtual worlds. We can play in them. And we can engage in alternate kinds of life-language-worlds.

One expression of this phenomenon: there is a popular Twitter account, @CanYouPetTheDog, that documents video games in which the player can and cannot pet a dog where a dog appears (Cooper). The limit of canine affection, in this case, reflects the way we engage with the limit in all aspects of video game play. What @CanYouPetTheDog reveals is a question of whether the word for “pet,” is or is not, literally, in a game. Remember that “the word allows the thing to presence as thing” (W, 151). The exact same thing happens in a video game. If one intends to pet the dog, one

either finds that one can pet the dog, and the game prompts: “Press X to Pet the Dog,” or the game does not, and there is no way to pet the dog. This is yet another instance where “Saying and Being, word and thing, belong to each other in a veiled way....” (W, 155). Part of playing a game is understanding and exploring this veiled relationship between Saying and Being.

The veiled relationship of Saying and Being, for Heidegger, refers also to the “concealed nature of language” that is his concern in “A Dialogue on Language” (21). Here, representing a dialogue between a thinly-disguised version of himself and a Japanese interlocutor, Heidegger positions the “emptiness” of the stage and the “hint” of gesture in traditional Noh theatre as indicative of Being in language. Gesture is here “the gathering of a bearing” (DL, 18)—not, that is, our own bearing, but a bearing toward us. Bearing, or gesture, becomes “the gathering which originally unites within itself what we bear to it and what it bears to us.” (DL, 19) Bearing comes—“springs first and only” (DL, 19)—from the gathering of gesture. In Noh, the Japanese interlocutor says, tall mountains appear by a simple gesture of the hand and face, as if looking toward them. The dialogue progresses:

J: You know that the Japanese stage is empty.

I: That emptiness demands uncommon concentration.

J: Thanks to that concentration, only a slight additional gesture on the actor’s part is required to cause mighty things to appear out of a strange stillness. (DL, 18)

A sight or vision of the invisible is the result of gesture. It becomes an encounter with emptiness: the emptiness of the stage. The emptiness of Being which returns us to the

stillness and finitude of language. “To us, emptiness is the loftiest name for what you mean to say with the word ‘Being.’” (DL, 19) But Heidegger and his interlocutors miss a prosperous connection. The stage of a Noh play is not empty! Rather, quite unlike the proscenium or the theatre-in-the-round, it is always bounded on four sides by columns that support a traditional roof. The columns serve an important function: they orient the actor onstage who can hardly see through the eye-holes of a mask. The columns of the Noh stage, as it were, are onstage and part of the action onstage. To the columns themselves the actor gestures, and hence, from the columns, we are with the mountains. Onstage, the emptiness, as the loftiest name for Being, is fundamentally a function of this delimitation and of the language. The limits, here again, are integral to gesture, to language, and to play.

Heidegger, however, for all his valuable discussion of language and limits, has little to say on the notion of play. For this we must turn elsewhere. By play, we mean, following what has been said: the exploration of the limits of a virtual world, at the limit of the virtual world. Play, therefore, is a movement along the limit. This movement of the player, however, is double: in exploring the limit, it seeks to escape it, but in moving along the limit, it is always reinscribing it. It has long been imagined that the ideal video game is one in which anything is possible. But nothing could be further from the truth. The video game is the art of inescapable limitation which, as such, reveals its own limitation. In playing a video game, the player-in-language does not become, as did Vahlo’s player, an object to themselves. Rather, the player’s subjectivity, from and as the limit, is subsumed into play itself. Describing precisely this entanglement of play and Being in language is Heidegger's phenomenological contemporary Hans-Georg Gadamer, whose *Truth and Method* I quote at length:

This suggests a general characteristic of the nature of play that is reflected in playing: all playing is a being-played. The attraction of a game, the fascination it exerts, consists precisely in the fact that the game masters the players. Even in the case of games in which one tries to perform tasks that one has set oneself, there is a risk that they will not ‘work,’ ‘succeed,’ or ‘succeed again,’ which is the attraction of the game. Whoever ‘tries’ is in fact the one who is tried. The real subject of the game (this is shown in precisely those experiences in which there is only a single player) is not the player but instead the game itself. What holds the player in its spell, draws him into play, and keeps him there is the game itself. (111)

A video game is a special case of being-played. It is a being-played by a computer which reveals the delimitation of its own cybernetic existence. “Can you pet the dog?” begs the question. Is it sensible, in this language, to even speak of petting? Surely not in a game dedicated to alien extermination—dog, or no. Again following Gadamer’s lead, a video game “absorbs the player into itself, and thus frees him from the burden of taking the initiative, which constitutes the actual strain of existence” (109). The burden of initiative, in this case, is a Heideggerian one: speech itself. Far easier, as far as sets of possibilities go, to respond to the speaking of a far more limited language, than to the one that circumscribes our own existence. The play of a video game emerges as an enclosure in language that reveals its enclosure—something Heidegger contends cybernetic language typically obscures. Therein lies the medium’s special power. The cybernetic loop, in this sense, becomes against all odds the more appealing constraint. Why? Because, in a video game, we are actually able to see it—the limit is revealed to us at every moment. The virtual world of a video game presents us with, as Heidegger’s contemporary Eugen Fink would

have it, “a *game without a player*” (*Play as Symbol of the World*, 206). We are presented with the play of language itself: a play of thinking that reveals the paucity of the cyberneticism it confronts.

Heidegger frames “The Provenance of Art and the Destination of Thought” around the question of art. It is for this reason he turns from *techne* to *kybernetes* in the first place. And it is for art’s sake that he invokes Athena. So where stands the art of the video game, given what we have concluded? Is its fate the fate of all cybernetic art? To become information, commodification—better yet, mere message, or expression? Heidegger: “Are its productions consequently destined to satisfy the procedural character of the feedback control system of industrial regulation and its perpetual accomplishment potential?” (PAT, 126) This would at least explain the endless parade of remakes and sequels!

If, as it stands, all art is enclosed, we must return to the question: “What is it that prevails in this being enclosed?” (PAT, 126) By “prevails,” Heidegger must mean, not what merely meets success, but what appears to us as true thinking, as poetry. Surely technological cybernetics cannot break their own enclosure—but can any one of us? No, the enclosure cannot be broken “*by the human being*”—but not without it either (PAT, 126). Being enclosed must itself be thought. Nor is this a prelude for action—it is “the decisive action itself” (PAT, 126). Heidegger breaks with the division of theory and practice. *Alētheia*, unconcealment, which “belongs to concealment, conceals itself, but in such a way that thanks to this self-withdrawal, it lets things emerge through their delimitation” (PAT, 127). What prevails in the enclosure is what emerges through its delimitation. First through Athena, “we became attentive to the mountains, the islands, the shapes and forms that appear through their delimitation...” (127). And it is this freedom from within the

enclosure that is needed today. The video game is a poetic thinking, in language, of such shapes and such forms.

4.6 *Tetris*

By way of conclusion, let's try out our critique—and to best examine its efficacy, let's pick a game that contains little of what most players would recognize as a virtual world in the representative or mimetic sense of the word. An “abstract” video game then, and the most famous of all: Alexey Pajitnov's *Tetris*. The game is simple: one at a time, shapes comprising precisely four squares fall from the top of the screen to the bottom. One looks like an "L," another looks like a two-by-two square. Players can rotate these shapes, called tetrominoes, clockwise and counterclockwise as well as move them laterally from side to side. Once a block reaches the bottom of the screen, or settles atop a stack of tetrominoes, it comes to a stop. Players lose the game when the stack of tetrominoes reaches the top of the screen, preventing any more tetrominoes from dropping. Players score points by completing full horizontal lines of squares across the screen, whereupon all squares in the line or lines completed disappear. Thusly players compete to keep the tetrominoes away from the top of the board in pursuit of higher and higher scores.

Tetris is a game about making things disappear. More properly, *Tetris* is a game about making things *that* disappear. A thing is something named, called into being by language, by a word. The language of *Tetris* has no obvious name for the agglomeration of shapes and blocks that pile up in play—as far as most players can tell, anyway. The first thing that *things* does so by disappearing, namely, the horizontal line. I'm getting the hang of this, the novice thinks. We know the horizontal line is a thing because it things, it

disappears, and by disappearing, it both clears space and bears world. Falling tetrominoes are also things—they thing by falling, being moved, being recognized as things, and thereby bearing the world as space around them. Other things can become things, but only as the language of *Tetris* becomes clearer. What a player may regard as a mistake in hour one may appear an opportunity by hour one-hundred. The rogue overhang of an L-shaped tetromino is nothing—no thing—to the beginner, who does not know (or know how) to call it to presence as a thing. The intermediate player, however, knows that tetrominoes can be pushed laterally once they touch the ground, enabling the vertical L-shape to presence as an opportunity for a square block. A fine move. In this manner, in play, many other things being to presence as the player calls them into being, first by recognition, then by intent and strategy

All play in *Tetris* is guided toward the production of the most important things: horizontal lines. Only these things thing by raising the player's score (another thing). Ideally, the player sets up the completion of multiple horizontal lines at once. Doing so multiplies the points awarded by their disappearances. Thus, a high-level *Tetris* player plays the game in advance. The last remaining column that would finish four rows is, as it were, already filled. The expert plays with potential. That is, only by knowing not only what is happening, but what must happen—necessarily, in order to achieve a goal—is the skilled player of *Tetris* able to make their sense of the game. What is on the board—in the world at present—things by its potential, and this too, Heidegger reminds us, is a form of presence. Indeed, this potential presence, this being with the things themselves, in thought rather than in any kind of present presence, displays a kind of mastery of language—a total comprehension of the set of possibilities, not in their actuality—but virtually, in language,

as things nonetheless. Knowing the things, and how to call the right things into being at the right time, in response to the language of the game, the skilled *Tetris* player is able to know the virtual world of the game by its very finitude. Although this virtual world is no mimetic representation, nor even an abstraction, of our own, the world of *Tetris* worlds nonetheless, by bearing things.

Understood in this way, *Tetris* becomes a play of world in language, a struggle against the enclosure of a game that constantly tries to stop the player from playing it, a struggle against the game over. Yet this enclosure cannot help but reveal itself to the player. Everyone knows the game over is coming. Far from being a privileged agent of action and change in the system, as the cybernetic approach would have it, the player achieves the serenity and freedom of having no actual agency at all. Not in the world but at the limit of language, a totalizing virtuality is realized.

CHAPTER 5. LIMIT: FORMS OF LIFE

5.1 Language Games

The last chapter concluded with the assertion that finitude, understood as the essential delimitation of Being, is fundamental to our experience of both the world and language, the two being effectively inseparable. For this reason, we turn now to a deeper reading of the philosopher Ludwig Wittgenstein, for whom the delimitation of language comprised the very basis of grammar, understood not as an atomistic account of fixed units and operations, but rather as a contingent, contextual, and ever-expanding set of practices. The meaning of an utterance, Wittgenstein argues time and again, is in its use. As virtual language worlds, video games are rendered explorable by players by the same virtue. The act of video game play emerges as the use of language by which meaning manifests.

If one phrase is to be associated with the work of Ludwig Wittgenstein, it is his writing, “the limits of my language mean the limits of my world” (T, 5.6). This oblique aphorism is characteristic of Wittgenstein’s nearly mystical approach to the philosophy of language, a facet which sets him apart from the cohort of analytic and predominantly Anglophone philosophers who surrounded him at Cambridge, and who would become his apostles following his death. Foundational to this distinction is Wittgenstein’s astonishingly anti-positivist notion that language itself holds the power to mediate our individual and collective experiences of the world. In other words, Wittgenstein holds (alongside Heidegger) that a proper understanding of language reveals the insufficiency of an objective conception of the world around us. We are, as it were, in our understanding and in our experience limited by language. This intuition, however, marks a point of

departure among Wittgenstein's intellectual descendants, many of whom reject or argue around the most radical assertions of his work. Rehashing these arguments serves our purposes little, but suffice it to say that it is very much the more radical—and, one might argue, more continental—channels of Wittgenstein's thought that bring him in line with the conception of virtuality, worlds, and language outlined in the present work.

What are the limits of one's language? The most basic characterization is this: what can and cannot be said. Or, as Wittgenstein more poetically put it into principle, "Whereof one cannot speak, thereof one must be silent" (T, 7). Later linguists would codify this sentiment under the name "linguistic relativity," commonly referred to as the "Sapir-Whorf Hypothesis" and named for the two linguists who popularized its premises, Edward Sapir and Benjamin Lee Whorf.

At a basic level, the hypothesis posits that language is so fundamental to our understanding of the world that we *only* understand the world through it. A prime example is color. As English-speakers, we recognize a distinction not just between blue and red but also between colors we recognize as essentially similar, like blue and purple, or blue and teal. A Sapir-Whorf interpretation of color would say that our words for colors preexist our recognition thereof. If our language did not have a word for teal, we might just see it as blue. Some historical linguists have even attempted to define a fixed historical progression of color words as they arise in languages, albeit to limited success.

It is a fact, nonetheless, that different languages have somewhat more or somewhat fewer or somewhat different words for different colors. Not every language, for instance, distinguishes between red and what we call orange. When we are born and acculturated

into a language, we come to learn its color words as they are used around us; only as a result, linguistic relativity goes, do we come to recognize colors themselves. Stronger or weaker interpretations abound, depending on whether human perception totally conforms to language (meaning that, following the earlier example, people literally see different colors), or whether language broadly informs but does not close off completely the possibilities of perception.

Linguistic relativity makes for a compelling point of comparison to the languages of video games precisely because their use of language is strictly and absolutely controlled. A video game comprises, in a way, a Sapir-Whorf world in miniature: a tightly bound possibility space of language wherein a player must contend with those very limitations. Indeed, this struggle of the player becomes play itself. What has not been already written into the space of the game world becomes unusable, nonsensical as language. As players meet the challenges doled out by the game, they come up against the limits of this language, the linguistic boundaries set by this relativistic world. What can and cannot be said?

Take a game where a player can roll to dodge enemy attacks. Ask the question, can the player roll “through” enemies? Will the player’s model collide with the enemy model, or will the former pass through the latter? How does the grammar of the game system restrict and thereby define the player’s use of language? The player will recognize this verb “to roll,” but will not immediately understand the extent of its use, its interactions with the world around it. When the player meets an enemy, and rolls toward it, the player is exploring the limits of the game world and its language. When the player either does or does not collide with the enemy, the player inscribes that very limit into their understanding of the world and into their use of the language. But this inscription is not by any means the

first. For the player to recognize and inscribe the limit of the language, the limit must already have been written into the world. In essence, the player explores the limit only by re-inscription. The player retraces a path set out in advance. But what else could be the case? Nothing a player can do in a video game is new to the game. All conditions are preconditions, and all possibilities are accounted for. The player is one who circumnavigates and circumscribes the limit of the world, but only over again. Most often, over and over again.

5.2 Context and World

As discussed in the last chapter, Lee Braver's *Groundless Grounds* draws comparisons between Wittgenstein and Heidegger on account of their thinking on language. For both Wittgenstein and Heidegger, Braver argues, language manifests holistically. There is no sense to a unit of language—a word, for instance—in isolation. If meaning is indeed in use then that very use necessarily implies a context, a linguistic environment in which the usage occurs. Braver draws upon contemporary theories of artificial intelligence to explain this point, and it is worth exploring them here for their connection to digital media.

Cognitive computer systems that understand the world as a collection of true facts about things have recently been challenged by systems which, on the contrary, learn by absorbing vast amounts of data in context. If one were developing a stop sign recognition algorithm, the former, cognitive approach would lead one to code a system that recognizes stop signs as red octagons with white letters atop long sticks, often found at street intersections, which inform drivers to stop their cars. The latter approach, machine

learning, might instead lead one to feed a computer thousands of hours of video from a traffic camera at an intersection in a city, whereupon the system would devise a probabilistic, if not necessarily accurate account of what is going on. (For instance, it might assume that fast moving objects naturally slow down when encountering the color red.)

The cognitive system could explain what a stop sign is, as it were, atomistically, or as an agglomeration of positive characteristics. But the machine learning system would have a better appreciation for the use of a stop sign in the world, even if it could not describe any singular distinguishing feature of the sign. For this reason, it might be put to use more readily in the world. Wittgenstein's "forms of life" (his nomenclature for language and its subsidiary language-games) function, Braver argues, much more like machine learning in that they are essentially contingent on inexplicable context, rather than on individualized, independent truths.

An important connection Braver leaves out is that machine learning systems appear to inherit a weakness from language itself, one which is decidedly in keeping with Wittgenstein's own theories, and which forms an essential part of their structure. Machine learning algorithms have a hard time transferring their knowledge between contexts, that is, from one context to another. This is because, unlike humans, they cannot rely on common sense or social cues to make associations between contexts. Our stop sign recognition algorithm, if trained on video from a sunny urban street corner, may not be able to recognize a stop sign at a darkened rural intersection. The cognitive system, in contrast, might have an easier time. It would be able to recognize the stop sign's features because it has been taught to recognize them as features to look for. Such a positivist notion of extensive knowledge acquisition—which works in effect by pointing to things and

telling someone what they are called—is precisely that which Wittgenstein spends the first part of his *Philosophical Investigations* critiquing. “Don’t think, but look!” he implores again and again (PI, §66). It is likely no one every told you that stop signs had eight sides.

As Braver has it, the apparent efficacy of machine learning, in spite of its weaknesses, may point to an analogous aspect of human language: its basis in the uncertainty of shifting contexts, its ground in groundlessness. In other words, a contemporary reading of Wittgenstein leads us to conclude not that humans, in our ordinary use of language, think like machine learning algorithms, but that we suffer from a very similar problem to theirs, that of transferring knowledge and meaning between contexts. We have simply learned to account for it.

A simple example is sarcasm. Over a text message, I can safely write a sentence like, “I bet he’s fun at parties,” to a friend who knows me well enough to understand that I do not actually hold the person in question in high esteem. Were I to write the same sentence, however, to a new acquaintance, the complete opposite impression may come across. What matters as far as meaning is concerned is the use of the expression, something that cannot exist outside of a context. To use Wittgenstein’s wording, when I say something sarcastically, I am playing a certain language-game, and I thereby hope or trust that my interlocutor recognizes it and plays along. Otherwise, I may get invited to what I may find a rotten get-together.

In most cases, even an unfamiliar interlocutor would recognize my light insult because it relies on a cliché. (In speech, my tone of voice would be equally important.) “I bet he’s fun at parties,” is well known to be something one says when one does not believe

that someone really is fun at parties. But this, too, relies eminently on context. When the context of an utterance changes, its usage, and therefore its very meaning, changes along with it. Everywhere, in every linguistic situation, in every language-game, we are faced with the problem of how to transfer knowledge and meaning between contexts, of understanding what things we saw in the video of the well-lit corner still apply to the shadowy intersection. With our advanced minds, long years of practice, and centuries of acculturation, we tend to do a pretty good job. Nonetheless, misunderstanding still occurs. This is because the problem of contextual meaning is essential to language, unless, as in the case of the cognitive system, it is artificially excluded in the pursuit of a perfectly logical discourse, that is, one where stop signs really are nothing but red octagons on long sticks. (Wittgenstein effectively attempted to do just that in his early work, before realizing the error of his ways.) The beauty of language, it would even seem for Wittgenstein, derives from the creativity with which we contend with this problem even in the most ordinary of situations. That we even make the attempt at irony or at telling a joke is nothing short of miraculous.

Why, then, does this problem of contextual confusion matter for video games? The reason is that video games are effectively alien contexts: worlds where our ordinary systems of meaning-making, our ordinary uses of language, do not apply. We are delighted, grappling with these machines, when their languages surprise us, and we are frustrated when language refuses to function as we intend it. The task of a game designer becomes one of anticipating the likely reactions a player will have when confronted with this alien system. More often than not, designers therefore rely on sub-cultural cues—like knowing which analog stick on a controller will move the character and which the camera—to make

the use of language more naturalistic. But never do we feel at home. And this is because while playing video games we are engaging in play with language in contexts entirely unlike our own, where we become constantly aware (rather than inwardly anxious) of the concrete limitations of our discursive environment.

Take the example of verbs. A verb like “jump” can hardly be recognized in isolation. “To jump” in *Super Mario Bros.* (Nintendo R&D4) is always to jump in a world, that is, within a greater linguistic context. The peculiarity of a video game’s context, however, is its minuscule breadth. Players encountering where a verb cannot take them in the world—a wall Mario cannot jump over—find themselves tracing, once again, a discrete limit. The use of a verb, in this case, is incapable of escaping its context. The context of language grounds the verb but also contains it.

5.3 Constraint

Limits are an essential part of video games. As such, they should be understood as contributing to the pleasure we derive from the medium. What makes limits fun? And what makes the particular linguistic limits of video games especially so? In *Play Anything*, Ian Bogost writes that games of all sorts—from sports to gambling—rely on constraints. His go-to example: take a ball, an open field, and a goal or two, and you have something like soccer. Add a constraint restricting players from using their hands, and you have soccer itself. This is an age-old idea for game studies, stretching back to Suits, Caillois, and Huizinga before them: that games ask us to achieve some goal given some arbitrary constraints. In poker, players cannot know everyone else’s cards, but they must act as if they could. To know when to hold 'em and know when to fold 'em, as the song goes,

becomes a goal achieved under constraint. The constraints are necessarily arbitrary because they tend to make things much harder for us. Basketball would be a less interesting game if players could simply pick up the ball and run with it. Dribbling a basketball is at once fun to watch and fun to do; but moreover, it makes for a more interesting game by introducing more points of failure, like the possibility of a steal or a fumble, both inherent to the clumsiness of the movement itself. Skill emerges from the management of these constraints, whereby their restrictions appear to fade into totally naturalistic play.

Exactly what constraints foster player interest, and what constraints turn players off from a game is a perennial question for designers, and one contingent on a given player's taste and judgment. The endless variations and house rules common to card games is testament to this difficulty. Even professional organizations are not exempt. The sport of rugby, as played by Rugby Union, uses 15 players; by Rugby League, 13. Two different constraints alike in their intention to limit the size of a team which might otherwise field dozens of players.

To wit, conventional wisdom says that in games we impose constraints upon ourselves to increase complexity, challenge, and interest. We turn something that would be dull or trivial, like getting up to throw a sheet of paper into a recycling bin, into something more engaging, like crumpling the sheet into a ball and tossing it across the room into the same bin. Computers change the game, so to speak. As Stephanie Boluk and Patrick LeMieux argue in *Metagaming*, video game constraints are mediated by a distinction between rules, which (any board game player will know) can be ignored, and mechanics, which, as in physics, are effective immutable. Video game players may very well impose rules upon themselves, say, to complete a game within a certain amount of time as in

speedrunning. But a video game's mechanics are as set in stone as is the acceleration of gravity on a basketball player's jump shot. They cannot be changed without changing something fundamental about the game world. Video game mods, cheats, and exploits do this all the time, but everyday play rarely does. In other words, the constraints leveled upon video games, that is, those which many would say make them games, are of a different order than those of other games. They are physical, hard-coded, inscribed in circuitry, and, above all, written. To play within these limits, to play along with these constraints, is not to take hold of one's own capabilities and to reign them in, but rather to cede entirely one's agency in the matter, and to do so not from a privileged position at the center of the world in question, but rather from the vantage of the limit itself. The typical game is defined by an imperfect and conditional concession to certain rules. The video game is a closed system of necessary and perfect confinement. A robust understanding of language allows us to make sense of this arrangement.

5.4 @CanYouPetTheDog?

A popular Twitter account beautifully expresses the linguistic essence of limits. "Can You Pet the Dog?" (Cooper) is a Twitter account that catalogs whether dogs (or dog-like creatures) in video games can or cannot be pet. "You can pet the dog in..." or "You can't pet the dog in..." respectively. The rules of the account seem to be predicated on player interaction. Non-interactive cinematics or cut-scenes do not count, even if, say, the main character pets a dog in them. To count, the game must allow players to intentionally initiate petting a dog.

Some games make this a straightforward affair. A button prompt might appear over a dog as the player-character walks by. If the player presses the button, a scripted animation depicts the protagonist petting the dog. The recent *Hades* (Supergiant Games) provides an example of this. Player-character Zagreus can pet guardian of the underworld Cerberus. Other games take a more passive approach, almost as if petting the dog is something to be discovered inadvertently, by accident, or as an easter egg. *Assassin's Creed Origins* (Ubisoft Montreal) is an example here, which allows players to pet animals only by walking protagonist Bayek up to them, having him crouch down, and then pressing no button input for several seconds.

By contrast, a game like *Tomb Raider* (Core Design) features dogs, but only as enemies, whom the player must kill, not pet, in order to progress. In this case, “Can You Pet the Dog?” passes a simple judgment: “You cannot pet the dog in Tomb Raider.” Attached to the tweet, a screenshot of Lara Croft firing her twin pistols at gnashing canines leaping through the air.

What does it mean to ask, “can you pet the dog?” What sense does it make, and what sense does it rely on? We can say plainly that the question is not a difficult one from our ordinary frame of reference. It is something we might ask in real life even, as a naive spectator at a dog show, or face-to-face with a friend’s mean looking hound. It makes sense to us, as a question, because we know what all the parts mean and how they fit together. Are you able to do the thing we call petting to the thing we call the dog? Yes, in most cases. No, in fewer. In fact, one might even say, relying on an ambiguity in the English language, that one *can* pet any dog, but that one *may not* or *should not* pet every dog in every scenario.

However, the humor of the Twitter account derives from the fact that the sense of the question is distorted when put against its realization in a virtual world. “Can you pet the dog” is a question which is only sensible because, in our world, you can generally pet dogs. This is how we know to ask it, in reference to a video game. Where a player in a video game can pet a dog, the question retains its native sense. But where a player cannot pet the dog, no matter what one tries, it becomes nonsensical. Nonsensical, that is, because it relies on a sense that is utterly alien to the world at hand. The question becomes, as it were, inexpressible.

In the virtual world of the video game, one cannot ask the question “can you pet the dog?” without first being able to pet the dog. Going up to a dog and seeing if you can pet it relies on the premises of the question itself. It begs the question. The structure is tautological. The question and its answer only find sense if both are already contained within the discrete grammar of the world. Lara Croft cannot pet a dog because petting is not something that exists for her, nor anywhere in her world, nor in the least as something to be done near dogs, which are universally hostile.

One can imagine a game wherein a player-character can crouch, can stand, and can do so repeatedly next to a dog. The visual image that would be created would, in some loose respect, approximate petting a dog. The player-character’s hand might graze across the dog’s digital fur, up and down. Players do this sort of thing all the time, using the limited tools of the game to produce the image of scenarios that are, so to speak, unscripted. In his article “When Keeping It Real Goes Wrong,” André Brock critiques a juvenile instance of this idea in *Resident Evil 5* (Capcom), wherein players could nudge the head and face of protagonist Chris against the exposed cleavage of deuteragonist Sheva.

Machinima, or short films recorded in commercial video games, use similar techniques to express an actor's range of motions and emotions, even where a game's engine is lacking. But no one would really call doing squats beside a dog petting it. The full breadth of the interaction, which ordinarily would be afforded scripted animation, is missing.

5.5 *Night in the Woods*

It is of the utmost importance to note that the question of what can and cannot be said extends beyond formalism, to understand that it is always a political question. Yet there is a difference between *having politics* and *being political*. The word “politics,” according to political theorist Chantal Mouffe, “refers to the ensemble of practices, discourses and institutions that seeks to establish a certain order and to organize human coexistence” (*Agonistics*, 3). On the contrary, Mouffe defines “the political” as “the antagonistic dimension which is inherent to all human societies” (2). Politics, then, is something like the ground-level manifestation of higher-order, political antagonism. People live together because of politics, despite their disagreements over the political. The uncertain and unending conflict of “the political” emerges as the dominant mode of human activity and its meaning-making.

All games, as products of culture and labor, have politics. Because they're made in a time, in a place, and by people for an audience of players, the politics of games are inherent, even if they are not outwardly expressed. One can imagine a thorough inquiry into the politics of *Super Mario Bros.* (Nintendo R&D4) that has nothing to do with the Mushroom Kingdom, its monarch, or her mustachioed savior—but rather concerns itself

with the impact of the game on Japanese and North American techno-entertainment economies.

Thus, the question of what can and cannot be said represents a site of political agonism, extending beyond materialist politics of production. Such a notion is essential to political interpretations of the poststructuralist tradition, especially those following Michel Foucault's work on disciplinarity and discourse. For Foucault, the identity of a subject is inextricably entangled in discourses of power, which exercise themselves by instating certain norms and excising certain taboos: what can and cannot be discussed. Judith Butler's *Gender Trouble*, a landmark contribution to feminist philosophy and queer theory, offers an account of the discursive subject as one whose gender emerges as a performative process of language and linguistic action within a codified societal enclosure of gender roles. Queer game studies, now established as an artistic and critical movement, carries such formulations of subjectivity into the domain of the virtual. Indeed, queer game studies advances positions far more like—and inspirational to—the poststructuralist and phenomenological articulations of the present work than most mainstream, structuralist, or cybernetic conceptions of video games, especially as concerns the player subjectivity within a space of productive enclosure.

A good example of the articulation of a political agonism within a virtual world in language, in this case best understood by a queer game studies perspective, arrives in *Night in the Woods* (Infinite Fall), an independent adventure game about a small town in economic decay. In a manner resembling the work of critical theorist Mark Fisher, the game levels a rare and audacious interrogation of Capital and its deleterious fallout. Specifically, the game interrogates what Fisher calls “capitalist realism,” or the “pervasive

atmosphere” which makes it “easier to imagine the end of the world than it is to imagine the end of capitalism” (*Capitalist Realism*, 2). *Night in the Woods* uniquely accomplishes this interrogation by acutely rendering the claustrophobia of boredom.

Players spend most of their time in *Night in the Woods* wandering the town of Possum Springs as Mae, a disaffected youth who returns to her home after dropping out of college. After a series of strange disappearances, Mae and her friends uncover a sacrificial cult of worshipers to a cosmic horror lurking at the bottom of an abandoned mineshaft. The cult, Mae finds, comprises local good-ol' boys alleging to be doing right by their community. For generations, they've sacrificed those they consider worthless to their vile god. In recognition of their deeds, the cultists pray that the Thing in the mine—Black Goat, as they call it—will by its great power return Possum Springs to its former All-American glory. Indeed, they want to *Make Possum Springs Great Again*. Following a last-act confrontation, Mae and her pals escape by inadvertently trapping the cultists in a mine collapse. The next day, they reconvene for band practice.

Delimitation is perhaps the best name for the affective experience of *Night in the Woods*. Mae's world is tightly constrained. As a side-scroller (meaning its characters are set against a flat, two-dimensional backdrop), the game world comprises about eight major screens of exterior townscape. Among them: the commercial town center, the former underground trolley station, the parking lot behind the old supermarket. Since the game progresses one day at a time, players nearly always start the day in Mae's bedroom. From there, Mae can walk out of the third-floor room, down the stairs, out of her parents house, and down the street either to the left or to the right. This household is located on a residential street near the rightmost boundary of the game's map. Moving to the right, the

player finds some woods, a bridge, and the sign marking the edge of the city. Attempting to continue rightward, the player provokes the player-character to quip that she's not about to walk all the way to the next town over. Mae and the player are stuck.

At the end of most days—as determined, not by a running clock, but rather by the onset of the player's own boredom—players progress the plot of the game by talking to one of the Mae's friends and making plans for the evening. Most character development happens in scenes set after the sun has set. But then the day begins anew. Every morning, players have to figure out what Mae is to do with herself while her friends are at work. Routines naturally emerge: who the player talks to first, then second, then third—should Mae steal a pierogi and feed it to some rats? Players never have access to very many verbs. They can walk Mae around and they can get her to talk to people. Yet, since the town is so small (in fiction and in practice), claustrophobia and boredom naturally set in. Here, Aubrey Anable's aforementioned exploration of video games and affect provides a useful touchstone. Anable contends that too often the discipline of game studies “looks for big emotions in a medium that seems to traffic more interestingly in the minor affects” (*Playing with Feelings*, viii). Indeed, among these affects, these “forces that inform our emotional states” (xvii), Anable locates tension, relaxation, catharsis and—most integral to *Night in the Woods*—boredom.

Through boredom, the narrative of the Mae's own dissatisfaction regarding her town becomes totally supported by the player's own experience of a tightly restricted sense of linguistic exploration—an experience of palpable delimitation. Why is she, anyone, even here? A gnawing sentiment—this town is dead, really dead—is expressed outright by various characters, but all the more effectively through the motions of play in the game's

language. Whereas *Night in the Woods* is a comparatively lengthy game for its genre—totaling anywhere from eight to over a dozen hours—the investment of time is meaningful. What amounts to mind-numbing, claustrophobic boredom on the part of the player exists for the experiential expression of genuine sentiment. “Although many games arrive at boredom unintentionally,” writes Bo Ruberg in *Video Games Have Always Been Queer*, “boredom itself can communicate a powerful message” (171). Indeed, for Ruberg, boredom is a powerful expression of a game’s “affective rhetoric” (165), especially when it produces “no-fun,” or the opposite of what is traditionally expected from a videogame (168). Through claustrophobia and habit, *Night in the Woods* leverages boredom, to draw again from Ruberg, as a queer experience: an “alternative form of pleasure” which works against the traditional equation of videogames and fun to “disrupt notions of desire, temporality, success, meaning, life, and death” (15). Mae, an expressly queer character, is desperate to find anything to do with herself. So too is the player—longing, day after day in Possum Springs, for the enclosure to permit new modes of expression.

Through boredom, then, players bear witness to a mining community in decline—to a community where the unions went on strike and were busted, where businesses moved, and the mines were closed, where the floods hit hard. In *Night in the Woods*, what Fisher describes as the essential centerlessness of capital is represented by the bottomless pit in the mines, something into which bodies are thrown for sake of prosperity. Although players achieve a kind of catharsis at the end of the game when the mine collapses, far more important to the game’s themes are the affective experiences of delimitation: the anxiety that there is no alternative, no end of capital, and nothing beyond. Consider the subtitle to Mark Fisher’s *Capitalist Realism: Is There No Alternative?* Through boredom, that is,

through a queering of game design good practice, *Night in the Woods* succeeds in realizing the political as phenomenal. Forcing its player to confront this anxiety, the game leverages the language of its world: the inability to leave, the inability to express or articulate an unbounded perspective. The game's ultimate response to its eldritch-capital antagonist—though it is beyond the scope of this section to explain in full—remains resolutely hopeful and reparatively queer (see Fiorilli, “Meet the New Boss, Same as the Old Gods”).

5.6 *Outer Wilds*

Perhaps the most robust and thoughtful ludic engagement with these concepts comes from a recent independent video game. In *Outer Wilds* (Mobius Digital), players traverse a miniature solar system as an unnamed “Hearthian,” a species of four-eyed, bipedal amphibians hailing from the Earth-like planet of Timber Hearth. The player character is a member of the titular Outer Wilds Ventures, a planet-hopping astronomical exploration corps whose other members the player encounters as guides and interlocutors across the planets of the solar system. Among these friendly faces are Esker, who maintains a lonely outpost on the Attlerock, the satellite moon of Timber hearth; and Feldspar, a founding member of the organization, long lost and shipwrecked amid the twisting caverns of the deadly planet Dark Bramble.

It doesn't take long for *Outer Wilds* to reveal its twist. Whether the player miscalculates the velocity of their spaceship's autopilot and hurtles into the sun, suffocates in the rising tide of sand on Ember Twin, runs out of jetpack fuel at an inopportune moment above the black hole at the core of Brittle Hollow, or lives just long enough to watch the solar system disintegrate in a blinding supernova, the player-character will snap their four

eyes open by the campfire that began the game, as if awakened from a dream. Every 22 minutes, or after every death, the game's time loop resets. The positions of the planets return to their place in orbit and the player is free to explore them once again. A goal emerges: find out what's causing the loop, find out what's causing the sun to go supernova, and figure out a way to stop them both.

The most important limit in *Outer Wilds* is also its most obvious: the time loop. It is a point of fact that, aside from the game's introduction and ending, no single play session can occupy the world for longer than twenty-two minutes. Once the supernova's cascading rays consume the player-character the loop ends. (Notably, the further from the sun the player is, the longer it takes for the supernova to reach their position in real time, upwards of several extra minutes.) Players are, from the jump, completely bounded by this delimitation. There is no way to escape it, not even, as the player learns, by ending the loop. The universe is ending, plain and simple. In a very real way then, play proceeds via the exploration of the bounds of this delimitation—as it does in other games, but especially here.

Much of the game's pleasure derives from the intricate solutions to these problems. And it does a disservice to summarize them so bluntly; but since the game's thematics are so closely tied to its puzzle mechanics, we must do so anyway. An important idea in *Outer Wilds* is taken from quantum mechanics, that observation changes outcome. In real life, the phenomenon was first observed in the famous double-slit experiment, where it was discovered that photons behaved as particles and as waves, depending on whether or not their travel was directly observed. Later, it was hypothesized that many very small bits of

matter behave similarly. In *Outer Wilds* this concept manifests as “quantum shards,” naturally formed obsidian obelisks which stay fixed in space only when directly observed.

A rock formation lies in front of the player. The player turns around to find, oddly enough, the same rock formation. Back again, the same formation. Soon, perhaps after sending out a photo probe, the player realizes that the formation moves to occupy a different space at the moment it becomes unobserved. One puzzle in the game has the player turning a flashlight on and off in a totally dark room until the right formation of quantum shards affords an improvised staircase. Beyond being equal parts fun and mind-bending to toy with, these shards play an important role in the game’s story. The player learns that they hail from the Eye of the Universe, the source of a mysterious signal which fascinated the Nomai, an ancient alien species whose ruins the player explores across the solar system, and whose technology is ultimately responsible for the game’s time-looping conceit.

The Eye of the Universe is appropriately named. It is a quantum anomaly that, once the player manages to solve the game’s final puzzle and travel to its lightyears remote location, is revealed to resemble a swirling void not unlike an enormous iris and pupil. The Eye is as far as anything is in the universe. From its vantage point it becomes clear that the supernova that destroys the solar system every twenty-two minutes is not, in fact, the result of Nomai technology gone wrong, but is, instead, the beginning of the natural end of the universe itself. There is no stopping it. Heat death has come. The player’s ultimate goal stops the time loop, allowing nature to run its course to complete annihilation.

Leaping into the vortex, the player-character hallucinates or calls into being a forest of flickering fireflies, each of which representing a solar system fading from existence. A miniature galaxy sits atop a solitary table in an empty museum. As the player walks toward it, a single button prompt is displayed: OBSERVE. In this act (the game gives the player no other choice), the player-character completes for all time both the grand mission of Outer Wilds Ventures and the apparent ultimate purpose of the Eye itself. The player presses the button and *observes*.

Thus, the Eye of the Universe, long sought by the ancient Nomai, holds a special relationship to the limit of the universe. It occupies the limit itself, defining and circumscribing it. The universe is simply what happens in front of the Eye. In this sense, the Eye echoes the player's own phenomenal relationship to the world of the game. The search that consumed the imagination of the Nomai and which occupies the player's own attention throughout the game is one that brings the game world's inhabitants ever closer to the position of the person behind the screen. In the last moments of their life, the player-character, having finally ended the Nomai time loop that prevented the universe from finishing its natural destruction, bears witness to the birth of a new universe. Everything goes black. Then, an exhalation of brilliant white light consumes the screen as an anthemic reprise of the game's main theme erupts from the silence.

Here, too, a kind of diegetic convergence occurs. There is, as it were, absolutely nothing behind the player-character's perspective. Nothing for them to turn around and see. Nothing, that is, except the player's own perspective, gazing, concordantly, inward. Player, protagonist, and Eye converge into a single perspective as witness to the end and the beginning, something the game implies is effectively necessary for anything at all to be.

Surely enough, the player solves puzzle after puzzle using this very logic, whereby objects literally exist only when they are looked upon. What is needed, then, for the birth of a new universe? The game argues: an observer.

The whole affair bears a great resemblance to an evocative passage of the *Tractatus* (5.632-5.6331) wherein Wittgenstein describes that our position in language is like our field of vision. What is universally absent in our vision is our own eye. Rather, the eye occupies the limit of sight. So too does our use of language position us at the limit of discourse. We struggle to express ourselves because, by trying to convey our thoughts to others, we sit upon the breaking point of language: the entwined possibilities that we may only be able to understand what we already know how to say, and that we may never be able to express what we innately understand. “Whereof one cannot speak, thereof one must be silent” (T, 7). We can thus view *Outer Wilds* as a game that reckons with the phenomenal positioning of the player as a linguistic subject in the world. A being not at its center, but, like the Eye itself, looking inward as it orbits its own limit.

What we are describing comes to define even the physical act of playing a video game. Consider the player, controller in hand, sitting in front a television screen playing a video game. Where is the play *happening*? The fact that we call these things video games gives us an important clue. Play happens on the screen. To be sure, very many players, by choice, in order to challenge themselves, or by necessity, due to visual impairment, play with less attention to the screen itself, or even with none at all. While these are exceptional cases, they indicate that what we mean by screen is important here. Thus, just as in a cinema the film comes into existence in the conjunction of the celluloid strip, the soundtrack, the projector, the darkened room, the speakers, the open air, and the screen onto which the

images are projected—so too does a video game exist on-screen in the conjunction of its complete technological array.

The screen is both what shows up on-screen and how it gets there. A better definition reverses the premise outlined above: not that play happens on-screen, but that on-screen is where play happens. A screen separates and delineates the game world from the real world. Therefore, and this is most Wittgensteinian, at the screen is where the player has to be. In other words, even on the most physical level, the player occupies the limit of the game world. The phenomenal and the physical, at the limit—and in *Outer Wilds* at the climax of the game—become one. Video game play, then, emerges as the exploration of the limits of a virtual world, at the limit of the virtual world: a movement along the limit. This movement of the player, however, is double: in exploring the limit, it seeks to escape it, but in moving along the limit, it is always reinscribing it.

CHAPTER 6. NECESSITY: THE IMAGINED FORTRESS

6.1 Ananke

In this chapter we will uncover what is shared between the language of video games and the language of literature. This is not an argument about the relative artistic merit of video games; rather, it is an argument about their very form, an argument about how the languages video games comprise are necessarily in conversation with other kinds of linguistic artifice. To this end, we turn to texts by four literary exemplars: Stéphane Mallarmé, Jorge Luis Borges, Clarice Lispector, and Italo Calvino. In the works of each of these authors, I argue, one finds the presence of a unifying struggle, namely, the quest for the inexpressible, or the question of how to use language to escape from language. To be clear: by definition these writings are not virtual. They are not, themselves, virtual worlds. Readers do not explore these worlds in language, but rather encounter in language the rendering of a world. Yet in such a rendering these stories represent virtuality. The drama they share is the realization of the virtual force of language, and it is for this reason that they have each been chosen.

From here on, we will undertake a survey of representative works from each author in turn, backed by close readings of particular texts, in order to pinpoint how this theme emerges and reflects upon the essentially delimited virtual worlds of video games. In effect, this chapter argues that, as we find in the linguistic experiments of literature, the play of video games is indeed a play of language seeking, in vain, to transcend itself. Nonetheless, in this futility video games exhibit their most provocative and peculiar qualities.

To guide its argument, this chapter returns to an idea explored in Chapter One: the ancient Greek personification of Necessity. Ananke, as the Greeks called her, was a goddess strongly associated with the (perhaps more well-known) Moirai, or Fates. In some myths, Ananke is even their mother. In Plato's cosmology, as portrayed in his *Timaeus* and as discussed at length in the earlier chapter, Necessity was a force at odds with Intelligence in the creation of the universe by its divine artisan. Her powers were those that simply *had* to be, like fire *has* to burn. Intelligence was brought to bear on Necessity, but nonetheless had to work within its constraints.

Indeed, the word “*anánkē*,” for the ancient Greeks, carried also this meaning, “constraint.” Alongside it, the meanings of “force” and “compulsion,” to the extent that some philologists (see Wooley's review of Schrenkenberg) have even linked it to the Ancient Greek for “torture.” Today, the rarely used adjective “anankastic” finds a place describing particular grammatical conditionals: “if you want to... then you must....” (The same adjective was also once used in medical terminology for what is now called obsessive-compulsive personality disorder—although we will not draw further on this particular connection.) Beyond the *Timaeus*, Plato and Aristotle both refer to Ananke as a “wandering cause” (see Morrow), something which cannot easily be reckoned with in their strictly logical conceptions of the world.

As necessity, as fate, as constraint, as force, and as cause, I contend that Ananke serves as a productive figure, in light of whom we may deepen our understanding of the unique kinds of language we have discussed, namely, the kinds of language examined in the works of Deleuze, Derrida, Heidegger, and Wittgenstein—the kinds of language employed in video games. For each of the authors below, we will highlight a particular

facet of Necessity, using it to emphasize the author's literary use of language and to reconnect that literary language back to our overall point: that video games are, perhaps more than any other medium, an anankastic art. In so doing, we must attend to the peculiarity of the kind of language at hand, something which requires a cumulative rather than a linear argument. The conclusion of every thinker we have thus far engaged at length is that to speak of language as a force entails great difficulty. There is simply no way to describe that language properly in language. The best an author can hope to do, as Wittgenstein noted, is to invite the reader to look and see (PI, §72). As we will see, then, these literary works draw the same conclusion. Here are mere attempts.

6.2 Force: Mallarmé's Demon

As Plato long ago realized—in the *Republic*, the *Timaeus*, and the *Phaedrus*, especially—language is a force of which we are all too likely to think we are in control, but to which, on the contrary, we are always in thrall. At once, language allows and it disallows, mediating our phenomenal experience of the world. This notion defines the drama of poststructuralism and continental language philosophy more broadly. It comprises, also, the drama of video games, where language emerges in equal measure as what gets us to play, what we play in, and what delimits our play within the constraints of the computational and the virtual.

Of a piece with these ideas, is “The Demon of Analogy [*Le Démon de l'analogie*]” (88-91) a prose poem (or “anecdote”) by Mallarmé wherein the author, or a speaker very much like him, finds himself in equal parts inspired and tormented by a nonsensical phrase that, try as he might, will not leave him alone. The poem opens with a question. “Have

unknown words ever sung on your lips—accursed tatters of some meaningless phrase?” The question is addressed, apparently, to the reader, to a definite “you,” evident in the phrase, “your lips [*vos lèvres*],” made using the formal address, *vous*, as opposed to the informal *tu*, or the impersonal *on*. (The last of these is probably heard more readily in the “you” of the translation, but the proper personality of the pronoun should be kept in mind.) Probably, the reader thinks, yes, words do sometimes appear to conjure themselves out of thin air. Everyone can remember a time where the right words came to the fore at just the right time, or more likely, where they did so moments after they were needed. (The French have an idiom for the second case, *l’esprit de l’escalier*, the spirit of the stairs, where one finds oneself just after departing a conversation.) Case closed, then: yes, Mallarmé, words sometimes do and sometimes do not crop up where they are needed.

But this answer seems too blunt. What exactly is Mallarmé asking us? It seems incommensurate to the sensation described to reduce the idea to, “have you ever had a phrase stuck in your head?” Something stuck in your head, like a catchy song or a turn of phrase, doesn’t necessarily sing across the lips. Perhaps it moves you to hum along, or mouth the words, but sing? Better yet, do the words themselves sing? In Mallarmé’s question, you aren’t the one doing the singing; the words are. They sing themselves, “*chantèrent-elles*,” using your body, your lips, as a vessel. Moreover, a song or a phrase stuck in your head cannot, by definition, be “unknown [*inconnues*].” Yet Mallarmé’s words are, literally, unfamiliar. You have never heard them, at least in this order, before. Indeed, they don’t even make sense. They are “meaningless [*absurde*],” totally without reason. And finally, they flit maddeningly in mind as if shed from some larger whole, some context that might let them cohere into actual meaning. What Mallarmé is really asking us, it seems,

is whether such infernal phrases possess us through no summons of our own? Are we ever so tormented?

He continues immediately, employing characteristic breaks in his typography:

I left my apartment with the exact sensation of a wing sliding over the strings of a musical instrument, lightly and lingeringly; this was replaced by a voice that uttered the following words in descending tones: ‘The Penultimate is dead’—in such a way that

The Penultimate

ended a line and

Is dead

detached itself from the fateful pause in a still more futile manner, into the void of meaning. (89)

The phrase possesses no more meaning in French, “*La Pénultième est morte,*” than in English, save, perhaps, for a certain sonority which lodges itself in the head of Mallarmé’s analog. Indeed, because English is etymologically indebted to French for the existence of the English word “penultimate,” Mallarmé’s poetic point is at least audible in

both phrases. He writes, “I took a few steps in the street and recognized in the sound *nul* the taut string [*la corde tendue*] of the musical instrument...” But while the “*nul*” is, shared, albeit with slight variation, by the pronunciation of both “penultimate” and “*pénultième*,” what distinguishes these “*nuls*” is their relationship to meaning. *Nul* in French carries with it the denotation, as a word in its own right, of “none,” or “no,” or, per its English relation, “null.” What Mallarmé hears in as the sound of a stringed instrument is, as it were, nothing at all. The words sing albeit soundlessly. Drawing a connection to Derrida, one might say that Mallarmé’s demonic voice is a written one, present yet perpetually unuttered, emanating from no source. Where there should be a subject, where there should be meaning, there is a void.

One further untranslatable difference, also key, derives from the syllable count of each word, untranslatable in English. “*Nul*” is the second of four syllables in “penultimate,” but, as Mallarmé is keen to point out later in the poem, the very penultimate syllable in “*pénultième*.” Indeed, he prays upon this connection in an attempt to establish any kind of meaning or causality in the phrase.

Constantly I kept trying to return to thoughts congruent with my tastes, arguing, to appease myself, that, after all, penultimate is the lexical term signifying the second-last syllable of a word, and its apparition was the imperfectly abandoned remnant of a linguistic task on account of which my noble poetic faculty daily grieves at being broken off: the very sonority and air of falsehood assumed by the haste of that facile affirmation were a cause for torment. (91)

Why, Mallarmé asks himself, asks his reader, these words, in this order, on this day? Why does his mind return to the “painful pleasure [*pénible jouissance*]” of the perception of a line break in the middle of the phrase? “Back came the phrase—virtual [*virtuelle*], released from some previous fall of a feather or branch [*de plume ou de rameau*]—henceforth heard through the voice until at last it articulated itself alone, alive with its own personality” (91). What power, he wonders, seems to speak to him? What power, he wonders, seeks to speak through him? Seeking a solution to these riddles, the poem’s speaker admits the damnable phrase pronunciation. He makes himself into their speaking subject, repeating them as if they were a liturgy. “Harried, I resolved to let the inherently melancholy words wander across my lips of their own accord” (91). He vamps, almost like a jazz musician—or better yet, a scat singer, riffing off consonant nonsense. “The Penultimate is dead, she is dead, well and truly dead, beyond all hope, the Penultimate...” (91). He longs that the “amplification” of his voice will release these words from him, or release him from their spell.

He wanders down a familiar street, toward a familiar shop window, where the words move him to gesture. He begins to embody them beyond his vocal cords, his mouth, his lips. “I felt that, as my hand, reflected in a shop window, made a gesture like a caress coming down on something, I possessed the very voice (the first one, which had certainly been the only one).” Staring into a reflection, the speaker’s presence is properly reflected. As he pronounces the words, it appears to him that they arose from him in the first place.

The poem ends with the injunction of forces, once again, beyond:

But the moment when the supernatural irrefutably intervened, and the anguish [*l'angoisse*] that racked my formerly magisterial spirit began, came when I raised my eyes and saw, in the antique dealers' street where I had instinctively gone, that I was in front of a lute-maker's shop, its wall being hung with old instruments that he was selling, and, on the ground, some yellow palm branches and old birds' wings shrouded in shadow [*des palmes jaunes et les ailes enfouies en l'ombre*]. I fled—an oddity [*bizarre*], someone probably doomed to wear mourning for the inexplicable Penultimate. (91)

As the *nul* of the Penultimate, its essential nothingness, suggested the breaking of a taut string, “*la corde tendue*,” here appears the luthier’s shop. As the rhythm of the words suggested the fall of a branch or a feather “*de plume ou de rameau*,” here appear those very palm leaves, “*des palmes jaunes*,” and those very wings, “*les ailes*.” What has occurred, and what Mallarmé’s speaker despairs in, is precisely the actualization of the virtual, *la virtuelle*.” The demon of analogy is a virtual one. The analog was always already virtual. What was once, in effect, a play of language, arising on its own accord, appears to have shaped the world. *The language forces*. Has Mallarmé’s narrator suffered from premonition? It seems unlikely, at least if we take the story as actually taking place.

No, the reality of the coincidence is, in fact, far stranger. Consider that the poem’s speaker noticed the familiar luthier, the branches and the feather, only—*only*—because the suggestion of language arose, as so often happens, without his conscious employment of that linguistic impulse. In other words, consider that his very perception of the world was mediated by a faculty not at all in his control. The “anguish [*l'angoisse*],” which Mallarmé attempts to convey in the poem derives not from the idea that language, operating

unpredictably, somehow tells us what will happen; but rather that language inevitably precepts our capacity to acknowledge what is already happening. We notice, that is, only what language, ever unreliable, has primed us to notice.

Such a theme is one taken up time and again by thinkers of a certain philosophical tradition, just a few of whom this dissertation has discussed at length. But it is also one that reveals, once again, the unique affordance of the video game as a medium. The video game is the medium that revels in the virtual aspect of language, the ability of language—of written language—to imagine worlds which are real but not actual, and which, by that same token, dramatize our native inability to recognize what has not already been claimed as utterable. Video games everywhere, even if they make no mention of this quality, describe the problem of needing to express ourselves effectively, perhaps to achieve a certain outcome, given only a set of unstable and oftentimes inadequate moves within that restricted system.

We take pleasure in asking of a video game, “can you pet the dog?” because it presupposes the possibility of that action, something we long for in actuality. It reassures us that asking, say, “can we achieve world peace?” is similarly sensible. But, as Mallarmé illustrates, it is by the same maneuverer that the opening up of possibility—the mystery of the Penultimate—forecloses its own solutions—the strings, the branches and the feathers. What we are able to cognize is precisely what we were already saying, if only to ourselves. Mallarmé seems to ask, then, in his introductory question, have you felt this? This demon? Is there really no escape?

6.3 Cause: Borges’ Tlön

“Tlön, Uqbar, Orbis Tertius” is an acclaimed short story by Jorge Luis Borges that narrates, in three sequential parts, the discovery of a record of an apparently imaginary country, Uqbar, secreted in the entries of an unlicensed encyclopedia; the discovery of a complete encyclopedic volume describing the planet Tlön, an imaginary world said to be a legend in the land of Uqbar; and (in a fictional post-script dated several years after the publication of the story) the discovery of a centuries-old secret society, Orbis Tertius, responsible not only for the creation of Tlön and Uqbar, but also for the propagation of apparently genuine artifacts from those ersatz regions. Into each section of the rather brief tale, Borges weaves dozens of allusions to literature, to historical figures, to philosophy, to mysticism and esotericism, and even to his friends and contemporaries. These factors contribute, as critics have long observed, to complex layering of textualities, wherein the actual and the imaginary begin to blur.

But the story goes beyond a simple kind of historical fiction. It is proper magical realism. Its unique thematics undergird a whole that becomes, as it were, supremely virtual. Borges describes, in written language, worlds wherein language is not only material, but radically immanent. In effect, the story realizes the virtuality of language via the invocation of language-games utterly unlike our own, or rather, those of Indo-European origin like Spanish or English. In effect, what Borges produces is an exploration of possibility, albeit one limited by the constraints of the language he employs. Far from being detrimental to the story, however, these constraints reinforce its central idea, that our language is as ill-equipped to render the metaphysics of Tlön as theirs is of ours, and that this resistance to translation is precisely indicative of the importance of language to our conceptions of the world around us. Notably, unlike Mallarmé’s speaker, the narrator of Borges’ story does

not seem to mind these developments. His perpetual participation in the mysteries and rites of Tlön bespeaks an interest in seeing them come to fruition. Whereas “The Demon of Analogy” ends with a terrible closure of force, Borges story describes instead an ever-expanding virtual cause.

Indeed, Borges’ story examines themes essential to all kinds of virtual worlds—worlds, that is, founded in language—including, should one take the idea to its limit, our own. The video game being another kind of written world—one, as we will find, not unlike Tlön in its construction—it stands to reason that Borges’ examination of language-worlds can inform our own understanding of this contemporary form, in particular, for its (more or less Wittgensteinian) thinking of grammar as an essentially physical property.

Holding before him “*A First Encyclopædia of Tlön. Vol. XI. Hlaer to Jangr,*” the narrator of the story describes its contents:

a vast and systematic fragment [*un vasto fragment metódico*] of the entire history of an unknown planet, with its architectures and its playing cards, the horror of its mythologies and the murmur of its tongues, its emperors and its seas, its minerals and its birds and fishes, its algebra and its fire, its theological and metaphysical controversies—all joined, articulated, coherent, and with no visible doctrinal purpose or hint of parody. (71f)

The narrator assumes, as becomes evident, that the work must be collective enterprise, drafted piecemeal and assembled by a cabal of “astronomers, biologists, engineers, metaphysicians, poets, chemists, algebrists, moralists, painters, geometers,” the whole of it all “so vast that the contribution of each writer is infinitesimal [*infinitesimal*]”

(72). The plan itself becomes especially important to the narrator's understanding of the mysterious text. "At first it was thought that Tlön was mere chaos [*mero caos*], an irresponsible act of imaginative license; today we know that it is a cosmos [*un cosmos*], and that the innermost laws [*las íntimas leyes*] that govern it have been formulated, however provisionally so" (72). One begins to have the impression that Borges really *is* describing the growing assemblages of production that today produce the vast computational systems of video games.

Using the word "cosmos [*cosmos*]," Borges implies a strict order, or rather, an intelligible and necessary physics that must exist to unite the disparate elements of the world. In the case of Tlön, this physics is grounded in language, both as a result of Borges' literary approach to describing a world in text (Tlön) through a world in text ("Tlön, Uqbar, Orbis Tertius"), and because of the special relationship between world and language native to the people of Tlön themselves. Borges: "Their language and those things derived from their language—religion, literature, metaphysics—presuppose idealism. For the people of Tlön, the world is not an amalgam of *objects* in space [*un concurso de objetos en el espacio*]; it is a heterogeneous series of independent *acts* [*una serie heterogénea de actos independientes*]*—the world is successive, temporal, but not spatial [sucesivo, temporal, no especial]*" (72f).

Borges reveals that, in composing the world of Tlön, legendary to the imaginary people of Uqbar, the collective reasoning of the Orbis Tertius saw fit to divide its planet hemispherically into two distinct language-groups. Borges' narrator tells us that the peoples of the southern hemisphere of Tlön speak in languages entirely without nouns: "there are impersonal verbs, modified by monosyllabic suffixes (or prefixes) functioning

as adverbs. For example, there is no noun that corresponds to our word ‘moon,’ but there is a verb which in English would be ‘to moonate’ or ‘to enmoon’ [*un verbo que sería en español lunecer o lunar*]” (73).

People of Tlön’s northern hemisphere speak using simple or complex agglomerations of monosyllabic adjectives, thereby producing a theoretically infinite set of theoretically infinitely long nouns. “One does not say ‘moon’; one says ‘aerial-bright above dark-round’ [*aéreo-claro sobre oscuro-redondo*] or ‘soft-amberish-celestial’ [*anaranjado-tenue-del cielo*] or any other string” (73). These two approaches have vast implications for the whole of society in both cases. In the literature of the north, “ideal objects [*objetos ideales*], called forth and dissolved in an instant” (73), some of which, pulled together by “mere simultaneity,” like “the color of the rising sun and the distant caw of a bird” form whole poems (73). An important fact is that, because of the innate idealism of Tlön’s people, “no one believes in the reality expressed by these nouns [*nadie crea en la realidad de los sustantivos*]” (73).

In other words, there are not only more nouns than things, but, as a further consequence of that same idealism, more things than things. The northern language of Tlön exhibits a kind of total virtuality, the most radical of radical idealisms. Everything is real, but not actual. Thought itself becomes, for the people of Tlön, “a perfect synonym for the cosmos [*un sinónimo perfecto del cosmos*]” (73) —and this is true as much for the fictional people as for their fictional manifestation at the hands of the Orbis Tertius—to say nothing of their actual reality as printed in the collected stories of Jorge Luis Borges. Thought, indeed, is the sole material of Tlön.

Meanwhile, the characterization of the languages of the southern hemisphere of Tlön, entirely verbal, resembles, as Borges may have been aware, the distribution of words in grammar of several actual languages. Biologist and founder of the Center for Native Peoples and the Environment, Robin Wall Kimmerer notes in her popular book *Braiding Sweetgrass* that, in the language of the Potawatomi Nation to which she belongs, the proportion of verbs in the lexicon is 70 percent, far greater than the 30 percent of English. Many words which would be nouns in English (or Spanish) are therefore, just as Borges describes, verbs. “A bay is a noun [in Potawatomi] only if water is *dead*,” Kimmerer writes. “When *bay* is a noun, it is defined by humans, trapped between its shores and contained by the word. But the verb *wiikwegamaa*—to *be* a bay—releases the water from bondage and lets it live” (55).

Like Borges, Kimmerer describes how this “grammar of animacy,” inherent to Potawatomi, reveals and fosters a special appreciation for the action of nature. As she has it:

'To be a bay' holds the wonder that, for this moment, the living water has decided to shelter itself between these shores, conversing with cedar roots and a flock of baby margansers. Because it could do otherwise--become a stream or an ocean or a waterfall, and there are verbs for that, too. To be a hill, to be a sandy beach, to be a Saturday, all are possible verbs in a world where everything is alive. Water, land, and even a day, the language a mirror for seeing the animacy of the world.... (55)

Borges' account of Tlön, to be sure, greatly exaggerates the limited linguistic relativism accounted for in Kimmerer's summation of Potawatomi. Beyond functioning as

a linguistic reflection of a particular and culturally situated perspective of the natural world, the languages of Tlön constitute an otherworldly logic. We should understand Borges as making an implicit political point here. Indeed, this otherworldliness should not be separated from the colonialist impulse that unites both the systematic suppression of the Potawatomi language and falsified documentation of an alien world as purported by the equally fictional people of the far-off land of Uqbar. That is to say, one should not mistake Orbis Tertius—or even the erudite narrator of the story—as being outside or apart from the imperialist context they so readily operate within. The story is, in the end, about a group of predominantly European intellectuals fabricating a land to the East.

This important point clarified, we find the most material expression of the languages of Tlön in the form of a paradox, one apparently incompatible with their conception of the world. “*On Tuesday, X is walking along a deserted road and loses nine copper coins. On Thursday, Y finds four coins in the road, their luster somewhat dimmed by Wednesday’s rain. On Friday, Z discovers three coins in the road. Friday morning X finds two coins on the veranda of his house*” (75). The heretic of Tlön posits that this parable reveals the persistence of objects in space and time, something impossible to express in either of Tlön’s principal languages.

Why is such an explanation impossible? “To explain (or pass judgment on) an event is to link it to another; on Tlön, that joining-together [*vinculación*] is a posterior state of the *subject*, and can neither affect nor illuminate the prior state” (74). The result is that every one of the proliferous philosophies of Tlön “is by definition a dialectical game [*un juego dialéctico*]” (74), developed not in search of truth but seeking astonishment, “*buscan el asombro.*” In effect, because it has no words to define causality—only poetic

association—“the language of Tlön resisted formulating this paradox; most people did not understand it,” concluding (and here Borges pokes some fun at logical positivism writ large) that it relied on verbal fallacies, or, in the case of “find” and “lose,” two neologisms to Tlön which “presuppose the identity of the nine first coins and the nine latter ones” (75). Equality, says Borges, is not equivalent to identity in Tlön, and this fact carries material consequences.

The eventual solution to the paradox is proposed, according to the histories, by an orthodox thinker, who argued for a kind of radically immanent monism, or “idealistic pantheism,” arguing “that there is but a single subject; that indivisible subject is every being in the universe, and the beings of the universe are the organs and masks of the deity [*los órganos y mascararas de la divinidad*]” (76). Thus, “X is Y and is *also* Z [*X es Y y es Z*],” all of whom remember, from themselves, where the coins were lost (76). The same principle eventually applies to the literature of Tlön, where there are no authors, no plagiarism, and hardly any distinction between works, freeing critics to take any two works as written by one and the same writer. Here again the realm of the virtual reigns supreme. Moreover, it is as if the Wittgensteinian ideal of the language-game is in full effect: if something can be thought, that is, expressed in the logic of grammar, it is real. Rendered in the negative: only what cannot be spoken of cannot be.

Tlön, for this reason, makes for an excellent analog to the phenomenal experience of video games. As we read of Tlön, we play with its ingenious operations. We struggle to imagine the struggle of imagining a world where the coins persist. Imagine being unable to imagine that. By describing the rules of a language unlike our own—albeit, to be clear, similar in some ways to some languages—Borges figures a world of totally virtual

materialism. Tlön thereby embodies the opposite of the “onto-theology” critiqued by Derrida, the notion that the Word was with God and the Word was God. It instead represents precisely the radical contingency he (and Wittgenstein) aspire to. Play as absolute. All that remains in Tlön—all that is—is association, resulting in a holistic language-game wherein every utterance modifies the monad. The language rules.

Yet the ultimate appearance of artifacts—for instance, “a gleaming metal cone about a die’s width in diameter,” “a very small yet extremely heavy object,” “made of a metal not of this world,” and resembling “an image of the deity in certain Tlönian religions” found in a dead man’s pocket (80)—is the apotheosis of the logic of Tlön. With the story’s post-script, Borges renders the virtual as, itself, productive. Here, the virtuality of language is not made actual—Plato’s city in speech is not actually built—but rather, the virtual begins to subsume the actual, forcing the realization that what was thought to be actual may have been virtual all along. Borges seems to wonder, what if what can be said can come to be? If the logic of Tlön can be expressed in the text of the story, why could its logic not manifest?

How could the world not fall under the sway of Tlön [*cómo no someterse a Tlön*], how could it not yield to the vast and minutely detailed evidence of an ordered planet [*una planeta ordenado*]? It would be futile to reply that reality is also orderly. Perhaps it is, but orderly in accordance with divine laws (read: ‘inhuman laws’) that we can never quite manage to penetrate. Tlön may well be a labyrinth [*un laberinto*], but it is a labyrinth forged by men [*urdido por hombres*], a labyrinth destined to be deciphered by men [*un laberinto destinado a que lo descifren los hombres*]. (81)

Tlön exists as a decipherable labyrinth, a more perfect fortress. A world with rules that can be—must be—expressed with the utmost sense. It is therefore a comforting world, one unlike our own. It is like the video game: wherein one finds, everywhere, rules which can always be expressed. A world wherein, through that expression, if only in the most constrained manner, the world and its limits are, at long last, rendered thinkable. Limitless delimitation, as the *Orbis Tertius* hypothesized, thereby propagates and is realized.

6.4 Fate: Lispector's Silence

The Hour of the Star [*A hora da estrela*] was the last novel of Clarice Lispector to be published during her life. Within its tempestuous and self-reflexive prose lies the story of Macabéa, a pitiful young woman in Rio de Janeiro, whose life comes to a premature end when she is struck by a yellow Mercedes just moments after being told by a fortune teller that prosperity would soon come her way. Macabéa's story is narrated by Rodrigo S. M., a demanding figure in equal parts temperamental and philosophical. To the extent that he claims credit for Macabéa's creation in writing—for he himself takes up the mantle of author—he abnegates responsibility for her ultimate fate. Like Macabéa, upon whom Rodrigo inflicts the miseries of her story, Rodrigo himself is as a personage trapped by language, one who is forced by language to arrange things a certain way, to take certain actions, to write a certain story. For this reason, *The Hour of the Star* is a useful book to compare with our hermeneutics of video games. In it are rendered two characters who experience the irresistible pull of language toward a predestined conclusion: one the writer, the other written. Both, meanwhile, exist on yet another textual layer, namely, within that codex which bears the name "Clarice."

As we have seen occurs in video games, the language of Lispector's novel is its driving force; it is that to which its characters (including its narrator) are beholden. Its language compels them to do things, to write and to act, and it pushes them to their ends. Rodrigo and Macabéa both, in their own ways, struggle against this current, but neither escapes. Their fates are bound to the delimitation of the language that is their world. Players of video games may recognize this struggle: to push against and circumnavigate the limits of a virtual world, meeting its challenges or exploring its spaces. To ask oneself, "can I defeat this enemy?" or "can I climb to the peak of that mountain?" is to make contend against language just as Rodrigo or Macabéa, albeit with less mortal consequences.

Still, video games are near universally punishing, even at their most casual. Pushed to its limit, a video game will not hesitate to close the player out. The skeleton kills you, or the timer runs out. Even peaceful or exploratory games, like *Minecraft* (Mojang Studios), will eventually draw upon so much of a computer's that the program itself will crash. The limit will never be transcended, and this is the ultimate realization of Lispector's protagonists. They cannot escape the writing of their world. Existing as we do, we are privileged to witness this drama from a vantage of genuine transcendence, just as we do while playing a video game. But in reading, in playing, something is activated, felt, and inevitably we draw the experience of this constrained language into ourselves; we make it our own. Let us turn now to a closer investigation of these points, as Lispector's prose reveals them to us.

In many ways, *The Hour of the Star* can be understood as an algebraic assemblage, wherein terms are defined and equated in an increasingly recursive equation. The central unit of the work is the word, although we should not confuse this term for our usual

meaning. “I swear this book is made without words [*é feito sem palavras*],” Rodrigo writes (8). But if the story is not written *in* words, it is certainly concerned with them. Rodrigo tells us that “words are actions [*palavra é ação*]” (7), that “words are sounds transfigured with unequal shadows that intersect [*as palavras são sons transfundidos de sombras que se entrecruzam desiguais*],” (8). Thus, Rodrigo’s word is a relational entity. The same could be said of the word of Derrida, of Heidegger, or of Wittgenstein. Language, or action, becomes a dense web of associations, something to be understood holistically. Nothing exists in isolation. (Even, as we will see, the concept of Nothing exists in a relational space.)

In the most practical sense, the word exists as the necessity of writing. Apparently contradicting his own claim to be making a book without words, Rodrigo implores his reader, “don’t forget that to write anything at all my basic material is the word. So that’s why this story will be made of words that gather in sentences and from these a secret meaning [*um sentido secreto*] emanates that goes beyond words and sentences” (6). The only way out of this contradiction, assuming Lispector intends for Rodrigo’s narration to be consistent, is to understand that the necessary material of the story, the word, does not produce the essence of its meaning. The story is written in words; the book, without them.

As a writer, Rodrigo views himself as “a manual laborer” (11). He thinks of writing as “a carpenter’s job” (6), “as hard as breaking rocks” (10). Although he is “not a professional” (9), Rodrigo writes because he has “nothing else to do in the world” (12), because he is “desperate” (13), because of an obligation to the writing. As he says, “Macabéa’s story has to come out or I’ll burst” (38). It becomes clear that, without telling us much about his personal life, Rodrigo implies his own sufferings as a currency to trade for the burden (or privilege) of illustrating (or crafting) Macabéa’s. In a more poetic turn

of phrase, Rodrigo summarizes his writing process as “the search for the word in the dark” [*a procura da palavra no escuro*] (61). Yet, based on his admission of wordlessness, he seems to consider it a somewhat fruitless exercise, even a completely hopeless one.

If words are actions, and writing is the bricklaying of words, Rodrigo’s claim that “action is now more interesting to me than thinking [*agir está me interessando mais do que pensar*]” (8) stands to reason. His distinction between action and thought is especially important, however, as it fundamentally separates action’s equivalents, the word and writing, from thought. Rodrigo even names himself “more of an actor” (14) than a writer. “I create human action and I tremble” (14). But what does writing enact? For Rodrigo, writing “is an act that is a fact [*um ato que é um fato*]” (28), and “facts are hard stone” (8), “facts are hard rocks [*pedras duras*]” (62). He says that his entire story is “only unworked facts of raw materials that hit me directly before I can think” (60). Again we witness a division from thought. Writing with the hard rock of fact is thoughtless. It produces or otherwise articulates an anti-theoretical, anti-logical density that Rodrigo insists is the true subject of his story. “The facts are sonorous,” he writes, “but between the facts there’s a whispering [*um sussurro*]” (16). Whence comes this whisper? One further postulate: “facts are words spoken by the world [*palavras ditaspelo mundo*]” (62).

The world of Lispector’s novel—Rodrigo’s world, Macabéa’s world, for these are essentially the same—speaks. It speaks in facts, which are stones, which are words. Recall Heidegger, for whom “language speaks” (L, 88). The world speaks because the world must be alive for life to live in it: “she liked noises [*ruídos*]. They were life [*era vida*]” (25). Yet, inasmuch as the world speaks, it does so inwardly. The world of *The Hour of the Star* is inverted. It is a hollow core rather than a populated surface. Rodrigo’s outwardly

contradictory assertion that “everything is a hollow nothing [*o tudo é um oco nada*]” (54) points to a rather specific metaphysical and geometric projection: the world and everything in it are surrounded, shrouded, and encased in a larger, possibly endless nothing, like an air bubble deep underwater. Pushing back against the pressure of that null atmosphere is an abiding faith shared by Macabéa and Rodrigo: “God is the world [*Deus é o mundo*]” (3).

Indeed, the pursuit of this God may be the driving force behind Rodrigo’s literary ambition. As he puts it, “I want to encounter the world and its God” (10). He even describes the process of writing itself: “when I enter into a contract with inner powers of mine, I find through myself your God” (28). Whose God, then? None but Macabéa’s. Writing, Rodrigo shapes Macabéa’s world, her God. Yet again, this is not thoughtful work. “God appears when you’re distracted” (18). Even as he concludes his opus, even as he fills the world-vessel of everything with the stuff of nothingness, Rodrigo’s mind wanders: “Don’t forget that for now it’s strawberry season” (77). At every turn, Rodrigo is cautious and reverent of the divinity of the word, something “we have known since Moses” (70). This is why he can only bear to use the word while distracted. His many tangents and digressions become a kind of liturgy. They are what allow him to write at all. In a revealing passage he admits, “With excessive casualness I’m using the written word [*a palavra escrita*] and that trembles inside me who fears moving away from the Order [*Ordem*] and falling into the abyss [*abismo*] populated with screams [*gritos*]: the Hell of liberty [*o inferno da liberdade*]. But let me go on” (28).

Rodrigo’s Hell of liberty is precisely that which is not circumscribed by nothing; it is the void beyond everything. Not words, but screams. “Because there’s the right to

scream. So I scream [*Porque há o direito ao grito. Então eu grito*]” (5). There is noise in the Hell of Liberty, there is life, but that is all there is. Let us return to Rodrigo’s most puzzling assertion. “I swear this book is made without words [*é feito sem palavras*]. It is a mute photograph [*uma fotografia muda*]. This book is a silence [*um silêncio*]. This book is a question [*uma pergunta*]” (8). Rodrigo’s book is silence. It opposes noise and life. Rodrigo’s book is, therefore, a kind of death, a silent death, a death without a scream. Rodrigo: “Death [*A morte*], which is my favorite character [*o meu personagem predileto*] in this story” (74). As she dies, Macabéa does not scream, she merely says, “As for the future” (75). It is life that screams in her stead: “And then—then the sudden rattling of a seagull, all at once the voracious eagle lifting to the high airs the tender lamb, the sleek cat mangling some dirty rat, life eats life [*a vida come a vida*]” (75).

Rodrigo’s book is indeed made “without words” (8), and for good reason. If it contained the word of death, it would contain the action of death; it would by its own logic be a murder. The question the book asks then, is the question of silence, the question of the symbol. What the book contains is the silent symbol of death: “a symbol [*símbolo*] that can be summed up in a deep kiss [*num profundo beijo*] [...] mouth-to-mouth in the agony of pleasure that is death [*boca-a-boca na agonia do prazer que é morte*]” (73). *The Hour of the Star* is a question whose answer is the very thing it cannot provide, namely, the word itself. “Silence [*Silêncio*]. If one day God comes to earth there will be great silence. The silence is such that not even thought thinks [*nem o pensamento pensa*]” (76f). In killing Macabéa, Rodrigo is killed, in his words, by her. “Don’t be afraid, death is an instant, it passes like that, I know because I just died with the girl. Pray forgive me this death

[*desculpai-me esta morte*]” (76). Should we forgive him? Was there anything else he could do?

Perhaps what we can do is recognize the cause of their fates. Language, as silence, as writing without words, as the speechless symbol, as the absence which bears presence, draws Rodrigo and Macabéa to their fates. Language does this because of the closed system the novel comprises. To feel something similar, you need only load up a favorite arcade game. The fate to which you will be drawn in the language of the game is unavoidable. Loss, failure. The game stops. Continue? No matter the path taken to get there, the game knows all the moves you will make. You cannot surprise it. And yet we play again.

6.5 Constraint: Calvino’s Fortress

With “Cybernetics and Ghosts [*Cibernetica e fantasmi*]” a relatively unknown lecture delivered across Italy in November of 1967, Italian writer Italo Calvino established a critical vocabulary for digital media decades before their time. Divided into five parts, the brief essay reconsiders the place of literature amidst the cultural and critical predominance of cybernetics and information theory. If the whole of the universe and our lives within it can be distilled and quantified into combinatorial sequences of discrete integers, Calvino asks, then whence comes literature and its unique power over us? Have we deluded ourselves, as a species, into setting literature and narrative apart from the mathematical universe science increasingly tells us we inhabit? What makes one sequence of alphabetic characters—a Shakespeare sonnet, or the New Testament—more resonant than another?

Seeking answers to these questions, Calvino takes a surprising path forward. Far from categorically denying literature a grounding in mathematics, he positions the form as an inherently combinatorial process. From this standpoint, Calvino develops a unique and remarkable account of literature which privileges neither the scientific nor the mystical. Literature becomes, for Calvino, “a combinatorial game [*gioco combinatorio*] that pursues the possibilities implicit in its own material [*proprio materiale*], [...] a game that at a certain point is invested with unexpected meaning [*significato inatteso*] [...] of great concern to the author or his society” (22). The speaking, listening, writing, and reading of literature emerge as effectively automatic, as natural to humans as breathing, as natural to the world as gravity.

Here we will work through the turns of Calvino’s prescient argument in order to understand its relevance for contemporary media theory. We will focus especially on its characterization of literature as a struggle against constraint, since this facet holds special import for the language of video games we have developed. Constraint, we should keep in mind, is one of the principle aspects of Necessity, especially as we have applied it to language. Inasmuch as it allows for language, and thereby literature, to occur, it also disallows in equal or even greater measure. For Calvino, literature emerges from this dialectic—so too, as we would have it, does the play of video games.

The earliest human storytellers, Calvino writes, were ones who bounced different words and figures against each other, just to see what happened. They did so because that was how language itself began, with people “inventing a finite number of sounds combined in various ways” (3). From these sounds grew words and from these words grew stories. “The storyteller [*il narratore*] began to put forth words [*profferire parole*] [...] to test the

extent to which words could fit with one another, could give birth to one another, in order to extract an explanation of the world from the thread of every possible spoken narrative [*per dedurre una spiegazione del mondo dal filo d'ogni discorso-racconto possibile*]” (4). Looking to the world around them, storytellers spoke of people, of animals, of landscapes, of natural and supernatural phenomena, and of the qualities and actions of each of these figures. Like they did with sounds to create words, they played these figures off one another in various combinations. “The storyteller explored the possibilities implied in his own language [*le possibilità implicite nel proprio linguaggio*] by combining and changing the permutations of the figures and the actions [*le figure e le azioni*], and of the objects on which these actions could be brought to bear. What emerged were stories....” (4)

Yet this play was, from the first, essentially delimited. “The telling of stories allowed certain relationships among the various elements and not others” (5). Some of these delimitations derived from cultural institutions. In a morality tale, for instance, the evildoer had to be punished. In the narration of a believable world, smoke had to be the result of fire, not the other way around. Still today, Calvino argues, stories emerge from this same exploration of the “potentialities contained in the word [*potenzialità che la parola detiene*]” (5). But whereas some, like the Russian Formalist schools of literary theory, have endeavored to exploit these combinatorics to derive a universal theory of narrative, Calvino is quick to point out that “even if the folk imagination is [...] not boundless like the ocean, there is no reason to think of it as being like a water tank of small capacity” (6). The expanse of literature is theoretically boundless, even given its finite resources.

What has changed, since the time of the earliest storytellers, is the popular understanding of the world and our place in it. “The world in its various aspects is

increasingly looked upon as *discrete* [*discreto*] rather than *continuous* [*continuo*]. [...] Thought, which until the other day appeared to us as something fluid [...] we now tend to think of as a series of discontinuous states [*una serie di stati discontinui*], of combinations of impulses acting on a finite (though enormous) number [*un numero enorme ma finito*] of sensory and motor organs” (8). In effect, Calvino reiterates the anxiety of Heidegger, namely, that the world is being transformed by technology and the technological frame of mind into an ordered quantity of disconnected yet unitary bits. (I choose the word “bits” to reference both its divisible and informatic denotations.) “I might also say that what is finite and numerically calculable [*la numerabilità, la finitudine*] is superseding the indeterminateness [*indeterminatezza*] of ideas that cannot be subjected to measurement and delimitation [*a misurazione e a delimitazione*],” Calvino writes (9). Yet this very encroachment of the digital—as opposed to the analog—makes things more, not less complicated, “just as Zeno of Elea, by refusing to accept space as continuous, ended up by separating Achilles from the tortoise by an infinite number of indeterminate points [*infinita di punti intermedi*]” (9). To wit, the more we divide things into bits, the more bits we discover, *ad infinitum*.

The existential question for literati of the 20th century, which has only become more lucrative in the intervening years: does this “triumph of discontinuity, divisibility, and combination [*discontinuità, divisibilità, combinatorietà*]” (9) foretell “a machine capable of replacing the poet and the author?” (12) *Absolutely*, says Calvino. *No doubt*. And not just “a machine capable merely of ‘assembly-line’ literary production,” either, but one “that would bring to the page all those things that we are accustomed to consider as the most jealously guarded attributes of our psychological life, our daily experience, our

unpredictable changes of mood and inner elations, despairs and moments of illumination” (12).

If, as Calvino has it, literature is simply the combination of finite elements into an infinite variety of associations, then there should be no reason that a Turing-complete machine, given enough time and processing power, could not run the same equations a human can, and, moreover, process them a hundred times faster. Literary movements—their trends and traditions, their classicist points and avant-garde counterpoints—would pass in the blink of a human eye as a machine renders thousands of years of literary output. And there would be no reason why some, or even much of it, would not be great. “That indeed will be the literature that corresponds perfectly to a theoretical hypothesis: it will, at last, be *the* literature [*cioè finalmente la letteratura*]” (13).

But Calvino does not despair of this future. For him, this is how literature has always worked. “Literature as I knew it was a constant series of attempts to make one word stay put after another by following certain definite rules; or, more often, rules that were neither definite nor definable [*non definite né definibili*], but that might be extracted from a series of examples, or rules made up for the occasion” (15). Considering the production of text as it stands, Calvino acknowledges the human, but sees little evidence for the human in the language itself. If mere chance could put these letters together, then the human author holds no special power. “The ‘I’ of the author is dissolved in the writing [*l’io dell’autore nell scrivere si dissolve*]. The so-called personality of the writer exists within the very act of writing: it is the product and the instrument [*un prodotto e un modo*] of the writing process. [...] Writers, as they have always been up to now, are already writing machines [*macchina scrivente*]” (15). It is only once we acknowledge the combinatorial machinery

of writing that we open our thinking to “the decisive moment of literary life [*il momento decisivo della vita letteraria*],” namely, reading (15). In this moment, one witnesses Calvino taking a step beyond a structuralism which is content to categorize and quantize language in terms of its mathematical foundations. Here, Calvino achieves a poststructuralist understanding of a reader’s essential role in the production of a text. Yet this moment belies an even deeper discovery, one which unites Calvino’s overarching hypothesis with the other works featured in this chapter, namely, that writer and reader both are joined and, indeed, controlled by a still more essential third party: language itself.

What, then, considering the constraint of language, does reading look like for Calvino? How does it differ from, say, the computational analyses, “translations and summaries” (12) that machines themselves perform on literary texts? Given that literature has been established as “a way of exercising the potentialities contained in the system of signs [*un’esplicitazione delle potenzialità contenute nel system dei segni*] belonging to all societies at all times” (16), Calvino locates an inherent “tension” in its perpetual struggle “to escape from this finite number [*uscire da questo numero finito*],” that is, its attempt “to say something it cannot say, something that it does not know, and that no one could ever know [*dire continuamente qualcosa che non sa dire, qualcosa che non può dire, qualcosa che non sa, qualcosa che non si può saperere*]” (18). He continues: “The struggle of literature is in fact a struggle to escape from the confines of language [*la battaglia della letteratura è appunto uno sforzo per uscire fuori dai confine del linguaggio*]; it stretches out from the utmost limits of what can be said [*dall’orlo estremo del dicibile*]; what stirs literature is the call and attraction [*il richiamo*] of what is not in the dictionary” (18).

This transcendent quality of literature Calvino calls myth. “Myth [*il mito*] is the hidden part [*la parte nascosta*] of every story, the buried part, the region that is still unexplored because there are as yet no words to enable us to go there” (18)—“it is a language vacuum [*un vuoto di linguaggio*] that draws words up into its vortex and bestows a form on fable” (19). Such a vortex, such a vacuum, is the result of a taboo, a prohibition on certain discourses which, necessarily, masks its own existence. The taboo becomes unconscious. How can one speak of a taboo if to speak of it is to invoke it? Calvino replies, in myth. “Literature follows paths that flank and cross the barriers of prohibition, that lead to saying what could not be said, to an invention that is always a reinvention of words and stories that have been banished from the individual and collective memories” (19). Reading becomes the act of listening for these unutterable utterances, these unthinkable thoughts: something a machine, functionally capable of producing literature but lacking both acculturation and an unconscious, remains unable to do.

Literature is that which, upon its reading, sparks something in a society, in an audience, or even in the mind of a single reader. Literature is the precipitate of a reaction with reading and with what Calvino calls the “ghosts [*i fantasmi*]” of a society, its inexpressible anxieties and desires. As Calvino points out, Shakespeare’s medieval spirits unsettle against the rationality of the poet’s Renaissance, just as Poe “[liberates] the ghosts that Puritan America trails in its wake” (20). It is no coincidence, then, that more than 55 years after Calvino delivered this address, as our collective anxieties turn ever more toward the digital screens that surround us and the networked communications they imply, our most profound experiences of digital literature emerge from the frequently frivolous play

of virtual language, from the linguistic exploration of the reassuring and strictly computational limits of the common video game.

Let us return to Calvino's complete definition quoted, in part, at the start of this section:

Literature is a combinatorial game [*gioco combinatorio*] that pursues the possibilities implicit in its own material [*proprio materiale*], independent of the personality of the poet [*personalità del poeta*], but it is a game that at a certain point is invested with unexpected meaning [*significato inatteso*], a meaning that is not patent on the linguistic plane [*livello linguistico*] on which we were working but has slipped in from another level [*altro piano*], activating something that on that second level is of great concern to the author or his society. The literature machine [*la macchina letteraria*] can perform all the permutations possible on a given material, but the poetic result will be the particular effect of one of these permutations on a man endowed with a consciousness and an unconscious [*dotato d'una coscienza e d'un inconscio*], that is, an empirical and historical man [*sull'uomo empirico e storico*]. It will be the shock [*lo shock*] that occurs only if the writing machine is surrounded by the hidden ghosts of the individual and of his society [*solo in quanto attorno alla macchina scrivente esistono I fantasmi nascosti dell'individuo e della società*]. (22)

From this definition we can conclude that the video game, understood as a virtual world in language, does not simply reflect Calvino's definition of literature, but extends it, deepening its entrenchment in combinatorics, and imposing upon the reader/player the

action of inhabiting an entirely unfamiliar linguistic environment wherein to begin to understand its modes of expression is to consent to the constraints of its delimitation. The video game becomes an exaggerated version of Calvino's literature: an experience of the struggle to break from the total finitude of a set of meaningful operations that can only be uttered in prescribed contexts. Here is a wall you can climb. Here is a wall you cannot. Here is a dog you can pet. Here is just a dog.

To intertwine the comprehension of a system with the escape from a system becomes the final point of Calvino's lecture. Remarking upon recent scholarship concerning labyrinth imagery in postmodern literature (familiar to any reader of Jorge Luis Borges or Umberto Eco), Calvino cites "Topographical Structures in Modern Literature," an article from the Buenos Aires literary magazine *Sur* by Hans Magnus Enzensberger, who writes: "The labyrinth is made so that whoever enters it will stray and get lost. But the labyrinth also poses the visitor a challenge: that he reconstruct the plan of it and dissolve its power. If he succeeds, he will have destroyed the labyrinth; for one who has passed through it, no labyrinth exists" (quoted, 25). For his part, Calvino already recognizes, even in the earliest days of literature's digital reformation, a sketch of the conclusion we drew just a moment ago. He writes: "Enzensberger's thesis can be applied to everything in literature and culture that today—after von Neumann [the eminent information and computer scientist]—we see as a combinatorial mathematical game [*gioco matematico combinatorio*]. The game can work as a challenge to understand the world or as a dissuasion from understanding it" (quoted in "Cybernetics and Ghosts," 26). The combinatoric system is itself a game of comprehension.

Well then, we ask, what if someone were to make a game out of it? What if someone were to translate the task of working one's way out of a labyrinth of language into an actual labyrinth? What if someone were to construct this labyrinth in such a way that the performance of certain linguistic operations resulted not only in the comprehension of the structure of the system, but also in the very dissolution of the system that stands as an obstacle? The video game is such a labyrinth. And its philosophical import is to reflect back on the linguistic structure from which it is derived.

Video games, ultimately, reflect on the problem of communication. The big problem of literature, Calvino posits, coincides with this most important capacity. If indeed, in literature, it is always up to the reader to ultimately decide what the text is saying and to “see to it that literature exerts its critical force [*la sua forza critica*]” (26), then how are we ever to ensure that our communication works? Are we, as it were, trapped in our own little cells, each a labyrinth in its own right? The “most optimistic finale [*il finale piú ottimistico*]” that Calvino can think of for his lecture is a passage from one of his own stories (27). In the story, “The Count of Monte Cristo [*Il conte di Montecristo*],” Calvino spins a postmodern remix of Alexandre Dumas' adventure novel of the same name. Edmond Dantès and the Abbot Faria are incarcerated in the Chateau d'If, an inescapable fortress.

Throughout his days and nights in solitary confinement, Dantès can hear Faria chipping away at the bricks of his own cell with makeshift tools. Every so often, Faria breaks into an adjacent cell, empty and utterly identical to the one he came from. Faria then starts his chipping away anew. Sometimes Faria passes through Dantès' cell, at one point climbing out of a hole in the ceiling and walking upright, as if gravity were for him alone

reversed. Calvino most effectively summarizes in his lecture: “On the basis of Faria’s mistakes Dantès tries to draw a map of the castle. While Faria, by the sheer number of his attempts, comes close to achieving the perfect escape [*la fuga perfetta*], Dantès moves toward imagining the perfect prison [*la prigione perfetta*—the one from which no escape is possible” (27). Here Calvino quotes directly from his story, and we will do the same.

If I succeed in mentally constructing [*col pensiero a costruire*] a fortress from which it is impossible to escape [*da cui è impossibile fuggire*], this imagined fortress [*questa fortezza pensata*] either will be the same as the real one [*uguale alla vera*]—and in this case it is certain we shall never escape from here, but at least we will achieve the serenity [*la tranquillità*] of knowing we are here because we could be nowhere else—or it will be a fortress from which escape is even more impossible than from here—which would be a sign [*è segno*] that here an opportunity [*una possibilità*] of escape exists: we only have to identify the point where the imagined fortress does not coincide with the real one and then find it [*basterà individuare il punto in cui la fortezza pensata non coincide con la vera per trovarla*]. (27)

It goes without saying that the title of the present work, “Imagined Fortresses,” is taken from this passage. Video games are a strange medium, built on writing, on language, and purporting to convey entire worlds in virtuality. But just as with all worlds, these worlds are not entire. They are finite, as all are. But they are unique in the scale of this finitude. Video games represent, in a way, the smallest possible worlds. The worlds where the fewest things are possible, where the sum total of all sense and expression is almost quantum. Even the most expansive of virtual worlds is profoundly delimited—and in this

delimitation, it asks, or forces, its players to adhere to the most stringent of strictures. To play a video game is indeed to explore the given space of possibility, but only on the game's terms. Stray from the path and the game will not hesitate to expel the player: game over.

CHAPTER 7. CONCLUSION

This dissertation has argued that video games, as virtual worlds, are composed and experienced in language. Two important conclusions can be drawn: that *the video game asks its player not to express agency but to surrender it*, and that *the video game lends its player not immersion in a world but a view from its outer limits*. Consequently, the video game figures as important kind of imagined fortress: one that portrays a reality totally quantized to the insatiable will of a solved set of combinatorial factors. To the player who is willing to set a game's logic against its own material, this imagined fortress is productive and ultimately radical. It places that player in contention with a perfect system and asks, *what do you do?*

The arc of this dissertation proceeded as follows.

In my first chapter, I charted the course of scholarly attempts to reconcile video games with language, principally through textuality. On the whole, I described these attempts as falling into one of two camps, which understand texts either as formal assemblages of semantic and syntactical information, or as cultural productions amidst other kinds of cultural production. Indeed, what is necessary to reconcile both of these conceptions is precisely the lessons of poststructuralism hitherto disregarded by most approaches to game studies, namely, that language extends beyond linguistic codes and into our phenomenal experience of world. Video games figure as necessary sites for the exploration of these ideas as they relate to game studies, literary theory, and philosophy because video games are, at their core, virtual worlds created and explored in language.

In the second chapter, I argued that language is fundamentally and intimately connected to virtuality, understood by Gilles Deleuze as the real, but not actual. Language is a mode, perhaps our primary mode, of expressing the reality of the virtual. To make this claim, I proposed a reading of Plato's *Republic* which examined its city in speech as a virtual world expressed and explored in language. Reading another Platonic dialogue, the *Timaeus*, I showed how the exploration of the virtual in language is founded on a dialectic between Reason and Necessity, the two primordial forces of Plato's cosmology. The necessity of constraints and limits to the experience of virtual worlds went on to connect Plato's ancient examples with the contemporary medium of the role-playing game. Applying these ideas, I provided a close-reading of one tabletop game in particular, *The Quiet Year*, to show how the closure of linguistic possibility not only functions as the game's central mechanic, but reinforces its themes and produces its characteristic worlds. I end the chapter by emphasizing the linguistic distinction between tabletop role-playing games from video games, namely, the predominance of speech in the former, as compared to the predominance of writing in the latter.

In the third chapter, I argued that video games are a written medium, that they are a kind of writing, that writing is their very material, and that they are experienced through the phenomenon of writing. I began by introducing the ways video games comprise traditional inscription: how they are written in computer code, how they write their game states to physical memory, how they trace patterns of color onto electronic screens. Next, I drew upon two illustrative episodes from the American sitcoms *Seinfeld* and *Friends* in order to demonstrate how the scriptural aspects of video games are essential to the drama and action of their play. Using the episode of *Friends*, I attended to Jacques Derrida's

theory of grammatology, which paradoxically holds writing as being phenomenally primary to speech and which explains that language itself exists as a kind of arche-writing into which we are perpetually thrust. Derrida's notion that the presence of writing manifests only in the absence of a speaking subject provided a mechanism by which I proposed a decentering of the playing subject of video games. I argued that, in effect, this absent subjectivity not only complicates our existing precepts of player agency and immersion, but that it becomes outright necessary for the experience of the virtual world in writing.

In the fourth chapter, I examined the relationship between world and language by surveying Martin Heidegger's late-career works on poetry and cybernetics. I began by articulating the orthodox understanding of the video game as a cybernetic medium: an interactive system of inputs, outputs, and feedback loops whereby a computer program responds to a player who is always positioned as the primary agent and operator. Drawing on Heidegger's critique of technology, I argued that this cybernetic perspective robs video games of their phenomenological significance and ontological peculiarity. The world of the video game is encountered in thinking—that is, in language. I underscored this fact using Heidegger's treatment of poetry, through which we experience being-in-the-world and encounter things-in-themselves even more readily than in ordinary, thoughtless activity. As Heidegger puts it, a familiar bridge is closer to us when we think about it than it is even for someone at this very moment crossing it absentmindedly. Further distancing players from the privileged position at the center of a virtual world is Heidegger's assertion that we speak only by responding to the speaking of language, that language itself speaks through us. Combining this notion with the quintessential finitude of Heidegger's worlds, I argued finally that the phenomenal experience of the video game is one that mediates our

everyday enmeshment in the autonomous play of language. I concluded with a reading of the game *Tetris* to articulate how players develop their skills by coming to terms with the peculiarities of a game's language-world.

In the fifth chapter, I drew upon the linguistic relativity of Ludwig Wittgenstein to locate the phenomenal position of a video game's player at the limit of its virtual world. I introduced Wittgenstein's work following recent scholarship on its relevance for artificial intelligence, thereby setting the stage for my contemporary treatment of his notion that meaning derives from the use of language in delimited context. Indeed, connecting Wittgenstein and Heidegger—two disparate philosophers on either side of the analytic-continental divide, only recently permitted to converse—is precisely this thread of delimitation. What cannot be said becomes as important, if not more important, than what can be said. Designers, critics, and theorists of games have long posited that constraints are essential to organized play, that games are defined as much by what is disallowed as by what is allowed. In video games, then, we find not just an analogy but an identity to language on the basis of this essential constraint: sense and nonsense. From this point, I presented three exemplary readings: the first reading of the popular Twitter account @CanYouPetTheDog? (Cooper) which humorously charts an exploration of verbal limits across dozens or even hundreds of video games; second, of the video game *Night in the Woods* (Infinite Fall), which mobilizes a queer aesthetic of boredom to explore political delimitation within capitalism; and third, a reading of *Outer Wilds* (Mobius Digital), a recent independent adventure game which exhibits in its narrative, themes, and puzzle design the notion that players explore the virtuality of video game worlds from the vantage of its outermost reaches.

Finally, in the sixth chapter, I returned to the image of Necessity, as explored in Chapter One, to examine the literary works of four authors, each of whom seek paradoxically to use language to escape from language, a struggle I argue is precisely that which occupies the player of a video game. For the ancient Greeks, the word *anánkē* held several additional meanings beyond “necessity,” among them, “force,” “cause,” “fate,” and “constraint.” In Stéphane Mallarmé’s prose poem “The Demon of Analogy,” there exists, I argued, a force of language which compels its speaker to a place where he notices only those worldly features that an unconscious linguistic impulse had already summoned in his mind. In “Tlön, Uqbar, Orbis Tertius” by Jorge Luis Borges, I discussed the characteristics of an imaginary imaginary language which reveals itself, apparently impossibly, to be a genuine material cause. Next, I charged writing, the language of silence, for the fatalism that lies at the heart of Clarice Lispector’s novel *The Hour of the Star* and that drives its characters to their destinies. Finally, I explored the imagined fortresses that point the only way out of Italo Calvino’s ever increasingly combinatorial universe, as he tells of them in the essay “Cybernetics and Ghosts” and the short story “The Count of Monte Cristo.” Concluding, I suggested that video games, by rendering perfectly in their own languages the anaknastic qualities of our language, illuminate and inform our phenomenal experience thereof, emerging as immanent critiques of the very cyberneticism they appear to embody.

Consequently, the scholarly contributions of this dissertation are threefold.

First, this dissertation grounds the nascent game design and critical vocabulary of “verbs” and “objects” in a comprehensive theory of language. Increasingly, game designers and critics employ linguistic metaphors to describe game mechanics and thematics. This dissertation argues that this trend is not merely fashionable or coincidental but bespeaks a

genuine connection between the medium of video games and the form of language. We naturally speak of video game mechanics as verbs because we recognize within them certain verbal processes. While attempts have been made to formalize vocabularies within and discursive practices surrounding this phenomenon, there has until now been no comprehensive undertaking to theorize the relationship between video games and language. What has been said on the matter has been said using overly restrictive, chiefly structuralist definitions of textuality and language. Thus, what most radically sets this dissertation apart from its antecedents is its dual intent to use language for deepening our understanding of video games and to proclaim video games as philosophical machines for challenging our understanding of language itself.

Second, this dissertation recuperates the language philosophy and literary theory of poststructuralism to counter the structuralism, formalism, and cyberneticism of traditional game studies. Due to a confluence of historical factors, poststructuralism and its concomitant critiques of the structuralist project effectively passed over the field of game studies, which emerged during a widespread movement of the humanities away from the totalizing theories that dominated 20th-century critical discourse. The result, still visible today, was that game studies became an academic discipline divided. On the one side is the practice of cultural studies, which surveys the medium as a cultural production among other cultural productions and systems. On the other are strictly formalist analyses, which anatomize the structure of the medium into elemental components like rules, story beats, or hardware platforms. Critics such as Anable have recognized this distinction as unjustifiable. Clearing a way forward, this dissertation positions language as a theoretical apparatus shared but more or less unrecognized by each camp. In other words, it uses

poststructuralism to consider language as both a combinatorial system and a discursive environment. This dissertation sets the stage for future work which could strengthen these connections by articulating the position of language and virtuality in even more material, political, and social contexts, tracing the path of poststructuralism's own engagement with critical theory (something out of which cultural studies itself was born).

Third, this dissertation advances the importance of video games as a subject for literary theory and continental philosophy via interdisciplinary and comparative methods. To date, few large-scale literary and philosophical studies have engaged with the implications of digital media—not computation, but the kinds of aesthetic objects computation facilitates. Fewer still have taken up the much maligned video game as a medium with which to examine longstanding or even contemporary problems in philosophy. Today, it can be argued that the form of the video game has more or less settled, that what it is now is what it will be for the foreseeable future. This was not always the case, as technological development, in decades past, far outpaced the speed at which theory could be written and published. Perhaps only now, then, is it possible to understand *the* video game—and not just *a* video game—as a medium with clear relevance for philosophical inquiry. This dissertation contends that the video game has become more than a technological oddity, more than a market boom or an economic institution; it has become, like cinema before it, a popular and essential mode of engaging the ideas and anxieties of an age. This dissertation has drawn upon particular philosophical and literary notions of language— notions that go beyond the sign systems of structuralist linguistics— in order to connect unsolved problems with their contemporary realizations in art. What unsettles the speculation and drives the production of literary theory and continental

philosophy is undoubtedly to be found in a medium with such clear material and phenomenal ties to the apparatus of language and writing. This dissertation is, at once, an elucidation of this linguistic apparatus, an assertion of its importance, and a thorough analysis of its operations within particular artistic and literary works. What is claimed, in the end, is that video games reveal all the more clearly the movement of a kind of language long sought by philosophers, critics, and theorists. In so doing, they make for rich objects of study which, even at their most banal and puerile, make obvious the intimate connection between the worlds and the languages we inhabit.

I would like to conclude this dissertation with a final example. In 1985, Italo Calvino composed a series of six lectures to be delivered at Harvard University. Although never delivered, the lectures were posthumously published under the title, *Six Memos for the Next Millennium* [*Lezioni Americane: Sei proposte per il prossimo millennio*]. The eponymous memos explore the following themes as they relate to literature of the past and future: lightness, quickness, exactitude, visibility, multiplicity, and consistency (left incomplete). As we discussed in Chapter Six, Calvino had much to say about the burgeoning relationship between computers and literature. But he probably could not have predicted that the game—rather than the novel or the poem—was to become the predominant cultural form by which fiction became computational.

This dissertation has argued that the play of video games is founded on a virtual force of language. If this is the case, then Calvino's memos offer an exciting opportunity to apply the insights of one of the last century's most forward-thinking writers. They stand

ready as a (very nearly) complete critical apparatus, one foot in each millennium, bestride two modes of the linguistic phenomenon: literature and video games. To conclude the present work, I propose an exploratory reading of one recent milestone of artistry—*The Legend of Zelda: Breath of the Wild* (Nintendo EPD)—in light of the freely associative abstraction of language defined by Calvino as “lightness” (see also Fiorilli, “*The Legend of Zelda: Breath of the Wild* through the Lens of Italo Calvino’s Memo on ‘Lightness’”).

In his first memo, Calvino enumerates three primary forms of lightness [*leggerezza*]: first, “a lightening of language by which meanings are carried by a verbal fabric that seems weightless [*un alleggerimento del linguaggio per cui i significati vengono convogliati su un tessuto verbale come senza peso*]” (19); second, “the narration of a train of thought [*la narrazione d’un ragionamento o d’un processo psicologico*] [...] or any description involving a high degree of abstraction [*o qualunque descrizione che comporti un alto grado d’astrazione*]” (20); and third, “a visual image of lightness that takes on symbolic value [*una immagine figurale di leggerezza che assuma un valore emblematico, come*]” (20). Although Calvino leaves open the possibility of other varieties of lightness, these are more than enough for our purposes, allowing us to examine the language of *Breath of the Wild* in these very terms: as weightless, as abstract and associative, and as symbolic imagery.

Breath of the Wild is an action-adventure game and latest mainline entry in the long-running *Legend of Zelda* series. Series protagonist Link is set loose in the fantasy land of Hyrule on a quest to defeat the evil demon, Ganon. While the game series was, historically, among the first to scatter the trials and dungeons necessary to complete it around an open

world for the player to explore, in no prior entry does the open world play such an integral role.

Whereas earlier incarnations of Link could hop over a missing plank on a rope bridge or use a grappling hook at predetermined points to swing across a bottomless chasm, the Link of *Breath of the Wild* can climb onto and scale nearly any surface across his landscape, from trees to mountains to giant monsters. Moreover, he can deploy his trusty paraglider at any time to glide through the open air after leaping from any height. Together, these verbs—“climb,” “leap,” “glide”—come to define the game in obvious and in subtle ways.

The open world of *Breath of the Wild* is one that encourages the player to use these verbs over and over. Climb. Survey the landscape. Spot a point of interest. Leap. Glide. Explore. Climb, and so on. It feels nearly unlimited, but of course there are limits. At the boundaries of the game’s map are cliffsides too tall to scale. The interiors of the game’s dozens of hidden shrines are lined with an obsidian rock that Link cannot grab hold of. Always arriving at the worst possible moment, rainstorms randomly roll across Link’s environs, causing him to slip and fall while climbing. Lightning may even strike him as he glides through the air.

What remains, in spite of these strict limitations—indeed, because of them—is the essential associative quality of the verbs “climb,” “leap,” and “glide.” They are useful in nearly any circumstance, even and especially when players must improvise in unexpected ones. Where Link cannot climb a wall, players might rely on the game’s simplistic yet nuanced physics system to light a nearby tree on fire, then use the updraft of the fire to soar

into the air on Link's glider. Where an enemy encampment is too heavily fortified for a frontal assault, players might climb atop a nearby butte and rain down arrows on their foes, or heave a nearby boulder down the slope toward them. What emerges from the verbal mechanisms of *Breath of the Wild* is an associative, oftentimes poetic register. It is a discursive environment—a language world—wherein these two verbs can apply to nearly any object or circumstance.

To use Calvino's vocabulary, the "verbal fabric [*un tessuto verbale*]" (19) of Link's language world is made weightless by the lightness of the climb, the leap, and the glide. Link is essentially above it all. While we know that no part of a game world can come as a surprise to the language-system that comprises it, players are nonetheless encouraged to feel as if they are improvising. Getting the jump on an enemy or discovering an oblique solution to an environmental puzzle makes one feel genuinely clever, even if the game has, for its part, already thought of it. The "train of thought [*un processo psicologico*]" (20) that marks a player's path through the world—their inscribed trace, as it were—becomes a record of abstract association. The game encourages players to explore the limits of its language, to respond to it, with abstract abandon. "Look at everything you can climb," it seems to say. "Now look what happens when it rains." It encourages players to seek solutions to problems where they might not otherwise look. *What if I...? What would happen if...?*

Perhaps Calvino's last enumeration of lightness is his most obvious. In reference to a tale told in Boccaccio's *Decameron*, which ends with the medieval poet Cavalcanti slyly giving his pursuers the slip by bounding up and out of a dusty crypt he has trapped them in, Calvino writes: "If I had to choose an auspicious sign for the approach of the new

millennium, I would choose this: the sudden nimble leap of the poet/philosopher [*l'agile salto improvviso del poeta-filosofo*] who lifts himself [*si solleva*] against the weight [*pesantezza*] of the world, proving that its heaviness [*gravità*] contains the secret of lightness” (14). The Link of *Breath of the Wild* appears to be such a figure as this: one through whom, exploring the limit of a world in the language of association and abstraction, the player can precisely articulate the feeling of the escape from the enclosure, from the crypt or the imagined fortress. In weight this figure finds weightlessness—in delimitation, limitlessness.

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