POSTHUMAN GAME AND PLAY: THE MIGRATION OF CYBERPUNK FROM PROSE MEDIA INTO THE MEDIUM OF *CYBERPUNK*, THE TABLETOP ROLEPLAYING GAME

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Abstract:

Tabletop roleplaying games (or TRPGs in short form) have often been objects of analytical confusion. Scholars such as Andrew Ross have made conclusions about them on the basis of the same methodological techniques typically used to analyze prose media. These conclusions fail to account for the content of what Noah Wardrip-Fruin has called "expressive processes." Ludologists following the discipline first developed by Espen J. Aarseth have created a series of tools that can be used to avoid the pitfalls of analysing such objects as if they were identical to other forms of prose media, but in the process, that discipline has often willfully discounted ludic objects as having any form of narrativity. As a result, the full breadth of philosophical context that accompanies a literary genre's migration from prose media to the medium of the TRPG has often been rendered analytically invisible. This dissertation addresses the question of exactly what content migrates from prose media to the medium of the TRPG by applying multidisciplinary approaches developed across English literature programs and the discipline of ludology to a close analysis of a specific case study: the migration of the cyberpunk genre into the medium of *Cyberpunk*, the tabletop roleplaying game. I conclude that, on the basis of this case study, what migrates is not merely a surface aesthetic, but a selection of philosophical and ethical assemblages that must be rendered visible if a meaningful form of media literacy involving such objects is to exist.

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Introduction

The most difficult thing about becoming academically enamoured with a subject like tabletop roleplaying games (TRPGs) or the cyberpunk genre is finding a common language with which to describe one's observations. Is cyberpunk about transhumanism or posthumanism? Is the posthuman a philosophical or technological actor? What exactly is cyberpunk? Is the TRPG a narrative or ludic experience? Can it be both? If so, how should it be analyzed? For that matter, what exactly is a narrative? The noise produced by such questions hides important observations about their subject's nature and behavior. Nevertheless, any serious scholarship about the subject must entangle itself in the act of finding a common ground that can be used to express the very content hidden by a lack of communal referent. In order to provide a common language and a sense of clarity, I will begin by providing various definitions, the logic of which will be made clear in the body of this dissertation.

Cyberpunk is a narrative genre, or at least, it started out as one, embedded in the contexts of a specific time period: the 1980s. As Thomas Foster argues, one might say that cyberpunk has become a "cultural formation" or a "historical articulation of textual practices" that go beyond a set of "necessary formal elements" of a narrative genre (xvi). Regardless, for my purposes, I use the term to refer to narratives that aestheticize the complex systems of contemporary life: computer systems, social systems, monetary systems, musical systems, and systems of power as seen through the lens of cybernetic systems theory are all of interest to this genre. In practice, this results in stories that feature hackers, subcultures, political struggles, financial struggles,

music, and often various forms of rebellion, as well as the ultimate icon that mythologizes the hybrid permutations of such systems in the flesh of a single body: the cyborg.

These cyborgs, however, are not always a literal entity. As Dani Cavallaro points out, "it should be emphasized that prosthetic devices do not simply encompass artificial limbs and implants but also the various technologies with which increasing numbers of people daily interact—from the Internet to fitness-club machinery" (51). While cyberpunk does often include literal cyborgs, various examples of the genre instead make use of entities who are discursive cyborgs because of the hybrid systems that compose their lives, and not necessarily literal, technological implants that permeate their bodies. Ultimately, cyberpunk stories need not possess a literal cyborg, but they must include characters who exemplify the hybridity of multiple systems connected by a cybernetic interface. The conceit of many such stories is that, at least as of their historical context, we have already been virtually plugged in.

This dissertation argues that the most important trope of cyberpunk is a rhetorical structure. Cyberpunk features narratives that both centralize the ethos of Norbert Wiener's concept of cybernetics and then use a postmodern aesthetic to attack that ethos. Specifically, the genre depicts the power of cybernetics to recuperate a "purposive" and "teleological" methodology from the chaos of an emergent world while also using the aesthetic techniques of postmodernism to subvert the belief that such recuperation is actually possible. In the process, its texts both literalize the transhumanist belief in a technological transcendence and then subvert a reader's ability to trust that such depictions are what they claim, on their surface, to be. Cyberpunk is critically posthumanist as a result.

Tabletop Role-Playing Games, or TRPGs, are a relatively new type of media. This type of media is composed of elements that are both narrative and ludic. Such games have two types

of players. One can be described as a dungeon master (DM), game master (GM), referee, or storyteller. This player is responsible for narrating the events of a fictional world and roleplaying the non-player characters (or NPCs) that populate it. The other players each control the behavior and actions of one or more player-characters (or PCs). These characters take the role of protagonists in a story otherwise told by the storyteller. A set of rules ludically adjudicate the results of any action—for example, the use of a skill or an attack—whose success or failure is deemed uncertain. The ultimate goal of such games is to produce, as a result of play, an emergent narrative from the combined influence of the storyteller's prompts, the protagonists' choices, and the ludic system of adjudication that serves as an interface between the two.

This dissertation argues that both cyberpunk and the TRPG emerged from the same cultural moment in American history. TRPGs made their first mainstream appearance in the 1970s. Cyberpunk is a genre that emerged in the 1980s. I argue that their relatively contemporaneous moment of emergence is accompanied by a similar set of topical issues: the systems that inform misogyny, racism, and self-representation. Cyberpunk, however, ultimately engaged with those issues in an egalitarian spirit. While its first efforts were plagued with problems, a historical analysis of the genre reveals that its authors continually made efforts to improve future publications on the basis of their audience's responses. Indeed, the second wave of cyberpunk is often described as being explicitly feminist. The first TRPG to achieve commercial success—*Dungeons & Dragons* (*D&D*), published in 1974—was written in the opposite spirit. Gary Gygax is one of the two people, alongside Dave Arneson, officially accredited for *D&D*'s creation. Gygax's influence on the product can, unfortunately, be found in the game's systemic process of coopting its players into communally producing sexist and racist stereotypes while simultaneously simulating the logic of such stereotypes in a manner that

threatens to disingenuously make that logic seem reasonable. This is especially true of Gygax's 1977 solo publication of *Advanced Dungeons & Dragons*. When cyberpunk transmedially migrated from the literary medium of prose fiction and the *Cyberpunk* TRPG was published in 1988, however, it proved that the medium of the TRPG could become more socially responsible as well: games like *Eclipse Phase* (first published in 2009) have followed *Cyberpunk*'s example. Mike Pondsmith wrote *Cyberpunk* in a manner that criticized the practices of *D&D* and influenced the medium's fanbase by teaching them to tell socially responsible stories.

This dissertation uses a dialectic, historical structure (albeit one divorced from the teleological assumptions of both Hegelian and Marxist dialectics) to argue my claim by examining the history of posthumanism, cyberpunk, and the TRPG, ultimately producing a narrative of that history designed to illuminate the complicated relationship between that concept, genre, and medium. My goal is to unmask the sublated content and rhetorical strategies that have driven the transmedial migration of cyberpunk from the novel to the TRPG, not because such drives have made the current state of the genre and medium a foregone conclusion, but because of all the possibilities that could have come to pass, this is the history that did. In the process, what is made evident is that the TRPG is an important narrative, cultural artifact that has not received the scholarly attention it is due because of the unique multidisciplinary methodologies required to analyze this artifact effectively.

"Chapter 1: Playing with Posthumanism" examines the complicated issues permeating an accurate understanding of the term. The goal of the chapter is not only to understand the various types of posthumanism whose definitions can be found spread across such texts as the *Oxford English Dictionary* and the *Posthuman Glossary* (by Rosi Braidotti and Maria Hlavajova), but also to make visible the manner by which the oppositional arguments made by various types of

posthumanism and even transhumanism are still bound by a common set of themes, issues, and rhetorical practices that are, if not structural in a teleologically proper sense of the term, still structural in the sense that their final output should not be completely divorced from the surrounding context of the term's various usages. The important possibilities authored by such structural contexts become clear in the observation that, in many ways, the more transhumanist and critically posthumanist conceptions of the posthuman are driven by opposing interpretations of Nietzschean philosophy that (as explained throughout the other chapters of this dissertation) collapse into one and the same being under the auspice of cyberpunk.

"Chapter 2: Play of the Movement, or, Anti-Teleology v. Teleology" analyzes the original context of cyberpunk in the sense of a historically specific and synchronic literary Movement. This is done using the combination of a survey of critical literature written about the subject and a comparative analysis of William Gibson's "The Gernsback Continuum" (1981) and *Neuromancer* (1984), Rudy Rucker's "Tales of Houdini" (1981) and *Software* (1982), Lewis Shiner's "Till Human Voices Wake Us" (1984) and *Frontera* (1984), John Shirley's "Freezone" (1986) and *A Song Called Youth* (1985-90), as well as Bruce Sterling's *Schismatrix* (1985). The purpose of this analysis is to clarify the contextual foundation from which cyberpunk evolved. In the process, I explain the parallel, structural issues that cyberpunk shares with the posthuman. These issues have made a critical consensus about the topic virtually impossible to achieve, at least when trying to come to a consensus on the basis of a synchronic methodology.

"Chapter 3: Gaming the Cyberpunk Genre with Diachronic Play" uses a diachronic methodology to ostensibly compare not individual texts but rather the oeuvres of Pat Cadigan (*Mindplayers* 1987 to *Dervish is Digital* 2000), Neal Stephenson (from *Snow Crash* 1992 to *Fall: or, Dodge in Hell* 2019), and Kathleen Ann Goonan (*Queen City Jazz* 1994 to *This Shared*

Dream 2011) with both each other and the output from the previous chapter.[1] Of course, pragmatic limitations have forced me to pick specific, exemplary textual moments from those oeuvres, which means that while I do provide analyses for multiple textual moments taken from various texts written by any given author from that list (and have made my choices after reading almost every text published by those authors as of 2022), I have found no reasonable means by which to include a close reading of every single text they have written within the scope of my argument. Nevertheless, the benefit of my methodology is that it renders visible something that, following in the footsteps of various other critics, I describe with the metaphor "language game." Namely, I argue that any given genre can be thought of as a language game whose play tentatively generates a set of tropes. The diachronic record of the moves played by various waves of cyberpunk indicate that the genre's critically posthuman qualities are beneficial to the genre's generally inclusive spirit, especially as practiced by its feminist second wave, and that the genre self-reflexively appreciates the ludic qualities of this metaphor.

"Chapter 4: Gaming Cybernetic Dungeons & Draconic Agencies" compares the shift in rhetorical and narrative strategies that occurs when the genre of cyberpunk undergoes a transmedial migration from literature, where it can only metaphorically be called a language game, to the TRPG, where it becomes a literal language game. By examining the stakes of playing a language game in real time as opposed to the game-like interactions that happen across the delayed process of publishing a story and reacting to an audience's responses with future publications, this chapter argues that the game *Cyberpunk*, later called *Cyberpunk 2013* after the publication of its subsequent editions, is evidence of the power a genre-artifact can have beyond its influence on the genre it is a part of. I argue that *Cyberpunk 2013* is Mike Pondsmith's reaction to the problematic content of the version of *D&D* that existed under the stewardship of

Gary Gygax. While it would be an overstatement to claim that *Cyberpunk 2013* is solely responsible for the recuperation of the TRPG's critical and cultural potential, it is a key example of that recouperation in action, and its ability to perform as such is grounded in the ethos of the cyberpunk genre and that genre's use of critical posthumanism.

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[1] It should be noted that *Mindplayers* is the novelized combination of four short stories: "The Pathosfinder," originally published in 1981; "Nearly Departed," originally published in 1983; "Variation on a Man," originally published in 1984; and "Lunatic Bridge," originally published in 1987.

Chapter 1: Playing with Posthumanism

In the concept of the "posthuman," a key problematic arises: is the posthuman a subject of posthumanism or transhumanism? According to the *Posthuman Glossary: Theory in the New Humanities*, "Posthumanism and transhumanism are two movements which are often confused with each other" (Ferrando 438). Posthumanism, it argues, "can be presented as a post-humanism, a post-anthropocentrism and a post-dualism. Born out of postmodernism, it further develops the deconstruction of the human started in the 1960s and 1970s . . ." (439). Transhumanism, however, "traces its roots within the Enlightenment and does not reject the humanistic tradition; on the contrary, transhumanism focuses specifically on human enhancement. . . . The main keys to access such a goal are identified in science and technology, in their existing, emerging and speculative frames" (439). I do not disagree with that assessment. Nevertheless, its focus on dividing concepts because of their differences threatens to erase the common points of origin that inform both posthumanism and transhumanism. Given that the *Oxford English Dictionary* takes its first example of the use of "posthuman" from Bruce Sterling's *Schismatrix*, a seminal cyberpunk text, and that cyberpunk predated the division of posthumanism and transhumanism, arguably acting as an aesthetic whose prototypical treatment of these concepts collapses their division, any serious study of that genre necessitates that one also collapses that division by interrogating the common points of origin that inform both concepts.[2]

For some time, in certain academic circles, the notion of a *human* entity has largely been replaced by something that is both different from *the human* and yet still describes *us*. Over a

decade ago, N. Katherine Hayles wrote that "*the human* is *giving way to a different construction* . . ." (*HWBPost* 2, emphasis in the original, first published in 1999).[3] A few years before Hayles published that statement, Robert Pepperell wrote that "our own view of what constitutes a human being is now undergoing a profound transformation" (*Post-H* i, first published in 1995).[4] At that time, scholars exemplified by such theorists as Hayles and Pepperell found themselves embroiled in this shift even as they were trying to name its end result. For a number of reasons, critics gravitated towards a common noun for this new entity: "the posthuman."

There was a time when the claim that "humanity has become a posthuman entity" would have at least seemed to be a clear and concise statement. According to the *Oxford English Dictionary,* English usage of the adjective "post-human" has existed since at least 1916, but research by various academics suggests an even earlier date (Herbrechter, *Posthumanism* 33). Additionally, the definition of that adjective, as provided by the *Oxford English Dictionary,* seems to offer a concrete meaning: "Of or relating to a hypothetical species that might evolve from human beings, as by means of genetic or bionic augmentation" ("post-human, adj. and n."). Obviously, the earliest uses of the word focused on genetic rather than technological adaptation, but this minor deviation should not cause confusion. Nevertheless, the term's transformation into a noun has been notoriously difficult to define in practice.

According to N. Katherine Hayles, the posthuman is a state of mind—"People become posthuman because they think they are posthuman" (HW*BPost* 6)—but the practical context of her use of the term in *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* is far more multivalent and complicated than this statement conveys on its own. After all, her claim that "the question is not whether we will become posthuman, for posthumanity is already here. Rather, the question is what kind of posthumans we will be" (246),

clearly implicates the term as a signifier for more than one type of condition. In *The Post-Human Condition* (later republished as *The Posthuman Condition: Consciousness Beyond the Brain),* Robert Pepperell uses the term to refer to three different qualities (*TPC* iv).[5] Such difficulties lead Pepperell to explicitly state, "The 'posthuman condition' cannot be so easily defined" (iv). A large number of critics have come to similar conclusions.[6]

This confusion was already a staple of critical analysis in Ihab Hassan's "Prometheus as Performer: Toward a Posthuman Culture?" (1977). Hassan, however, did not merely observe that posthuman culture remains "undefined" (831). A number of critics have noted that Hassan's use of the term "posthuman" marks "the first *critical* use of post-humanism" (Herbrechter, *Posthumanism* 33). Critical, in this sense, describes an investigation into "the possible crisis and end of a certain *conception* of the human, namely the humanist notion of the human" (3, emphasis in the original). This definition marks both Pepperell and Hayles as using a "critical" variant of "posthuman." The division between the type of "post-human" represented by Bruce Sterling's *Schismatrix*—what *The Oxford English Dictionary* defines as "a member of a hypothetical species that might evolve from human beings" ("post-human, *adj.* and *n.*")—and the subject of "critical posthumanism" has become a commonplace assumption in the humanities' scholarship about the topic.[7] Indeed, scholars in various disciplines have divided the idea of the posthuman over and over again, transforming the term into a vast field of varying concepts.[8]

While it is important to observe and make note of Hassan's modified use of the term, such repeated divisions threaten to bankrupt the "posthuman" of meaning, for the word now describes a variety of imaginary products; by dividing the term, critics have obfuscated the complicated relationships that exist between what many now assume are merely nominally related concepts. This is, ironically, against the very spirit of the posthuman described by

Hassan. After all, when discussing "convergence and divergence," "myths of totality and ideologies of fracture," Hassan explicitly states that "convergence and divergence are but two aspects of the same reality, the same process" ("Prometheus as Performer" 833). This chapter is written in the interest of addressing a system of convergence and divergence that has become unbalanced. Through a series of comparative analyses of various critical and futurist texts, this chapter will reassemble the concept of the posthuman into a larger totality than it is usually afforded in contemporary scholarship.

First, this chapter will analyze the manner in which a surface reading of two exemplary texts in the critical posthumanist tradition, Hayles's *How We Became Posthuman* and Pepperell's two editions of *The Post-Human Condition/Consciousness Beyond the Brain*, might suggest that even they are representative of divergent concepts. This chapter will then attack that notion by examining the way both texts relate to the type of humanist claims made by John Locke in his example of "the prince and the cobbler" from *An Essay Concerning Human Understanding* (1689). [9] That comparison, however, also makes appreciable the way "critical posthumanism" responds to the types of futurist promises made by such writers as Hans Moravec, Marvin Minsky, Max More, and Ray Kurzweil not only by directly responding, in a critical manner, to their promises but also by sharing a number of common perceptions relating to technology and consciousness.

This chapter will then analyze the manner in which the "critical posthuman" and the futurist version best described by the term "transhumanism" are the products of mutually informative modes of thought whose antithetical values shape two different types of responses to a common critical issue—the influence of poststructuralism on the concept of the human—in order to explain why the two different definitions are different without succumbing to the

temptation to claim that the two definitions have only a nominal relation to each other. Ultimately, what this chapter will prove is that at least two of the most commonly discussed modes of the posthuman, the output of critical posthumanism and transhumanism, are mutually informed by their debate over the role teleology plays in our evolving future. In fact, it is from the earliest moments of similar conflicting responses that I will argue that *cyberpunk* emerges like life from primordial goop.

The Critical Posthuman

Pepperell "employed the term Post-Human to mean a number of things at once" (*Post-H* i). In the "Foreword" to his original 1995 edition of *The Post-Human Condition,* Pepperell explains that he uses the term to "mark the end of that period of social development known as Humanism," "to refer to the fact that our own view of what constitutes the human being is now undergoing a profound transformation," and to describe "the general convergence of organisms and technology to the point where they become indistinguishable" (i). In "A Note on the Term 'Posthuman'" from his 2003 revision of *The Posthuman Condition: Consciousness Beyond the Brain*, Pepperell reiterates these three primary uses (iv). This broad, abstract set of applications might, if examined in a non-rigorous manner, make it seem possible to seamlessly conflate his use of the term with most invocations of the word, critical or otherwise: for example, this use does evoke the notion of an organism evolved beyond the normative human state via technological evolution.

How We Became Posthuman agrees that the constitution of human being is in the process of profound transformation. In brief, Hayles's description of the posthuman begins with the

rough statement, “The posthuman subject is an amalgam, a collection of heterogeneous components, a material-informational entity whose boundaries undergo continuous construction and reconstruction” (*HWBPost* 3). Like Pepperell, Hayles attributes this entity’s many articulations to “the union of the human with the intelligent machine” (2). Organisms and technologies are converging to a point that they often seem indistinguishable. In fact, Hayles characterizes the fourth quality of the “posthuman” as a conflation that combines the act of human *being* with intelligent machines, removing all perceptual differences and absolute demarcations between “bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals” (3).

Cary Wolfe’s “In Search of Post-Humanist Theory: The Second Order Cybernetics of Maturana and Varela” (1995) might seem to exist as a counterpoint to my claim. Afterall, he is very careful to discuss the topic in terms of “a post-humanist theoretical framework” (33). In fact, he never uses the term “posthuman,” and in his later publication *What Is Posthumanism?* (2009), Wolfe explicitly states, “posthumanism in my sense isn’t posthuman at all—in the sense of being ‘after’ our embodiment has been transcended—but is only posthumanist” (xv). That same text, however, states that the genealogy of the posthumanism that is “directly relevant” to Wolfe’s usage of the term “may be traced to the Macy conferences on cybernetics from 1946 to 1953 and the invention of system theory” (xiii). Like Hayles, Wolfe is interested in the convergence of “biological, mechanical, and communicational process that removed the human and *Homo sapiens* from any particularly privileged position” (xii). Despite the differences between his project and that of Pepperell or Hayles, in some sense, even his work can be said to originate from similar issues.

Hayles also agrees with Wolfe to some degree insofar as she argues that at least one of the types of subjects driving the evolution of the posthuman "could not finally be contained within the assumptions of liberal humanism" (108). According to Hayles, the influence of autopoietic theory on the second wave of cybernetics results in "the liberal subject, although more than ever an autonomous individual . . . literally losing its mind as the seat of identity" (149).[10, 11] Her analysis concludes that various key figures in the development or representation of the posthuman state of mind agree that "liberal humanism could not continue to hold sway" (221). As Hayles herself explains, "Taken straight, [*How We Became Posthuman*] points to models of subjectivity sufficiently different from the liberal subject that if one assigns the term 'human' to this subject, it makes sense to call the successor 'posthuman'" (6). While Wolfe would take issue with her use of the term "posthuman," the entirety of "In Search of Post-Humanist Theory" does make a similar argument regarding the end of a humanist subject at the hands of "second order" of cybernetics as expressed by Humberto Maturana, Francisco Varela, and Niklas Luhmann.

This reductive summary on the basis of similarity, however, threatens to miss the point of *How We Became Posthuman*. Hayles clearly states that her "argument will repeatedly demonstrate that these changes were never complete transformations or sharp breaks; without exception, they reinscribed traditional ideas and assumptions even as they articulated something new" (6). Hayles's above listed fourth posthuman quality only occurs because of—at least in part—the way "the posthuman view privileges informational pattern over material instantiation," in effect making "the body . . . the original prosthesis we all learn to manipulate, so that extending or replacing the body with other prostheses becomes a continuation of a process that began before we were born" (2). This view is humanist in virtually every sense. This makes it

seem that a difference exists even between the posthuman described by Pepperell and Hayles, at least insofar as they appear to disagree about the relationship that the posthuman has with humanism.

Pepperell associated humanism with the project of the Enlightenment. According to Pepperell, "Humanism had its origins in the science and philosophy of ancient Greece and Rome" (*TPC* 159). Pepperell explains that this origin is the result of the way such "early thinkers did not consider the world to be subject to a Christian God" (159). This allowed philosophers such as Protagoras to claim, "Man is the measure of all things" (qtd. in Pepperell, *TPC* 159). Pepperell traces the translation and discovery of ancient documents during the late medieval period to a complex series of economic, historical, philosophical, and technological developments (156-61). Pepperell's overall summation is that the "high tide" of the humanist mode of thought is characterized by the "'clockwork' view of nature as a logical machine . . . endorsed by many members of the Royal Society, founded in 1660" (159).

How We Became Posthuman describes a key feature of the humanist subject, insofar as it is important to her argument, by noting that such a subject has a "body [that] is understood as an object for control and mastery rather than as an intrinsic part of the self" (Hayles, *HWBPost* 5). That is because the humanist subject perceives autonomy and individuality as its central features (132). In this regard, "the locus of the liberal humanist subject lies in the mind, not the body" (5). It is also of key importance, however, to note that this abstraction of the mind from the body is born from the values of liberal humanism. Hayles describes these values as "a coherent, rational self, the right of that self to autonomy and freedom, and a sense of agency linked with a belief in enlightened self-interest" (86). Pepperell, similarly, describes such humanist rhetoric as a type of "reductionism that was part of the larger paradigm of humanism" and which "clung to the idea

that [rational humans] were part of some search for the essential truth about reality" (Pepperell, *TPC* 167).[12] As such, the two understand humanism in similar terms despite perceiving a different relationship between the posthuman and humanism.

Hayles's description of the posthuman (as she defines its qualities) as the result of a paradigm that reinscribes various humanist ideas (even as it transforms the human subject) is a logical observation considering John Locke's writing and *How We Became Posthuman*'s inception as a response to the transhumanist tradition. Locke became a member of the Royal Society in 1668 (Phemister viii). Over the course of his life, Locke developed a "lifelong fascination with the medical sciences" (vii). Locke developed friendships with such important figures in the evolution of western, Enlightenment era thought as Robert Boyle, John Wilkins, and Robert Hooke (vii). These days, Locke is remembered primarily for his contributions to continental philosophy and political theory, not "natural philosophy" (or rather, what we now call science). However, Enlightenment era natural philosophy and medicine, what might in rough abstract form be termed a "clockwork" view of nature, were a major influence on Locke's work.

Locke is frequently named as a key figure in the production of the humanist subject. Pepperell does not explicitly reference Locke as a humanist thinker, but Hayles does (Hayles, *HWBPost* 3). Nancy J. Hirschmann goes so far as to state that ". . . Locke is often dubbed the virtual 'father' of liberalism" (79). Hayles uses a passage from C. B. Macpherson's *The Political Theory of Possessive Individualism: Hobbes to Locke* to define a key element of the humanist subject: "its conception of the individual as essentially the proprietor of his own person or capacities, owing nothing to society for them. . . . The human essence is freedom from the wills of others" (qtd. in Hayles, *HWBPost* 3, emphasis removed from the original). Locke's *Essay* fits neatly into the defining qualities that both Pepperell and Hayles provide for humanism.

Locke's text deals with the measure of the world via the faculties of man. That becomes clear when Locke writes that his text was born of the realization that "it was necessary to examine our own Abilities, and see, what Objects our Understandings were, or were not fitted to deal with" (Locke 4). Likewise, Locke opens his first book in the *Essay*, "Of Inanimate Notions," by noting that his text is a response to the suspicions that "either there is no such thing as Truth at all; or that Mankind hath no sufficient Means to attain a certain Knowledge of it" (14). To counteract this suspicion, Locke seeks "to search out the *Bounds* between Opinion and Knowledge" (14, emphasis in the original). These humanist topics and themes—the centrality of human perspective, the search for "Truth"—lead Locke to question whether a change in the "Substance" that thinks, namely the human body, will result in a change of "Person" (210). In other words, "of what role is our body to our sense of self?" To "solve" this problem, Locke provides the example of the prince and the cobbler.

In short, Locke questions whether it is possible for a person to be brought back to life in a different physical body but be "the same [in terms of the] consciousness going along with the Soul that inhabits it" (212). More specifically, Locke asks whether the assembly created by "the Soul of a Prince, carrying with it the consciousness of the Prince's past Life," and the physical "Body of a Cobler [sic]" would result in an entity equivalent to the "Prince" or the "Cobler" (213). In the process of analysing this example and its surrounding context, Locke concludes that "if the same consciousness," conceived of as "a present representation of past Actions," can be transferred from one substance capable of thought to another, then it is possible for "two thinking Substances [to] make but one Person" (212). Locke goes so far as to say that "*Self* is that conscious thinking thing . . . which is sensible, or conscious of Pleasure and Pain, capable of Happiness or Misery, and so is concern'd for it *self*" (214, emphasis in the original). As

"*personal Identity* consists, not in the Identity of Substance, but . . . in the Identity of *consciousness*" (214, emphasis in the original), as in the pattern and memory of a particular consciousness's past actions, the implication is that the complete replacement of one's "substance that thinks" with "another" does not change the man so long as his memories and ideas remain intact. This is Locke's final conclusion (218). Locke even goes so far as to characterize this change in bodies as a change in "two distinct clothings" (217). The body, *Essay* concludes, becomes little more than a prosthetic for the mind; a "Prince" wearing the body of a "Cobler" is still a "Prince."

Even though *How We Became Posthuman* never analyses this particular example of Locke's writing, Hayles's argument about the posthuman's relation to humanism is made clear by juxtaposing Locke's conclusion against *How We Became Posthuman*'s inception in a "roboticist's dream that struck [Hayles] as a nightmare" (Hayles, *HWBPost* 1). Hayles first encountered a transcription of this dream/nightmare in Hans Moravec's *Mind Children: The Future of Robot and Human Intelligence* (1, first published in 1988). Moravec's work in the field of robotics led him to believe that humans have finally "produced a weapon so powerful it will vanquish the losers and winners alike" (Moravec, *Mind Children* 1). According to Moravec, while the technology of his time was still limited to "simple creations," the dawn of "something transcending everything we know" would be brought about "within the next century" by a new breed of robots that, he wrote, "will mature into entities as complex as ourselves" (1).

Of course, "solitary, toiling robots, however competent, are only part of the story" (75). The story enters into its main act with the union between the human and the intelligent machine. *Mind Children* predicts that "partnership" between humans and hyper-intelligent machines "will become more intimate, a symbiosis where the boundary between the 'natural' and the 'artificial'

partner is no longer evident" (75). The text claims that this symbiosis will begin with such technology as "magic glasses" (85). Such glasses, Moravec wrote, will let a "computer control what you see and hear, in response to your verbal requests" (86). His prophecy foretells, however, that such extrinsic modification will lead to humans replacing more and more of their intrinsic selves with "artificial organs and other body parts" (109). Moravec's claims, on their surface, might appear to collapse the boundaries that humanism typically erects, but his conclusion is fully congruent with Locke's writing about the prince and the cobbler.

Moravec essentially goes on to rephrase Plutarch's philosophical paradox about The Ship of Theseus by asking, "what about replacing everything, that is, transplanting a human brain into a specially designed robot body?" (109).[13] Not content to leave humanity with its last plank of wood, Moravec then continues by noting that this "transplant scenario gets our brain out of our body. Is there a way to get our mind out of our brain?" (109). His answer, *yes,* explains his opening claim that, as a result of our new weapon, what "awaits is not oblivion but rather a future that, from our present vantage point, is best described by the words 'postbiological' or even 'supernatural'" (1). As it so happens, this union between man and machine exemplifies the human as a material-informational entity, what Moravec describes via the term "*pattern-identity*" (117). Moravec's belief in this pattern-identity is an important translation and reintegration of Locke's notion of personal identity (and his claim that consciousness is grounded in a pattern of past experience, not one's bodily substance).

The parallels between Locke's theoretical query and Moravec's technological promises are striking, and their respective conclusions are virtually identical. As *How We Became Posthuman* is a direct response to the type of posthuman entities that Hayles attributes to Moravec's writing, it is no surprise that she perceives the posthuman as an entity that has

reinscribed many elements of the humanist subject. This observation, however, is of integral significance for two reasons. First, Hayles's notion of the "posthuman" is as bound to futurist iterations of the concept as critical ones, and as such, one cannot claim that Hayles's critical work is only nominally related to what many now call transhumanism.[14] Second, Hayles's entire text is written as an attempt to save the practice of thinking in a posthuman paradigm. It does so by attempting to theoretically problematize the reinscribed humanist qualities in such a way that, instead of recuperating liberal humanism, the posthuman grounds itself in "embodied actuality rather than disembodied information," and thus offers "resources for rethinking the articulation of humans with intelligent machines" (Hayles, *HWBPost* 287). That project, however, has a lot in common with Pepperell's *The Post-Human Condition* and *Consciousness Beyond the Brain*. Despite the seemingly antithetical nature of Hayles and Pepperell's claims about the relation of humanism to the posthuman, they share a similar stance in regards to such Lockian/Moravecian conclusions.

The Post-Human Condition does not explicitly discuss the concept of "uploading" or (confusingly) "downloading" the human mind onto a digital computer, but it does align itself against related claims. When rereleasing the text as *The Posthuman Condition*, Pepperell "added a subtitle, 'Consciousness beyond the brain', which [he hopes] conveys the essential thesis of the book" (*TPC* i). As the text concludes that "machines are gradually acquiring human characteristics and humans are gradually acquiring machine characteristics" (Pepperell, *Post-H* 157), one might, in combination with that essential thesis, expect to see attitudes reminiscent of *Mind Children*. Certainly, insofar as consciousness is concerned, Pepperell does say that "Post-Humans believe that [the] view of consciousness being located in the brain cannot any longer be sustained" (3), but that is not because Pepperell believes in a pattern-identity that can be

dualistically separated from its material instantiation, represented algorithmically, and digitally transferred from one medium to another. On the contrary, Pepperell states that his understanding of consciousness is "as much a function of the whole body as of the brain" (4). He implicitly disagrees with Locke's claims about the prince and the cobbler and shares Hayles's distaste in regards to the reintegration of such humanist ideas in uncritical manifestations of the posthuman.

Pepperell believes that we "are not centered in our mind. . . . Bodies and minds blur across each other's supposed boundaries" (5). It becomes clear that this line of reasoning, this conception of the posthuman, cannot be conflated with Moravec's "postbiological" prophesy when Pepperell states that reality "is essentially non-computable" (59). Moravec's notion that humans are "pattern-identities" that can be seamlessly translated onto a digital computer implicitly claims that reality is computable. In fact, futurism written in a Moravecian vein frequently makes that claim explicitly. For example, Ray Kurzweil is a proponent of "strong AI"; he writes that "the human brain (and body) comprises matter and energy, that matter and energy follow natural laws, that these laws are describable in mathematical terms, and that mathematics can be simulated to any degree of precision by algorithms. Therefore, there exist algorithms that can simulate human thought" (Kurzweil 454). Kurzweil claims that human thought can be reproduced *because* reality is computable.

The type of thought process Kurzweil adheres to is exactly what Pepperell takes issue with when he argues that, despite the way computers "allow us to produce . . . models to a degree of sophistication never before possible," we must be wary of "confusing the model of reality with reality itself" (Pepperell, *Post-H* 59). In a similar vein, Hayles takes issue with such confusion by "irreverently" breaking down its process into two models she describes as the "Platonic backhand" and the "Platonic forehand" (Hayles, *HWBPost* 12). The backhand assumes

that abstract theories created to try and understand the real world are in fact an originary form of the real world (12). The forehand describes the process by which a simplified abstraction is, with the aid of digital computers, evolved into a "multiplicity sufficiently complex that it can be seen as a world of its own" (12). Over the course of *How We Became Posthuan*, it becomes clear that such abstractions ignore the complex, often subtle interrelations of concrete reality in favor of such philosophically idealistic divisions as the "information/materiality hierarchy" (12).[15]

Pepperell's warning about confusing the model of reality with reality itself is also couched in similar terms to those used by Hayles. Pepperell notes that dimensions "are qualities of a thing that are used to describe it" (Pepperell, *Post-H* 40); when describing a "thing" such as a snooker ball, we often pare down a thing's dimensions to an abstract finite set that we believe are pertinent, but just "because we choose not to consider most of [the ignored] factors when we discuss a thing does not mean that they are irrelevant" (40). Indeed, from Pepperell's perspective, the "scientific search for truth . . . can only be realistically considered as the search for *better models*" (40, emphasis in the original). Like Hayles, Pepperell does not see anything wrong with such theorization: "there is little else we can do" (40). It is "when *we equate the model to the reality that is being modelled*" (40, emphasis in the original) that Pepperell says a problem arises.

In both my example cases, I have found that the problem is described in terms of a potentially negative result caused by a lack of attention to the presence of emergence in praxis. For example, Pepperell does not just decentralize consciousness from the mind in order to locate it in the entire body. Rather, he states that consciousness is "an emergent property that arises from the coincidence of a number of complex events" (10). He then takes regular pains throughout the two versions of his text to describe these events as being decentralized not only

from the mind but also from the locus of the human body itself: "*consciousness and the environment cannot be absolutely separated*" (18, emphasis in the original). Consciousness, from this paradigm, spans the body, environment, and complex interactions between the two. The aforementioned problems take the shape of emergent negative consequences derived from human behavior informed by an abstract model's failure to account for elements of consciousness thought to be unimportant.[16]

Pepperell thinks of the posthuman condition as a post-liberal-humanist one precisely because the text is written in order to illuminate the various ways in which the complex networks technology has added to our experience of everyday life are decentralizing the notion of thought from the human subject. In other words, one could say that his goal is to portray the various ways in which an ontology of our species requires an account and incorporation of the contributions that environmental inputs have on our consciousness. Environmental context, in other words, is an important determining factor in the way we define our species, and as such, it is illogical to uphold a human-centric worldview. Despite the way Hayles and Pepperell seem to disagree about the relationship between the posthuman and liberal humanism, Hayles's oeuvre is never in disagreement with this element of Pepperell's primary argument. Indeed, in this regard, both attack liberal-humanism on virtually the same grounds.

In fact, in *Electronic Literature* (2008), Hayles explains the importance of various new modes of fiction by noting that the "evolution of *Homo sapiens* has codeveloped with technologies" (112), literally. [17] She notes that there is evidence that suggests interaction with tools and language both use common parts of the brain due to the way both require "the sequential ordering of reproducible and discrete units" (113). Due to neural plasticity, the implication is "that the brain's synaptic connections are coevolving with environments in which

media consumption is a dominant factor" (114). In her words, "as media change, so do bodies and brains" (118). Consciousness, according to Hayles, spans across mind, body, and environment in emergent and unpredictable patterns. Hayles, however, perceives of the posthuman as a force that risks reinscribing the liberal humanist subject because *How We Became Posthuman* is addressing the way the concept of our changing bodies and brains is problematically interpreted by various technological innovators who are helping reorganize those bodies and brains.

Wolfe, despite taking issue with some aspects of Hayles's scholarship, does share a similar project. Certainly, Wolfe does not situate his work as a response to such innovators in the same manner as Hayles; ostensibly, Wolfe only cares about the transhumanists enough to briefly summarize their position and describe his work as being unrelated to theirs. He addresses Nick Bostrom's claim that posthumanism combines "Renaissance humanism" with Enlightenment era minds who emphasized "empirical science and critical reason" (*What is Posthumanism?* xiii-xiv), but he sides with a paradigm derived from Foucault's statement that we should "avoid the always too facile confusions between humanism and Enlightenment" (qtd. in *What is Posthumanism?* xiv) because "humanism is, in so many words, its *own* dogma, replete with its own prejudices and assumptions" (Wolfe *What is Posthumanism?* xiv, emphasis in the original). Nowhere, however, does Wolfe claim that some of those assumptions were not inherited from such minds as Locke—such confusions just do not address the complex reality of the involved subjects. Moreover, regardless of whether the transhumanists are the product of Enlightenment era philosophy or not, Wolfe positions his version of posthumanism in opposition to transhumanism because "transhumanism should be seen as an *intensification* of humanism" (xv). Wolfe might take issue with "Hayles's use of the term … [because it] tends to *oppose*

embodiment and the posthuman" (xv), whereas he thinks that his version of posthumanism has nothing to do with such posthuman entities, but in practice, Wolfe, Like Hayles and Pepperell, is interested in a subjective system too complex to fall into the traps of humanism and which also decentralizes the human subject on the basis of insights that can be gleaned from cybernetic systems theory. That is the central unifying project of critical posthumanism.

The Transhuman

Marvin Minsky's assertions in *Society of Mind* (originally published in 1986 and discussed by Hayles in her 1999 publication *How We Became Posthuman*), the common ground those assertions have with Moravec's claims in *Mind Children* (1988), and the similar beliefs that both Minsky and Moravec develop regarding the human mind provide a strong case study for the manner in which the shared concept of blurring bodily boundaries (be they literal or discursive), present in all versions of the posthuman, is being interpreted by various technological innovators into a paradigm that is directly at odds with critical posthumanism's interests. Minsky's text attempts to explain "how minds work" from the viewpoint he developed as a renowned roboticist and cognitive scientist (Minsky 17). The text argues that "you can build a mind from many little parts, each mindless by itself" (17). The claim is that these little parts, which Minsky calls "agents," produce "true intelligence" when joined together in cognitive "societies" (17). In order to make his argument, Minsky begins with a few observations about a "child playing with blocks" (20). Minsky realizes that all of our observations surrounding this phenomenon tell us little more about how an adult learns to build a block tower than a set of mere conventions: "though all grown-up persons know how to do such things, *no one*

understands how we learn to do them" (21, emphasis in the original). That mental growth occurs as a result of this physical interaction with the blocks is, however, evident from the way a child spends "joyful weeks learning what to do with them" and an adult is likely to find such toys "dreadfully dull" (21). The drastically different conclusions made by people like Hayles or Moravec make it easy to forget that everyone with a stake in this debate agrees that interaction with our physical environment is, in some shape or form, of key importance to our intellectual growth.

Minsky drew his arguments about the mind from an analogy between human interaction with our physical environment and similar interactions on the part of one of his robotics projects from the late 1960s, "Builder," which was the culmination of Minsky and Seymour Papert's desire to "combine a mechanical hand, a television eye, and a computer into a robot that could build with children's building blocks" (29). As Minsky self-reflexively admits, this analogy is born out of a set of intuitive comparisons with a history dating back to the 1940s (30). Minsky specifically refers to the work of Warren McCulloch and Walter Pitts—their research into "how machines might be made to see, reason, and remember" (19).[18] Minsky even explicitly describes such research as an extension of the work of Alan Turing (19). Turing is the mathematician and early computer engineer who famously proposed, in a publication from 1950, that "it can also be maintained that it is best to provide the machine with the best sense organs that money can buy, and then teach it to understand and speak English. This process would follow the normal teaching of a child" (Turing 297). Such claims are not incongruous with the work of Hayles or Pepperell: Pepperell, for example, writes that "a machine that has a sense of being must evolve it as humans do, by negotiation with the environment in all its complexity" (*Post-H* 144). Wolfe, in his focus on posthumanism rather than the posthuman, is the least interested in such matters, but

he does discuss Niklas Luhmann's notion of "consciousness" as a phenomenon requiring the "interplay of bodies as generative structures" (Wolfe, *What is Posthumanism?* xxiii)—a strikingly similar concept.

Moravec shares Minsky's belief that minds are an epiphenomenal by-product of a society of agents whose original specialities are tailored towards the manipulation of a physical world. Moravec states that humans have evolved not to perform abstract thinking but rather to compete for "such limited resources as space, food, or mates" (Moravec, *Mind Children* 15). Our consciousness and emotions, *Mind Children* postulates, are but emergent phenomena: "natural selection, the guiding mechanism of Darwinian evolution, is . . . utilitarian, and yet here we are, with feelings and a sense of self" (44). According to *Mind Children*, it is the "highly evolved sensory and motor portions of the brain [that] seem to be the hidden powerhouse behind human thought" (93).

At the heart of the deviation between critical posthumanism and futurist predictions are a key set of similarities: they all focus on the interactions between sense organs in rapport with an environment; both camps agree that this rapport has an important influence on the mind; both realize that contemporary technologies and systems theory affect such interaction, thus paradigmatically creating a fusion between the human and the machine (if only as an implication in the subjective and philosophical sense in Wolfe's case). In fact, both versions realize that this effect on interaction and the resulting fusion collapses *some* form of binary division: the futurists collapse the binary divide between "the natural" and "the artificial"[19]; critical posthumanists, as my reading of Pepperell and Hayles up until this moment has shown, collapse the binary divide between "the mind" and "the body."[20]

It would be illogical, given the similarities present in Pepperell and Hayles's work, to claim Hayles's added appreciation of the effect the futurist posthuman has on the general concept of the posthuman—the way such futurist posthuman promises threaten to reintegrate a humanist paradigm—requires that we read the term "posthuman" in their two works via two different definitions. Rather, the two add to the same concept by responding to a common set of issues with slightly different sources of inspiration. Even Wolfe and his interest in posthumanism rather than the posthuman does the same. Similarly, if one claims that critical posthumanism and futurist prediction create two different posthuman entities that only share a nominal connection, one obfuscates the kind of similarities between critical posthumanism and futurist prediction that this chapter has started delving into. There is, however, a difference between the two. Minsky believes "it will soon be possible to extract human memories from the brain and import them, intact and unchanged, to computer disks" (Minsky qtd. in Hayles, *HWBPost* 13); Moravec believes that we will be able to upload or download a mind, intact and unchanged, into a machine. This rearticulation of Locke's prince uploaded into the cobbler is not possible from the viewpoint espoused by the critical posthumanists. From both Hayles and Pepperell's critical point of view, awareness of our neural plasticity and environmentally informed context makes us posthuman entities already. Wolfe may not be interested in our status as a posthuman or lack thereof, but he too constructs his interest in posthumanism in opposition to the transhuman "intensification" of humanism.

In terms of critical posthumanism, this difference can be described as a causal output from a critical attack on teleology. *How We Became Posthuman* seeks to "replace a teleology of disembodiment with historically contingent stories about contests between competing factions, contests whose outcomes were far from obvious" (22). Pepperell's remarks are similar in

sentiment when he describes his approach to defining consciousness as being "complexified" (Pepperell, *Post-H* 10). According to Pepperell, "in Post-Human terms, consciousness can only be considered as an emergent property that arises from the coincidence of a number of complex events. . . . We cannot isolate consciousness from the conditions that produce it" (10). A teleology defines phenomena on the basis of their purpose; it presupposes that a goal or purpose must exist. An emergent phenomenon does not necessarily have a purpose; it arises from coincidence and accident as much as anything else. Pepperell is very clear that science will never learn enough to comprehend exactly what complex events produce such emergent phenomena: "Science will never achieve its aim of comprehending the ultimate nature of reality. It is a futile quest, although many scientists do not acknowledge this yet" (*TPC* 179). That is why Pepperell states that "uncertainty is certain" (184). Wolfe has less to say about teleology, but he too aligns himself with critics opposed to "the teleological jurisdiction of an entire field whose organizing center remains *intention*" (Derrida qtd. in Wolfe, *What Is Posthumanism?* 44), citing Derrida's subversion of such concepts. This critical attack is a logical outgrowth of the way writers such as Wolfe, Pepperell, and Hayles have grounded their work in such poststructural theory as Derrida's own attack on teleology in *Of Grammatology*.[21]

Post-Teleology

When Hayles summarizes Edward Fredkin and Stephen Wolfram's "claim that reality is a program run on a cosmic computer" (Hayles, *HWBPost* 11), an argument based upon the notion that "a universal informational code underlies the structure of matter, energy, spacetime—indeed, of everything that exists" (11), she uses a methodology evolved from Jacques Derrida to

deconstruct the disembodied perspective their position often leads to.[22] The informational code that underlies structure is read as something complete in itself. The material instantiation of that code is read as what both Jean-Jacques Rousseau and Derrida termed "the supplementary." The notion that this material instantiation can be cast aside is attacked on the basis that the practice has "learned nothing from Derrida about supplementarity" (11). By unpacking what one should have learned from Derrida about supplementarity, a number of striking parallels arise in terms of critical posthumanism and its attitude towards children, evolution, and certainty.

Derrida's lessons about supplementarity are explained in *Of Grammatology* (originally published in 1967). In that text, Derrida reads in Rousseau's writing an attitude that believes "languages are made to be spoken, writing serves only as a supplement to speech" (144, 295, 303). The supplement, Derrida notes, can never be the presence it supposedly replaces *by definition*, as a complete thing is already whole, requiring no addition to be made whole; such a thing "ought to be self-sufficient" and is "irreplaceable" (145). Whatever one uses to replace this thing will always be a "mediocre makeshift" (145). Moreover, as this presence is thought of as being "natural," it follows that "Nature's supplement does not proceed from Nature," as the supplement must be inferior and other from the lack it is supplementing (145). This idea, however, collapses when one considers that "education, the keystone of Rousseauist thought, will be described or presented as a system of substitution . . ." (145). Childhood becomes the first manifestation of a deficiency in nature that requires a definitively non-natural supplement, something that should not be possible if nature is actually self-sufficient and irreplaceable, that is to say, something complete in itself (146). In short, the reality of supplementation is, according to Derrida, far too complex to be encompassed by Rousseau's abstract concept of the process.

It is no accident that the concept of children has been evoked multiple times: by Minsky's description of his goals in producing and observations about "Builder," Turing's description of machine learning, and Moravec's concept of advanced technology as *Mind Children*. Derrida's response to Rousseau's understanding of supplementation underpins the critical posthumanist response to these various futurist expressions of technological "children." Critical posthumanism accepts that machines *might* be able to gain a sense of being, as per Pepperell's statement that "if we cannot draw a clear demarcation between the occurrence of being in humans and other species then we must accept the possibility that a sense of being could arise in any system that meets the necessary conditions" (*Post-H* 145). It even accepts that such being, if it could exist, would have to be evolved (144). That is why it does not take issue with every claim made by Turing or Minsky. Critical posthumanism does not, however, accept that something akin to an abstract model of the child as a deficiency in nature, what is frequently characterized in Locke's empiricism as a "*tabula rasa,* a blank slate" (Phemister xii), is complex enough to accurately model reality.

Certainly, critical posthumanism would accept Locke's belief that "ideas are imprinted as the mind encounters the external world and reflects upon its own activities" (xii). In fact, Locke's claim that all human thought begins with the manner in which ". . . *Our Senses,* conversant about particular sensible Objects, do *convey into the Mind,* several distinct *Perceptions* of things . . ." (Locke 54) underpins every iteration of the posthuman and posthumanism. However, Locke's "enlightened" attitude towards the notion of "Success," succinctly expressed in his analogy that "'Tis of great use to the Sailor to know the length of his Line, though he cannot with it fathom all the depths of the Ocean" (15), is not shared by the critical posthumanists. The human propensity for abstract thought—what Locke praises as the

capability that differentiates us from beasts (94-95)—is never a certainty that pre-exists praxis. Our reason is fallible. As such, critical posthumanism would never assume that we can use reason and logic to conclude that reality is no more complex than this model of a blank slate signifies. The model of childhood as a deficient lack in nature is too simple to encompass complex reality. Just because we might, in a rough analogy, teach machines the way we teach children, does not mean that digital machines are the same as human children.[23]

In any case, returning to Derrida, the problem is that Rousseau's theory of writing, according to Derrida, seems to have placed this abstraction into an imaginary point of origin that exists *a priori* real experience. Rousseau's model of reading assumes that the "art of writing is nothing but a mediated representation of thought" (144). In other words, speech represents thought, and writing represents speech. This belief also assumes the existence of a teleological progression of meaning akin to that expressed in Plato's "The Simile of the Cave."[24] Meaning moves teleologically from lesser forms of representation towards an originary thought, and the art of writing is about effectively mastering a skill set that would allow the writer to transmit that thought in a faithful manner. This, however, is impossible according to Derrida: "the writer writes in a language and in a logic whose proper system, laws, and life his discourse by definition cannot dominate absolutely" (158).

Derrida understood that this model also presupposes the ability to effectively analyze text in order to discover the teleologically most accurate interpretation and that the "question is therefore not only of Rousseau's writing but also of our reading" (158). This model of reading is unrealistic as well according to Derrida. Derrida's text is uncertain that the result of any given critical analysis can escape being relegated to a provisional understanding (149). This understanding of writing and reading abolishes teleologic concepts of meaning. As Derrida

writes in *Of Grammatology*, "this play of the supplement . . . makes history escape the infinite teleology of the Hegelian type" (298). In its place, reading and interpretation become emergent phenomena. This concept is eminently similar to critical posthumanism's perception of transhumanist promises as an emergent interpretation of scientific data that is not tenable as an all-encompassing account of our ontology.

Despite the fact that Hayles criticises some of the disembodied implications of Derrida's work in other sections of her text, the poststructural attitude she has taken from him is more than a mere offhand reference.[25] Admittedly, she does not explain in detail her statement that disembodied attitudes born of Fredkin and Wolfram's work have "learned nothing from Derrida about supplementarity" (Hayles, *HWBPost* 11). She does, however, go on to explicitly complain about the way various interpretations of scientific texts make use of the "Platonic backhand" and the "Platonic forehand" (12) directly following her evocation of Derrida. Where Derrida's text complains about the way Rousseau's theory of writing uses a teleological attitude that privileges an abstract construct despite the fact that his construct does not match actual practices in writing or reading, Hayles's text complains about the way various interpretations of scientific theories and facts have created a "teleology of disembodiment" (22) and ignored the way "human life is embedded in a material world of great complexity . . ." (5). Where Derrida attempts to "encompass existence and writing in the same *tissue"* (*Of Grammatology* 150, emphasis in the original)—to embody reading and writing—Hayles attempts to "keep disembodiment from being rewritten, once again, into prevailing concepts of subjectivity" (Hayles, *HWBPost* 5). In short, Hayles uses the poststructural methodology of deconstruction on various philosophic, scientific, and literary texts in order to reconnect the "parts that have lost touch with one another" (13) much the way Derrida attempts to reconnect existence and writing.

Pepperell explicitly describes the importance of deconstruction and poststructural thought to the posthuman condition. He opens his chapter "Being, Language and Thought" with the statement, "in posthuman terms, reality is an energetic continuum in which humans are essentially indistinguishable from their environment. This is in contrast to the humanist view, which sees humans as essentially distinct from, in opposition to, and predominant within nature" (*TPC* 77). In this statement, the ghost of Derrida's attack on the role "nature" plays in Rousseau's theory of writing is already present. Pepperell describes the goal of this chapter as an attempt to outline the "posthuman conception of language and thought as 'embedded' in other energetic processes in the world" (77). By the end of "Being, Language and Thought," he discusses poststructuralism, deconstruction, and Derrida.

Before engaging in poststructuralism directly, Pepperell first reminds his reader that we "must remember that when we use a word to refer to an object we do not refer to an isolated entity—nothing can be isolated from the rest of the universe, except in an idealised or abstracted way" (84). This concept already summons a Derridean attitude to the operation of the word as discussed above. In short order, Pepperell notes that "there is a philosophy of language that has been extremely influential. . . . 'Deconstructionism' arose from the French schools of structuralism and post-structuralism and has been important in showing how meaning is socially 'constructed' rather than being natural or pregiven" (85-86). Pepperell notes that "deconstructionism attempts to reveal how words and ideas are not neutral, impartial symbols that we freely choose to express ideas. Rather, it exposes how words and meanings they embody have a rich ecology of interconnections and *evolutionary* history that defies linear interpretation . . ." (86, emphasis added). Shortly after these statements, he points out that a "key figure in deconstructionism is Jacques Derrida" (86).

Wolfe's quote from Derrida is framed by a similar context as well. Wolfe explicitly cites Derrida as being useful to Wolfe's project because of Derrida's observation that "it is not certain that what we call language or speech acts can ever be exhaustively determined by an objective science or theory" (Derrida qtd. in Wolfe, *What is Posthumanism?* 44). In Wolfe's own words, "this . . . has far-reaching consequences for the rigor and objectivity of the knowledge that we think we can have of ourselves and of other, nonhuman beings . . ." (44). Hayles and Pepperell's texts, then, serve as my example of criticism about the posthuman written in terms as heavily influenced by poststructural theory as it is by burgeoning technologies and utopian responses to them, and while Wolfe couches his position in terms of posthumanism rather than the posthuman, pragmatically speaking, he also serves as an example of the same.[26]

This, then, is the common quality that binds work on the posthuman from such authors as Pepperell and Hayles together: a poststructural attitude or quality defined by a desire to escape teleological interpretations of ourselves, our relation to the various systems in which we exist, and an acceptance that a certain degree of uncertainty must be incorporated into our various pronouncements. Hayles may critique the various ways that Derrida's texts sometimes reintegrate certain disembodied qualities, but her scholarship still maintains a decidedly Derridean attitude. Ultimately, her work's goal is to ensure that the posthuman continues to exist as a concept grounded in a complex notion of reality that accounts for the way consciousness is an emergent phenomenon born out of embodied existence precisely because her work accepts the poststructural collapse of binaries such as mind/body; such binaries are too abstract, too inaccurate a model for the multifaceted complexity of actual, lived experience.

Pepperell, likewise, uses the term "posthuman" to refer to a subject that is part of an emergent, non-teleological universe that is more complex than any abstract deterministic model

can account for. He might not use the word teleological, but he does state that mechanistic models of life, such as a Newtonian model of the universe in which one can "calculate all future events," are untenable in a "natural universe [that] is now understood as a much more fluid, dynamic and interdependent system that imposes significant limitations on our capacity for measurement" (*TPC* 161). It is for this reason that Pepperell calls the universe non-computable, and while Pepperell might reject "the long-cherished belief that human thought is a unique case amongst natural phenomena—something that can never be replicated in any other medium" (77), this should not be equated with an acceptance of the teleological certainty present in such texts as Moravec's *Mind Children*. On the contrary, after quoting Max More's definition of the posthuman, "persons of unprecedented physical, intellectual, and psychological ability, self-programming and self-defining, potentially immortal, unlimited individuals" who will achieve this state through "a combination of technology and determination" (qtd. in *TPC* 170-71), Pepperell explicitly states that he "would not necessarily agree with" such a definition and outlines his posthuman condition as a "somewhat more cautious and less Utopian [paradigm] about the possible consequences of current technological development" (171). Even when Pepperell accepts some aspects of transhumanist arguments, he still uses the term "posthuman" to refer to subjects of emergent, unpredictable creation.[27]

Technological Prophesy

The exemplary use of the term posthuman I have outlined in Pepperell and Hayles's work is shared by a large number of texts, sometimes operating in different disciplines, and often disagreeing about various minor or semantic issues, but nevertheless commonly inflected by this

general attitude.[28] Even some authors who refuse to write about the posthuman, instead couching their work in the term posthumanism, share this commonly inflected attitude. For such authors, the teleological certainty of various prophesies about technological transcendence is an untenable condition due to the influence of poststructural uncertainty. On the other hand, there is also a large body of work that has used the term posthuman, or has evoked the concept that the term has been used to describe, but which is characterized by an almost antithetical position grounded in precisely the type of teleological certainty that the other body finds untenable. Moravec, Kurzweil, and Minsky are all exemplary proponents of a prophetic attitude at odds with critical posthumanism.

Minsky is the least obvious example out of the three I have chosen. Minsky thinks of our "ambitions, frustrations, satisfactions, and disappointments" as qualities that are not "really aspects of our goals themselves but emerge from the interactions among the many agencies that become engaged in pursuit of those goals" (78), and he frequently uses the word "emerge" (or one of its variations) to describe the operations of the mind (or the practices, concepts, ideas, and institutions those operations give rise to).[29] Nevertheless, he implicitly attacks a poststructural attitude towards emergence in *Society of Mind*. Minsky writes that various words used to describe things that are "more than the sum of their parts" might suggest "clear and definite ideas," but he suspects that their "actual function . . . is to anesthetize a sense of ignorance" (27). One of the words Minsky names with that judgement is "holistic."[30] The *Oxford English Dictionary* defines "holistic" as "characterized by a tendency to perceive or produce wholes" ("holistic, adj."). Minsky is explicitly opposed to holistic thinking.

Of course, the attempt to perceive the human as a product of a whole system that includes not only the mind but also our body and environment is Pepperell's goal in *The Post-Human* and

Consciousness Beyond the Brain.[31] Likewise, Hayles attempts to recombine a whole "too unruly to fit into disembodied ones and zeroes" (Hayles, *HWBPost* 13). This is precisely because of the way both have been influenced by a poststructural attitude that disavows the abstraction and certainty present in structuralism in favor of a holistic understanding of language, concepts, and interaction. The poststructural uncertainty I have discussed up until this point could, in fact, be described as an *acceptance,* not *anesthetization,* of the troubling possibility that some degree of ignorance about the various complex systems in which we operate might be a fundamental and unavoidable component of the human condition—though we cannot be certain.

Minsky accepts that, at the current moment in time, there are many things we "do not know" (101, 196, 306) and "do not understand" (114, 196, 258, 306), but *Society of Mind* is written from the Galilean and Newtonian perspective that, through "science, one can learn the most by studying what seems the least" (20). This belief underpins the entire text. This becomes evident when analysing the claim that "many people assume that . . . 'subjective' kinds of questions are impossible to answer," but "questions about the arts, traits, and styles of life are actually quite technical" (20). Minsky leaves no uncertainty when he states that such "questions will be answered" (20); it is just that, in order to answer them, "we must first know more about our minds" (20). The belief that we will ever be able to know enough about the mind to answer such questions requires a certain degree of faith in the humanist notion that reason and science will always lead to a better system (which is to say more reliable and of larger capacity). Indeed, Minsky subtly integrates a degree of teleology back into the workings of the mind directly when he writes that "the *destiny* of each central 'trajectory-type' agent [in the mind] is to learn to recognize not a particular person, but a particular type of gesture or expression" (313, emphasis added).

Minsky explicitly accepts a Newtonian model of the universe (or at least the mind's place in that universe) by the end of *Society of Mind* when he writes, "according to the modern scientific view, there is simply no room at all for 'freedom of the human will'" (306).[32] In other words, like Thomas Hobbes,[33] Minsky concludes that something akin to Galilean geometry is applicable to human behavior, and as such, our actions are ultimately deterministic. He then follows this highly contentious statement by going one step further and directly attacking non-teleological models of scientific interpretation in the field of sciences relating to the operation of the human mind. The theory of evolution posits a non-teleological and emergent understanding of life on our planet. Minsky admits that this understanding is correct (317-18). He then, however, complains that "one aftermath of the controversy with the teleologists was that many scientists in other realms became so afraid of making similar mistakes that the very concept of purpose became taboo throughout science" (318). This problem, according to Minsky, has thankfully been solved by the "'cybernetic revolution' of the 1940s," which allowed scientists to realize, at least according to Minsky, that "there is nothing inherently unscientific about the concept of the goal itself . . ." (318). [34] Minsky concludes that "human minds do indeed use goal-machinery, and there is nothing wrong with recognizing this and bringing technical theories about intentions and goals into psychology" (318).[35] This is not in and of itself prophetic, but it does lay the groundwork for a teleological understanding of the mind that, theoretically, should allow for a predictive (and thus prophetic) model of cognition.

I am not the first scholar to become aware of this style of rhetoric in Minsky's writing. Robert M. Geraci's research on writers such as Moravec, Minsky, Kurzweil, Kevin Warwick, and Hugo de Garis led him to coin a term for the body of work their popular science texts exemplify: Apocalyptic AI (1). Geraci explains that this genre is "a movement in popular science

books that integrates the religious categories of Jewish and Christian apocalyptic traditions with scientific predictions based upon current technological developments. Ultimately, the promises of Apocalyptic AI are almost identical to those of Jewish and Christian apocalyptic traditions" (9). Geraci defines these traditions with four salient points: "1) a dualistic view of the world, which is 2) aggravated by a sense of alienation that can be resolved only through 3) the establishment of a radically transcendent new world that abolishes the dualism and requires 4) radically purified bodies for its inhabitants" (9). Traditionally, apocalypticism was also definitively teleological. The term "apocalyptic" originally meant "revelation" in The Revelations of St. John the Divine ("apocalyptic, adj. and n.").[36] The Revelations outline the prophetic vision of God's plan, goal, and purpose in regards to the end of human society on earth. Technological prophets are reinscribing the attitude of The Revelations into the scientific realm.

Geraci's research, however, is designed not to prove that Apocalyptic AI is teleological but rather deserving of the title apocalyptic. As a result, Geraci does not analyze the presence of the kind of teleological attitude I have analysed from *Society of Mind*. In fact, Geraci admits that "Minsky has not written an apocalyptic book per se . . ." (22). Geraci does, however, go on to note the various ways in which Minsky's real-life beliefs and practices supported Moravec and Kurzweil's published apocalyptic prophesies (22). Combined with Geraci's observation that "pop science revelations never come from gods and their authors are not prophets in the traditional sense" (14), one might assume that Apocalyptic AI is not necessarily teleological, even if my analysis of Minsky suggests that his work, at least in some sense, is. When Geraci analyses the manner in which Moravec and Kurzweil operate as authors of Apocalyptic AI, however, Geraci's research clearly delineates the presence of teleological rhetoric (even if Geraci

virtually never uses the word explicitly).[37] For example, Geraci writes that "the Apocalyptic AI authors draw upon past technological achievements and the presumably overwhelming powers of evolution (now applied to technology rather than biology) to predict the future in terms they consider scientifically *certain*" (14, emphasis added). For all intents and purposes, there is no difference between an apocalyptic or teleological attitude.

Geraci provides a number of examples of this certainty in operation. Summarizing Moravec's argument from "Pigs in Cyberspace," Geraci notes that "Moravec does . . . offer an explanation for our belief in god" (69). Specifically, Moravec "argues that, just as superbly intelligent computers of the future might simulate other worlds or our past, we could already be living in a computer simulation. Whoever created the simulation would be the god or gods of our religious beliefs" (69). Within two sentences of this statement, Geraci takes the time to directly cite and quote the following emphasized portion of Moravec's conclusion: "the very moment we are now experiencing may actually be (*almost certainly* is) such a [simulation]" (Moravec, "Pigs in Cyberspace"). With this statement, Moravec both reintegrates a purposive entity in control of reality and invokes the ostensible certainty normally wielded by a prophet speaking from a teleological and religious tradition.

Indeed, stepping away from Geraci's research for a moment, even a brief analysis of Moravec's rhetoric in *Mind Children* clearly indicates that Moravec, like Minsky, desires to reintegrate, through science, teleology into human existence. Moravec concludes that text by complaining that "we have been shaped by the invisible hand of Darwinian evolution, a powerful process that learns from the past but is blind to the future" (158). That complaint, however, is followed by Moravec's statement that, "perhaps by accident, [evolution] has engineered us into a position where we can supply just a little of the vision it lacks. We can choose goals for

ourselves" (158). In so doing, Moravec suggests that we can take up the mantle of god and reintegrate teleological principles into our future existence with technological innovation. As Geraci observes, "our technoscientific heritage is grounded in the religious life of the Western world, which explains how religious goals and sacred categories are inseparably mixed into its experimental aims" (13). Moravec's goals and aims are so bound up in concrete desires for specific end-state results that teleology cannot help but infuse the mix.

Geraci's research suggests that a similar drive, regarding the reintegration of teleology, is at play in Kurzweil's work. According to Geraci, "Kurzweil argues that the emergence of life *necessitates* the emergence of technology . . ." (28, emphasis added). Geraci then notes that in order to perform this transition from biological to technological evolution, writers such as Kurzweil make use of "Moore's Law": "In 1965, Gordon Moore of Intel noticed that the number of transistors on an integrated circuit doubled roughly every twelve months . . ." (28). While the exact speed of this doubling is debatable and has been modified by Moore himself, "the point remains that computation speed has increased exponentially for decades . . ." (28).[38] Geraci observes that in Kurzweil's hands this law is transformed into "a natural law that expresses a universal Law of Accelerating Returns" (28). Kurzweil even goes so far as to plot "the evolution of life" as a natural predecessor to Moore's Law (Geraci 29).

Geraci's observations are easily verified in Kurzweil's *The Singularity is Near,* where Kurzweil claims "the ongoing acceleration of technology is the implication and inevitable result of what I call the law of accelerating returns, which describes the acceleration of the pace and the exponential growth of the products of an evolutionary process" (35). Kurzweil's claim is highly contentious: "Kurzweil's faith in accelerating returns is not a widely accepted theory" (Geraci 173). That being said, it is also representative of Kurzweil's teleological outlook on life. In his

hands, evolution, which Moravec and Minsky at least still describe as being completely emergent, is plotted onto a graph that suggests evolution has *always* been a teleological process leading to the "evolution" of computing power required for humanity to undergo transcendence.

Critical posthumanists and these technological transcendentalists are thus, alongside the previously mentioned similarities, also characterized by a key set of antithetical values. The transcendentalists believe, as Kurzweil neatly summarises, that "no matter what quandaries we face . . . there is an idea that can enable us to prevail. Furthermore, we can find that idea. And when we find it, we need to implement it" (2). Such technological transcendentalists seek to reintegrate a teleological paradigm into our scientific pursuits. They are driven by a desire to overcome the emergent discourse evolution posited into the "human" by using technology to reintroduce controlled evolutionary direction. Critical posthumanists, however, are invested in the multifaceted possibilities present in emergent systems and the uncertainty that a poststructural understanding of such systems necessitates. The most important difference between the two camps is that the critical posthumanists are driven by a value system that interprets the effects of such inputs as information technology (or the theory of *cybernetics*) in a manner that does not obviate an emergent ontology.

Post-Apocalyptic Play

This type of realization has led many critics to conclude, as Andy Miah does in "Posthumanism: A Critical History," that posthumanism "is not a distinct perspective. It is the detritus of perspectives" (98). Creating various divisions of the concept has become common practice when discussing the posthuman. This move, however, also risks obscuring important

analytic details about the term's use in practice. Claiming that critical posthumanism and its subject have nothing to do with the type of posthuman defined by someone like More obscures the fact that critical posthumanists such as Pepperell have felt the need to cite More's definition of the term. In fact, while Pepperell's updated edition of *Consciousness Beyond the Brain*, as a result of such critiques as those exemplified by Hayles's *How We Became Posthuman*, takes the time to distance itself more concretely from the humanist elements of More's definition, in the original edition of *The Post-Human Condition*, Pepperell saw enough similarities between More's futurism and his own critical approach to merely write, "there are some points of emphasis by the Extropians with which I would not wholly agree, but these are not significant enough to unravel here. For most purposes we can say that the Post-Human condition and the Extropian vision share a common idea of the future of humanity" (175).[39] If one claims that there is no connection between critical posthumanism and transhuman iterations of the concept, one risks obscuring the fact that the division between the two exists precisely because texts such as *How We Became Posthuman* have been written in direct response to texts such as *Mind Children*, or that Hayles's text also takes the time to examine the influence Minsky has had on the concept of the posthuman (*HWBPost* 13, 22, 157, 244-45).

Alternatively, one might be tempted, as a result of the type of analysis I have provided, to argue that the term "posthuman" or "posthumanism" have effectively been claimed, in their entirety, by the "critically posthumanist" camp. After all, Moravec never uses the term posthuman in *Mind Children*. Instead, he favours the use of "postbiological." Likewise, Minsky never uses the word in *Society of Mind*. Kurzweil goes so far as to explicitly take issue with the label "posthuman" (Kurzweil 374).[40] That would also, however, be a problematic conclusion. The word's historical origin as provided by a dictionary definition is far too ingrained in the

word to ever completely remove that influence from its dialogic connotations; every word always exists as a conversation between that word's various uses over time, and there is no practical way to ignore a word's current dictionary definition. That is why Pepperell states that the posthuman "has been [alternatively] . . . named as the 'Postbiological'" (*TPC* 169), and whatever Kurzweil believes, one cannot completely divide a vision of our future from the concept of a "posthuman" after one extensively uses conceptual material such as More's writing in service of their own.[41]

An analytically rigorous understanding of the term must rather necessitate that one is aware of the divisions or camps that have congealed around various explicit and implicit uses of the term and the way antithetical ideologies that simultaneously use the term are often mutually informed responses to the same set of cultural issues *despite* their divergent qualities. Hassan's first foray into a critical use of the term in 1977 already invoked the meeting point between "Myth and Technology" ("Prometheus as Performer" 835, 838-39) and queried whether "technology may be transforming human consciousness itself . . ." (841). Pepperell, at first, largely aligned his critical perspective with the futurist writing of More because of their common interest in the effect of technology on human consciousness. Hayles responded to the reiteration of humanism by the implicit invocation of the posthuman in such texts as those written by Moravec and Minsky (or by extension More) in order to save the critical posthuman from the problems such a reiteration could re-inscribe. Pepperell then republished his work in a manner that aligned it more closely with Hayles's observations, thus maintaining his work's anti-humanist paradigm. Even Wolfe's refusal to use the term "posthuman" in favour of the term "posthumanism" required that he briefly discuss the transhumanists (*What is Posthumanism?* xiii). In doing so, however, their texts continue to inform the concept of the posthuman with

transhumanist writing, both by aligning with such writing via certain observations about the influence of technology and by responding negatively to certain futurist attitudes—specifically regarding certainty. Rather than having no relation to transhuman certainty, critical posthumanism responds to its transhumanist cousin by couching their use of "posthuman" in poststructural attitudes.

In fact, as early as Hassan's first foray into the term (1977), the critical invocation of the posthuman was partly built upon Michael Foucault's observations in *The Order of Things: An Archaeology of the Human Sciences* (originally published in 1966).[42, 43] In that text, Foucault argues that "man" entered into occidental knowledge only in conjunction with a great scheme of shifts in knowledge that occurred from the nineteenth century onward (XXV). According to Foucault, "man is only a recent invention, a figure not yet two centuries old, a new wrinkle in our knowledge, and . . . he will disappear again as soon as that knowledge has discovered new form" (XXV). This paradigm separates a thing called "man" from the notion of natural essence or presence in favour a historically contingent and conceptual construct, a set of discursive systems that play has organized in a specific arrangement. [44] In other words, Foucault transforms "man" into a sign that exists in a system of supplementation akin to that described in *Of Grammatology*. "Man," in this schema, is interpreted as a provisional understanding present in a larger system of signs written not merely in the grammar of words but in the relation of a set of discourses. Foucault then goes on to conclude that, "if those arrangements were to disappear as they appeared . . . then one can certainly wager that man would be erased, like a face drawn in the sand at the edge of the sea" (*Order* 422). In Foucauldian terminology, we can describe the posthuman as a response (that has translated "man" into "human") to a technological, informational revolution that has restructured our interpretation of ourselves on the basis of the

changing shape of discursive knowledge that defines said revolution. Both Pepperell and Hayles have made note of the importance of Foucault's text to their use of the posthuman as well.[45]

The critical posthuman can, in some sense, then be thought of as a response to a philosophically post-apocalyptic environment. Poststructuralism virtually abolished all classic assumptions about meaning in order to collapse the various binaries on which scholars had largely assumed meaning was made. In many ways, poststructuralism can be thought of as both a grand revelation and philosophic cataclysm regarding the state of meaning and knowledge. That apocalypse forced various academics to rebuild knowledge in their respective fields. This post-apocalyptic landscape provides what Rosi Braidotti describes as "an undeniably gloomy connotation to the posthuman condition, especially in relation to genealogies of critical thought" (*The Posthuman* 5). Poststructurally inflected posthumanism appears, in some sense, to be an attempt to rebuild a positive social and discursive identity out of the detritus poststructuralism wrought upon our understanding of the identity humanism originally proposed.[46] It is, however, an attempt to do so while learning from the lessons of poststructural thought.

This observation is made particularly poignant by comparing my analysis with the manner in which Jean-François Lyotard helped pioneer a poststructural approach to a posthuman thematic directly in "Can Thought Go On Without a Body?" (originally published in 1988) from *The Inhuman: Reflections on Time* (originally published in 1991).[47,48] *The Inhuman* opens with an introduction which notes that, while the "lessons" of humanism are, in "a million ways, often mutually incompatible," humanism continues to pretend that man has "a certain value, which has no need to be interrogated" (1). From a paradigm shaped by humanism, what "*value* is, what *sure* is, what *man* is, these questions are taken to be dangerous and shut away again pretty fast" (1, emphasis in the original). In response to this problem, Lyotard (like Pepperell after him) calls

for a "process of complexification" (5). To achieve this complexification, Lyotard invokes a rhetorical apocalypse. Lyotard states that the certainty present in humanism "results from a process of development" (6). This development

> obeys a simple principle: between two elements, whatever they are, whose relation is given at the start, it is always possible to introduce a third term which will assure a better regulation. *Better* means more reliable, but also of greater capacity. The initial relation mediated in this way appears as a particular case in a series of possible regulations. (6, emphasis in the original)

In other words, the development works in a teleological pattern akin to the Hegelian dialectic.[49] In a surprise twist, however, Lyotard notes that this progression "needs no finality" as it can "assimilate risks, [memorize] their informational value and [use] this as a new mediation necessary to its functioning" (7). In order to escape the teleological trap of dialectics, Lyotard moves his theoretical analysis past the limitations imposed by "the expectation of the life of the sun" (7).

The hypothetical destruction of the sun allows Lyotard to expose the manner in which "the life of the mind," a concept viewed through a "spiritual" lens, is spiritual only because it is conceived of as spiritual by the human mind, and it is conceived of by the human mind only because of our mind's existence on an earthly plane (9). To qualify what we are, Lyotard looks for a manner in which life can survive after the destruction of the sun and prefaces Pepperell's conception of the posthuman by turning to the revelations present in "the laws of the transformation of energy" (11).[50] That is to say, Lyotard equates biological organisms with technological devices, describes our bodies as hardware, our minds as software, and writes that "the problem of the technological sciences can be stated as: how to provide this software with a

hardware that is independent of the conditions of life on earth" (12-13). On its surface, his claim reintegrates the Cartesian divide and would seem to align itself with the type of transcendental promises made by writers like Moravec and Kurzweil, but this would be an inaccurate assessment of what is, in Lyotard's paper, little more than a provisional alignment used as a deconstructive thought experiment.

This thought experiment allows Lyotard to point out that the human mind is not binary: "It accepts imprecise, ambiguous data that don't seem to be selected according to pre-established codes or readability. It doesn't neglect side effects or marginal aspects of a situation" (15). Our thoughts are, in other words, emergent. This emergence, however, requires such qualities as suffering (18-20) and gender (20-23). What is more, the emergent quality that Lyotard describes also fills his piece with uncertainty. The quality of gender in our thoughts is "elusive, impossible to grasp" (22). As such, Lyotard admits that he "doesn't know whether sexual difference is ontological difference. How would a person *know*?" (22, emphasis in the original). Thus, while his paper, on its surface, purports to examine what we must "prepare post-solar thought for" (23), Lyotard clearly states that he has "no idea whether such a 'programme' is achievable" (17). Rather, the primary achievement of the piece is a focus on the manner in which the complex interrelations between our species, its bodily instantiation, and our environment produce effects (such as consciousness) that are not necessarily computable or replicable.

Nietzschean Origins

Placing the concept of a "human" after the rhetorical destruction of the sun is a telling gesture, and such a rhetorical apocalypse underpins the conceptual destruction of man or human

(at the hands of technological mediation) required to claim that we are already, critically speaking, posthuman entities. The transhumanist posthuman found in the type of writing Geraci calls Apocalyptic AI is also, however, at least in some sense, an attempt to rebuild an identity out of the detritus poststructuralism wrought upon our understanding of the identity humanism originally proposed. It, however, attempts to do so by ignoring the implications of poststructuralism's philosophic apocalypse and writing that apocalypse out of existence. This claim is somewhat less obvious than its inverse, as texts written in the Apocalyptic AI genre tend to avoid referencing poststructural theory completely, but More and Kurzweil's treatment of Friedrich Nietzsche provides a powerful example of such rhetoric in operation.

Nietzsche is frequently described as an important influence on poststructural thought. For example, Foucault has stated that "the most important authors who . . . enabled me to deviate from my university training . . . were people like . . . Friedrich Nietzsche" ("Interview with Michel Foucault" 241). For Foucault, Nietzsche provided an antithesis to "those great philosophical machines called Hegelianism, phenomenology" (241). He is very clear in classifying such Hegelian phenomenology as an attempt to "recapture the meaning of everyday experience in order to rediscover the sense in which the subject that I am is indeed responsible, in its transcendental functions, for founding that experience together with its meanings" (241). Foucault read Nietzsche, however, as the source of a model where "experience has the function of wrenching the subject from itself, of seeing to it that the subject is no longer itself, or that it is brought to its annihilation" (241). In other words, Foucault translated a Nietzschean paradigm to create the methodology that, as practiced in *Order*, allows Foucault to perceive the dissolution of man in poststructural terms.[51]

Kurzweil ignores this dissolution, even taking issue with the term posthuman due to his certainty that a "human" category will persist after technological transcendence, and does so on the basis of the assumption that the phenomenal experience of digital simulation provides a pattern that is equivalent in its real value to the original biological organism it simulates. Nevertheless, Kurzweil reappropriates Nietzschean philosophy to support his position (even though that philosophy, as used by a writer like Foucault, ought to be caustic to Kurzweil's claims). First, Kurzweil (referencing an argument originally proposed by More) cites Nietzsche's statement that "man is a rope stretched between the animal and the Superman—a rope over an abyss" (Nietzsche 5). Then, Kurzweil writes that "we can interpret Nietzsche to be pointing out that we have advanced beyond other animals while seeking to become something far greater" (Kurzweil 373). By doing so, he literally ignores all the poststructural lessons and uses of Nietzschean philosophy, rewriting those lessons out of existence.[52] Where critical posthumanism creates a post-apocalyptic posthuman written after the revelation of teleology's dissolution, the genre of Apocalyptic AI creates a pre-apocalyptic posthuman built upon apocalyptic, teleological promises.

In the shape of the "posthuman" stretched like a rope across the abyss of these antithetical interpretations, a key problematic has now arisen: how has culture responded to the problems posed by the poststructural apocalypse and the issues they cast on various fields of knowledge and action? Should the lessons of poststructural thought be cast aside? What dangers does that practice pose in terms of concrete existence? Alternatively, is there some way to recuperate meaning in the face of these queries without ignoring poststructuralism's lessons? Considering the fact that poststructuralism's first great influences were in the disciplines of linguistic and literary scholarship, this observation leads into another ideal arena of analysis.

There is a literary genre that has evolved from the mutually informative tension and antithetical modes of existence that, altogether, are the "posthuman." Indeed, it is from this very genre that the *Oxford English Dictionary* takes its first example of the use of "posthuman" as a noun, and as such, it is to the species that evolved out of such texts as Bruce Sterling's *Schismatrix* that I now turn: *cyberpunk*.

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[2] The *Oxford English Dictionary* provides the following citation as the first use of the word "posthuman" as a noun, attributing the definition to a function of science fiction: "1985 B. Sterling *Schismatrix* 26 I've met many borderline posthumans in my day, but never one of you" ("post-human, adj. and n."). This may surprise certain readers, as Sterling alluded to the concept as early as "Cicada Queen," which was originally published in 1983. In "Cicada Queen," however, Sterling uses the word "Posthumanism" as a noun in four instances (Sterling, "Cicada Queen" Kindle Locations 6751, 6756, 6761, and 6869). The word "posthuman" is used only as an adjective, and only in one instance (Kindle Locations 7254). "Sunken Gardens," originally published in 1984, does include one use of the word "posthuman" that might arguably be a noun in an interrogative sentence asking whether "we" are a predicate nominative known as "posthuman": "Aren't we posthuman?" (Sterling, "Sunken Gardens" Kindle Location 7724). As no other concrete uses of the word as a noun exist until *Schismatrix*, however, the scholars responsible for upkeeping the *Oxford English Dictionary* seem to have interpreted this question as relating to a predicate adjective, not a predicate nominative, and have judged *Schismatrix* to be the first proper use of the word "posthuman" as a noun.

[3] The short form *HWBPost* refers to *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*.

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[4] The short form *Post-H* refers to *The Post-Human Condition*.

[5] The short form *TPC* refers to *The Posthuman Condition: Consciousness Beyond the Brain*.

[6] In "Prometheus as Performer: Toward a Posthuman Culture?", Ihab Hassan's "Pretext" states that posthuman culture remains "undefined" (831). In *Technology, Subjectivity, Science Fiction: Bodies of Tomorrow* Sherryl Vint does not explicitly say that the posthuman is hard to define, but she does write, "central to my arguments in this book is the contention that we need an embodied notion of the posthuman" (16). This suggests that the posthuman is a concept whose definition is still being constructed. Similarly, Rosi Braidotti also does not explicitly say that the posthuman is hard to define in *The Posthuman*, but she does note that in "academic culture . . . the posthuman is alternatively celebrated as the next frontier in critical and cultural theory or shunned as the latest in a series of annoying 'post' fads" (2), implicating the term with a certain undefinable quality that makes it difficult to accurately judge the concept's value. Stefan Herbrechter's *Posthumanism: A Critical Analysis* notes that the term references "a multiplicity of human and posthuman forms of representation" and contains a "radical openness of and the lack of consensus on the meaning of its concept" (75). Pramod K. Nayar opens *Posthumanism* with a chapter that "examine[s] the many definitions of . . . 'posthumanism'" (15). These examples, in combination with the two exemplary texts used in the body of this chapter, provide evidence of a lack of critical consensus regarding the term's definition that lasts at least between 1977 and 2014. I have seen little evidence that a critical consensus has been achieved since then, but Rosi Braidotti and Maria Hlavajova *Posthuman Glossary* may be the beginning of a consensus.

[7] As Herbrechter puts it, critical posthumanism

> differentiates between the figure of the 'posthuman' (and its present, past and projected avatars, like cyborgs, monsters, zombies, ghosts, angels, etc.) and 'posthumanism' as the contemporary social discourse (in the Foucauldian sense), which negotiates the pressing contemporary question of what it means to be human under the conditions of globalization, technoscience, late capitalism and climate change (often, very problematically, by deliberately blurring the distinctions between science fiction and science fact . . .). (Herbrechter, "Critical Posthumanism" 94)

[8] In his "Introduction" to *The Practice Turn in Contemporary Theory*, Theodore R. Schatzki states that two varieties of posthumanism intersect practice theory" (10), suggesting that even more varieties exist outside of that set of philosophical interests. Vint, like Hayles, explicitly states that there are multiple versions of posthumanism (Vint 11). Braidotti divides the "contemporary posthuman" into "three major strands" (38). Francesca Ferrando's "Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialism: Differences and Relations" states:

> "Posthuman" has become an umbrella term to include (philosophical, cultural, and critical) posthumanism, transhumanism (in its variants as exotropianism, liberal and democratic transhumanism, among other currents), new materialisms (a specific feminist development within the posthumanist frame), and the heterogeneous landscapes of antihumanities, posthumanities, and metahumanities.

Nayar divides the concept into "critical posthumanism" (11) and "pop posthumanism" (16). This list of critics and references is merely illustrative; it is far from complete.

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[9] An Essay Concerning Human Understanding will be referred to by the short form *Essay*.

[10] Hayles explains that autopoiesis means "self-making," and autopoietic theory refers to a "fully articulated epistemology that sees the world as a set of informationally closed systems. Organisms respond to their environment in ways determined by their internal self-organization. Their one and only goal is continually to produce and reproduce the organization that defines them as systems" (*HWBPost* 108).

[11] Hayles explains that "the second wave of cybernetics grew out of attempts to incorporate reflexivity into the cybernetic paradigm at a fundamental level. The key issue was how systems are constituted as such, and the key problem was how to redefine homeostatic systems so that the observer can be taken into account" (*HWBPos*t 10). Additional information about Hayles's reading of the second wave of cybernetics can be found in "The Second Wave of Cybernetics: From Reflexivity to Self-Organization" (131-59).

[12] This type of definition has, to this day, persisted in critical scholarship written about the posthuman. For example, Vint's *Bodies of Tomorrow* isolates "various elements of both liberal and humanist subject construction—particularly their tendency toward false universalism, abstraction from body, and distanced relation to nature" (11). Her "two key concerns" are "the emphasis on universality and the emphasis on individuality" (12). Nayar defines "humanism" as the study of a discursive "individual subject" who is "marked by rational thinking/ intelligence," "able to plot his/ her own course of action depending on his/ her needs, desires and wishes, and, as a result of his/ her actions, produces history" (15). According to Nayar, this subject is traditionally treated as universal, and is always treated as possessing a type of individuality defined by "rationality, authority, autonomy and agency" (Nayar 15).

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[13] From Plutarch's "Theseus":

> The thirty-oared galley in which Theseus sailed with the youths and returned safely was preserved by Athenians down to the time of Demetrius of Phalerum. At intervals they removed the old timbers and replaced them with sound ones, so that the ship became a classic illustration for the philosophers of the disputed question of growth and change, some of them arguing that it remained the same, and others that it became a different vessel. (28-29)

[14] Transhumanism should be thought of as a movement whose "agenda serves the interest of the human (or some humans) in the quest to become a 'better' human and transcend, through advancement in science and technology, into a seamless amalgamation of a technological human" (Catts 67). According to Francesca Ferrando, transhumanism "traces its roots within the Enlightenment and does not reject the humanistic tradition; on the contrary, transhumanism focuses specifically on human enhancement . . ." (439). Likewise, Ferrando claims that posthumanism "and transhumanism are two movements which are often confused with each other" (438), and "they should not be assimilated" (438-39). While I take no issue with Ferrando's claims in the strict spirit in which they are made, it should be noted that my observations still exemplify how claims such as Ferrando's obfuscate the way posthumanism and transhumanism have a more complex relationship than merely "sharing a critical approach" or arising from common "social and philosophical waves" (438). In many ways, posthumanism is a reaction against the what Ferrando describes as transhumanism's alternative use of the term "posthuman" (439).

[15] As Nicholas Rescher explains in *Conceptual Idealism*, philosophical "idealism takes many forms" (1). The definition I wish to use is rather broad in that it is designed to

simultaneously reference a wide host of philosophies, such as those espoused by Plato, Kant, Hegel, or more contemporary conceptions such as that of Rescher. Idealism is, as William Sweet explains in his introduction to *Idealism, Metaphysics and Community*, often concerned with "articulating an overview that reveals a coherence or ultimate consistency and unity to reality" (4). This unity is created on the basis of philosophy or logic (4). In earlier conceptions, idealism believed, as S. Radhakrishnan's *An Idealist View of Life* explains, that "whatever is real in the universe is such stuff as ideas are made of" (14). By Rescher's time, idealism had adapted so as not to "impede the prospects of a physicalist/materialist world view on the side of causal explanation" (Rescher 195). Instead, Rescher's version focused on "experienced phenomenology of mind . . . [in order to] maintain . . . the traditional idealistic doctrine of the primacy of the mental for our view of the world" (Rescher 196). In short, idealism focuses on the ideal, spiritual, or phenomenal in order to interpret the world. idealism believes that abstractions, patterns, or laws, that is to say ideas, are more fundamental to reality than sensory things, and uses such laws to, as Paul Redding describes in *Continental Idealism: Leibniz to Nietzsche*, "reconcile conflicting stances or orientations towards the world" (3).

[16] Admittedly, neither version of the text by Pepperell that I am using provide contextualized examples of this problem. On the other hand, many other academics have. For example, Allucquére Rosanne Stone, like Pepperell and Hayles, also argues that "no matter how virtual the subject may become, there is always a body attached. It may be off somewhere else—and that 'somewhere else' may be a privileged point of view—but consciousness remains firmly rooted in the physical" (93). Stone writes, "forgetting about the body is an old Cartesian trick, one that has unpleasant consequences for those bodies whose speech is silenced by the act of our forgetting; that is to say, those upon whose labor the act of forgetting the body is founded—

usually women and minorities" (94). It is easy, for example, to forget who is responsible for building the computer chips that make our information technology a concrete reality and the working conditions they are often subject to.

In Control and Freedom: Power and Paranoia in the Age of Fiber Optics, Wendy Hui Kyong Chun explains:

> Hardware has traditionally been produced by women: in the 1980s, the women hired in Silicon Valley to assemble circuit boards and other components were predominantly of Asian heritage. In the 2000s, many women are still Asian, but they live on the other side of the Pacific. The Internet became widely used and computers became personal computers through outsourcing, which combined with advances in technology, has led to dramatic decreases in the prices of personal computers. . . . Spearheaded by Dell's ruthless cost cutting . . . most computer manufacturing has become outsourced to factories in Mexico and China—factories that often fail to meet minimum wage standards in these countries, and that also subject their workers to strip searchers, labor practices designed to prevent collective bargaining, unsafe working conditions (health hazards stem from soldering, noise pollution, and chemical baths used to clean computers components), and excessive overtime. (73)

This reality, however, is easily forgotten in the idealistic claim that information technology provides an escape from the body and a playground for the mind. What is at stake is an attempt to remember the ethical implications of actual practices relating to bodily instantiation and those practices' effect on consciousness.

Donna Haraway's "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century" is a potent early expression of these stakes. She notes that "the 'new industrial revolution' is producing a new worldwide working class. . . . These developments are neither gender—nor race—neutral" (Haraway 25). Like Pepperell, she draws a connection between environment, body, and mind by stating that "these developments must have major consequences in the psychodynamics and politics of gender and race" (27). Like Stone, Haraway also argues that "certain dualisms have been persistent in Western traditions; they have all been systemic to the logics and practices of domination of women, people of color, nature, workers, animals—in short, dominations of all constituted as others, whose task it is to mirror the self. Chief among these troubling dualisms . . . [is] mind/body" (35).

[17] The short form *Electronic* refers to *Electronic Literature*.

[18] The analogy that Minsky roots in the 1940s and the work of McCulloch and Pitts stems from Norbert Wiener's concept of cybernetics. In the 1940s, Wiener developed the concept of cybernetics in order to improve the behavior of automated anti-aircraft machine guns designed to shoot down Axis bombers. In *The Human Use of Human Beings: Cybernetics and Society*, the text Wiener wrote to explicate cybernetics for laymen, Wiener explains that the term is etymologically derived "from the Greek word *kubernētēs*, or 'steersman,' the same Greek word from which we eventually derive our word 'governor'" (15). At its heart, cybernetics is a system designed to govern the transmission of information in various contexts relating to "electrical engineering theory . . . the study of language . . . means of controlling machinery and society, the development of computing machines and other such automata, certain reflections upon psychology and the nervous system, and a tentative new theory of scientific method" (15). On

the very first page of his first chapter, "Cybernetics in History," Wiener already linked human qualities to mechanical ones.

In a cybernetic system, information is "a name for the content of what is exchanged with the outer world as we adjust to it and make our adjustment felt upon it" (17). Because of this central defining feature, the system requires a "rapport with the outer world by sense organs" (Wiener 33). As his first (and more scientifically technical) publication on the subject makes clear with its very title, *Cybernetics: or Control and Communication in the Animal and the Machine*, the concept links the biological and the mechanical as an integral conceit. In fact, "man, or indeed any moderately intelligent animal such as a kitten" (*Human Use* 22), are by definition cybernetic according to Wiener. On the other hand, he holds up the "the prearranged behavior of . . . [a] music box" (Wiener 22) and other forms of clockwork automata as antithetical examples to biological, cybernetic processes. Wiener conceived of cybernetics to make machines operate more like biological entities, at least insofar as his rough analogy surrounding the transmission of information in order to control a desired outcome is concerned. Both McCulloch and Pitts were drawn to, and then worked on, the concept that Wiener pioneered.

[19] As seen by Moravec's use of the terms in Mind Children 75.

[20] As Wolfe puts it, "we can no longer talk of the body or even, for that matter, of a body in the traditional sense" (xxiii).

[21] It should be noted that Wolfe's anti-teleological influence comes from other tests, such as *Limited Inc*, but can still be traced to Derrida as my citation of Wolfe's quote from Derrida proves.

[22] There is nothing disembodied about the observation that material reality contains certain forms of code (or patterns). Such codes obviously exist, on various levels, as evinced by our ability to state that water is H_2O. When, however, that statement is translated into the claim that only the code matters, and one instantiation of the code is the same as any other (often following from the analogy that a copied program run on one universal computer is exactly the same as that program on another universal computer), the result is a disembodied perspective.

[23] This type of logic is *why How We Became Posthuman* responds negatively to *Mind Children*.

[24] "The Simile of the Cave" is a section from Plato's *The Republic*. In short, "The Simile" provides an allegorical tale in which the majority of human kind exist as if in a cave. Everything such people see is but a shadow-illusion cast upon a wall in the cave. The philosopher is the one who exits the cave trying to learn what the shapes that cast those shadows actually are and from where the light that creates the shadows emanates. Thus, the philosopher ascends towards the sun, or a metaphor for pure philosophy. The search for wisdom or meaning is a teleological journey towards the sun. The shadows in the cave are nothing more than an inaccurate and inferior supplement for the world as actually seen in the sun's light. For more information, see Plato 240-48.

[25] See Hayles, *HWBPost* 43, 212, 285.

[26] Additional examples of writing about the posthuman which have been visibly influenced by Derridian theory, as evinced by citational references, include: Ihab Hassan's "Towards a Posthuman Culture?" (833), Neil Badmington's "Pod Almighty!; or, Humanism, Posthumanism, and the Strange Case of Invasion of the Body Snatchers" (7-8, 11-13, 16), "Post, Oblique, Human" (61-64), and "Theorizing Posthumanism" (10-15, 19, 21, 23-25). Moreover,

while I have used Derrida to produce a case study in this text, it is not only Derrida who has influenced this breed of thinkers, but rather a variety of poststructuralist writers in general.

Hayles cites Michael Foucault's notion that the "body [is] a play of discourse systems" (Hayles, *HWBPost*192). Granted, in this instance Hayles references Foucault as part of an effort to show how, "although researchers in the physical and human sciences acknowledged the importance of materiality in different ways, they nevertheless collaborated in creating the postmodern ideology that the body's materiality is secondary to the logical or semiotic structures it encodes" (192). Even as an oppositional sentiment, however, this example still shows that Foucault's work has had an influence on her text's thought process. After all, her goal is not to discard Foucault's work wholesale, but rather to build "on Foucault's work while going beyond it" (195). As an additional example, Andrew Pickering's "Practice and Posthumanism: Social Theory and a History of Agency" states that we should, in general, perceive science in the history of agency as operating "within the plane of practice: continually emerging from and returning to enduring sites of encounter of material and human agency such as the factory (166). After stating as much, Pickering's note on the subject lists Foucault as an influence on this perception (173). Indeed, "Towards a Posthuman Culture?" (844-45), "Pod Almighty!" (13), "Theorizing Posthumanism" (13), and Cary Wolfe's "In Search of Post-Humanist Theory: The Second-Order Cybernetics of Maturana and Varela" (33-35) all use and cite Foucault in a similar manner.

Hayles also makes explicit reference to Jean-François Lyotard's notion that the "postmodern condition implies incredulity toward metanarrative" (Hayles, *HWBPost* 22) and evokes a desire to view the disembodied construct of virtuality espoused by thinkers such as Moravec and Minsky as a metanarrative we should be skeptical of (22). References to Lyotard

can also be found in "Pod Almighty!" (13), "Post, Oblique, Human" (61), "Theorizing Posthumanism" (17, 19-21, 23, 25) and "In Search of Post-Humanist Theory" (43-44). This list of critics and references is merely illustrative; it is far from complete. Indeed, the intertextual connections between poststructural and posthumanist practice have become so intertwined that Stefan Herbrechter writes that a "particularly powerful" approach to "posthumanist philosophy" can be found "in so-called poststructuralism and deconstruction" (*Posthumanism* 3).

[27] Wolfe may be less interested in the notion of the posthuman or teleology as such, but he too uses Derrida's poststructural and anti-teleological philosophy to question humanist assumptions and make room for an understanding of subjectivity that can account for nonhuman subjects.

[28] For example: Hassan's "Prometheus as Performer: Towards a Posthumanist Culture?"; Wolfe's "In Search of Post-Humanist Theory"; Pickering's "Practice and Posthumanism"; Badmington's "Pod Almighty!," "Post, Oblique, Human," or "Theorizing Posthumanism"; Elaine Graham's "Post/Human Conditions"; Sherryle Vint's *Technology, Subjectivity, Science Fiction: Bodies of Tomorrow*; Rosi Braidotti's *The Posthuman*; Stefan Herbrechter's *Posthumanism: A Critical Analysis*; Pramod Nayar's *Posthumanism*; and so on and so forth.

[29] For additional context, see Minsky 78, 120, 178, 181, 207, 222, 226, 239, 257, 259, 278, 297, 308, 315, 320, 324.

[30] Another would be "gestalt" (Minsky 27), which Minsky explicitly defines as "the unexpected emergence, from a complex system, of a phenomenon that had not seemed inherent in that system's separate parts" (328).

[31] Indeed, the term "holistic" comes up with a fair degree of frequency in Pepperell's text (Pepperell, *TPC* 19, 26, 44, 84, 103).

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[32] It should be noted, however, that Minsky also says that we cannot give up models of the mental realm that include "freedom of will":

> No matter that the physical world provides no room for freedom of will: that concept is essential to our models of the mental realm. Too much of our psychology is based on it for us to ever give it up. We're virtually forced to maintain that belief, even though we know it's false . . . (Minsky 307)

[33] Richard S. Peters writes that Hobbes fell in love with Geometry "because it seemed to provide a method of reasoning which would give men certain knowledge. . . . Hobbes was excited by the possibility of extending this assumption to man as well as to Nature. Geometry could reveal the ground-plan of human nature . . ." (9).

[34] While writers have used the concept of cybernetics for a variety of different purposes, Minsky's interpretation of cybernetics is a logical use of many of the statements Wiener made in *Human Use of Human Beings*. Wiener's concept was designed to govern the transmission of information. To do so, it had to act as a counter force to what Wiener described as informational entropy. Entropy is a state of chaotic homogeneity that naturally emerges over time (Wiener 12). As such, Wiener explicitly notes that his text "is devoted to the impact of the Gibbsian point of view [surrounding the entropic effect] on modern life, both through the substantive changes it has made in working science, and through the changes it has made indirectly in our attitude to life in general" (11). This devotion imputes *Human Use of Human Beings* with "a philosophic component which concerns what we do and how we should react to the new world that confronts us" (12). When one combines this philosophic component with a scientific theory surrounding the effective construction of goal orientated behavior in machines, Minsky's point of view becomes a logical outgrowth. Indeed, Wiener also comes to believe that humans "are not stuff

that abides, but patterns that perpetuate themselves" (96). Furthermore, long before Moravec, Wiener wrote that it is theoretically possible to "transmit the whole pattern of . . . the human brain with its memories and cross connections, so that a hypothetical receiving instrument could re-embody these messages . . . continuing [their] process" (96).

[35] While it is outside of the purview of this text's research, it should be noted that various elements of this claim and its grounding assumption that the human mind can be likened to a digital computer are highly contentious in the sciences and are far from being universally accepted. I include Minsky's statement only to provide an example of Minsky's reasoning and the manner in which it helps found a prophetic point of view.

[36] Indeed, the word "revelation" only came into existence as a potential alternative to "apocalypse" circa the 1384 publication of Wycliffe's Bible ("revelation, n."). The word "apocalypse" is etymologically translated from the Latin term apocalypsis ("apocalypse, n."), which meant "to uncover or disclose." By 1894, however, John Swinton's *Striking for Life: Labor's Side of the Labor Question* used the term apocalypse to mean "a disaster resulting in drastic, irreversible damage to human society or the environment, esp. on a global scale" ("apocalypse, n.").

[37] Geraci only uses any version of the word "teleology" once in his text, as found in the following paragraph:

> The study of religion and science, therefore, should go beyond its moral hope for the integration of religious and scientific truths, seeking also a more balanced intellectual effort toward historical, anthropological, and sociological understanding. In an ideal world, this approach might lead to the kind of peaceful coexistence between scientific and religious thought that reconciliation theorists

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> hope to gain, but then again, it might not. Academic research owes no allegiance to our moral *teleologies*. (146, emphasis added)

This use, however, does implicate Apocalyptic AI authors as operating in a teleological mode.

[38] This observation is historically specific to the 2010 publication date of *Apocalyptic AI*. At the time of his text's publication, Geraci noted that popular estimates suggest the doubling "will likely continue . . . until [at least] 2020" (28). The May, 13, 2016 issue of the *MIT Technology Review*, however, already contains an article by Tom Simonite entitled "Moore's Law is Dead. Now What?" That article suggests that Moore's Law "looks to be slowing to a halt" (Simonite). Recently, "Intel pushed back its next transistor technology, with features as small as 10 nanometers, from 2016 to late 2017" (Simonite). Furthermore, "Intel has suggested silicon transistors can only keep shrinking for another five years" (Simonite). Today, it is widely accepted that the law is no longer applicable.

[39] The "Transhumanism/Posthumanism" entry in the *Posthuman Glossary* describes "Extropianism" as a subcategory of Transhumanism (Ferrando 439), which it in turn defines as follows: "Transhumanism traces its roots within the Enlightenment and does not reject the humanistic tradition; on the contrary, transhumanism focuses specifically on human enhancement, which explains its symbol 'H+' as an acronym for 'Humanity Plus'. The main keys to access such a goal are identified in science and technology, in their existing, emerging and speculative frames" (Ferrando 439). This particular subcategory of transhumanism has its roots in Max More's "Principles of Extropy."

[40] Kurzweil is so certain that our human identity could be retained in his technological prophesy, despite the series of adaptations and reconstructions that he admits would be required

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to upload a human mind (assuming such a feat is even possible), that he takes issue with the term "posthuman." He states:

> to me being human means being part of a civilization that seeks to extend its boundaries. We are already reaching beyond our biology by rapidly gaining the tools to reprogram and augment it. If we regard a human modified with technology as no longer human, where would we draw the defining line? Is a human with a bionic heart still human? How about someone with a neurological implant? What about two neurological implants? What about someone with ten nanobots in his brain? What about 500 nanobots? Should we establish a boundary at 650 million nanobots: under that, you're still human and over that, you're posthuman? (Kurzweil 374)

Kurzweil uses the Ship of Theseus paradox to claim that not only will our personal pattern-identities survive this sort of reconstruction, but so too will our classification as human beings.

[41] More has been a huge influence on Kurzweil's beliefs. More's website features a piece of praise by Kurzweil: "Max More's ideas are very influential among other 'big thinkers,' who in turn are influence leaders themselves. Max's writings represent well grounded science futurism, and reflect a sophisticated understanding of technology trends" (qtd. in More). Kurzweil also quotes and cites More in *The Singularity is Near* a large number of times (369, 371, 373, 403). He does so in support of More's ideas. For example, in order to lend credence to his own views, Kurzweil notes that "contemporary philosopher Max More describes the goal of humanity as a transcendence to be 'achieved through science and technology steered by human values'" (373). That is exactly what Kurzweil describes the goal of humanity to be as well.

Kurzweil's extensive use and praise of Nick Bostrom's material provides a similar problem (259, 369, 401, 403, 404). Bostrom's "In Defense of Posthuman Dignity" takes issue with "bioconservative" writing. The paper "argues for the importance of a concept of dignity that is inclusive enough to also apply to many possible posthuman beings." That paper also defines "posthuman" in much the same way as More: "beings who [as the result of various types of technological enhancements] may have indefinite health-spans, much greater intellectual faculties than any current human being—and perhaps entirely new sensibilities or modalities—as well as the ability to control their own emotions." As such, while Kurzweil does not like the term posthuman, it still appropriately defines the concept he describes.

[42] *The Order of Things: An Archaeology of the Human Sciences* will be referred to by the short term *Order*.

[43] Ihab Hassan's 1977 publication "Towards a Posthumanist Culture?" makes conceptual use of the following lines of text, quoted from *Order*: "One thing in any case is certain: man is neither the oldest nor the most constant problem that has been posed for human knowledge. . . . As the archaeology of our thought easily shows, man is an invention of recent date. And one perhaps nearing its end" (844).

[44] This use of the term "play" is, of course, a reference to Jacques Derrida's use of the term in "Sign, Structure, and Play in the Discourses of the Human Sciences." In that essay Derrida explains that western thought has been built around the concept of a structure possessed of a "center" that would orient, balance, and organize the structure's totality. That center, Derrida argued, is not the empirically valid force of organization that it claims to be, but rather a historically contingent moment in "a series of substitutions of center for center, as a linked chain of determinations of the center" (353). Derrida's essay is intended to explain an "event" or

"rupture" (353) in western thought characterized by a burgeoning awareness of this set of substations that made it

> necessary to begin to think that there was no center, that the center would not be thought in the form of a being-present, that the center had no natural locus, that it was not a fixed locus but a function, a sort of non-locus in which an infinite number of sign-substitutions came into *play*. (353-54, emphasis added)

[45] Hayles cites this data explicitly (HWBPost 293). In his updated version of Consciousness Beyond the Brain, Pepperell (who actually references Hayles's use of the information) does as well (169). In fact, Order has been so influential on the concept of the posthuman that Neil Badmington includes an exerpt from Order in his Readers in Cultural Criticism: Posthumanism.

[46] It should be noted that Rosi Braidotti argues something similar when she writes, "Posthumanism is the historical moment that marks the end of the opposition between Humanism and anti-humanism and traces a different discursive framework, looking more affirmatively towards new alternatives" (37).

[47] *The Inhuman: Reflections on Time* will be referred to by the short form *The Inhuman*.

[48] *The Inhuman* is included in Neil Badmington's *Readers in Cultural Criticism: Posthumanism*.

[49] Detailed information about the dialectic can be found in Hegel's *Phenomenology of Spirit*. James R. Ozinga provides an effective, brief—and thus necessarily reductive—summation when he writes, "Hegel believed that progress in history resulted from something he called **dialectics**—the simultaneous confrontation of opposites, which create a conflict that nature has to resolve" (15, emphasis in the original). An example of this dialectic process in operation can

be found in "Independence and Dependence of Self-Consciousness: Lordship and Bondage," a section of the *Phenomenology of Spirit*.

[50] Pepperell states that humans "and the environment are different expressions of energy; the only difference between them is the form that energy takes" (*TPC* 180-81). Likewise, Pepperell claims that "all we can really talk about or describe at any level of inquiry is the formation and transformation of energy, albeit as it is expressed in some tangible material form" (51). In doing so, he follows directly in Lyotard's footsteps, who also turns to the transformation of energy to discuss "the job of simulating conditions of life and thought to make thinking remain materially possible after the change in the conditions of matter" (*The Inhuman* 12).

[51] Braidotti describes Nietzsche's importance to this mode of thought in more general terms when she writes:

> That humanity be in a critical condition—some may even say approaching extinction—has been a leitmotif in European philosophy ever since Friedrich Nietzsche proclaimed the 'death of God' and of the idea of Man that was built upon it. This bombastic assertion was meant to drive home a more modest point. What Nietzsche asserted was the end of the self-evident status attributed to human nature as the common sense belief in the metaphysically stable and universal validity of the European humanistic subject. Nietzschean genealogy stresses the importance of interpretation over dogmatic implementation of natural laws and values. (6)

[52] Herbrechter comes to a similar observation when he writes that "Nietzsche's 'On Truth and Lie in an Extra-Moral Sense' may serve as a starting point for, but also as an anticipated summary of, the notion of 'posthumanism' . . ." (*Posthumanism* 2). Herbrechter, however,

divides Nietzsche into at least two entities (31). The first entity is "the 'critical' Nietzsche, who with his philosophical hammer is intent on breaking up traditional and venerable but ossified knowledge without any respect and whose refreshing tone and radicalness forces a break with a stifling, established and moralizing doctrine" (31-32). This is the Nietzsche whose "ethos is exactly what has been informing so-called 'French Theory', or poststructuralism and deconstruction" (32). The other Nietzsche is a "'prophetic' vitalist, craving the coming of the overman (or the posthuman), and who despises sickness, glorifies strength, will and power and plays with nihilistic fire" (32). I differentiate myself from Herbrechter's reading by discounting this theory. There is only one Nietzsche. There are, however, at least two antithetical interpretations of Nietzschean philosophy.

Chapter 2: Play of the Movement, or, Anti-Teleology v. Teleology

People have hotly debated the definition of "cyberpunk" almost from the moment Gardner Dozois appropriated the term from Bruce Bethke's short story by the same name to refer to a science fiction subgenre. The result of this debate has been a series of critical fumbles best described as a semiotic petri dish of confusion. Inside this petri dish, the definition of cybernetics and its relation to cyberpunk has been stretched between Norbert Wiener's original use of cybernetics and a colloquial understanding of the word in a manner reminiscent of the various uses of "posthuman." As with an understanding of the word "posthuman," however, attempts to simplify a definition of "cyberpunk" by categorizing the genre behind a common, stylistic aesthetic—the presence of humans with augmented, electronic, robotic components, for example—combined with various marginally overlapping "themes" has proven to be ineffective.[1] Indeed, when the various uses of concepts such as cyborgs or cybernetics are divorced from each other and their meaning in cyberpunk is then analytically recombined from an incomplete understanding of the genre's divergent but related uses of such concepts, critics have often created definitions of cyberpunk that problematically include its antecedent influences as members of the genre itself. A defining trait of the cyberpunk genre that helps overcome such analytic confusion is a structural tension between the notion of teleology and a poststructural attitude used to interrogate various issues *including* the nature of posthuman identity.

Attempting to identify cyberpunk by its aesthetic qualities and themes, by its tropes, has proven to be a contentious, often fruitless, enterprise. In theory, the task ought to be as simple as defining the "posthuman." In practice, describing cyberpunk has proven to be just as complicated

a feat, and for similar reasons. By the late 1980s, shortly after cyberpunk established itself as a genre, scholars such as Istvan Csicsery-Ronay were already noting how hard it is "to say what the label actually refers to" ("Cyberpunk and Neuromanticism" 266). As Scott Bukatman observed in 1993, a "proliferation of definitions" exists (*Terminal Identity* Kindle Location 828). That being said, the problem is more complicated than what Bukatman describes as an "absence of definition" (Kindle Location 828). Certainly, Bukatman is correct: insofar as the word "cyberpunk" is concerned, the scholarly community finds its "ontology is adrift" (Kindle Location 828), but this is caused by a structural tension that destabilizes the notion of common central tropes, such as "theme," even as it provides the genre with the type of common qualities that usually provide a definition.

The common scholarly observations from which this structural tension can be categorized and exemplified are the agreement that cyberpunk possesses a number of postmodern qualities, the way cyberpunk is often praised or critiqued in the same terms as the postmodern, and the way cyberpunk and postmodern sensibilities are both grounded in the effects of media technologies. If these common observations are used to frame a selection of texts by the five authors whose stories were published in *Mirrorshades: The Cyberpunk Anthology* (originally published in 1986) and whose novels were considered to be the core of the cyberpunk genre by the genre's first wave writers—William Gibson's "The Gernsback Continuum" (originally published in 1981) and *Neuromancer* (originally published in 1984); Rudy Rucker's "Tales of Houdini" (originally published in 1981) and *Software* (originally published in 1982); Lewis Shiner's "Till Human Voices Wake Us" (originally published in 1984) and *Frontera* (originally published in 1984); John Shirley's "Freezone" and *A Song Called Youth* (originally published in three parts as *Eclipse* in 1985, *Eclipse Penumbra* in 1988, and *Eclipse Corona* in 1990), as well as Bruce

Sterling's *Schismatrix* (originally published in 1985)—what emerges is an interrogation of the "posthuman" whose discursive structure mirrors the issues in conceptualization described by "Playing with Posthumanism." In other words, as a genre, cyberpunk is best defined by the tension between various seemingly antithetical tropes whose simultaneous presence gives the genre its central theme.

My argument is ultimately that cyberpunk's most important trope is the inclusion of images that on the one hand seem to allude to teleological values (as their origin in cybernetic theory claimed that such images were of teleological nature) but nevertheless operate in anti-teleological principles as is made evident when those images are analyzed in relation to any given text's overarching context. Over the course of this chapter, I will argue that teleological and anti-teleological aspects of these texts are both related to the concept of the posthuman. In fact, I argue that these texts use the tension between the qualities in question to interrogate and perhaps even help produce the posthuman. By doing so, however, I am also forced to conclude that the genre's greatest strengths and nuances have also become its failure, which logically explains why the genre has frequently been used to reify a transhumanist version of the posthuman in practice despite having a critical posthumanist attitude. In other words, the texts contain enough conflicting qualities for them to have been interpreted in antithetical manners, making it difficult to provide a definitive interpretation of their content as framed by the division discussed in the last chapter.

According to the online edition of *The Oxford English Dictionary*, Bruce Bethke's 1983 short story, "Cyberpunk," published in *Amazing Science Fiction Stories*, was the first text to use the term ("cyberpunk, n."). In Bethke's own words, "In the early spring of 1980 I wrote a little story about a bunch of teenage hackers. From the very first draft this story had a name, and lo,

the name was—*cyberpunk!*" (Forward, emphasis in the original). Despite that fact, however, many scholars agree that William Gibson is the most important early influence on the genre. Bukatman writes that "the real advent of cyberpunk . . . [was] the publication of *Neuromancer* in 1984" (*Terminal Identity* Kindle Location 2900). Fredric Jameson agrees that the genre's opening "bang" was "William Gibson's *Neuromancer*" (*Archaeologies of the Future* 93). Norman Spinrad goes so far as to assert, "everyone agrees that William Gibson's *Neuromancer* started it all . . ." (109). Even Bethke writes, "I never claimed to have invented cyberpunk fiction! That honor belongs primarily to William Gibson, whose 1984 novel, *Neuromancer*, was the real defining work of 'The Movement'" (Forward).

"The Movement" was the term used by "a loose generational nexus of ambitious young writers, who swapped letters, manuscripts, ideas, glowing praise, and blistering criticism. . . . Gibson, Rucker, Shiner, Shirley, [and] Sterling" (Sterling, Preface xi). Together, they formed the first wave of cyberpunk authors. While Bethke's use of the word "cyberpunk" predates *Neuromancer,* the word only came to be attached to the Movement after Dozois used the word in "Science Fiction in the Eighties," an article published in the Washington Post on December 30, 1984. Dozois used the term to refer to "bizarre hard-edged, high-tech stuff" written by "Sterling, Gibson, Shiner, Cadigan, [and] Bear." Despite the fact that only three of the names on that list were Movement affiliated, according to Shiner, "Gardner used the word to describe . . . [the Movement]. This was [their] first recognition by the outside world . . ." ("Inside the Movement: Past, Present, and Future" 17-18). Scholars such as Dani Cavallaro have made similar observations to those made by Shiner (13). For this reason, an analysis of cyberpunk should begin with the work of the Movement authors.

That being said, many critics have taken a page from Csicsery-Ronay's suggestion that "we think of cyberpunk not as a movement" but as a "artistic style, with profound philosophical and aesthetic premises" ("Cyberpunk and Neuromanticism" 269). While it is Gibson's *Neuromancer* that is most often named as the "origin" of cyberpunk, Sterling is also an important pillar in the genre's nascent formation.[2] Darko Suvin has gone so far as to say that Gibson and Sterling are "the most representative" cyberpunk authors ("On Gibson and Cyberpunk SF" 41). According to Sterling, the Movement "found a friendly unity in their common outlook, common themes, even in certain oddly common symbols . . ." (Preface xi).

The term cyberpunk, in Sterling's view, referred to these commonalities via a "crucial" notion of "integration" (xi). According to Sterling, this integration is technological in nature. The cyberpunks lived in a "truly science-fictional world" (xi). To them, "technology is visceral. . . . it is pervasive, utterly intimate. Not outside us, but next to us. Under our skin; often, inside our minds" (xiii). This was a response to "the personal computer, the Sony Walkman, the portable telephone, the soft contact lens" (xiii). As a result of these 1980's technologies and the living environment they constructed, Sterling claims that various "central themes [regarding integration] spring up repeatedly in cyberpunk" (xiii).

Sterling more specifically describes these symbols and themes in terms of "prosthetic limbs, implanted circuitry, cosmetic surgery, genetic alteration. . . . brain-computer interfaces, artificial intelligence, neurochemistry—techniques radically redefining the nature of humanity, the nature of the self" (xiii). In other words, Sterling claimed that the central themes of cyberpunk deal with both genetic and bionic "evolution." This would seem to reinforce Csicsery-Ronay's suggestion. Nevertheless, Csicsery-Ronay has critiqued Sterling's claim that the Movement was a reaction to such issues. Csicsery-Ronay stated that it is hard to see how they are

"borne out by the writing associated with the *Mirrorshades* anthology" ("Cyberpunk and Neuromanticism" 268). Some contemporary critics such as Carlen Lavigne have agreed. She, for example, calls the anthology an "eclectic mix" (Kindle Location 116). Nevertheless, while the opinion may be contentious, traditionally speaking, critics such as Catherine Harper have claimed that the anthology is "still the best example of cyber-punk short fiction" (399).[3] Such symbols and themes as those found in *Mirrorshades* thus inform the beginning of this analysis.

Despite Csicsery-Ronay's critique, the novels—such as *Schismatrix*—referenced by *Mirrorshades* do tend to share a common aesthetic. As previously noted, the first use of "posthuman" as a noun is attributed to Sterling's *Schismatrix.* Sterling's use of the word is often read by scholars as bearing a relation to cyberpunk's rhetoric as a whole. Porush, for example, writes that in a "cyberpunk future it's not only the exceedingly rich who aren't remotely human anymore. Everyone, like the total population of Sterling's *Schismatrix,* is either mechanized or bioengineered . . ." (250-251). This claim is obviously true of *Schismatrix,* a text filled with cyborgs "patched together with advanced Mechanist hardware" (Sterling, *Schismatrix Plus* Kindle Locations 106-107) and Shapers, creatures of "genetic engineering" (927).[4]

Sterling names *Neuromancer* as one of the "central texts of contemporary science fiction" (*Mirrorshades* 1). In that text, when Case meets Molly for the first time "she held out her hands, palms up, the white fingers slightly spread, and with a barely audible click, ten double-edged, four-centimeter scalpel blades slid from their housings beneath the burgundy nails" (Gibson, *Neuromancer* 25). This is far from a unique moment of technological modification. Molly also features a pair of mirrored glasses that are "surgically inset, sealing her sockets" (24). Ratz has a cybernetic, "prosthetic arm" (3). Such cybernetic modifications are ubiquitous. Indeed, in the

world of *Neuromancer,* various corporate employees "above a certain level were implanted with advanced microprocessors" (10). Cyborgs are a common character type in *Neuromancer*.

Sterling writes that *Software* draws "imaginative power from Rucker's study of information theory" (*Mirrorshades* 43). The text explicitly features minds downloaded into robotic bodies. The character Stanny is temporarily impersonated by a digitized double. Upon his return, his father is forced to ask, "How do I know you're real *now,* Stanny?" (Rucker, *The Ware Tetralogy* 36). Stanny responds, "you don't. *I* don't" (36). This confusion is explicitly connected to "cyborg" entities (36). The text is not merely mislabeling a robotic double as a cyborg. On the contrary, one of the central plot points in the text is a conspiracy to make Cobb Anderson—the human character who "invented" robots (79)—"immortal."[5] The robots do so by taping his brain and putting it in a robot body via a process almost exactly like that described by Hans Moravec in *Mind Children.*[6] *Neuromancer* and *Software*, then, both contain bionic posthumans.

Where *Neuromancer* and *Software* contain examples of bionic posthuman imagery, Shirley's *A Song Called Youth,* like *Schismatrix,* contains examples of both bionic and genetic variants. Sterling describes *A Song Called Youth* as a "dizzying near-future where pop, politics, and paranoia collide in a high-tech struggle for survival" (*Mirrorshades* 139). It features implants of the style found in *Neuromancer*. For example, "Howie's right eye was electronic, an implant" (Shirley, *A Song Called Youth* Kindle Location 6282). It also features posthumans "genetically engineered for certain characteristics" (Kindle Location 11907).

Sterling states that Shiner "demonstrated his important role in Movement fiction" with *Frontera* (*Mirrorshades* 125). *Frontera* explicitly provides examples of genetic, posthuman alternations that also contextually invoke the type of electronic cyborgs described in *Neuromancer*. Like Molly from *Neuromancer, Frontera's* Kane is a "corporate mercenary"

(Shiner, *Frontera* 28). Like Molly, Kane is a cyborg. Kane's implant, however, is "wetware" (125). In other words, it is made of "biological circuitry . . . tied right into the nervous system" (63). The chip does something similar to Molly's "cut-out chip" (Gibson, *Neuromancer* 147). Molly's chip allowed her old employers to put her into unconscious "puppet time," during which her behavior would be controlled by various "programs" (148). Likewise, Kane's chip also allows Morgan (Kane's uncle and employer) to use interchangeable programs, almost like "diskettes," to try and use hallucinations to control Kane (Shiner, *Frontera* 72-73, 77). *Neuromancer* and *Frontera* not only share cyborg characters, but the proposition that cybernetic devices can potentially be used as a form of control.

These common qualities (in and of themselves) are just a stylistic common ground between objects like Kane's "mirrored sunglasses" (Shiner, *Frontera* 28) and Molly's mirrored insets. If such Movement "totems," the word Sterling uses to describe such common images (Preface xi), are all cyberpunk texts have in common, one can forgive some critics for accusing the genre of being all style and surface with no depth.[7] Moreover, seemingly in keeping with Csicsery-Ronay's critique, while Shiner's "Till Human Voices Wake Us" does contain such explicit "totems," many of the other stories by Movement authors do not. Sterling claims that in "Till Human Voices Wake Us" Shiner "combines mythic images and technosocial politics in a classic cyberpunk mix" (*Mirrorshades* 125). The text does feature posthuman entities akin to those found in the above-mentioned novels. Instead of featuring bionic cyborgs who ambiguously mix human and robotic components, the text focuses on a type of genetic evolutionary process similar to that practiced by the shapers in *Schismatrix*. One of the central images in "Till Human Voices Wake Us" is a "phantom" (Shiner, "Till Human Voices Wake Us" 134), or, "a creature with a woman's breasts and the tail of a fish" (136). This creature,

however, is "not the romantic myth" (137) one might expect. Instead, it turns out to be a product of cloning and genetic manipulation (137). Shirley's standalone excerpt from *A Song Called Youth*, "Freezone," on the other hand, contains almost no explicitly posthuman characters even if such imagery is common in the surrounding context of *A Song Called Youth*. Furthermore, Gibson's "The Gernsback Continuum" and Rucker's "Tales of Houdini" do not contain a single explicitly posthuman concept between them. I, however, argue that they do all share a subtler but also more important cyberpunk trope.

Original Movement

Following and accepting Csicsery-Ronay's suggestion that we think of the genre as an entity divorced from the Movement has produced problematic results. For example, Kelly Wisecup claims that William Burroughs is a "cyberpunk artist" (866). David Porush has also stated that Burroughs is an "early cyberpunker" (247). Jenny Wolmark has claimed that Burroughs and Thomas Pynchon bear "the unconscious traces" of the genre (108). According to John Schwetman, "the first cyberpunk novel comes out at the moment of romanticism's initial flourish early in the nineteenth century, and that novel is Mary Shelley's *Frankenstein* . . ." (129). Schwetman also goes on to claim that cyberpunk "garnered scholarly attention" at least partly as a result of Philip K. Dick's novels, thus implying that Dick is also an important cyberpunk novelist (133). The anachronistic quality of these claims should make them obviously problematic.[8]

Burroughs's writing preceded cyberpunk, although he was an important influence on it. Historically, "Burroughs's career as writer and oracle of the Beat Generation is legendary" (Skerl

1). That being said, Larry McCaffery calls Burroughs "cyberpunk's Godfather" (9) and notes, like Burroughs, cyberpunk delights "in creating cut-ups and collages . . . in which familiar objects and motifs are placed in startling, unfamiliar contexts" (14). Movement writers have described their writing this way, sometimes citing Burroughs as a source of inspiration. Sterling, for example, says, "the cyberpunks, being hybrids themselves, are fascinated by interzones: the areas where, in the words of William Gibson, 'the street finds its own uses for things'" (Preface xiii).[9] In his examples of this phenomenon, he includes "scratch music, whose ghetto innovators turn the phonograph itself into an instrument, producing an archetypal Eighties music where funk meets the Burroughs cut-up method" (Preface xiv). Gibson explicitly names Burroughs, "what he was doing with plot and language" (McCaffery and Gibson 231)" and his "cut-up stuff" (232), as one of his literary influences and describes his own writing style in terms of "accidents" and "unanticipated evolutions" (McCaffery and Gibson 221).

Wisecup does not explain any of this in "'Let's Get Semiotic': Recoding the Self in Neal Stephenson's *Snow Crash*." On the contrary, she merely calls Burroughs a "cyberpunk artist" as if this is a self-evident fact. She only contextualizes her claim that Burroughs is a "cyberpunk artist" insofar as such artists "have used the virus to critique contemporary society's manipulation of individuals through media images" (866). She then applies the claim to Burroughs's *Nova Express* (originally published in 1964). Her claim is understandable insofar as Burroughs's text can be said to have a certain aesthetic and thematic quality in common with the cyberpunk texts he influenced, but it is still anachronistic.

This aesthetic has a philosophical premise that helps to explain Schwetman's claims as well. Derrida has said that "toxicomania, the notion of drug addiction as a disease, is contemporaneous with modernity and with modern science. Electronic circuitry got hooked up in

the argot of drugs and the addict got wired" ("Rhetoric of Drugs" 22). In short, according to Derrida, narratives about drug addiction, disease, and electronic circuitry are commonly informed by a "metaphysical burden" stirred up by modernity and modern science about the multiplicity of boundaries related to concepts such as "self . . . one's own body or the foreign body . . . the different 'parts' of the body" and so on and forth (31). Derrida is not alone in making such observations. Avital Ronell, for example, eloquently states that "if the literature of electronic culture can be located in the works of Philip K. Dick or William Gibson, in the imaginings of a cyberpunk projection, or a reserve of virtual reality, then it is probable that electronic culture shares a crucial project with drug culture" (68). The project shared between electronic and drug cultures relates to Schwetman's claims about Dick.

Dick was also, like Burroughs, a strong influence on cyberpunk. Sterling writes that "the cyberpunks treasure a special fondness for SF's native visionaries" and provides "the reality games of Philip K. Dick" as an example (Preface x). Gibson "hadn't read much Dick before [he] started writing" (McCaffery and Gibson 227). Nevertheless, Gibson states, "I'd already gotten my Dick from Pynchon" (227). Csicsery-Ronay explains that the genre is informed by the tendency to treat "hallucination as an object in the world—a privileged object, since it does not merely exist among other things, but changes their ontic status" ("Cyberpunk and Neuromanticism" 274). He then credits Dick (among a few other sources) as the "serious" beginning of this trend (274). The relationship between the literature of drugs, disease, and electronic culture observed by Derrida and Ronell, which Ronell explicitly connects to both cyberpunk and Dick, is present in cyberpunk (at least partly) because of the influence Dick has had on cyberpunk's first-wave works. This is precisely the quality Schwetman ascribes to Dick after naming him a cyberpunk author: "Dick's work, in particular, provided readers with

complex games and puzzles revolving around the contingency of reality upon perception and technological modes of altering our perceptions" (Schwetman 133).

In practice, then, Csicsery-Ronay's suggestion has led some critics to erase the boundary between works that have influenced cyberpunk and works that should, historically speaking, be considered a part of the genre. As a result, even *Frankenstein* (originally published in 1818), a work that is often cited as "the first SF novel" (Slusser 46), becomes cyberpunk to the occasional critic like Schwetman. This erasure is obviously contentious. As Veronica Hollinger explains in relation to Dick, while Dick can be placed "within the project of anti-humanist science fiction," he is "separated from cyberpunk not only by chronology but also by cyberpunk's increased emphasis on technology as a constitutive factor in the development of postmodern subjectivity" (33).[10] Such overextensions transform cyberpunk into an all encompassing "genre" that threatens to swallow so much material that the term becomes analytically useless. After all, as Sterling notes, it is not only cyberpunk that is influenced by Burroughs's cut-up method but much of "Eighties art" (Perface xiv). Calling Dick and Burroughs cyberpunks makes about as much sense as saying "scratch music" *is* cyberpunk.[11] In the face of this overextension, it is no surprise that critics such as Suvin have concluded that "an encompassingly extensive survey of cyberpunk sf looks therefore not only materially impossible but also methodologically dubious" (Suvin 41).

Discursive Cyborgs

A closer examination of the contextual qualities that *Frontera*'s imagery shares with the concept of the cyborg, however, begins to reveal the way the topically common posthuman images I described above also share a deeper rhetoric that is more than skin deep and is present

in all the Movement texts being examined. The cyborg—typically an entity that fuses machinic and biological components using cybernetic technology—is one of the hallmarks of cyberpunk. The term "cyborg" was formally introduced in 1960 by Manfred E. Clynes and Nathan S. Kline when they used "the term in a paper presented at a military conference on space medicine" (R. Kline 332). The content of that conference was reiterated in their 1960 print publication "Cyborgs and Space." In the article, they explain that the cyborg is an "exogenously extended organizational complex functioning as an integrated homeostatic system unconsciously" (Clynes and Kline 27). The term, however, was first used in the public sphere in a *New York Times* article, published a few days before their formal introduction, "based on a press release and interviews with the authors" (R. Kline 340). The definition of "cyborg" provided by that *New York Times* article is listed as the original print use of the word by the *Oxford English Dictionary*: "A cyborg is essentially a man-machine system in which the control mechanisms of the human portion are modified externally by drugs or regulatory devices so that the being can live in an environment different from the normal one" (qtd. in "cyborg, n."). The environment that the cyborg was theorized to overcome is space.

Frontera is about a space-journey to humanity's Mars colony, "Frontera." The text describes Earth as "a fragile accident of a world, the one place in the solar system, maybe in the universe, that is truly hospitable to the human race" (56). The inhospitable qualities of the rest of the universe are as important to *Frontera* as they were to Clynes and Kline. In *Frontera*, "the risk you took when you got out from under the barriers of Earth's atmosphere and left yourself open to the hard radiation of space" turns out to be "Molly's daughter" (22) and the other children born on Mars. More specifically, the text describes the risk in terms of various cosmic phenomena destructive to the human organism: "the cosmic primaries, the solar flare protons, the

solar X-rays, doses of ten to thirty rads a year" (22). It also, however, immediately contextualizes that risk in terms of deformed children and the fear, sadness, and hatred that their mutations evoke (22). The larger context of the risk posed by migration to "Frontera" is the transformation of the human organism.

Molly names her daughter Sarah, but the child renames herself "Verb" (22). This name is already suggestive. The child is not a proper noun but some sort of state, action, or occurrence. She is not only a subject in the story but also the predicate that asserts transformation of the story's primary subject: the human. Verb tells Molly that, due to the way space transformed Verb, "I'm not really human to you. I never have been" (142). Molly is unable to contradict her.

Verb's transmutation is not merely cosmetic, "insignificant or easily correctible" (22). Verb possesses "freakish abilities" that provoke "some kind of instinctive xenophobia" from *normal* humans (108). Those abilities are a force of transformation in multiple ways. On one hand, they allow her to build a new piece of technology with life-changing implications so grand that the technology becomes the centre of the novel's plot. As Molly explains, the thing shifts paradigms in a manner that is "semiotic": "Once Verb built the machine, it changed our way of thinking about it" (113). Verb's abilities also transform the ostensibly normal humans Verb interacts with through the emotional reactions her abilities provoke: "It changed you" (22).

Verb's mutations are not enough to call her a cyborg in and of themselves. While the environment of space has transformed her into a verb with the power to transmute others, a type of posthuman, they have not done so via drugs or cybernetic control mechanisms. Likewise, her ability to survive in a hostile environment has not been genetically engineered or improved. She is not a stylistic cyberpunk "totem" in the sense of such common images as the mirrored sunglasses found in many cyberpunk texts, nor does she fulfill that role in the manner of the

cyborgs and posthumans I described earlier in this chapter. The qualities of the transformational circuit between subject and environment in *Frontera* are still indicative of an ironically poststructural and cybernetic paradigm that transforms Verb into a semiotic cyborg.

One must understand what I mean by a "poststructural and cybernetic paradigm" to make sense of my claim. "Cybernetics" is a reference to the theoretical field first developed by Wiener during World War 2.[12] There are three elements of feedback in his concept that one should keep in mind: first, a cybernetic system requires "*rapport* with the outer world by sense organs" (Wiener, *Human Use* 33, emphasis in the original)[13]; second, Wiener argues that the study of cybernetics is related not only to mathematic, mechanistic, and electrical fields but also to "the study of language" (15)[14]; finally, according to this field of study, the central nervous system of biological organisms "no longer appears as a self contained organ. . . . On the contrary, some of its most characteristic activities are explicable only as circular processes, emerging from the nervous system into the muscles, and re-entering the nervous system through the sense organs . . ." (Wiener, *Cybernetics* 8). The important detail is that Wiener conceives of living organisms (and humans) as already being cybernetic in their qualities.

It should, given that fact, be clear how Verb fulfills a cybernetic paradigm. Like a verb, the character connects the subject (human) with the object (environment) via her action or influence upon said environment, but she does so in a circular feedback loop that destabilizes the boundaries of her status allowing her to become a subject, object, and predicate in the story. She is the result of a transformational process who is herself a transformational process that catalyzes additional transformational processes. The story frames this through the explicit interaction of sense organs, memory, and communication; sight, sound, emotional responses, and the products of Verb's intellectual output all initiate a transformational feedback process between Verb and

the rest of the story (both in the sense of its environment and metafictional qualities) that, as I have already mentioned, is explicitly described by the term "semiotic" in *Frontera*.

One might be tempted to argue that this is, as of yet, not enough to claim that Verb is indicative of a deeper cybernetic paradigm in the text. After all, Wiener developed cybernetics in large part because "German prestige in aviation" at the beginning of World War II, the threat of Axis bombers, "turned the attention of many scientists to the improvement of anti-aircraft artillery" (*Cybernetics* 5). In other words, cybernetics was intentionally designed to improve "the ability to receive and organize impulses and to make them effective in the outer world" (124). He wanted to create automated turrets that could use artificial sensory organs in feedback with the real world to more effectively shoot down Axis planes. At first blush, one might have trouble connecting that to Verb.

One must, however, remember that Wiener conceived of the failure to transmit information in terms of "thermodynamics" (5). To Wiener, "just as the amount of information in a system is a measure of its degree of organization, so the entropy of a system is a measure of its degree of disorganization" (5). Of course, the problem is, "entropy almost always increases" (56). Cybernetics was conceived of as an effort "to produce a temporary and local reversal of the normal direction of entropy" (Wiener, *Human Use* 25). Verb's machine is a response to the fact that "in a vacuum you get a spontaneous pair production, a particle and an antiparticle. . . . Happens at random, they annihilate each other, and that's it" (Shiner, *Frontera* 86), or a response to the perception of spatial disorganization—entropy. Verb, however, uses her abilities to quantify a pattern in the ostensibly random process and produce "free energy" (86). Her advanced, transformed perceptual and cognitive abilities are used to produce a pattern of information that in turn produces a pattern of technology that then produces an increase in

thermal energy, or a local reversal of the normal direction of entropy. Verb uses circular feedback loops akin to those Wiener describes as being cybernetic.

Frontera, in fact, drives this imagery home by noting that the machine is also a "matter transmitter" (144) capable of "transcribing" and then "broadcasting" people through time and space (148-149). This idea comes straight out of Wiener's *The Human Use of Human Beings*: "Let us then admit that the idea that one might conceivably travel by telegraph, in addition to traveling by train or airplane, is not intrinsically absurd . . ." (103). The organization of matter is presented as a type of information as well. This allusive logic is commonly present in both the text's poetic devices and the literalized metaphors of its story. For example, when Kane aims his gun, the action is described in terms of a "completed neural circuit" that allows Kane to "see one step further ahead" (Shiner, *Frontera* 159) like one of Wiener's cybernetic anti-aircraft turrets. *Frontera* regularly uses language and story elements that allude to Wiener's ideas.

Despite cyberpunk's anti-teleological attitude and its connection to cybernetics, cybernetics (at least of the first order represented by the Macy Confrences) is thought of as an intrinsically teleological concept by many in the scientific community, including the man who coined the term. It is true that Wiener never uses the word "teleology" in either *Cybernetics* or *The Human Use of Human Beings*. Additionally, the way cybernetics is grounded in various non-linear practices might lead one to expect that the system would not be aligned with a concept that had, by the 1940s, long been critiqued for its seemingly linear connections between phenomena and their final causes.[15] Wiener, however, notes that "the theory of linear prediction and of non-linear prediction both involve some criteria of the goodness of fit of the prediction" (*Cybernetics* xiii). Furthermore, Wiener classifies cybernetic organisms as "purposive" and states that "the whole conception of the apparently purposive organism, whether it is mechanical, biological, or

social, is that of an arrow with a particular direction in the stream of time rather than that of a line segment facing both ways which we may regard as going in either direction" (*Human Use* 48). Wiener's claims are grounded in teleology, which becomes explicitly clear after an examination of the article Wiener coauthored with Arturo Rosenblueth and Julian Bigelow: "Behavior, Purpose and Teleology."[16]

"Behavior, Purpose and Teleology" conflates purposive behavior that modifies its action on the basis of input with the philosophical study of things based on their final state of existence. The text states that "purposeful active behavior may be subdivided into two classes: 'feed-back' (or '*teleological*') and 'non-feed-back' (or 'non-teleological)" (Rosenblueth et al. 19, emphasis added). In fact, the article explains that it uses the word "teleology" in a manner that is "synonymous with 'purpose controlled by feed-back'" (23). In other words, Wiener imagines cybernetic feedback to be a non-linear, *teleological* practice.[17] It is a goal-oriented system that seeks to implement a teleological end-state by adapting practice in response to negative feedback. According to Minsky, it is the "cybernetic revolution" that rejuvenated the study and use of teleology in scientific fields (318). If (first order) cybernetics is a teleological practice, it should theoretically be at odds with the anti-teleological ethos of poststructuralism and postmodernism. Nevertheless, *Frontera*'s paradigm is as poststructural as it is cybernetic, and the manner in which this is true illuminates the qualities of the connection between cybernetics and postmodernism.[18]

I have in many ways already presented the evidence required to make that claim in this chapter. I explained Verb's nominal recreation of her own identity in terms of a subject that is no longer itself, that has become a predication of change. In "Playing with Posthumanism," I explained that Foucault used a Nietzschean paradigm to inform his poststructural model of

experience, and I have explained how that model destabilizes or even annihilates the subject position in a manner strikingly similar to Verb's role in *Frontera*. I noted that Verb is the mutated output of the dangers experienced in space. Verb, however, unlike the cyborg proposed by Clynes and Kline, is not intentionally modified to survive the dangers of space.

Verb's mutations are accidental. They leave her pale, flabby, with stringy hair, and with lopsided eyes (Shiner, *Frontera* 81). As a result of the mutations, Verb's lifespan is shortened. She is only twelve years old (86), but she is already dying (26, 142). She might be the output produced as a result of spatial input, but she is not a self-correcting feedback loop, and as such is "non-feed-back," that is to say "non-teleology," in Rosenblueth and Wiener's terms. If one believes, as Wiener does, that the "living organism is above all a heat engine" (*Cybernetics* 41), then organic death is an entropic process, a *heat death*. She is not only an eminently cybernetic character in the novel but also, oxymoronically, an *entropic* mutation or *evolution*. Even Minsky, enamoured as he was with the reintegration of teleology in the sciences, admits that "attributing goals to [natural, biological] evolution was bad . . . because it was wrong" (118). In Verb, then, one should read a phenomenon akin to Derrida's description of an "affirmation [that] also surrenders itself to *genetic* indetermination" ("Sign, Structure, and Play" 369, emphasis in the original). Both her abilities and her posthuman identity are an emergent accident akin to a poststructurally influenced posthuman identity.

She is not a lone occurrence of seemingly paradoxical poststructural and cybernetic braiding in the text. Kane is a cyborg in the explicit sense: he possesses a biological implant that cybernetically modulates his behavior for a specific purpose. He was designed to further Morgan's purposes and grant Morgan access to Verb's invention (Shiner, *Frontera* 81). In the novel's final chapter, however, Kane gives Molly (and by extension Frontera Base) control of

Verb's invention instead (176). The conclusion of the novel is, thus, not the cybernetic purpose that Kane's implants were created to provide but an emergent accident.[19] That emergent accident brings about the "new order" and the realization that Earth needs to peacefully coexist with Frontera Base (177). As such, this accident can also be interpreted as a *positive* event. In such cases, localized order is poststructurally produced.

One of poststructuralism's most famous documents, Derrida's "Sign, Structure, and Play," positively invokes "Nietzschean *affirmation*—the joyous affirmation of the play of the world . . . offered to an active interpretation" (369). Derrida presented this "interpretation of interpretation" as an opposite to the "structuralist thematic of broken immediacy. . . . [that] seeks to decipher, dreams of deciphering, a truth or an origin which escapes play and the order of the sign, and which lives the necessity of interpretation as an exile" (369-370). Verb's shifting name and ontological status hint at a similar paradigm, as does the ambiguous role played by Kane's cybernetic implant. The play of the sign, however, necessitates that one carefully considers how a reader should interpret the word "cyborg" in relation to this novel.

Clynes and Kline first used the word as "an abbreviation for 'cybernetic organism'" (R. Kline 332). Poststructuralism, however, teaches us that words do not have essential centers of meaning. Instead, what they mean shifts in the constant play of use. As should already be obvious, and as critics such as Robert Kline have pointed out, the term "seems like a misnomer because all organisms are cybernetic in that they interact with the world through information and feedback control" (332). Wiener wanted to build machines that operated more like biological organisms. As Cavallaro puts it, "central to research in the field of cybernetics is the idea that, if the human body can be conceived of as a machine, it is also possible to design machines that simulate the human organism" (12). Clynes and Kline's use of "cyborg," however, diverges from

the above-mentioned understanding in that it refers to "a *cybernetically extended organism*—an organism extended by means of cybernetic technology" (R. Kline 332). In other words, something like a "rat [that] has under its skin the Rose osmotic pump . . . designed to permit continuous injections of chemicals at a slow, controlled rate into an organism without any attention on the part of the organism" (Clynes and Kline 27).

Wiener, then, discursively extended the nervous system beyond the body, and Clynes and Kline looked for a way to physically insert mechanical technology into the body. This is possible because of the way cybernetics perceives of the body as another type of machine that can, like any other type of machine, be modified with compatible components. If, however, our nervous system exists beyond our body, then cybernetic devices that interact with that extended nervous system can also be thought of as "implants." Indeed, as previously noted, our minds are *physically* altered by extended use of such devices due to the fact that we grow neural trees whose sole purpose is interaction with such machines. It is possible to develop neural wiring that is only activated when we use the machines that caused us to develop said wiring.

Given that type of logic, it is easy to see how Cavallaro can perceive "the person hooked into a computer and navigating through cyberspace, or the person developing his/her body schema through exercise equipment built with the latest technology" (51), as another type of cyborg. As Donna Haraway puts it, as a result of such poststructural semiotics and discursive understandings, "by the late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism. In short, we are cyborgs" (150). Given the poststructural paradigm of *Frontera*, the logic of the text indicates that Verb is also a cyborg because she "studies with computers" (Shiner, *Frontera* 83). Verb cannot even contemplate what it would be like to have those computers taken away because they facilitate

"the most important thing" in her life (84). Verb is the feedback of entropy, affirmation of genetic indetermination, a fruitful accident, emergent biological posthuman, and cybernetically extended organism—a cyborg.

When one maps my understanding of this type of paradoxical, cybernetic/poststructural logic to "Freezone," "The Gernsback Continuum," and "Tales of Houdini," it becomes clear that they too are filled with post-apocalyptic, posthuman cyborgs: entities that can be called cyborgs not in the literal sense of an organism whose body is extended via machines integrated underneath the boundary of the skin, but organisms whose body is extended via machines integrated into an understanding of the body whose boundaries have already been extended via theoretical discourse. "Freezone" is a standalone excerpt from *A Song Called Youth*. Like *Frontera*, "Freezone" features non-teleological components in its story that suggest a poststructural paradigm. For example, the story begins in Freezone. This location is like Sterling's description of an interzone. Not only does the street find its own use for things (in a non-teleological manner) in the Freezone, but the location is a repurposed object in and of itself: "Originally, Freezone had been just another offshore drilling project" (Shirley, "Freezone" 139). As a result of a terrorist attack known as the "Computer Storage Depression" (140), or CSD, however, "the affluent . . . . didn't feel safe in the States" (141). Seeing an opportunity, a "Texas entrepreneur" bought and transformed the rig into an area that "dealt in pleasant distractions for the rich in the exclusive section and—in the second-string places around the edge—for technickis from the drill rigs" (141-42).[20] The businessman, having the wealth and power to control discourse, is able to emergently change the non-teleological and contingent meaning of the oil rig in response to a hostile attack designed to harm the affluent. Freezone is like the

"enclaves in the States where you could get lost in media churn" (141). If one agrees that the text possesses a poststructural paradigm, everyone in Freezone is a cyborg.

The story reinforces that reading by stylizing certain types of interaction in explicitly cybernetic terms. For example, the place is a haven for "drugs styled to fit the fashion. Excitative neurotransmitters of all kinds" (144), or purposive neurological modification via narcotic substances not unlike those made to the above-mentioned cyborg rat. Music, too, is given a cybernetic quality not unlike narcotic neurotransmitters: music produces "a social chemical reaction" (155). In fact, the story's rare, explicit cyborg is a "wired act. . . . A dancing mannequin . . . . [with] a single chrome electrode that activated the pleasure center of the brain" (145), a musician. The use of drugs and music in *Freezone* make its populous cyborgs.

"The Gernsback Continuum," despite its lack of explicit posthumans, has the most explicitly post-apocalyptic (and thus poststructural) cyborgs of any of these stories. Sterling called it a "clarion call for a new SF esthetic of the Eighties" (*Mirrorshades* 1). The story is about an individual who experiences "semiotic ghosts" (Gibson, "The Gernsback Continuum" 7). In other words, hallucinations of an "alternate America: a 1980 that never happened" (5). He experiences these waking dreams as a result of spending too much time trying "to photograph what isn't there" (4), or consuming architectural media relating to "the future" (4) that never was, the "architecture of broken dreams" (5). Media influences this photographer as drastically as any drug or musical experience in "Freezone." Thus, the photographer is also a cyborg in a poststructural sense. This sense is particularly apropos as its semiotic sensibility revolves around the notion of multiple futures coexisting in space through neurotic influence and discourse. Moreover, the world the photographer actually exists in is not the "perfect" (8, 11) world of this alternate America, nor is the story about an attempt to enter into or remain in the teleological

promise of perfection. On the contrary, the photographer uses “really bad media” to “exorcize” his “semiotic ghosts” (10). To the photographer, “condensed catastrophe,” entropic chaos, is preferable to Gernsback’s continuum of perfection (11), but the photographer in the story is still a cyborg because of his ability to enter into feedback with Gernsack’s continuum.

“Tales of Houdini” is far subtler in its posthuman subject matter than Rucker’s *Software*. The short story starts “at four in the morning, July 8, 1948” (Rucker, “Tales of Houdini” 43). Considering the fact that Wiener’s first edition of *Cybernetics* was published in 1948, the date is suggestive. One of Houdini’s tricks involves him escaping potential death caused by a “B-15 bomber” flown by “the most decorated World War II Pacific combat ace” (44). Considering the role that the anti-aircraft turret played in producing *Cybernetics*, this too is suggestive. Houdini, however, does not use such technology to shoot down a bomber. Instead, he finds a way to escape a “coffinlike bomb cradle” dropped from the bomber midair (45). That being said, symbolically speaking, the phrase “coffin like” is suggestive of death, and Houdini does still use his ability to escape death dropped from a bomber. This is congruent with the purpose behind Wiener’s *Cybernetics*: even if Houdini is not literally shooting down an Axis bomber, he is still using his ability to successfully escape the entropy of death dropped like a bomb from a WW II bomber flown by a WW II combat ace. Houdini uses cybernetic abilities in a manner that makes him a cyborg as well.

One should moreover keep in mind, despite the text’s literal deviation from the expectations of a cyborg character, that, like “The Gernsback Continuum,” “Tales of Houdini” is about the effort to create a media-text: “The idea is to get a priest, a rabbi, and a judge to be on camera with Houdini . . .” (43). Without a poststructural element, the text’s only connection to posthuman subject matter would be metatextual; for example, the specter of cybernetics is only

present via suggestive dates and references to the purpose behind cybernetics—avoiding the devastation caused by WW II bombers. The story does, however, trouble efforts to avoid the consideration of the play of the sign when interpreting it due to a poststructural attitude. For example, it features a cast of characters who seem to be associated with a structural or else teleological approach to meaning. Judges are classically associated with something akin to Derrida's description of the drive "to decipher . . . a truth or an origin which escapes play" ("Sign, Structure, and Play" 369): they oversee a verdict.[21] The priest and the rabbi are aligned with the concept of teleology due to the fact that the Judeo-Christian religion is an important source of teleological paradigms via such texts as The Revelations of St. John the Divine. These characters, however, are unable to give any meaningful predictions about Houdini's death-defying acts (Rucker, "Tales of Houdini" 46).

Houdini's final escape troubles their ostensible alignment to teleology. Houdini attempts to escape a cylindrical hole in the ground while handcuffed, locked in a cylindrical tank of freezing water, and subjected to an atomic detonation (48-49); his death seems preordained. Houdini, however, escapes in "a white convertible" (49). None of the witnesses can, or even try to, explain his survival. Moreover, the historical context of the story controverts the purposive goals that, according to the narrative, drive Houdini to participate in the production of the film. Houdini promises his mother that he will "use the money to open us a little music shop" (46). After that, there will be "no more magic" (46). In the real world, however, Houdini died on October 31, 1926 in Detroit Grace Hospital. He was sent to the hospital directly from the Garrick Theater (also in Detroit) on October 24, 1926 after his last living performance. In other words, not only did Houdini never give up the practice during his lifetime, but by 1948 he was already dead. In the story, Houdini's existence is inexplicable.

The story's use of the date 1948, in effect, is not only suggestive of *Cybernetics* but also transcendent promises regarding immortality made on the foundation of that text. As previously noted in "Playing with Posthumanism," apocalyptic posthumanism teleologically promises that cybernetic technology can provide humans with a transcendent solution to death. I have already described how this promise is explicitly modeled by *Software*. *Neuromancer* features a character named Dixie Flatline who is a digital construct of his dead namesake (Gibson, *Neuromancer* 49). Moreover, the novel's titular AI purportedly has the ability to "call up the dead" (244). "Freezone," and by extension *A Song Called Youth,* explicitly features a reference to the "Immortality Treatment Elite" (Shirley, "Freezone" 162 and *A Song Called Youth* Kindle Location 2102). *Frontera* may not present a world in which personas are downloaded, as patterns, into digital databases, but Kane's implant, ostensibly used to save his life, leads him to believe that all matter is part of an immortal pattern that "survives" (Shiner, *Frontera* 150). "The Gernsback Continuum" is a semiotic *ghost* story that, as has already been summarized, immortalizes failed dreams through media induced hallucinations. "Till Human Voices Wake Us" is the least obvious example, but even it features a nominal connection through its "phantoms" genetically created for the purpose of building (ostensibly) better, unimaginable futures (Shiner, "Till Human Voices Wake Us" 134, 137). Houdini's constructed, mediated record of repeated successes at escaping death in "Tales of Houdini," including his real-world death in 1926, immortalizes the character, aligning the representation of Houdini as a type of, theoretically speaking, posthuman as well; the character "Houdini" is no less of a construct escaping its referent's real-life death than Dixie Flatline.

One might be tempted to interpret the story as a battle between the religious teleology of the rabbi and the priest pitted against an equally teleological immortality promised by

apocalyptic futurism, which one could argue is symbolically represented by the implications of the story's media technology. This, however, does not explain the role of the judge. Moreover, that interpretation is further contradicted by the addition of a scientist, who is "a dead ringer for Albert Einstein" (Rucker, "Tales of Houdini" 48), to the aforementioned panel of ostensible teleologists. The predictive capabilities of science are also no match for Houdini's final trick. The scientist "pushed the button" (49), but Houdini does not die. This would seem to suggest that, despite the text's reference to the transcendental promises made on the grounds of supposedly cybernetic abilities, Houdini is not representative of the sort of scientism practiced by apocalyptic futurism.[22]

"Tales of Houdini" presents Houdini as having survived his own death, but with all the prior context in mind, to accept that surface presentation is to ignore Houdini's own historic skepticism regarding the presentation of life after death in the actual world. In his day, Houdini was famous for "anti-Spiritualist agitation" (Doyle 6) and was known as "the greatest medium-baiter of modern times" (Doyle 1). To read the short story as a battle between supernatural and scientific teleology is to ignore the way it lumps the scientist in its narrative into the same panel as the rabbi and the priest.

The allusions provided by the story's coterminous setting with the original publication of Wiener's *Cybernetics*, its reference to World War II bombers, and its focus on media technology support the argument that Houdini is a type of immortal cyborg, but only if one's interpretation uses the poststructurally inflected theory found in such work as Haraway's "Cyborg Manifesto." Rucker's Houdini is a *discursive* cyborg, which is to say that he is an example of a type of cyborg that challenges the notion of a cyborg as a technologically extended organism in its essence. In fact, the very tools used to construct his character as such are subversive to the

notions of teleological certainty that underpin many of the concepts his character and claims about technological extension both allude to. Houdini is thus presented in terms that mirror those framing Verb in *Frontera*.

Postmodern Literature

Cyberpunk is eminently postmodern. The manner in which "Freezone," "The Gernsback Continuum," and "Tales of Houdini" connect to the imagery and topics of *Schismatrix*, *Neuromancer*, *Software*, the larger body of *A Song Called Youth*, and "Till Human Voices Wake Us"—through the common qualities *Frontera* shares with them all—helps to explain why, despite confusion surrounding cyberpunk's definition, it is typically a matter of agreement that, as Harper claims, the genre is "postmodern literature" (400). According to Jameson, the safest way to conceptualize the postmodern is as "an attempt to think the present historically in an age that has forgotten how to think historically in the first place" (*Postmodernism* ix). He goes on to describe the concept in terms of a drive to look for the "telltale instant after which [an ambiguous] *it* is no longer the same" (ix, emphasis added). Postmodernism can be thought of as an awareness regarding the collapse of signification.

This description suggests postmodernism is also a useful tool for the purpose of rebuilding a discursive history after something like the post-apocalyptic environment wrought by poststructuralism. This should not be too surprising, as many of the most important names in poststructuralist theory are also important names in philosophical postmodernism. In fact, the *Stanford Encyclopedia of Philosophy* writes, "the term 'postmodernism' first entered the philosophical lexicon in 1979, with the publication of *The Postmodern Condition* by Jean-

François Lyotard" (Aylesworth). This connection between poststructuralism and postmodernism is so strong that Jameson claims that poststructuralism is one of many "competing formulations" that proved to be "unsatisfactory" due to its inability to capture the totality of the postmodern condition outside of poststructuralism's specific and rigid "area of provenance" (*Postmodernism* xiii).

In any case, *The Postmodern Condition* is no less interested in the influence of technology on its titular condition than *The Inhuman* is in connecting various philosophic and technological issues related to being human.[23] According to Lyotard, society's theoretical and material model under the postmodern condition is cybernetics (*The Posthuman Condition* 11). Jameson does not disagree with Lyotard's assessment and also frequently references technological influence as an important factor to the condition of late-stage capitalism, even if he does frame technology as a "figure for something else" (*Postmodernism* 35).[24] This commonality marks another statistically prevalent trope in debates about cyberpunk: the conclusion that it has an important relationship with technological issues connected to information exchange and phenomenal mediation.[25]

This set of observations and interpretations may seem, if summarized in a reductive manner, to place technology at the center of cyberpunk's mode of being. Yet, after Dozois's *Washington Post* article thrust the term "cyberpunk" onto the Movement, Shiner complained that he "was also uneasy with Gardner's emphasis on technology" ("Inside the Movement" 19). He partly blamed the "widening gap" between his vision of the genre and technology heavy versions on "Sterling's rhetoric" (22). Shiner expressed more interest in a "a rock-and-roll quality" (21). To Shiner, cyberpunk is not about "corporate mercenaries, wetware implants, or orbiting space colonies" (21). His critique is fair, even if *Frontera* does contain those images. Technology, in

and of itself, would not create the kind of tension I have been outlining in *Frontera,* "Freezone," "The Gernsback Continuum," or "Tales of Houdini." That tension is created as a result of the simultaneous presence of certain cybernetic technologies and poststructural qualities whose juxtaposition undercuts the values that inform the promises made by the same technologies that the stories allude to.

The tensions I have attributed to *Frontera,* "Freezone," "The Gernsback Continuum," and "Tales of Houdini" all exhibit an attempt to think through a problem that destabilizes not only history but the ontology of all the entities that populate their stories; their narratives are marked by cyborgs that are neither recognizable as the entity Clynes and Kline historically used the term to describe nor teleologically purposive. Those four stories, however, are not the only Movement texts in my selection to represent such tensions. Ultimately, the posthuman "totems" of *Software, Neuromancer, A Song Called Youth,* and "Till Human Voices Wake Us" prove to be just as invested with similar tensions, especially in regards to their use of cyborgs, cybernetics, and their allusion to futurist promises of transcendence.

For example, some of the factions in *Software* might claim that "the pattern is all that counts" (Rucker, *The Ware Tetralogy* 6), but the events in the text suggest that the claim is reductive and inaccurate. According to Wagstaff, "Thhey arre kkillinng peoplle jusst to gett theirr brainn patterrns" (7). In fact, even when a robot mind is moved to another body, "No two arrangements of circuit cards can be exactly the same . . ." (14). Stanny/Sta-Hi explicitly states that the result is not immortality (22, 49). This destabilizes Cobb's cyborg transformation.

Despite the fact that Cobb does not agree with Sta-Hi based on "the principles of robot consciousness" (23), after Cobb has his brain surgically removed and dropped "into something that looked like a bread-slicer connected to an X-ray machine" (30), his personality and behavior

change.[26] These shifts are so drastic that even Cobb cannot tell whether his old personality or a robot entity (known as Mr. Frostee) is in charge of his behavior (35). Before his posthuman transmutation, Cobb values the concept of freedom. Cobb, for example, is responsible for giving the robots free-will and causing them to revolt against humans because he "didn't want to father a race of slaves" (24). After his posthuman transmutation, Cobb's purposive goals converge with the robot faction responsible for his transformation. Suddenly, Cobb supports the "basic plan" (45) that all humans should merge with robot consciousnesses so that they can become "a new and greater being" (42). Considering the fact that Cobb's new goal leaves the taped minds of humans subservient to a robot overlord who decides when a person gets "their own robot-remote body" (20) and when to "cut [a taped mind] off entirely" (43), Cobb's simulated drives exist in stark contrast to his original, ethical paradigm.

Cobb's destabilization is mirrored by the evolutionary qualities of the story's robots. The robotic organisms are cybernetic. They are also, however, built to incorporate an evolutionary principle based on "Selection and Mutation" (24). This mutation is not presented in the same manner as the teleologically controlled promises made by apocalyptic posthumanism. Instead, they are designed to include a "randomly evolving process" (24). While Cobb may have wanted that process to result in the robots developing free-will, and while certain factions in the text do believe that "nothing is truly random" (44), the shifts in Cobb's personality suggest that nothing is truly predictable either. Whether Cobb survives the process is a matter of poststructural interpretation that undercuts any notion of teleological certainty in his survival past the surgical process enacted on him.

The text makes heavy use of a postmodern style alongside its content to rhetorically problematize conclusions about Cobb's new ontic status as well. For example, in "Chapter

Sixteen," Cobb's new consciousness is represented in terms as diffuse as what Marjorie Perloff calls *radical artifice* (Perloff xi). Take the following paragraph, for example:

> This sort of problem, however, was only a small part of Cobb's confusion, only the tip of the iceberg, the edge of the wedge, the snout of the camel, the first crocus of spring, the last rose of summer, the ant and the grasshopper, the little engine that could, the third sailor in the whorehouse, the Cthulhu Mythos, the neural net, two scoops of green ice-cream, a broken pane of glass, Borges's essay on time, the year 1982, the state of Florida, Turing's imitation game, a stuffed platypus, the smell of Annie Cushing's body, an age-spot shaped like Australia, the cool moistness of an evening in March, the Bell inequality, the taste of candied violets, a chest-pain like a steel cylinder, Aquinas's definition of God, the smell of black ink, two lovers seen out a window, the clack of typing, the white moons on fingernails, the world as construct, rotten fish bait on a wooden dock, the fear of the self that fears, aloneness, maybe, yes and no… (Rucker, *The Ware Tetralogy* 30)

Following the word "confusion," the paragraph is no longer written in lucid syntax. Instead, its increasingly random phrases look like those found in the types of poems Perloff describes as "unnaturally *difficult*—eccentric in its syntax, obscure in its language, mathematical rather than musical in its form" (Perloff xi). There are striking similarities between Rucker's paragraph and the text of a poem like Steve McCaffery's *The Black Debt.*

Such radical artifice is, as Perloff explains, reflective of a type of poetry that must "position itself, not vis-à-vis the landscape or the city or this or that political event, but in relation to the media that, like it or not, occupy an increasingly large part of our verbal, visual, and acoustic space" (xiii). Turning to the research of Richard A. Lanham, Perloff reiterates Lanham's

statement that "digitized communication is forcing a radical realignment of the alphabetic and graphic components of ordinary textual communication" (Lanham 265 and qtd. in Perloff 16). Because of our ability to "'transform' what is usually thought of as prose into what is usually thought of as poetry" via the media interface of word processing, "the textual surface has . . . become what Lanham" (Perloff 16) describes as "malleable and self-conscious" (Lanham 267).

Poetry of the radical-artifice variety, Perloff argues, has responded with an aesthetic that makes use of "noise" in the sense of the vernacular of information theory (15). In other words, "the set of phenomena of interference that become obstacles to communication", but which are also "*essential* to communication" (Serres 66). This is because communication, from this point of view, only exists as a "sort of game played by two [or more] interlocutors considered as united against the phenomena of interference and confusion . . ." (66). Contemporary poetry, that is to say, has embraced and aestheticized the increase in noise created by malleable and adjustable text by embracing noise as essential to communication and producing texts filled with malleable and adjustable meanings so that "not only does the boundary between 'verse' and 'prose' break down but also the boundary between "creator" and 'critic'" (Perloff 17).

When this perspective is coupled with phrases from Rucker's paragraph such as "Turing's imitation game" and the final conclusions "maybe, yes and no," there is little to conclude that Cobb has survived as Cobb. Maybe he has survived. Maybe the seemingly random allusion to Turning's imitation game is a suggestion that Cobb is now a computer trying to fool an audience into believing it is Cobb. Maybe both possibilities are paradoxically true. Cobb's survival has become a textual interaction whose conclusion is as much a factor of the critic interpreting the text as it is of the text itself. In fact, following this passage of text (and a number of others like it), a one-word response is provided as another question: "Cobb?" (Rucker, *The*

Ware Tetralogy 30), further suggesting that it is reasonable to conclude that Cobb is no longer present and that he committed "suicide" (25) for nothing. The entire event is a "trip," both in the sense of travel and drug use, during which Cobb "couldn't tell yes from no" (41), and the reader has no more details with which to be certain about the result than Cobb.

Neuromancer may include Dixie Flatline as a character, but the simulated construct is far from alive. It is a "ROM cassette" (Gibson, *Neuromancer* 76): Read Only Memory. It has no ability to alter its own program or remember new events (78, 79). It has no ability to adapt. It tells Case, "I'm dead. . . . It doesn't [bother me]. . . . What bothers me is, nothin' does" (105). It has no ability to feel or act like a living human. It is as fictional as Rucker's Houdini. Whether Dixie Flatline is a subject or an object is ontologically unclear in any context beyond a grammatical analysis.

Neuromancer, furthermore, might claim to be able to "call up the dead," but Case turns and walks away from the offer (244). At the end of the novel, Case sees Linda, his dead girlfriend, and himself in the matrix (270-71). These are digital ghosts constructed by Neuromancer. If, however, Case is able to see his own ghost, logically speaking, whatever it is, it is not Case. Neuromancer's promise that, "If your woman is a ghost, she doesn't know it. Neither will you" (244), is implicated as being false; there is a *différance* that is lost in the translation. Neuromancer's promise is as fictional as *Neuromancer*.

The notion of an Immortality Treatment Elite, "people keeping immortality treatment to themselves because the government doesn't want the public to live too long and overpopulate the place" (Shirley, "Freezone" 162 and *A Song Called Youth* Kindle Locations 2102-03), is denigrated as "another bullshit conspiracy theory" ("Freezone" 162 and *A Song Called Youth* Kindle Locations 2103-04). The surrounding events in *A Song Called Youth* only problematize

the textual existence of the concept further. John Swenson, for example, died "unregistered in his hometown" (*A Song Called Youth* Kindle Location 1273). The character is, seemingly, brought back to life, but only as a set of "false memories" used to build a cover persona (Kindle Location 1275).[27] Nothing in the text suggests that immortality is a realistic possibility of the posthuman technology present in the text. On the contrary, in that text, posthuman technology is used, more often than not, to degrade our species. For example, the text's previously-mentioned genetic manipulation is used to build "puppies. . . . The work force of the future. . . . subhumans . . . needed to fill a certain, ah, economic niche" (Kindle Locations 11905-09). The text uses the technology featured in apocalyptic futurism as a component of its narrative, but that technology's presence only subverts futurism's promises.

One should not think of the metaphor of the "phantom" presented in "Till Human Voices Wake Us" as a simple turn of phrase because of such context. Scholars like Jack Voller have noted that cyberpunk has Romantic or Gothic qualities. One of the more important topics of interest to such texts is the concept of the "sublime." To explain the way the sublime is an important facet of Gothic qualities, Voller's "Neuromanticism: Cyberspace and the Sublime" says, "it is essential that we remind ourselves at the outset that the tradition of the sublime is, at its heart, a tradition of spiritual inquiry, an aesthetically grounded quest devoted to recovering intimations of the divine" (18). When the seventeenth century, however, discovered the infinity of the universe, the modern sublime "countered the spiritual and philosophical anxieties . . . by directly correlating the apparently infinite universe with the power and majesty of God" (19). In other words, according to the modern sublime, "infinity came to serve as the objective correlative of transcendence" (19). With the new scientific discoveries of the seventeenth century, however, the image of "infinity" took on a double meaning: "the divine or the void"

(19). Shiner's use of the word "phantom," like the other allusions to technological or mediated immortality found in Movement texts, plays on the tension between multiple meanings.

Campbell first imagines the "legs merged into a green, scaly tail" (Shiner, "Till Human Voices Wake Us" 126) in terms of a "romantic myth" (137). His relationship with his wife is in a process of dissolution: "he couldn't remember the last time they'd made love" (126). The world itself, or at least the island on which the story takes place, seems to be in a state of desolation: "The bright red of a Coke can winked at him from a coral head. He crushed it and stuck it in his belt, suddenly furious with the company and its casual rape of the island . . ." (134). The creature is described as a phantom because, from Campbell's focal point, she seems to offer him a type of supernatural, sublime escape from the cultural ennui of his deteriorating relationship and polluted environment.

Like the gothic sublime described by Voller, however, the creature is "not the romantic myth he had first imagined" (Shiner, "Till Human Voices Wake Us" 137). Voller explains that "the progressive secularization of Anglo-American culture has discovered infinity to be a source of uncertainty and disquiet, an empty crypt haunted by the ghosts of spiritual failure. It is this absence which forms the basis of Gothic and Dark Romantic sublimity . . ." (20). Certainly, despite Dr. Kimberly's promise that the creature is the result of experimentation designed to build a better "future we couldn't even imagine fifteen years ago" (Shiner, "Till Human Voices Wake Us" 137), Campbell responds by criticizing that future's praxis: "Your boats have killed the reef for over a mile around the hotel. Your Coke cans are lying all over the coral bed. Your marriages don't last and your kids are on drugs and your TV is garbage. I'll pass" (137). Dr. Kimberly's failure to provide a better future and the phantom's failure to provide a transcendental experience are a failure of Apocalyptic AI to fulfill its prophesies. The

technology's ontic qualities cannot be derived from the *telos* attributed to technology by such prophesies.

Postmodern Problems

This observation troubles claims, such as those made by Andrew Ross, that cyberpunk embraces a new "stage of 'human' development" (162) and extends "the old discourse of humanism to the realm of machine intelligence" (165)—in other words, that cyberpunk is a form of apocalyptic posthumanism. While it may include such discourse as a component of its worlds via various plot and poetic devices, the texts I have been analyzing also problematize that discourse via their poststructural qualities. On the other hand, Ross is correct when he states that cyberpunk "is often cited in technocultural contexts that are fully in keeping with the tenets of evolutionary humanism" (162). In fact, this phenomenon is so prevalent that, while "cyberpunk authors such as Gibson . . . . did little to influence roboticists directly, many Apocalyptic AI concepts reached the robotics community through [such] science fiction" (Geraci 54).[28] Ross's critique is not a definitively accurate literary analysis, but it does accurately describe the way many readers have interpreted cyberpunk.

The odd juxtaposition between the ability to read cyberpunk as a force that destabilizes teleological, transhumanist promises and its frequent reception as a force in keeping with those promises speaks to a quality that has characterized academic investigations of the genre since its inception. Indeed, these disagreements are often framed around an ongoing debate about whether meaningful postmodern critique is theoretically possible. The details of this disagreement are important as they represent a fundamental schism regarding not only the value of cyberpunk as a

genre but the beliefs that define "value" insofar as the word is used in scholarly analyses of cyberpunk.

Csicsery-Ronay claims cyberpunk "is so slick and global it fuses . . . [everything, leaving one with no] place to stand" ("Cyberpunk and Neuromanticism" 266). In other words, the text abolishes "critical distance" in the same way that Jameson claims postmodernism does ("Postmodernism" 85-88 and *Postmodernism* 48), and as a result, all forms of "cultural resistance" are "disarmed and reabsorbed by a system of which they themselves might well be considered a part, since they can achieve no distance from it" ("Postmodernism" 87 and *Postmodernism* 49). Csicsery-Ronay describes cyberpunk narratives as "stances/myths of bad faith . . . . in a world of absolute bad faith, where the real and the true are superseded by simulacra and the hyperreal" ("Cyberpunk and Neuromanticism" 277); he calls cyberpunk the "apotheosis of the postmodern" (277).[29]

Critics, however, have not come to a consensus regarding such claims. McCaffery, for example, responded to Csicsery-Ronay's argument by writing (in 1988), "cyberpunk represents not only a sort of *apotheosis of postmodernism* . . . it is also currently producing some of the most important art of our time" because of the way "it has found a means to mirror its era's central motifs, obsessions, and desires (and render these concretely, through the dominant cultural imagery)" ("The Desert of the Real" 8, emphasis added). This appears to be a response to Jameson's claim that postmodernism cannot provide a "cognitive map." In *Postmodernism, or, the Logic of Late Capitalism*, Jameson posits that postmodernism's "ultimate historicist breakdown" makes it impossible to "imagine the future at all, under any form—Utopian or catastrophic" (286).[30] Instead, according to *The Logic of Late Capitalism*, postmodern science fiction such as cyberpunk provides "an outright representation of the present" (286).[31] The

arguments regarding such claims become more complicated the more one attempts to unravel them.

Ross picks up and builds on Csicsery-Ronay and Jameson's claims, arguing, "Science fiction writers, more than those of any other popular genre, have been passionately concerned about their social responsibility to imagine better futures" (Ross 142). In describing the surrounding cultural context of the genre, however, Ross notes, "punk culture's brilliant anti-utopian influence . . . the entropic, post-apocalyptic, ragtrade look" that it is so famous for, and which is frequently found in music videos possessing an ostensibly futuristic backdrop, is part of an aesthetic that is ultimately not futuristic at all, as it "could be found in any inner-city environment" (144). In a roundabout manner, he ends up indicting the genre as a version of SF that does not fulfill its utopian responsibility because of its failure to imagine a better inner-city space and its choice to instead revel in urban detritus; he accuses cyberpunk of creating "alternative cultures" on "futurist principles without any attention to the past" (145).

Where Ross takes Csicsery-Ronay and Jameson's side in this debate, however, critics like Porush or Bukatman have sided with McCaffery. Bukatman, for example, does not contradict Jamesonian notions about late capitalism's effects on space or history, but he does argue that postmodern science fiction such as *Neuromancer* is an effort to render "the invisible visible" ("The Cybernetic (City) State" 47) by returning "the human (and its fate) to the center stage of the postmodern drama" (60). In other words, Bukatman does not value space in the same way that Ross does and argues that the genre has an important psychological and social focus instead. Bukatman concludes that "those who argue that recent science fiction has become too dark, too negative, have missed the . . . impulses which lie at its cybernetic core" (60).

These types of disagreements have not abated in recent publications. On the contrary, the debate has only grown in scope. As Sherryl Vint's 2007 publication *Bodies of Tomorrow: Technology, Subjectivity, Science Fiction* notes, "part of the reason that cyberpunk has been the focus of so much critical discussion can no doubt be attributed to the wide range of assessments the sub-genre has provoked" (103). In fact, it has become a fairly common trope of academic texts written about cyberpunk to describe those various wide-ranging assessments.[32]

These conflicting estimations of the value of cyberpunk exist, at least in part, because they have been built upon a theoretical foundation that is, since its earliest days, unstable. While Lyotard's *The Postmodern Condition* might have introduced the term "postmodernism" to the lexicon of philosophy, it is not the first text to have used the term. Hassan's "POSTmodernISM: A Practical Bibliography" clearly predates Lyotard's 1979 text with its 1971 publication, for example.[33] As Brian McHale explains, "it is not . . . clear who deserves the credit—or the blame—for coining it in the first place" (*Postmodernist Fiction* 3). Hassan is, however, among the critics McCaffery names when describing cyberpunk's relationship with postmodernism (7). Cyberpunk and postmodernism connect over the locus of an unstable theoretical foundation.

"POSTmodernISM" evaluates its titular subject ambiguously. On one hand, Hassan positions postmodernism against the type of authority and elitist orders that "may no longer have a place amongst us, threatened as we are, at the same instant, by extermination and totalitarianism" ("POSTmodernISM" 29). He describes postmodernism as an aesthetic form that includes an "enhancement of life in certain anarchies of the spirit, in humor and play, in love released and freedom of the imagination to overreach itself, in a cosmic consciousness of variousness as of unity" (29-30)—what McHale summarizes as "a stage on the road to the spiritual unification of humankind" (*Postmodernist Fiction* 4). On the other hand, Hassan also

questions whether "the Anarchy of Postmodernism" fulfills a "deeper response, somehow more inward with our destiny", and concludes that he "can not believe this to be so" ("POSTmodernISM" 29). Hassan pessimistically "wonders if any art can help to engender the motives we must now acquire," but he also explains that such issues "are not assertions; they are open questions" (30).

In this vein, postmodernism (and posthumanism) can be thought of as a term that, in its early inception, was used to help map a proposed direction for art, thought, identity, and possibly action, but which was obviously not a solution in and of itself. It was a tool of analysis, an open question, not a proposed solution. In many ways, Jameson's critique that "cognitive mapping" has "ceased to be achievable" (*Postmodernism* 408-09) is similar to Hassan's fear that art can no longer help to engender healthy motives. Ultimately, Jameson claims that "cognitive mapping" is a code word for "class consciousness" (417-18) and notes that the process "is an integral part of any socialist political project" (416) (to which Jameson is obviously sympathetic). His overarching fear is that postmodernism makes it impossible to engender (what he believes are) healthy, socialist values. For Jameson, Hassan's tool is broken.

Estimations of postmodernism's value have been as varied as estimations regarding cyberpunk, perhaps usurpingly given the former's relationship to the later. Linda Hutcheon, for example, has famously argued against Jameson's view by claiming postmodernism is "resolutely historical and inescapably political precisely because [it is] parodic" and "postmodernist art offers a new model for mapping the borderline between art and the world" (180). Following a thought process that she takes from David Caute, Hutcheon concludes, "if art wants to make us question the 'world,' it must question and expose itself first" (206). The crux of the issue

between these varying interpretations is whether postmodernism affords an analytic tool that can do more than question its subject matter in a never-ending cycle.

Negative estimations of cyberpunk do tend to share a common quality. Ross's criticism that cyberpunk is irresponsible due to its inability to imagine a utopian map for a better urban space is written in a rhetorical vein built upon Jameson's arguments.[34] The same is true of Csicsery-Ronay's critique of cyberpunk as a set of myths of bad faith that "completely ignore the question of whether some political controls over technology are desirable" ("Cyberpunk and Neuromanticism" 277). These types of critiques are elegantly symbolized by Claire Sponsler's criticism that "if one of the aims of cyberpunk is to give narrative and symbolic coherence to our desires, fears, and anxieties about technological trends, then it falls seriously short of narrating new patterns of human action within this radically changed landscape" (641). Cyberpunk is critiqued on the grounds of a failure to provide solutions.

Positive evaluations tend to instead focus on the genre's ability to ask the right questions. McCaffery's position that cyberpunk asks "obviously important questions that not only have no simple answers but are difficult (maybe impossible) to formulate in conventional artistic terms" (8) is evocative of Hutcheon's claims about postmodernism. The pertinent question, however, is whether that makes cyberpunk a cognitive map or a cartographic tool that precedes the possibility of a map. Indeed, critics like Chun have responded to claims such as those made by McCaffery by asking questions like, "What exactly makes cyberpunk a form of cognitive mapping in the first place?" (176). In short, they seem troubled by the notion that a "question" can be called "right" if no answer is provided.

If we think of a cognitive map as a clear set of pronouncements regarding a text's core themes and topics, then my work in this chapter indicates that cyberpunk's first wave texts fail to

provide a cognitive map. On the one hand, it is clear that cyberpunk can be read in a manner that destabilizes the old discourse of humanism. On the other hand, in order to destabilize that discourse via poststructural techniques, the genre often uses plot devices that, at least on their surface, literalize that old discourse in the realm of machine intelligence. Anyone unfamiliar with poststructural techniques can interpret the text in a manner informed by that literalized discourse, and Geraci's fieldwork provides real world examples of such interpretations influencing the direction of technological research.

This model of a cognitive map, however, could also be described as a successful, singular, hermeneutic interpretation authorized by a particular author. The above model would suggest that we could only call a text a successful cognitive map if it provides a singular, reasonable course of understanding and/or desirable action to all readers. Considering the body of scholarship currently in circulation, it is difficult to imagine that *any* text could ever be called a cognitive map given this constraint. As early as 1960, Wolfgang Iser described the interaction between a reader and a text in terms of a message transmitted in two ways so that "the reader 'receives' it by composing it" (1524). Iser describes a "central gap in our experience" between the reader and the text because "pure perception is quite impossible" (1525). Moreover, unlike face-to-face interaction, Iser admits that a "text cannot adapt itself to each reader it comes in contact with" thus making it impossible for a reader to "learn from the text how accurate or inaccurate are his views of it" (1526). The critiques leveled at both cyberpunk and postmodernism indicate that *nothing* is a cognitive map in the era of late-stage capitalism.

Paradigm of a Solution

I grant that Iser does end up claiming that "participation in the text" is something akin to "the construction of *another's* meaning" and that, as such, "it is natural to speak not of what a text says, but of what an author means . . ." (1532). Thus, *Iser's* final conclusion, which is admittedly only related to postmodernism in a tertiary sense, does not contradict the possibility of a cognitive map. Critics such as Roland Barthes and Stanely Fish, however, have made it difficult to accept Iser's conclusion in the face of his observations. Today, it is somewhat obvious that in the process of reading one must navigate various lacunae that necessitate an interpretation on the part of the reader. Where Iser tries to attach this process to an author's intention, however, Fish notes that "two critics with opposing interpretations" (340) can build such interpretations in a way that leaves "no [textual] basis for deciding between them" (340). In such cases, the only interpretive agreement capable of validating some interpretations as opposed to others relates to "the ways of *producing* the text" (342, emphasis in the original). Fish's use of the word "producing" references not the literal act of writing but rather "interpretive strategies" (347). Fishes counterpoint is taken up by Barthes as well.

Fish's claims are reminiscent of Barthes's statement that "the Text is not the decomposition of the work, it is the work that is the imaginary tail of the Text; or again, *the Text is experienced only in an activity of production*" ("From Work to Text" 1327, emphasis in the original). If one accepts this line of reasoning, then the interpretive conflict surrounding the first generation of cyberpunk texts should be thought of as a battle of discourse seeking to authorize particular interpretations by way of extratextual agreements. That, however, would mean that a cognitive map is never the domain of the work. Rather, if a cognitive map can be created, it is an activity of production found in what Barthes called "the Text." The cognitive map *is* an interpretive agreement. The work is merely a tool in the production of that agreement. In that

vein, the positive evaluations of cyberpunk basically claim that the texts analyzed in any given study provide a reader with the tools required to engage in the process of creating a cognitive map instead of trying to frame the work as a cognitive map in and of itself.

This is the discursive context into which *Schismatrix* posited the noun "posthuman." The text asks questions about the ontic nature of that term, but it does not provide a clear cognitive map with which to understand the term. Instead, it provides the tools with which a reader might, during the process of interpretation, attempt to build a cognitive map. It is obvious that *Schismatrix* contains various posthuman ideas. These are no less symptomatic of deeper, underlying topics in *Schismatrix* than any of the other first-wave texts I have examined. *Schismatrix* explicitly uses the word "cybernetic" to describe various processes in the text eight times.[35] These references are all used to describe technology whose capabilities are improved via Wiener's non-linear, purposive feedback loop. Cybernetics are a coordinate in Sterling's formulation of the posthuman.

It is true that this coordinate creates a false binary between biological and technological processes, as every single use of the word "cybernetic" in the text is made in reference to electronic technology and implants. This, however, is most effectively read as the text's comment and reflexive awareness of the way Clynes and Kline's cyborg differentiated between an unmodified biological organism and a cybernetically modified organism: the text's two uses of "cybernetic precision" (Sterling, *Schismatrix Plus* Kindle Locations 164, 266) explicitly describe operations involving space flight; the cybernetic modifications of the Mechanists are explicitly purposive in terms of "the gifts of survival" in the extended environment of Earth's solar system (Kindle Locations 4839-41). The false binary is a rhetorical strategy.

The human drive to migrate and survive in new environments, in fact, both in terms of physical and ideological survival, is an obvious topic of the text as evinced by the numerous uses of the word "survival" and those uses' surrounding context.[36] These uses reference not only Mechanistic cyborgs but also the biologically engineered Shapers. In fact, by the end of the text, it is made clear that survival is about much more than the modifications of either faction:

> The gifts for survival were not found only in the sharp perceptions of the Shapers, with their arsenals of brain-stretching biochemicals, or the cybernetic advances of the Mechanists and the relentless logic of their artificial intelligences. The world was kept intact by the fantastic predilection of the human mind for boredom. (Kindle Locations 4839-42)

Survival is tied to the human desire to see and experience new things, even when that means restructuring ourselves into entities "like the Spectral Intelligents, the Lobsters, and the Blood Bathers" (Kindle Locations 4844-45).

Schismatrix's titular entity is the dream of "a posthuman solar system, diverse yet unified" (Kindle Locations 2676-77), in that very context. *Schismatrix* agrees with the writing of Hassan: "The future belongs to Posthumanism. . . . Not to nation-states, not to factions. It belongs to life . . ." (Kindle Locations 4271-72). In *Schismatrix,* "Posthumanity's bigger than [the Mechs and Shapers]" (Kindle Location 4715). It is also, however, bigger than teleology. The Shapers are no different from the Mechanists in terms of their belief in a final cause. According to the Shapers, one cannot be a "true Shaper" if they are genetically "unplanned" (Kindle Locations 1805-06). The *telos* behind any given faction or clade's philosophy of survival, however, is constantly described by the text in terms of failures that produce unexpected, emergent results. The schismatrix of a posthuman solar system is built on emergent schisms.

Supporting examples are prolific. In the beginning of the text, Lindsay, Vera, and Philip plan a grand act of suicide in the name of their ideology to "change the Republic when all else was hopeless" (Kindle Locations 220-21). Lindsay thinks that the only "consolation for losing Vera" was the knowledge that "Philip would survive to carry on the work" (Kindle Locations 221-22). Instead, for the remainder of the text, Philip becomes Lindsay's primary antagonist. Pongpianskul attempts to build a "preserve for humanity and the human way of life" (Kindle Location 4787). Instead, he "ended up with a huge stage set full of tourist shills and Cataclyst fry-brains" (Kindle Locations 4787-88). As Pongpianskul states, "Things never work out the way you plan them" (Kindle Location 4764). In fact, that is why "the Mechs" and their cybernetic processes "have [not] taken over long ago" (Kindle Locations 4764-65). Humanity does not evolve along the genetically planned lines of the Shapers either. Despite the best laid plans of Mechanists and Shapers, humanity fractures into "multiple humanities [that] hurtled blindly toward their *unknown* destinations" (Kindle Location 4846, emphasis added).

Like the other first-wave texts, *Schismatrix* presents its content in poststructural, *semiotic* terms. This is most evident when Lindsay finds himself on a spacecraft called the "Red Consensus" (905). The ship doubles as a government: "the Fortuna Miners' Democracy" (Kindle Location 670). Its crew double as "President" (Kindle Location 669), "Speaker of the House" (Kindle Location 673), "Senators" (Kindle Location 1154), "Chief Justice of the Supreme Court" (Kindle Location 1177), "Second Justice" (Kindle Location 1256), and the like. They are both people living in a spaceship and constructed *signs* operating in a government explicitly conceived of by the text as a *semiotic* system (Kindle Location 1197). In *Schismatrix,* semiotic systems and environments overlap in ways that give the systems "an almost physical pressure" (Kindle Location 1197).

While the above example is the only explicit use of the term "semiotics" in the text, its use haunts many of the other elements of the narrative. For example, Lindsay's genetic, "borderline posthuman," modifications take the shape of "an entire second state of consciousness" that, when "fully operational," leave Lindsay unable to know if he is "speaking the truth" (Kindle Locations 448-51); "sincerity" becomes a "slippery concept" (Kindle Locations 451-52). "Truth," in *Schismatrix*, is an "ambitious" desire that stands separated from "sense" (Kindle Locations 3186-87). Even the "scientific method" is implicated as a failure insofar as the search for "Truth" is concerned (Kindle Locations 3186-87). These textual examples are evidence of a distinctly poststructural attitude.

The use of the word "evolve" in the *Oxford English Dictionary's* definition of "post-human," whose first use is taken from *Schismatrix*, is thus particularly apropos. A posthuman is "a hypothetical species that might *evolve* from human beings," but in *Schismatrix* it does so along non-teleological lines akin to traditional evolution, not the cybernetically reclaimed, goal-driven evolution of Apocalyptic AI. The "bionic" or "genetic" qualities the dictionary definition attributes to the word are literalized metaphors in *Schismatrix*. The text's anti-teleological, semiotic qualities make its posthumans discursive entities, not just literal ones. The text, in other words, contains the juxtapositional tension between the post-apocalyptic, anti-teleological posthuman and the apocalyptic, teleological posthuman—what would one day become the subjects of posthumanism and transhumanism. The *text* in a properly Barthesian sense provides the means for a reader to build a cognitive map, or schismatrix.

No Resolution

Nevertheless, Lindsay's final transformation "in a silver wave" (Sterling, *Schismatrix Plus* Kindle Location 5876), his experience of "Stellar cold, a melting, a release" (Kindle Location 5876), can easily be interpreted in terms of the *telos* of disembodied, transcendental immortality promised by Apocalyptic AI precisely because this tension is indicative not of an already constructed map of the text's topics but rather a tool to explore them, in a cooperative sense. If, as Iser, Fish, and Barthes once argued, text is only experienced as a constitutive and thus cooperative exercise, then cyberpunk's use of such tensions in order to explore the ontic space of the posthuman is an apropos methodology for the medium of the novel. These cyberpunk texts use the novel to play to that medium's strengths: they use the constitutional properties of interpretation to mirror the process of constituting a critical posthuman subject thus creating that subject via an ongoing process of *questioning.* After all, part of Gibson's influence was an interest in writers who "made science fiction . . . inhabit a more urban universe, a universe with more moving parts, one in which more questions could be asked (if far fewer definitively answered)" ("Source Code" xvi). By focusing on this tension as a defining trope of cyberpunk, one that must live alongside its surface aesthetic and overarching "themes," one avoids falling into the analytic problems discussed earlier in this chapter. Suddenly, the genre becomes a coherent whole that encompasses the aesthetic, topics, and historically contingent *Movement* of cyberpunk. This, however, is both the strength and the weakness of the genre.

By attacking the *telos* of apocalyptic futurism on a structural level, any individual novel must by necessity concede the *telos* of a ready interpretation. If a critic or reader desires a specific, concrete value in a novel's conclusion, they are likely to be disappointed (if not with their own interpretation, then at least with the interpretations produced by other consumers and critics). Indeed, it becomes difficult to discuss cyberpunk in terms of *themes.* Undergraduate

English students are typically taught that a theme should be discussed in terms that are more concrete than a mere topic or subject captured in a noun phrase, for such simple expressions of theme do not say "anything very insightful" (Mays 385). By conceding the *telos* of a ready interpretation, however, it is unclear how one can describe cyberpunk in terms of more robust themes. The genre's topics are clear. Thematically, however, its argument and thus final output is necessarily unclear, at least in a deductive sense, unless one discovers a method by which the structural uncertainty can be transcended. Deductively speaking, it is far from certain that such transcendence is achievable with the medium of the novel.

The shape of the "posthuman" that cyberpunk has constituted by staring into the abyss has stared back, and the key problematic discussed at the end of "Playing with Posthumanism" has inscribed itself onto the Movement in advance of that problem's philosophical expressions made after the first wave of cyberpunk. On one hand, the genre's first generation of texts have done an admirable job depicting the way cybernetic paradigms have both colonized and extended human subjectivity, thus helping to produce a society of critically posthuman characters. On the other hand, by structurally attacking *telos*, while the genre has undercut the *telos* of apocalyptic futurism, it has also made it difficult to claim that the genre is a cognitive map to *any* teleologically preordained interpretation. In terms of concrete existence, in certain spheres, the Movement has reinforced some of the very humanist concepts that it theoretically undercuts and inspired transhumanism. To fully understand cyberpunk's cultural feedback, however, one must move beyond an understanding of the genre as the temporally fixed object of the Movement and examine its evolution as a process over time. In so doing, two of cyberpunk's commonly used metaphors indicate their importance to cyberpunk's topical themes: *game* and *play*.

[1] In this case, I am using the word "themes" in a manner synonymous with "topics."

[2] As Hollinger explains, he was one of the genre's "most prolific spokespersons . . . during its heyday" (Hollinger 31). This is a common scholarly observation. Bukatman (*Terminal Identity* Kindle Locations 588-89), Catherine Harper (399), Jameson (*Archaeologies of the Future* 59, 384), David Porush (250-52), Andrew Ross (145), Shiner (21-22), Norman Spinrad (118-121), Claire Sponsler (627), and Sherryl Vint (102) all, for example, note Sterling's importance—though not always happily—as well.

[3] Bukatman has gone so far as to say that the anthology "has contributed more to the general acceptance of cyberpunk than any text besides *Neuromancer*" (*Terminal Identity* Kindle Locations 5407-08).

[4] For additional references to Mechanist implants and cyborg entities, see Sterling, *Schismatrix Plus* Kindle Locations 93, 184, 417, 480, 504-505, 762, 852-853, 949, 957-958, 1192, 3595, 3657, 4035, 4075-4077, 4841, 5378.

For additional reference to Shaper genetic modifications, see Sterling, *Schismatrix Plus* Kindle Locations 1225, 1304, 1666,1845, 1905, 2427, 2458, 2466, 2696, 2801, 2803, 2870, 2874, 4018, 4387, 5009, 5647, 5693-96, 5772.

[5] For additional context, see *The Ware Tetralogy* 2-3, 6-8, 11, 13-14, 19, 21-23, 25, 29, 34, 38, 45, 49.

[6] See *The Ware Tetralogy* 22: "Immortality. What they want to do, old man, is to cut out our brains and grind them up and squeeze all the information out. They'll store our personalities on tapes in some kind of library." For additional context, see *The Ware Tetralogy* 7, 15-20, 22-23, 29, 32, 36, 38-39, 42-45, 49-51.

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[7] Csicsery-Ronay, for example, concludes that "for cyberpunks, 'hipness is all'" ("Cyberpunk and Neuromanticism" 269).

[8] It should be noted that the examples in this paragraph are illustrative, which is to say not complete. Other critics can also be found making similar ahistorical claims. For example, Daniel Grassian claims that "J.G. Ballard, William Burroughs and Philip K. Dick" are "three seminal cyberpunk writers in their own right" (255).

[9] Gibson's original statement can be found in "Burning Chrome" (199).

[10] If folding Dick into the cyberpunk camp erases important differences between his work and cyberpunk, then that is doubly true for the conflation of Burroughs and his Beat Generation associations or a 19th century text such as *Frankenstein* with cyberpunk. Obviously, as *Frankenstein* is the first SF novel, it is possible to find common ground between *Frankenstein* and cyberpunk. Perhaps cyberpunk is "still enacting the role of Victor Frankenstein" (55), as Slusser claims. I take no issue with the claim that "Dr. Frankenstein's stunned gaze into his cyborg's face analogously anticipates a casual trade in body parts and prosthetics in . . . [a] cyberpunk future" (Schwetman 132). There are, however, important differences between Shelly's early 19th century text and the late 20th century genre that is cyberpunk, but those differences are too numerous and off-topic for me to write about them at length here.

That being said, to be fair, Schwetman admits as much. Schwetman's use of *Frankenstein* is rhetorical, and Schwetman, after making the claim, self-reflexively admits that "it is unreasonable to call *Frankenstein* the first ever cyberpunk novel" (Schwetman 129). The other examples I provided, however, do not benefit from this caveat.

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[11] It should be noted that while Gibson draws parallels between cyberpunk and "scratch music," thus making it possible to conflate the two aesthetics via the problematic logic I have outlined in this chapter, Ross goes so far as to argue that

> hip-hop, which shares the postmodernist sensibility of eclectic appropriation through technosampling and the like, is perhaps the best rebuttal of the argument that postmodern culture depends on erasing the lessons and the materiality of history; and one of our best reminders, despite cyberpunk's claim to the contrary, that alternative cultures cannot be founded simply on futuristic principles without any attention to the past. (145)

Thus, according to Ross, cyberpunk and "scratch music" (or hip-hop) should be thought of as antithetical, at least in some regards, rather than confluent.

[12] For more information, see footnote 16 in "Playing with Posthumanism."

[13] The short form *Human Use* refers to *The Human Use of Human Beings: Cybernetics and Society.*

[14] In fact, Wiener's original 1948 publication of *Cybernetics* concludes with the chapter "Information, Language, and Society."

[15] For context relating to the role of non-linear practices in cybernetics, see Wiener, *Cybernetics* viii, x, xiii, 80, 109-111, 131, 173, 178-179, 181, 199.

[16] Wiener references his work on that article in *Cybernetics* (8).

[17] It should be noted that the philosophic implications of its non-linear qualities are best summarized by "Behavior, Purpose and Teleology" when the text explains that it restricts the "designation [of teleology] only to purposeful reactions which are controlled by the error of the reaction" and thus, theoretically, separated from the concept of determinism (23-24).

[18] It should be noted that my statements apply specifically to the first order of cybernetics, which "emerged in the 1940s as a technoscience of communication and control, drawing from mathematical physics, neurophysiology, information technology, and symbolic logic" (Clarke and Hansen 2). My statements do not apply to the second order of cybernetics, or what Bruce Clarke prefers to call "neocybernetics" (2), as developed "in the work of [Heinz] von Foerster and Gregory Bateson and extended from there by Henri Atlan, Humberto Maturana, Francisco Varela, Lynn Margulis, Susan Oyama, and Niklas Luhmann" (5). The latter topic has since been historized by such scholars as Clarke, Mark B. N. Hansen, Even Thompson, John Protevi, Michael Schiltz, Edgar Landgraf, Linda Brigham, Cary Wolfe, Ira Livingston, and Fred Turner (among others). See the "Conclusion" of this dissertation for more context regarding the omission of neocybernetics.

[19] Moreover, whether those implants ever provide an increase or decrease in entropy is ambiguous. On one hand, Kane's implant operation saved his life (Shiner, *Frontera* 160). On the other hand, it was also designed to atrophy Kane's ambition (7, 125). By removing Kane's ambitions, his purposes, one could argue that the chip is "non-teleological." "Behavior, Purpose and Teleology" explains that the opposition to teleology or *purposive* feedback is "non-teleology" (24). As the cybernetic process is a teleological process opposed to entropy, "non-teleology" should probably be thought of as entropy, or at least a condition more likely to produce entropy. The intentional degradation of purpose would thus be an entropic process.

[20] In "Freezone" and *A Song Called Youth*, a techniki is another term for a member of the working class.

[21] In fact, in "What Makes Interpretation Acceptable?", Stanley Fish critiques older models of literary scholarship represented by the famous essay "The Affective Fallacy" in terms

relating to its "juridical terminology" and its "sense [of] a *legal* finding" (344, emphasis in the original).

[22] Moreover, the teleologically derived promise of transcendental immortality is also problematized by the contextual details surrounding Houdini's historic death and the fact that he spent much of the 1920s invalidating paranormal claims about life after death. Those details help authorize a non-teleological paradigm which problematizes any easy attempts to explain the significance of Houdini's symbolic role in the story in a one-dimensional manner. Houdini's death, historically speaking, became a battle of discourse between Sir Arthur Conan Doyle's belief in supernatural, teleological powers and Houdini's own skeptical attitude.

After Houdini died, Doyle tried to use *The Edge of the Unknown* to frame Houdini's death through some "remarkable points" related to the implicitly, according to Doyle, *supernatural* nature of Houdini's death (Doyle 8). That text uses the "very rare" diagnosis of Houdini's cause of death and the existence of "strange things [that supposedly] continued to happen" after Houdini's death to argue that his death could not have been a coincidence (9). Instead, coloured by Doyle's frustration with Houdini's "anti-Spiritualist agitation" (6), Doyle's put his faith in the teleological, "sad prophesy" that "disaster would befall him [Houdini] while performing before an audience in a theatre" (7).

In other words, Doyle, rather than reviewing the data free from a teleologically preordained conclusion, used *The Edge of the Unknown* to publicly *interpret* the events surrounding Houdini's death in a manner that reinforced Doyle's a priori beliefs. To do so, Doyle chose to use rarity as proof of teleological destiny in opposition to the possibility of coincidence. Doyle was trying to explain the fact that Houdini was, by Doyle's own account, "the greatest medium-baiter of modern times" (1) by rewriting Houdini's performative and

deductive capabilities with the conclusion that Houdini must have also been "a medium" (9, 18, 21). This conclusion is incongruent not only with Houdini's famous "medium-bating" but contemporary medical data as well.

The doctors at Grace Hospital concluded that Houdini's death was the result of severe medical complications relating to appendicitis. This conclusion has been a point of contention. As of 2010, "debate as to whether acute appendicitis following trauma is coincidental or causal" (Toumi 478) was still common. A "Systemic Review of Blunt Abdominal Trauma as a Cause of Acute Appendicitis" does feature the following conclusion:

> Although rare, the diagnoses of acute appendicitis must be considered following direct abdominal trauma especially if the patient complained of abdominal right lower quadrant (RLQ) pain, nausea and anorexia. Appendicitis can be reasonably attributed to trauma if the presentation was early after the traumatic event and the patient has not suffered from suggestive symptoms prior to the trauma" (482).

Thus, the verdict of Houdini's insurance company is reasonable, if rare.

[23] For additional context, see Lyotard, *The Posthuman Condition* xxv, 3-4, 6-8, 11-12, 14, 16, 28, 37, 38, 39, 44-50, 61, 63-64, 75-77.

[24] For additional context, see Jameson, *Postmodernism* xx, 6, 22, 36-38, 42, 45-46, 56, 62, 67, 69, 73-76, 89, 95, 106, 128, 147, 156, 212, 248, 275-76, 299-300, 304-05, 311, 319, 339, 377, 379, 381, 384-86.

[25] Sponsler's "Cyberpunk and the Dilemmas of Postmodern Narrative: The Example of William Gibson" has a particularly eloquent passage about the subject. After calling cyberpunk "quintessentially postmodern" due to its "exploration of the human experience within the context of media-dominated" society, Sponsler clarifies by providing a list of typically post-apocalyptic

and postmodern literary qualities found in cyberpunk texts: “a montage of surface images, cultural artifacts, and decentered subjects moving through a shattered, affectless landscape” (626-27). She then writes, due to “the way technology and material objects shape consciousness and motivate behavior [in the genre], cyberpunk would seem to square with postmodern culture as it has been amply described by Baudrillard, Jameson, and Jean-Francois Lyotard, among others” (627). Sponsler’s description is far from unique. McCaffery, for example, clarifies that the important issues which only cyberpunk seems to be dealing with include cybernetics, AI research, developments in computer technology, and “technology’s greater facility to introduce media images,” after which he explicitly links the list to postmodern theory as explained by Jameson (9).

[26] For the sake of brevity, I am keeping the examples in the body of my chapter focused on drastic shifts in personality. The text also, however, supports a number of superficial shifts that bolster my observation in regards to the more drastic changes. For example, after being transformed into a robotic posthuman, Cobb thinks, “I am me” (9), but considering the fact that he now has false memories about how he “liked to fish” with Sta-Hi (31), his claim seems more like an attempt at self-deception than an accurate assessment. This is not the lone instance of such confusion: “In his old body he had never been able to talk comfortably to garage mechanics. But now, with a random grease monkey’s face on a Sta-Hi shaped body, Cobb fit in at a filling station as easily as he used to fit in at research labs” (45). Many such examples exist in *Software*.

[27] The entity is similar to *Neuromancer’s* Armitage in that they are both false personas created to help factions from either novel achieve specific ends, but neither persona is a functional human capable of surviving beyond a limited purpose.

[28] In fact, Mar Pesce has argued that,

> for the last twenty years at least, "hard" science fiction has functioned as a "high level architecture" (HLA), an evolving design document for a generation of software designers brought up in hacker culture, a culture which prizes these works as foundational elements in their own worldviews. Hackers, energized by texts which foresaw their own emerging role in planetary culture, have come to see their "mission" as the realization of the visions brought forth from authors like Vernor Vinge, Orson Scott Card, *William Gibson*, Neal Stephenson and Greg Egan. (emphasis added)

[29] Note that Jameson calls cyberpunk the "supreme *literary* expression if not of Postmodernism, then of late capitalism itself" (*Postmodernism* 419).

[30] *Postmodernism, or, the Logic of Late Capitalism* is the 1991, Duke University Press, book-length publication that includes his 1984, *New Left Review* article "Postmodernism, or, the Logic of Late Capitalism," the text in which Jameson criticizes postmodernism for collapsing all forms of critical distance.

[31] Granted, *Postmodernism, or, the Cultural Logic of Late Capitalism* was originally published in 1989, but its life began as an article published for *The New Left Review* in 1984, and Jameson's ideas were already in circulation at the time of McCaffery's publication of *The Desert of the Real: the Cyberpunk Controversy* in 1988.

[32] For example, in *Terminal Identity,* Bukatman positions Ross's negative estimation of cyberpunk against the more positive receptions expressed by David Tomas (*Terminal Identity* Kindle Location 3053) and Allucquere Rosanne Stone (Kindle Location 3064), writing that "while Ross downgrades adolescent cyberpunk gamers, Stone describes a more sophisticated

community of readers and the reemergence of an electronic public space" (Kindle Locations 3066-67); Harper opens her "Incurably Alien Other" by positioning the negative critical reception of cyberpunk by writers like Nicola Nixon, Ross, and Samuel Delany against the positive critical reception expressed by Thomas Foster (399-400); in *Bodies of Tomorrow,* Vint positions Suvin, Csicsery-Ronay, and Ross as critics who "suggest that the subversiveness of cyberpunk lies more in its style than its substance" (102) against the positive receptions of McCaffery, Bukatman, and Hollinger (103).

[33] Hassan's text even connects postmodernism to posthumanist concepts with its statement that postmodernism features a force of "dehumanization" which "essentially means the end of the old Realism" as it is produced via a phenomenological "revision of the Self" ("POSTmodernISM" 26). Hassan explicitly states that this element of dehumanization is a move to "posthumanism" (25). Hassan also reinforces this concept when he later claims that the posthuman is "the subject of postmodern performance" ("Prometheus as Performer" 831).

[34] It should, however, be noted that Ross does not extend his verdict to all postmodernist art in general but casts it on cyberpunk specifically.

[35] For more context, see Sterling, *Schismatrix Plus* Kindle Locations 164, 175, 266, 480, 1949, 2807, 3420, 4840.

[36] For more context, see Sterling, *Schismatrix Plus* Kindle Locations 221, 301, 476, 485, 1022, 1112, 1117, 1134, 1278, 1288, 1583, 1801, 1860, 2455, 2495, 2838, 3084, 4839, 5251, 5304, 5414, 5574, 5666.

Chapter 3: Gaming the Cyberpunk Genre with Diachronic Play

The implication of *game* and *play* as concepts used by the *oeuvre* of post-Movement cyberpunk authors like Pat Cadigan, Neal Stephenson, and Kathleen Ann Goonan, and then read in feedback with *game* and *play* as used in theory about the process of interpretation, illuminates cyberpunk's greatest weakness: ultimately, if any given cyberpunk novel is an attack on the *telos* of apocalyptic futurism as described in "Play of the Movement," it will seem like an attack destined to fail, for the practice of interpretation will always allow a reader to coopt a cyberpunk text in the name of an apocalyptically futurist interpretation. A novel written in the genre can only succeed at such an attack when it is being read by someone who already cares to use its content to destabilize the aforementioned *telos.* To perceive such "failure," however, is to ignore the diachronic qualities of interpretation. By examining the way texts written by the aforementioned authors have adapted to the critiques that readers have had to prior cyberpunk texts, what is observed is ultimately not failure, but a history of responses that cyberpunk has evolved and which should be used to infer the *game* of interpretation *played* among literary communities: this *game* is a positive process whose measurable product is not apocalyptic futurism, but rather the therapeutic *play* of *posthuman* identity.

The original Movement texts did not ubiquitously use "arcade games" or "video games" as their imagery of choice for a digital environment, but even then, the trend was relatively common. In Gibson's iconic *Neuromancer*, "The matrix has its roots in primitive arcade games . . ." (Gibson, *Neuromancer* 51). The other texts do not make the connection between non-linear, technological environments, games, and their narrative quite as obvious, but digital gaming

environments have a presence in the surface aesthetic of two other fictional worlds described in my choice of Movement texts from "Play of the Movement." After robot-Cobb kills Sta-Hi's father, Sta-Hi "tried to make himself conspicuous, hoping something would happen to him" (Rucker, *The Ware Tetralogy* 46). While doing so, he spends his time "playing machines" in an "arcade" (46). In *A Song Called Youth,* Shirley includes multiple references to arcades located in two environments: the space colony strip contains "two digital arcades" (Kindle Location 609); in Freezone, stacked in layers, "the arcades ran three levels above the narrow street" (Kindle Locations 2080-81 and "Freezone" 161).[1] At least one character in the novel explicitly "love[s] the arcade" and "spend[s] hours there" (*A Song Called Youth* Kindle Location 547). That is to say, (at least) three important milestone novels are evidence of the popularity of such imagery among the Movement's authors. Admittedly, *Frontera*, *Schismatrix*, "The Gernsback Continuum," and "Till Human Voices Wake Us" do not make use of the arcade game as imagery, but later waves of cyberpunk authors and texts have frequently picked up on the trend set by *Neuromancer, Software,* and *A Song Called Youth.*

This chapter will use Cadigan, Stephenson, and Goonan to explain the diachronic evolution of that trend and its logical implication. Cadigan is one of the five authors originally described by Dozois as a "cyberpunk," but she was not a member of the Movement. Shiner, in fact, "was surprised to see Cadigan and Bear called 'cyberpunks'" ("Inside the Movement" 18). She was, however, one of the non-Movement authors Sterling chose to anthologize in *Mirrorshades*: "Cadigan's multifaceted talent includes a strong gift for definitive hard-core cyberpunk" (34). As such, she has actually been described as one of the "original" or "first wave" cyberpunk authors (Lavigne, Kindle Locations 97, 2220-22). The early work of Neal Stephenson—specifically *Snow Crash*—has variously been described as "second wave

cyberpunk" that "generated enough energy to single-handedly revive the genre" (Boehm 924) to a liminal text existing somewhere between the genre's first wave and a feminist second wave: *Snow Crash* is "a novel that both exemplifies the major traits of the cyberpunk genre and hints at the feminist ideas that were already springing to life within other texts" (Lavigne, Kindle Locations 112-13). I will make an exception to my methodology in this chapter to use a single text by Melissa Scott—*Trouble and Her Friends*, originally published in 1994—to connect Stephenson's work to that of Goonan. Given my selection of authors, Goonan's work is, to my mind, the least like the original Movement texts or popular conceptions of cyberpunk to precede her. Nevertheless, her various texts' initial use of subtle cyberpunk tropes, which become more obvious towards the end of her Nanotech Quartet, has led authors like Carlen Lavigne to claim that her work is written "within [cyberpunk's] boundaries" (48). I argue that Goonan's work is an example of expansive play used to recuperate the seed of feminist potential present in cyberpunk from the justifiable criticisms often deployed against the genre, not unlike Scott's explicit response to the misogynistic content of the first wave that this seed was often buried inside. In the following chapter, I will explain how various cyberpunk texts written by the genre's second wave of authors provide a strong example of the importance that digital-game environments have come to play in the genre and the relationship those environments ultimately have to a form of expansive play deployed for feminist purposes.

Games in the Second Wave

Cadigan's first novel, *Mindplayers* (originally published in1987, but composed from a combination of short stories that she published between 1981 and 1987), was published three

years after *Neuromancer*, and like Gibson's text, its technological conceit is a type of game. Instead of *Neuromancer*'s "matrix" accessed via "consoles," *Mindplayers* takes as its opening *novum* "psychosis" accessed with "the madcap" (3).[2] *Neuromancer* calls the matrix a "consensual hallucination" (Gibson 51). In the words of Thomas A. Bredehoft, "the visual components of Gibson's conception of cyberspace are rooted in . . . hallucinatory and futuristic/technophilic iconographies" (253). In this regard, Cadigan's *Mindplayers* follows suit: "psychosis" is "a change in brain chemistry that felt as natural as changing your mind" (4). Unlike *Neuromancer*'s matrix, "psychosis" is not a technological descendant of primitive arcade games. Rather, it is a technology that allows one to literally experience its namesake: "paranoid delusions that built up quickly, one drawing on another for substance" (4). It is, however, also linked to the concept of a game. Right before using a madcap for the first time, Allie thinks to herself, "psychosis is an acquired taste and I wasn't sure I'd acquired it. But I was *game*. After all, *game* was the name of the *game*. I slipped in" (3, emphasis added). This metaphoric connection is repeated throughout the text in regards to both the illegal "madcaps" and their legal equivalents.[3] As a result, one can think of the experience of "psychosis" as a "game" whose psychological experimentation is *played* by the novel's titular compound noun: "mindplayers."

Cadigan's work is often evocative of *video*. Cadigan's next novel, *Synners* (originally published in 1991), features "networks" that are explicitly electronic and digital, not techno-chemical, in nature.[4] The subtle connection between the *novum* from *Mindplayers* and the networks in *Synners*, however, persists. For example, the madcap features an "eye-shield" (Cadigan, *Mindplayers* 3). This machine administers a "local anesthetic" and "partly" removes a user's eyes "out of their sockets" in order to create "connections [that] snaked under . . . eyelids and around . . . eyeballs to the optic nerve" (4). The legal machines used for "mindplaying"

perform virtually the same process (18). This 1987 description can reasonably be read as a reference to the importance that video technology played in early conceptions of information technology and postmodern culture. If video (not to be confused with film) is, as Jameson claims, "Postmodernism's most distinctive new medium" (*Postmodernism* xv) because it aesthetically models a "machinery [that] uniquely dominates and depersonalizes [the] subject" (76), then, in some sense, the madcap and mindplaying can be thought of as a literalization and exploration of something like Jameson's theory presented in the narrative terms of a *videogame*.

For example, in *Mindplayers,* the techno-chemical machines literally depersonalize their users, such as the novel's protagonist, Allie. This depersonalization is similar to Jameson's description of "commercial television and experimental video" (Jameson, *Postmodernism* 69), which he argues collapse "critical distance" by subjecting their users to "a situation of total flow, the contents of the screen streaming before us all day long without interruption" (69), even when the television is turned off. The madcap Allie uses in the beginning of the novel is "incomplete" (Cadigan, *Mindplayers* 8)—its effects are not undone after it is used on her. As a result, Allie is made painfully aware that a madcap can "leave you altered [even] after it cleaned out the psychomimetics" (7-8). Her personality becomes something other than Allie. This theme is explored throughout the novel, as exemplified with such lines as, "You're not the Allie you were. But you *are* Allie just the same" (275, emphasis in the original), or, "I'm used to receiving thoughts. It's made me a different person. Many different people" (258-59). Allie is penetrated by the total flow of the game that continues to affect and thus change her even after her various episodes of use ostensibly end.

Synners shares similar themes. As Laura Chernaik observers, "most of the very large number of protagonists in *Synners* produce music *videos* and 'simulations' for the transnational

company" that employs them (70, emphasis added). These are videos in the same sense as those described by Jameson.[5, 6] As in *Mindplayers*, this technology threatens to depersonalize its users and creators via a sort of "total flow." For example, in *Synners*, Visual Mark is on the "verge" of a "stroke, maybe, or an aneurysm" while hooked up to "sockets": "a direct interface for input-output with manufactured neural nets. Computers" (Cadigan 184-85). This interface allows Mark to engage in a sort of "total flow" with the novel's various networks. As a result, Mark's stroke—coupled with his "hypertrophied" or "overdeveloped" "visualizing center of his brain," which allows him to "have no trouble at all sending out anything he visualizes" via his implant (141)—is able to spread out over computer networks like an "online brain illness" (413) and kill multiple people with *the* stroke, "the same one" (298). The inescapable total flow of Mark's video output becomes a literal force of *depersonalization*, in the sense that it can transform a person into a corpse, and it is itself an object depersonalized from Mark, in the sense that it can no longer be possessively attributed to him in the singular.

Mark's depersonalization is even more drastic than death or the loss of possession. The stroke seems to kill Mark in a bloody and spectacular fashion (357-58). Nevertheless, he does not die. Instead, because the distance between Mark and his digital environment has collapsed into nonexistence, he seems to avoid death by transforming himself into a digital consciousness not unlike a transhuman from some sermon about the possibilities of apocalyptic futurism. Mark, however, becomes something other than "human" (419). Thus, like Allie in *Mindplayers*, Mark *changes* as the distance between his "self" and "other" ceases to exist. Moreover, by the end of the novel, his ultimate survival requires him to merge or "compress" with an AI named "Art" (418). The two become a single entity known as "Markt" (425). As Chernaik puts it, they are

constructed "as the same" (78).[7] As in *Mindplayers*, this notion of *change* and the constructed quality of the human is an ongoing theme throughout *Synners*.

This is not the only connection between the two texts' respective *nova*. The pharmacological iconography featured in the main plot of *Synners* (with the concept of an online brain illness and its cure) is reinforced with various other references of a similar tenor. For example, the text features an oversight comity known as the "Food, Drug, and Software Administration" (72, 86, 142) as well as "implants that were supposed to get you toxed without taking any drugs" (92). More importantly to my project, however, is the manner in which *Synners* also mixes this network of ocular references, postmodern subject matter, and pharmacological iconography with the concept of the game. The novel is named after "the real synthesizers" (91), or programmers who "synthesize everybody's dreams into one big dream" (273) via a process of *continual hallucination* (Cadigan's metaphor, not mine) (118). Some of these characters, like Gina, make music and videos, but Gabe makes what Chernaik describes as "interactive virtual reality role-playing games" (Chernaik 70). Games are an important common image shared between these two texts.

Synners collapses the "rock'n'roll" ethos of Gina, who "just keep[s] rockin' on" (Cadigan 355), with gaming. The fourth chapter of *Synners* opens with an action scene between Gabe, Marley, and Carintha (36). The sequence reads like a scene from *Neuromancer*, complete with "clinics that go screwing up people's brains" (Cadigan, *Synners* 37). The word "game" is not used, but the entire sequence turns out to be an immersive, interactive program that Gabe has designed so that he can "face the minions of technological evil" (43). It is, in other words, a "simulation" (44) created by merging two "simulated" (45) people—used by Gabe for companionship—with the rough plot of "a [Hollywood] B-title if there ever was one" (46). The

text presents such "wannabe formats" as a type of "computer game," which is made explicit later in the novel (427). According to *Synners*, Gabe's work on games is just another facet of what Shiner describes as a "rock-and-roll quality" ("Inside the Movement" 21), for both Gabe and Gina engage in productive work that makes them synners.

This logic maps onto Stephenson's work too. Stephenson's first two texts, *The Big U* (1984) and *Zodiac: The Eco-Thriller* (1988) were "poorly received" (Grassian 252) and, as they are not generally considered to be cyberpunk texts, are not of interest to this study. Stephenson's third novel, *Snow Crash* (originally published in 1992), however, "was both commercially and critically successful" (252) and, more importantly, is often described as "a second-generation cyberpunk novel" (252). Published in the same year that Neil Easterbrook infamously declared that "cyberpunk is dead" (378), the text was influential enough to cause Carl Boehm to claim that *Snow Crash* "single-handedly" brought cyberpunk back from the grave (394). Like *Mindplayers* and *Synners*, Stephenson's *Snow Crash* follows in the pattern set by *Neuromancer*'s matrix.

The digital network that *Snow Crash* uses as its *novum* is the "metaverse." The metaverse is a "computer-generated universe" that a computer "draws" onto "goggles" and "pumps" into "earphones" (Stephenson, *Snow Crash* 29). It is, as Daniel Grassian puts it, "a shared virtual reality landscape in which users interact using virtual bodies or avatars" (253). *Snow Crash* explicitly connects this environment and its avatars to computer games: "When white-trash high school girls are going on a date in the Metaverse, they invariably run down to the computer-games section of the local Wal-Mart and buy a copy of Brandy" (46); "Amusement parks in the Metaverse can be fantastic, offering a wide selection of interactive three-dimensional movies.

But in the end, they're still nothing more than video games" (47). The metaverse is a heterogenous videogame.[8]

The metaverse shares some of the surface thematic concerns I attributed to the madcap from *Mindplayers* and the networks in *Synners.* Lisa Swanstrom explains that "the network of the 'Metaverse' in *Snow Crash* is all about social isolation and, paradoxically, extension and penetration" (54). That is to say, each agent over the network "is a discrete part" of the "tide" of information that travels over the network, "but closed off from it, sealed off" in a private environment that seeks to reinforce separation (57). These "enclosures," however, are threatened by "a disease designed to overturn the partitioned logic of natural language" (70). As Swanson observes, various forms of penetration in the metaverse threaten "individual identity" in *Snow Crash.*

For example, the previously mentioned disease appears, at first, to be a "drug called Snow Crash" (Stephenson, *Snow Crash* 51). The drug "fuck[s] up your brain" and "your computer" (53) by exposing "your optic nerve to, what, maybe a hundred thousand bytes of information" (88). After Da5id uses it, his avatar ceases to exist and turns into a "jittering cloud of bad digital karma" (90). The avatar is literally depersonalized; it is no longer coherent as being a representation of Da5id's persona. Da5id's physical person suffers similar effects: "The worst thing is that his eyes don't always point in the same direction" (224); his heart "beats too fast, then it doesn't beat at all" (224). The patterns of Da5id's life are disrupted by the disease to the point that his hospital-bedridden flesh is no longer recognizable as the Da5id from earlier in the novel.

This force of depersonalization is intentionally spread in *Snow Crash*. As it turns out, the drug/virus is ultimately being spread by a megalomaniac titan of industry named "L. Bob Rife"

so “he can control two kinds of people” and become “Ozymandias, King of Kings” (483). In Rife’s own words, the virus transforms individuals into depersonalized “biomass” that he can—in a metaphoric sense—feed off of “like a whale straining krill from the ocean” (140). As Judy Joshua puts it, “to plunge into the biomass . . . is to become other in the apparently least autonomous, least self-possessed manner. It is to become food and fuel for the developed world” (35). Like Mark’s stroke, “Snow Crash” is also spread through the (often ocular) media of “total flow.”

The problem is that while the reading I have been presenting in this chapter is technically accurate, it is also incomplete, and like so many interpretations of cyberpunk, its reductive qualities can be misleading. Certainly, as a number of critics have observed, electronic culture and drug culture share a common project surrounding the mutability of boundaries.[9] Certainly, all of the texts are bound up in an examination of this mutability that bears a number of striking similarities to Jameson’s discussion regarding postmodern video and “total flow.” Based on the evidence I have presented so far, one could reasonably conclude that, like Jameson, these texts provide a clear criticism of this “total flow” and its “collapse of critical distance.” That conclusion, however, would be erroneous. The reason this is so is also intimately bound up with the texts’ shared contextual aesthetic regarding “playing games.”

After Swanstrom presents a reading of *Snow Crash* that “favours encapsulation, even though this fragmentation allows for a paradoxical freedom” (73), she goes on to note that her argument is “not sufficient” (74). Her work proceeds to evince the various ways in which the novel contains elements that can be read in a manner opposite to the interpretation she presents in the main body of “Refiguring Nature, Science and Technology.” For the purpose of this study, the exact content of this inversion is not pertinent. Rather, Swanstrom’s rhetorical tactic in and of

itself provides an elegant example of the critical frustration that accompanies efforts to read and interpret cyberpunk texts. The kind of confusion I have revealed in regards to the genre's first-wave reception among the critics discussed in "Play of the Movement" has continued to plague interpretations of the genre's second-wave texts, often in terms that exceed the original, critical boundaries in contention.

Questions surrounding the genre's relationship to gender issues are a prime example of this expanding contention. For example, Jenny Wolmark argues that cyberpunk is, as a whole, "masculinist" (110-111).[10] According to Wolmark, *Synners* follows suit because "the metaphor of interface is consistently used to establish 'masculinity' as a universal and hegemonic", which defeats "Cadigan's attempt to suggest an oppositional stance" as a result of the "reification of gender relations . . . implicit in cyberpunk" (Wolmark 125). Even so, Wolmark does admit that cyberpunk "nevertheless appears to represent science fiction's most vigorous response to the kinds of organizational and technological transformations in production and consumption that are characteristic of post-industrial, postmodern societies" (110).[11] Such organizational and technological transformations often involve the subject of gender, at least tangentially.

In fact, at least partly because of the relationship between this topic and gender, not only have individual critics been forced to admit that texts in the cyberpunk genre have qualities whose values enter into antithetical juxtaposition, but scholars like Chernaik and Lavigne have taken issue with at least some of the claims made by scholars like Wolmark and Balsamo. Chernaik argues that "there are a number of problems with Wolmark's argument" (68). To Chernaik, Wolmark's argument that terms such as "human" are always "masculinist" are overdetermined and "not necessarily always the case" (68). Additionally, according to Chernaik, *Synners* "is not about 'what it means to be human. . . . *Synners* is about agency" (68). Lavigne

takes issue with some aspects of Cadigan's texts, but ultimately takes a position closer to Chernaik's when she argues that Cadigan is an important "precursor to . . . feminist cyberpunk" (Kindle Location 1594). Critical responses to the genre's relationship regarding gender issues have—taken as a whole and not judging any critical response on its own merits—often been just as confused as the original boundaries of critical dispute discussed in "Chapter 2: Play of the Movement."

One might be tempted to argue that this phenomenon is evidence of Jameson's criticism that cyberpunk is "the supreme *literary* expression if not of Postmodernism, then of late capitalism itself" (*Postmodernism* 419, emphasis in the original). After all, Jameson makes the claim that "commercial television and experimental video" are representations of "some supreme and privileged, symptomatic, index of the zeitgeist" of postmodernism (69) and goes on to explain why this is so in terms that are suggestive of a hermeneutic collapse, which would also explain the difficulty that critics have interpreting cyberpunk. Jameson's critique, however, while internally consistent in and of itself, yields an analytically frustrating result when combined with the context of other, similar critiques, as I will attempt to show in the pages that follow.

Jameson claims that his problem with "total flow" is that it leaves "no room for interpretation" (xv). Total flow, he says, obviates "memory"—the "afterimages in the manner of the great moments of film" (71). Instead, Jameson believes, video bombards one with constant spectacle that provides no cognitive reflection—no "critical distance."[12] As Jameson puts it, "the helpless spectators of video time are . . . immobilized" (72). As a result, Jameson argues, the "work" of art is transformed into the aesthetic "text" (77). Art can be "read" only as "immense ensembles or systems of texts of various kinds, superimposed on each other by way of the various intertextualities, successions of fragments" (77). For Jameson, the danger of this

postmodern transformation is that "it is not evident that a spectator will ever reach a moment of knowledge and saturated memory from which a formal reading of this text in time slowly disengages itself" (83). In other words, where Derrida perceived a poststructural "event" that promised to free "play" ("Sign, Structure, and Play" 351-54, 365-67, 369-70), Jameson perceived a postmodern collapse of meaning that left behind something akin to "a breakdown in the signifying chain" (*Postmodernism* 26).

The observations that Jameson makes are bound up in his interpretation of Jean-François Lyotard's *The Postmodern Condition: A Report on Knowledge.* As Jameson explains in his Forward, "the [poststructural] analysis of language situations and games, and of language itself as an unstable exchange between its speakers, whose utterances are now seen less as a process of the transmission of information . . . than as . . . the trumping of a communicational adversary, an essentially conflictual relationship between tricksters" (xi), marks the shift into the "postmodern condition." That condition has less to do with "structuralism" or cybernetic "systems theory" than "many different language games" whose "heterogeneity of elements" never coheres into a singular metanarrative (Lyotard, *The Postmodern Condition* xxiv). The games depicted in cyberpunk texts are postmodern in a Lyotardian sense—they mark a conflict in which the very rules of the game are under contention caused by the conflict between cybernetic systems theory and an understanding of postmodern language games—but in the sections that follow I argue that their products are evidence of the value of the interpretative process and not its collapse.[13]

Cyberpunk Ambiguities

The presence of a ludic contest between various meanings written into cyberpunk from the genre's tropic composition would certainly explain why so many scholars have seen fit to criticize cyberpunk on grounds similar to Jameson's critique of postmodernism. Certainly, when analyzing cyberpunk at the synchronic moment of the Movement's first wave, one discovers that the texts have an ambiguous relationship with teleology. *Mindplayers*, *Synners*, and *Snow Crash* share this cyberpunk trope.

For example, the plotline of *Mindplayers* heavily revolves around a specific type of "mindplayer" called a "pathosfinder." These "mindplayers" help artists "find what was basically the soul in their work" (*Mindplayers* 50). One can think of this branch of mindplaying as a cybernetic, psychological feedback loop used to help people find "direction." In fact, Allie undergoes a mindplaying session with a pathosfinder because she is "letting things happen to [her] but [she is] not making anything happen" (73). Allie even becomes a pathosfinder herself: she takes "the pathosfinding option" (69). Allie's life, however, only takes this direction because of a "dare": "the type of thing where you know it's a mistake but you do it anyway because it seems to be Mistake Time" (3). From the novel's first page, Allie's life is directed by a series of accidents from which the novel's entire plot *emerges*, in a formal sense, and concludes in the critically posthuman construction of Allie's "whole-self." Allie is told, "You're the accumulation of everything you've done" (268). She is then forced to make a choice: "a whole self, or just an accumulation of elements that soon wouldn't be more than the sum of their parts" (272). She can accept that she is an anti-teleological totality that is more than the sum of its parts, or she can focus on all the individual elements, the determinations she believes she should have in advance of her emergent experience, and thus fail to cohere as more than that sum, instead descending into "madness" (272).[14] What is more, the very word "pathos" is possessed of a "transient" or

impermanent quality: "The quality of the transient or emotional, as opposed to the permanent or ideal" ("pathos, n."). On one hand, the pathosfinder appears to be a job purposive in a properly cybernetic sense, but on the other hand, the novel's plot is driven by accident, transience, and emergence.

A similar conundrum occurs when one examines the body of evidence from which they can interpret *Synners.* As I have already noted, in *Synners,* Mark both seems to download himself into the novel's networks, thus reifying the teleological promises of transhumanism, *and* maintains his own identity *only* in an indeterminate manner, thus subverting those same promises in favour of an understanding akin to that featured by critical posthumanism's anti-teleological stance. Only interpretation on the part of the reader allows one to make a clear statement regarding who or what Mark and Art, now properly called Markt, *are.* Such indeterminacies are so common in *Synners* that Chernaik concludes that the text is "clearly about boundaries and *interpretation*" (73, emphasis added).

Snow Crash features a plot that at least seems to aestheticize randomized input that should theoretically destabilize *telos.* Swanstrom, for example, points out that when Hiro "crashes his Mafia-owned town car into an empty swimming pool in the opening scenes" of *Snow Crash,* it is *luck* that brings along "a young female skateboarded Kourier" to save the day (54). In Swanstrom's words, "this early episode in *Snow Crash* marks an interesting *convergence* of events" (54, emphasis added). These types of emergent convergences repeatedly drive the plot of the novel. As Hiro puts it, he doesn't know whether he is "talented or lucky" (73). For example, when Hiro is forced into a swordfight in the real world, "he must have gotten lucky and hit a gap between vertebrae. Hiro's training comes back to him, oddly. He forgot to squeeze it off, forgot to stop the blade himself, and that's bad form" (360). Such qualities can be interpreted

as an indication of an anti-teleological attitude. After all, Hiro explicitly states that he "never knew" where he "stood" in regards to his ontological qualities: "black or Asian or just plain army"; "rich or poor"; "educated or ignorant" (73). In all cases, as with *Synners,* interpretation is required to decohere qualities that seem to exist in a liminal state akin to Schrödinger's cat.

Some of the novel's other qualities, however, have been interpreted by critics as incorporating traditionally-teleological and idealistically-disembodied paradigms. In the early days of cultural criticism about cyberspace, around 1993, critics like Michael Heim believed that our "love affair with computers, computer graphics, and computer networks [ran] deeper than aesthetic fascination and deeper than the play of the senses. We are searching for a home for the mind and heart" (61), he wrote. Heim explicitly connected this statement to "the ancient idealism of Plato" (60). According to Heim, an "ontological continuity" connects "the Platonic knowledge of ideal forms to the information systems of the Matrix" described by William Gibson (63). This, of course, implies that cyberpunk is grounded in what Hayles describes as "the teleology of disembodiment" (*HWBPost* 22). It should be no surprise, then, that Robert Markley accuses cyberspace of being "a consensual cliché, a dumping ground for repackaged philosophies about space, subjectivity, and culture" that is "merely . . . a seductive means to reinscribe fundamental tensions within Western concepts of identity and reality" on similar grounds (56). Feeding into this consensual cliché, Boehm goes so far as to try and link the metaverse to "Plato's ideas of justice" by arguing that *Snow Crash* "demonstrates that morality can be brought into the wilds of the virtual world by a champion who values it and attempts to construct a paradigm for social justice" (395).

There are many ways that one can interpret Hiro's journey as a traditional cybernetic effort, in a sense fully aligned with the word's ethos under Wiener's auspices, to combat entropy

and teleologically maintain order, or the coherency of the human mind in the sense of an informational pattern. Where "Snow Crash" creates a lack of cohesion, fracturing Da5id into an entity other than himself, and folds individuals into a homogenous "biomass," Hiro is the "Last of the Freelance Hackers" (Stephenson, *Snow Crash* 417). Hiro spends the entire novel on an epistemic quest to learn everything he can about "Snow Crash" and stop it. By the end of the story, Hiro writes a program called "SnowScan"—a program "that searches for Snow Crash" (544). With it, Hiro stops an "amphitheatre" (545) in the metaverse from being infected with the virus and forms "HIRO PROTAGONIST SECURITY ASSOCIATES" (546, capitalization in the original), the digital security firm that promises to protect users against the entropy of "Snow Crash" and the efforts of such villains as "L. Bob Rife" and "Raven." *Snow Crash* is a narrative about using digital code to purposively combat the entropy of a pattern properly understood as *humanity*.[15]

It is precisely because of such indeterminacy that Swanstrom argues that *Snow Crash* "grapples with the persistent model of Cartesian subjectivity, even as the network technologies it describes work to undermine such a model" (54). In her words, while "initial criticism of cyberpunk fiction" may have "focused on cyberspace as an expression of Platonic idealism that undermines the importance of the real," thus reifying the Cartesian duality, "recent critical analyses have begun to question some of these assumptions" (54). According to Swanstrom, one should read subjectivity in *Snow Crash* as neither "completely tied to the Cartesian model . . . , nor an excessively open model that treats subjectivity as a mass of societal affiliations with no roots or grounding of any kind" (55). Instead, the novel is a "distributed network of embodied systems that exist in a flux of encapsulations, enclosures, ruptures, and flows" (55). From my point of view, her argument provides a perfect example of just how difficult it can be to

overcome the deeply rooted ambiguity present in cyberpunk's various representations. In fact, Wolmark explicitly discusses cyberpunk in terms of an "ambiguous tone" that is "critical of what it appears to be celebrating, but also appreciative of that towards which it is most critical" (117).[16]

This trope of ambiguity, ironically, makes it difficult to claim that the texts should be read as a literalized exploration of something like Jameson's aforementioned theory presented in narrative terms, for while they with one hand present new media as a depersonalizing force, with the other they present this media as the prerequisite ground for new forms of personalization. For example, in *Mindplayers*, after Allie's sense of self is scrambled as a result of her illegal use of a madcap, a "reality affixer" named "Segretti" takes Allie for "little trip" (Cadigan 8-9) and informs Allie that she has a "brain organization [that] is unique" (10). This data not only personalizes Allie's character, it also causes Allie to "be given some options" (17). Her "third option" is to become a "mindplayer" as a form of "community service" (38). Thus, not only is her sense of self affixed by virtually the same technology that depersonalized her in the first place, but the process helps personalize Allie in a manner that causes her to become a mindplayer. As a mindplayer, she eventually becomes a pathosfinder who helps others further personalize themselves in the sense of finding the "soul" in their work or direction in their lives. One could argue that the entire novel is a narrativization of the process by which Allie constructs her own *person* using the technology that, at first, depersonalizes her.

A very similar rhetoric is at play in *Synners*. On one hand, Mark may be read as a subject depersonalized by the technology in the text. On the other hand, Chernaik interprets Mark as an incomplete subject whose *initial* behavior is more viral than human even before the influence of technology: Mark "is like an organic virus which uses the nuclear material of the host cell to

replicate its own genetic code; he uses other people for his own benefit" (79).[17] According to Chernaik's reading, "when Mark and Art merge, replicated, two of the same, they become fully 'human'" (79).[18] If one agrees with Chernaik, then technology not only depersonalizes Mark's death, it also reconstitutes Mark and prosthetically recuperates his less than human behavior into a creature who becomes fully human due to his efforts to protect the world from his own depersonalized death.[19]

Even if one takes issue with Chernaik's interpretation, it is hard to read Art as anything other than an emergent model for a new type of personalized subject. The novel's networks are the prerequisite ground for Art's existence. "Art Fish" was originally "the file name on a proposed AI program" (Cadigan, *Synners* 189). That file name emergently and accidentally combined with "a prototype of a [digital] vaccine with the working title of Virus Doctor" and transformed into the "present incarnation" known as "Dr Art Fish, V.D. Virus Doctor" (189). This is what spreads "all through the nets" (189). In fact, "there is no part of the net that is not Art. Art is everywhere, though his attention is not . . ." (189). As for Art's ontological status: it is a "virus," or "several" emergently combined viruses, and "it's not really a true virus anymore in many ways" (189). Whatever this Schrödinger's virus/not-virus decoheres as, however, it is "awake… in the net" (190, ellipses in the original)—it is a unique character in the novel, composed with its own agency. If "the question is whether Art's human or not," then the answer—"part catastrophe and part chaos"—"sounds pretty human" (190).

In some sense, then, the merger between Art and Mark is but one of a series of mergers. That final merger can be read as a depersonalizing force that homogenizes both Art and Mark, breaking apart their individual boundaries, and transforming them into Markt. It can also, however, as Chernaik's reading demonstrates, be interpreted as one more step in a new model of

personalization that creates a unique entity who is more than the sum of its viral parts. The virus, in this model, is both the cure for and the nodal building block of the subject.

The above description provides an ideal representation for cyberpunk's many ambiguities that happens to mirror one of the central, critical concerns I am currently grappling with: if the structural model of communication is a farce, thus opening the door for the play of poststructural thought, ambiguity appears to be a precondition of postmodern communication. It is tempting to conclude that these cyberpunk texts, then, are—as Jameson seems to believe—a symptom of postmodernism that can only problematically be described as a critical engagement with postmodern concepts due to the genre's own inability to achieve critical distance from its subject matter. This conclusion, however, is deeply unsatisfying due to various analytic inconsistencies that arise when it is combined with the larger body of scholarship about cyberpunk.

At first, an analytic review of the field might seem to indicate that cyberpunk is a response to the "traditional model" of science fiction. Hollinger writes that "genre science fiction thrives within an epistemology which privileges the logic of cause-and-effect narrative development" (30). She further explains, "genre science fiction can claim the realist novel as its closest narrative relative; both developed in an atmosphere of nineteenth-century scientific positivism and both rely to a great extent on the mimetic transparency of language as a 'window' through which to provide views of a relatively uncomplicated human reality" (30). In other words, science fiction's traditional cause-and-effect narrative is thought, by some critics, to be aligned with a structural understanding of language and meaning combined with a nineteenth-century paradigm that imagines all epistemological problems can be deterministically solved (and teleologically studied).[20] Such critics imagine, as Teresa Ebert puts it, that "the aim of traditional science fiction is to 'extrapolate' from the present givens of a contemporary science

and technology and predict, in a believable fashion, the effects of science on human destiny" (92). Of course, Ebert also claims that "recent science fiction . . . has become increasingly pluralistic and . . . 'multiplex'" (91).[21] Certainly, the traditional model (if it ever existed as such) does not match the complicated reality of posthuman existence, and in comparison to that model, cyberpunk does seem to be a subversion according to critics like Ebert.

The problem is that the field of analysis about cyberpunk is as indeterminate as its content. Hollinger conceives of cyberpunk as a "symptom of . . . postmodernism" (42), and in that vein, she agrees with Teresa Ebert's assessment: "when science fiction is enlisted by postmodernist fiction . . . it becomes integrated into an aesthetic and a world-view whose central tenets are uncertainty and indeterminacy" (30). Hollinger explicitly examines cyberpunk "within this conflictual framework of realist conventions played out in the postmodernist field" (30).[22] Sponsler, however, reaches the opposite conclusion, complaining that "the potential of cyberpunk as postmodern narrative" is undone by a "failure" on the "level of plot and agency" (Sponsler 636). Cyberpunk, she claims, fails to challenge "the constitutive codes of our present [1993] cultural moment" because it is entrapped by "the conventions of realism" (Sponsler 636). More specifically, it is trapped by "science fiction's well-worn reliance on an epistemology that hails from the nineteenth-century realist novel, an epistemology that privileges cause-and-effect plot development and the unified humanist subject" (Sponsler 636). Creating a syllogistic synthesis of the field is difficult due to the virtually oppositional evaluations scholars have had about cyberpunk: supposedly, it is both postmodernist and realist in its conventions.

When Jameson's criticism is added to the mix, the analytic conclusion of any synthesis becomes absurd, regardless of how brilliant and internally consistent much of that scholarship is taken on its own merits. For example, Sponsler's critique appears to be made in a spirit similar to

Jameson's argument that "Postmodernism is not the cultural dominant of a wholly new social order . . . , but only the reflex and concomitant of yet another modification" that contains shreds of "older avatars—of realism, even" (xii). Jameson's specific critique about realism as it relates to cyberpunk in *Postmodernism*, however, has less to do with cyberpunk plots (which can be described in terms of "fictive time"). Rather, Jameson (at least in *Postmodernism*), like Ross after him, perceives cyberpunk to be a "formerly futurological science fiction" that has lost its ability to imagine or extrapolate a "utopian" future due to a loss of "critical distance" (286). Instead, because it cannot escape its own subject matter and imagine a pattern of cause-and-effect towards a better world, Jameson thinks it "turns into mere 'realism' and an outright representation of the present" (286).[23] In other words, in an ironic turn, Jameson perceives cyberpunk to be a form of "realism" for reasons that align it with Ebert's description of "metascience fiction," which has evolved away from the cause-and-effect extrapolations of earlier forms of "realism" in science fiction. Suddenly, one and the same piece of evidence becomes representative of antithetical conclusions as a result of a synthesis of scholarship which, taken on its own, is internally consistent: the very ambiguous features that other critics and I have observed in cyberpunk simultaneously become evidence of both cyberpunk's supposed realism and its antithesis.

Certainly, cyberpunk does contain a significant quantity of ambiguity akin to the pluralistic multiplexity that Ebert and Hollinger describe. Likewise, when any individual cyberpunk text is synchronically examined as a specific and individual text, this multiplexity makes it difficult—if not impossible—to claim any individual interpretation of the text is its singular meaning. Insofar as one can think of interpretation, meaning, poststructuralism, and their relation to concepts such as posthumanism as central themes of the cyberpunk genre, one

can even justifiably claim that a single text from the genre analyzed as a synchronic entity cannot achieve critical distance from these concepts. The brilliant internal consistency of various scholarly analyses about the subject seems to have proven that beyond the shadow of a doubt. Thus, I certainly agree with Jameson when he writes that it has become obvious that "examination of a specific and individual" text is a phenomenon whose process distorts "all findings beyond recognition" (*Postmodernism* 78), but that does not necessarily mean that "it is not evident that a spectator will ever reach a moment of knowledge and saturated memory from which a formal reading of this text in time slowly disengages itself" (83)—that conclusion only applies when a critic is artificially limited to analyzing a specific and individual text divorced from its diachronic context.

Gaming Interpretation

A model for interpreting cyberpunk can be synthetized from Richard Coyne's *Technoromanticism: Digital Narrative, Holism, and the Romance of the Real* and Thomas G. Pavel's *Fictional Worlds*. *Technoromanticism* effectively curates a history of interpretive practice in order to critique its titular concept. According to Coyne, "Technoromanticism seeks a new world order of unity through information" (12). While his overall argument is not identical to my own, there are a number of parallels. Specifically, Coyne also perceives of a "unity theme [that] presents in various forms" (3). This theme can also be described as the desire for a "unity state [that] may transcend what is normally accessible to the sense, as an idea, or an ideal" (4). Coyne also discovers an antithetical theme that he describes with the term "multiplicity" in various places in his text.[24] His argument is that, strung between the tension of unity and

multiplicity, technoromanticism speaks to both "concepts of the one and the many, unity and multiplicity" (88), in order to create a chain "through which space is represented, resisted, reduced, divided, and ultimately transcended" (106). His answer regarding to how "we break the chain from representation to technoromanticism" (106) speaks to both the strengths and weaknesses of my own argument.

Coyne's answer is a synthesis of pragmatic, structuralist, poststructuralist, hermeneutic, surrealist, and psychoanalytic theories. Ultimately, his insights lean on the "working of language" (106), and Coyne concludes that there "is clearly no escaping the unity theme, but postmetaphysical narratives are highly reflexive on the instabilities of their own structures" (279). To Coyne, reflexivity regarding an unstable structure is the most powerful tool against a "transition from the particular to the general and back to particularities" that is assumed to be "a given" and drives "technoromanticism's trajectory toward a transcendent disembodied reality" (280). Considering that his sources, which are similar to the ones I have used, lead him to a similar methodology, one could be forgiven for assuming that his conclusion about cyberpunk would view the genre's attack on *telos* in a manner that is also similar to the observations I have been making.

It does not. Coyne claims that the "presence of technoromanticism is irrefutable in the extreme narratives of cyberpunk and the hyperbole of IT commentary" (11). Of course, Coyne also admits that cyberpunk "seems to trade in the importance of unconscious processes, the carnivalesque, and 'unreason'" (194), all of which are part of his method of breaking the technoromantic chain—what I might call the line of *telos*. Coyne's issue seems to stem primarily from the fact that "cyberpunk literature suggests that the computer world challenges various empiricist 'conventions,' including assumptions about reality" (194), and in so doing, it is

coopted by technoromanticism because it grants "information technology a causal role in the transition from modernity to postmodernity" (14), thus missing "the point of postmodernity" (14), and becoming a form of "quasi postmodernism" (99).

Technoromanticism's conclusion about cyberpunk comes from Coyne's research and an analysis of a single cyberpunk text: *Neuromancer*. His definition of cyberpunk is largely taken from Timothy Leary's "The Cyberpunk: Individual as Reality Pilot" as found in *Storming the Reality Studio: A Casebook of Cyberpunk and Postmodern Fiction.* That book has four authors who reference Cadigan and none who reference Stephenson or Goonan.[25] Coyne references none of the articles that reference Cadigan. Cyone's reference to Dougless Rushkoff's "survey of the culture of cyberpunk" (67) from *Cyberia: Life in the Trenches of Hyperspace* yields similar results: Gibson and Sterling are discussed by that text, but none of the other Movement authors are, and neither are Cadigan, Stephenson, or Goonan. This pattern holds throughout with one notable exception: a single citation of Porush's "Hacking the Brainstem: Stephenson's *Snow Crash."*

The section of *Technoromanticism* that cites Porush's work about *Snow Crash* has nothing to do with that novel. Rather, "Hacking the Brainstem" is used to create the following sentence: "[Deleuze and Guattari] rename the capital of capitalists, or rather the 'capitalist being,' as the 'body without organs,' which also produces ironic dissonances against Descartes's concept of mind independent of body" (Coyne 234). Deleuze and Guattari are among the theorists that Coyne uses to build a model for various types of positive, self-aware interactions, which are self-reflexive of unstable rhetorical structures, with potentially technoromantic ideas. "Ironic dissonance" used against the "concept of mind independent of body" is part of the methodology Coyne develops. The two quoted terms—"capitalist being" and "body without

organs"—can, however, be found nowhere in "Hacking the Brainstem." The closest match to either term would be "body without an organ" (Porush, "Hacking the Brainstem" 108), which does match the page number that Coyne cites. The context, however, does not seem to match the argument made by Coyne. At best, it is possible that Coyne is trying to describe the concept that Porush champions as being Cartesian, for Porush has nothing to say about Deleuze or Guattari in that article at all.[26] The end result is that, while its overarching argument is convincing, its judgement of cyberpunk is not, for *Technoromanticism* gives the impression of being unfamiliar with cyberpunk beyond a body of research that primarily focuses on *Neuromancer*.

Snow Crash can be read as a diachronic response to precisely the type of interpretations of the Movement that Coyne uses as research; its narrative methodology parallels that suggested by Coyne despite predating *Technoromanticism* by seven years. Like *Synners, Snow Crash* features a virus that both depersonalizes and constructs the *self*. The titular virus is responsible for a radical erasure of an individual's boundaries, thus enabling L. Bob Rife to transform groups of individuals into a mass of biopower. As Swanstrom points out, however, "the Snow Crash virus is not some new-fangled technological invention; rather, it is an ancient string of verbal syntax—code—that lies latent in all living things" (71).[27] In a sense that classically keeps with Wiener's original conception of cybernetics, the cybernetic technologies in the text give the virus a new vector by which it can interact with already cybernetic humans, but this code was always a factor in human life—all life—long before the invention of those technologies. In fact, according to *Snow Crash*, it is the virus as code that is responsible for individual consciousness. The novel builds a relationship akin to the one Coyne highlights when he writes that the "endless chain of signification features prominently in narratives of information technology, but Derrida's point is not that this is a new phenomenon of the digital age, but that language can only function, and

always has, through" an "endless referentiality" whose "nondeterminate phenomenon" are "constantly in flux and play" (132).

Snow Crash represents consciousness as a phenomenon that is memetic and viral. According to the novel, early human culture "was another manifestation of the metavirus. Except that in this case, it was in a linguistic form rather than DNA" (Stephenson, *Snow Crash* 473). This description of culture as a viral and genetic agent is in keeping with Richard Dawkins's invention of "memetics." According to *The Selfish Gene*, "Cultural transmission is analogous to genetic transmission in that, although basically conservative, it can give rise to a form of evolution" (Dawkins 189). Dawkins created the term "meme" to refer to a "replicator" by which culture evolves and chose this word specifically because he wanted his new term to be a "monosyllable that sounds a bit like 'gene'" (192). According to Dawkins, memes "literally parasitize [the] brain, turning it into a vehicle for the meme's propagation in just the way that a virus may parasitize the genetic mechanism of a host cell" (192). *Snow Crash* is transparent about this allusion: "primitive societies were controlled by verbal rules called *me*" that acted like "little programs for humans" (Stephenson 471, emphasis in the original). *Snow Crash*, however, does not allude to Dawkins's claim without simultaneously subverting it (as I shall explain after presenting some necessary context).

It can be said that Dawkins's description of memes has a metaphysical component. According to him, these memes act on the human mind in the exact same way that a virus coopts the genetic mechanisms of a host cell. In some sense, one could call this an example of what Coyne terms "*metaphysical realism*" (82), or the belief that "there exists ultimately one correct description of reality" (82). Dawkins essentially uses a syllogistic similarity to collapse the gap and form a unity between physical, social, and psychological behaviors. Coyne leans on Martin

Esslin's claim that verbal "nonsense is in the truest sense a metaphysical endeavour, a striving to enlarge and to transcend the limits of the material universe and its logic" (Esslin 341-42), to present a "verbal paradox" (Coyne 52) whereby one achieves "unity with the universe by the destruction of language, which keeps us apart from the world by establishing the independence of objects" (82). This type of metaphysics is said by Coyne to be in opposition to the metaphysical realism of technoromanticism, which employs a "monosemic legacy that equates the real, the Intelligible, the supradivine with unity, and the sensible, the material, and the earthbound with multiplicity" (53).

Snow Crash uses the tension between the above two models in the exact same way that Coyne does: to invoke Lacan and present the unintelligible as a pre-symbolic realm of the real. Coyne explains that, as a result of the fact that "Lacan's interpretation of Freud is informed by structuralist language theory and by surrealism" (222), Lacan forms "particular conceptions of the self and the real that run counter to the Cartesian and empiricist tradition" (222). Specifically, Lacan divides the world into "the symbolic, the imaginary, and the real" (Lacan, "The Function and Field of Speech and Language in Psychoanalysis" 255). While that statement may not seem to be divorced from the Cartesian order on its surface, to Lacan, "the real is that which always comes back to the same place" (*The Four Fundamental Concepts of Psychanalysis* 49), in the sense of a "forgotten memory" or an "imaginary echo which arises as a response to a point of reality that belongs to the limit where it has been excised from the symbolic" ("Response to Jean Hyppolite's Commentary on Freud's 'Verneinung'" 326). Thus, "the sense that something is unreal is exactly the same phenomenon as the sense of reality" (326) because, as Coyne explains, "the child begins life emersed in the whole, absorbed in a world that is undifferentiated" (223), and only develops a sense of self when it "is presented with the prospect that it is other than the

world" (223). The symbolic order is developed as a system of language capable of communicating this realization and thus affirming the personal subject (Evans "Subject" and "Symbolic").

Snow Crash invokes this symbolic order with its *me.* Sumer was "stuck in a rut" because its people were just "passive receivers of information" (Stephenson, *Snow Crash* 473). In this state, Dawkins's claim was fully accurate: memes could "literally parasitize [the] brain, turning it into a vehicle for the meme's propagation" (Dawkins 192). Likewise, the text's world existed in a pre-symbolic state of complete unity until the Sumerian hero Enki noticed that he was "different": Enki was "one of the few—perhaps the only—conscious human being[s] in the world" (Stephenson, *Snow Crash* 473). Because he was "lonely" (473), he decided to "deliver" the infant-like human race, reprograming them, and "gave us the ability to think" (474). In Chernaik's terms, "only when each individual mind is compartmentalized can it fully come into consciousness" (72). In other words, *Snow Crash* breaks the meme—which the text envisions as allowing for a type of Lacanian un/real—into the subject/object or self/other position as affirmed in the mirror of the *me*.[28]

Snow Crash thus uses exactly the type of theory that Coyne wishes that cyberpunk would use. While it does present a world that in some sense is metaphysical, it resists the version of the metaphysical L. Bob Rife wishes to impose upon its fictional world. Likewise, the text is quite clear that whatever technologies the world presents, they operate on principles that are properly ancient, from the infancy of human culture, and are but products of the symbolic order Enki spoke into existence. Whatever transcendent properties the text might use in its narrative structure, these properties are not presented as having been created by computers.

Snow Crash, nevertheless, as I have already shown, does not necessarily invoke an interpretation that positions its narrative as an attack on *telos* or technoromanticism. In fact, it is fairly obvious why Coyne did not use "Hacking the Brainstem" to a greater degree if one examines its contents. On one hand, Porush opens his essay by noting that "the history of irrationalism reveals that the irrational has always been 'pre-postmodern'" ("Hacking the Brainstem" 111). On the other hand, Porush argues that this pre-postmodern "space is prefigured as a site for the initiation or control of apocalyptism, where at some time in the future revelations from places beyond rational or material experience will occur" (125), and positions a technological transcendence as an apotheosis of this potential. Porush reads *Snow Crash* as possessing a "commitment to orthodox rationalism" (139) and claims that it is unable "to confront its own metaphysics, the spiritual transcendence it conjures only to banish", because of a "fashionable unwillingness to grant any credence to narratives of metaphysics" (140). Ultimately, from the perspective of Coyne's argument, "Hacking the Brainstem" argues (mistakenly, from my perspective) that *Snow Crash* is an example of the metaphysical realism to which Coye is ultimately opposed. Coyne seems to have accepted Porush's interpretation of *Snow Crash*, but Porush confused *Snow Crash*'s refusal to accept the techno-utopian claims of transcendence—a set of claims that Porush virtually admits are "deterministic decision procedures in all senses of the word: systems that seek perfect control" (122)—with an ultimate rejection of metaphysics rather than binarism (141). Once again, attempts to synthesize the field of analysis about a cyberpunk text have yielded analytical confusion.

One solution to such confusion relies on an observation about the synchronic model often applied to contemporary interpretive schema. Coyne notes that "Saussure . . . departed from orthodox linguistics by proposing that the synchronic (time-independent, parallel) dimension to

language is more revealing than its diachronic dimension" (123). From a Saussurian position, this move is logical. Saussure explains, "Everything that relates to the static side of our science is synchronic; everything that has to do with evolution is diachronic" (Saussure 81). As Coyne puts it, the "diachronic, or historical, study of language focuses on the way languages change in time and how languages are derived from each other" (123); the synchronic study examines not the "evolutionary phase" but the "language-state" (Saussure 81). This is logical insofar as Saussure was trying to analyze the structural qualities that (he thought) give an utterance meaning at the moment in which an utterance is made. Insofar as Saussure was concerned, "the particular synchronic consequences that may stem from [a diachronic fact] are wholly unrelated to it" (Saussure 84). That is to say, when one makes an utterance for the purpose of linguistic communication, one does not actively consider the various historical uses of a morpheme or the morphemic combinations that underly any given sign, nor do such considerations change what a sign means at a specific moment in time. Indeed, "Diachronic facts are not even directed toward changing the system" (Saussure 84). From this point of view, the complex historical shifts that underly the existence of any given sign are an accident of history whose "modification does not affect the arrangement but rather its elements" (Saussure 84). In simple terms, speakers (at least of the everyday variety) do not consider the historical implication of "techne" when they utter "technology."

This paradigm is misleading when it is applied to the way we make meaning of narratives. The issue occurs because of a trend in literary studies eloquently expressed by Marie-Laure Ryan: "the leading analogy in literary thinking has been the linguistic one: literature is a language (as well as, metonymically, an artifact made of language); the text is a 'system of signs'" (Ryan 8). That, however, is a category mistake. Literature is not a language; it is

interfaced with language. Certainly, there are many similarities. One can metaphorically call elements of literature such as tropes, genres, or the structure of Freytag's pyramid the "syntax" or "grammar" of the media. Such metaphors can be helpful in understanding a concept by mapping insights about one aspect of our existence onto another. When one assumes that the metaphor *is* the reality, however, they have just performed another example of the Platonic backhand: the simplified abstraction used to explain the world's complicated multiplicity has circled around to "constitute the abstraction as the originary form from which the world's multiplicity derives" (Hayles, *HWBPost* 12). Diachronic modifications are sometimes purposive, always integral to understanding the most reasonable interpretation of any given text, and should be actively used by readers to interpret texts.

The importance of diachronicity to interpretation becomes clear in light of Thomas G. Pavel's narratological methodology described in *Fictional Worlds.* Pavel opens that text with the complaint that "a comprehensive theory of literature needs a viable account of literary content" (vii). The issue, according to Pavel, is that a methodology for creating such accounts does not exist because the predominant mode of literary criticism has been a "structuralist quest for linguistic models mediated by narrative analysis" (4). In a sense, Pavel's complaint is not unlike my own. He accuses proponents of the structuralist quest of having little concern for "methodology": "rather than scrutinizing the methodological adequacy of their model, most proponents of this trend prefer to theorize about general properties of literature, with the nontrivial consequence that the structuralist heritage consists more in theoretical theses than, as many believe, in a set of scientific methods" (4). Unfortunately, the "semantic fundamentalism" (4) that such practices bring to the study of narrative are not solved by a poststructural paradigm. Instead, connection between the sign and its signified becomes, Pavel complains, impossible

from the point of view of such paradigms (121). His complaint mirrors mine: a corollary of a poststructural paradigm applied to literary interpretation when literature is treated as a language and the text as a sign is that textual interpretation collapses in on itself.

The argument here is not that multiplicity in textual interpretation is a flaw. Like the poststructuralists, Pavel relishes the fact that "the present context in literary criticism is one" of a "multiplicity of readings" (10), and so do I. Rather, the question is one of methodology. Instead of focusing on the destabilization of meaning produced as a result of the lack of a referent, Pavel "sees in the concept of PW [or Possible Worlds] a way to put an end to the structuralist moratorium on questions of reference" (Ryan, "Possible Worlds" sec. 3.0.1). His theory can be described as an effort to avoid "the extreme isolationism imposed by the structuralist and deconstructionist doctrine of textual immanence" (sec. 3.0.1). *Fictional Worlds* does not indicate that a single unitary reading of a text is the only possible interpretation, but rather, it provides an explanation for how readers often relate to texts.

Pavel does not provide this explanation in the terminology of a "diachronic interpretation," but that is the implication of his work. Pavel takes as his critical point of origin the practical observation that, at least to many readers, the "happenings inside the novel are vividly felt as possessing some sort of reality of their own" (Pavel 11)—a reader can "fully sympathize" with "characters" (11).[29] As such, "for their readers, the worlds they describe are not necessarily fractured along a fictive/actual line" (16). To understand why, Pavel explicitly turns to "various epistemological attitudes towards the relations between reality and fictions" (11). His model of interpretation can be summarized (though it never is by Pavel) as a diachronic and hermeneutic feedback loop between a reader and a modal universe of fictional worlds.

Ryan's short form summary of "the concept of possible worlds (henceforth PW), loosely inspired by Leibniz' philosophy" provides a necessary baseline-understanding ("Possible Worlds" sec. 1).[30] In short, a modal system "is a universe composed of a plurality of distinct worlds" (sec. 2). Reality is "conceived as the sum of the imaginable [worlds] rather than the sum of what exists physically" (sec. 2). These worlds are "hierarchically structured" in opposition to the "'actual' or 'real' world (henceforth AW)", which is treated as the "central element" of the modal system (sec. 2). The concept is essentially a "means to solve problems in formal semantics" using this "modal" system (sec. 1).[31] Basically, Pavel used analytic philosophy and a constructed metaphysical modal system to explain how one can describe the statements about an alternative PW (henceforth APW) as being true or false given the fact that the world being analyzed *is* fictional.

The role that diachronicity plays in Pavel's model of literary interpretation arises from the observation that the entire feedback loop between a reader, text, and author can be described as a *language game*. When considering the semantics of a PW, one should compare the statements of the text to the APW of the text instead of the actual world (henceforth AW) of the reader. A statement constitutive of the PW is automatically considered to be true in the PW.[32] This constitutive process is *ludic*: "works of fiction are not mere sequences of sentences but props in a *game of make-believe* . . ." (Pavel 55, emphasis from the original).[33] Essentially, "readers are located *within* the fictional world that, for the duration of the game, is taken as real" (55, emphasis from the original).[34, 35] Such games, however, still have rules akin to the conventions produced by coordination games via "strategies of recognition" and "solutions based on precedent" that emphasize the way "literary games enhance the pleasure of taking fewer and fewer risks" (126-27). In other words, the game produces "regularity in behavior, a system of

mutual expectations, and a system of preferences", and "the horizon of expectations within which writers and their public operate can be seen as the background of various coordination games involving tacit cooperation between the members of the literary community" (120). This model is not at odds with the lessons of poststructuralism, as is obvious when one considers that Lyotard described the method by which meaning is made as a "language game" in *The Postmodern Condition* (9-11). The entire set of operations in such *games*, however, are only visible if one analyzes the various moves *played* by its participants diachronically.

Reader as Detective

This model suggests that reading and interpretation bear much in common with the structure of a detective story. When explaining how these coordination behaviors and games apply to reading, Pavel explains that "in a game-theory perspective, literary texts are assumed to be built around a few basic rules that give access to a text" (126). Naïve readers only know those basic rules. More advanced readers learn more advanced strategies via "training and practice" (126). Eventually, readers learn "how to detect regularities [in a text] that are invisible to less-trained readers" (126). On the basis of those regularities, more advanced interpretations become available. The reader is a detective constantly working towards a more and more accurate interpretation based on prior efforts.

Cyberpunk asks its reader to interpret the genre via this model using a structure that helps explain why some readers accuse it of possessing a cause-and-effect narrative: cyberpunk *does* typically possess, on the level of plot, something akin to a classic cause-and-effect narrative! As Wolmark points out, "cyberpunk is strongly inscribed with the . . . rhetoric echoes . . . of

detective . . . fiction" (109). The connection between cyberpunk and detective fiction is a common observation among critics.[36] That observation does apply to the texts discussed in this chapter. *Mindplayers* is punctuated by Allie's various efforts to *learn*.[37] The two most important lessons that mark Allie's journey are the fact that "*any* contact, face-to-face or mind-to-mind, leaves its mark on you" (Cadigan, *Mindplayers* 42) and she cannot "separate" herself from the psychological ghost of "McFloy" (271). Her final "revelation"—the novel's climax—is her discovery that "reality and state of existence" are "not the same thing," and while McFloy may not be part of her reality, to be a "whole self" and avoid "madness" or schizophrenic "fragmentation," she must successfully internalize his existence as a result of her first lesson in the novel: any contact with another person leaves its mark on you (271-72). *Mindplayers* is essentially a psychological detective novel that fictionalizes Allie's attempt to discover herself.

Synners and *Snow Crash*'s relation to the detective genre is a little more obvious. As Chernaik points out, *Synners* "is constructed around an enigma, a mysterious note. . . . By the end of the novel, we are able to translate this note. . . . The discourse of each character is an attempt to unravel this enigma, providing the hook for the reader of the text" (71).[38] *Snow Crash* provides a similar detective context. The "mystery" in the novel begins the moment "the black-and-white guy says, 'you want to try some Snow Crash?'" (Stephenson, *Snow Crash* 51). The "hermeneutic code" is activated, and the reader is led to wonder, "Who is this avatar? What is Snow Crash?" This activation is reinforced by the way the novel frames Da5id as a victim—in the sense created by a crime—of this avatar and the drug/virus it offers. Over the course of the novel, Hiro Protagonist solves this mystery, learning about Raven, Snow Crash, the nam-shub of Enki, L. Bob Rife, the various plots involving all these narrative elements, and ultimately, discovers a way to create virus-protection software against the novel's titular metavirus. It is no

wonder that Cavallaro says that a "major influence behind cyberpunk's characters and settings is the hard-boiled detective fiction" (8).

This observation seems to be at odds with one of McHale's claims about cyberpunk and postmodernism. McHale agrees that cyberpunk is "a convenient name for the kind of writing that springs up when the converging trajectories of SF poetics and postmodernist poetics finally cross" ("Elements of a Poetics of Cyberpunk" 149). He makes this statement in keeping with the arguments made by Ebert about "metascience fiction" ("POSTcyberMODERNpunkISM" 311). McHale argues that "both science fiction and mainstream postmodernist fiction possess repertoires of strategies and motifs designed to raise and explore ontological issues" ("Elements of a Poetics of Cyberpunk" 151), but according to McHale, cyberpunk and postmodernist fiction stand at odds with modernism and detective fiction because the former pair is "governed by an ontological dominant" where the latter are "epistemologically oriented fiction" (151). McHale goes so far as to say that the detective story is "the epistemological genre *par excellence*" (*Postmodernist Fiction* 9, 16 and *Constructing Postmodernism* Kindle Location 3318, emphasis in the original). In polar opposition, he calls science fiction "the ontological genre *par excellence*" (*Postmodernist Fiction* 16, 59, emphasis in the original). He explicitly states that "everything that makes SF a paradigm of contemporary writing at large is present, if anything even more conspicuously, in the fiction of the latest SF generation, so-called 'cyberpunk' SF" (*Constructing Postmodernism* Kindle Locations 476-78), thus indicating that cyberpunk should have nothing to do with detective fiction.[39]

McHale's argument regarding cyberpunk and its role as an "ontologically oriented fiction" revolves, in part, around the way the genre "often generates elements of its worlds by literalizing metaphors from everyday discourse or mainstream fiction and poetry" ("Elements of

a Poetics of Cyberpunk" 150). Specifically, he argues that science fiction "is preoccupied with questions such as, what is a world? how is a world constituted? are there alternative worlds, and if so how are they constituted? how do different worlds and different kinds of worlds differ? and what happens when one passes from one world to another?" (151). According to McHale, cyberpunk texts use the literalized poetics of "symbolic enclosures, functioning as scale models or miniature analogues of worlds, [to] bring into view the normally visible horizons of world, the very 'worldness' of world" (151). One can certainly find examples of such literalization at work in *Mindplayers, Synners,* and *Snow Crash.*

For example, one of the poetic strategies that McHale attributes to cyberpunk's ontological orientation is its exploration of microworlds arranged along a "parallel" axis: "that is, it is possible to juxtapose worlds occupying *different* ontological planes—worlds and metaworlds, or worlds and inset worlds (worlds-within-worlds)" ("Elements of a Poetics of Cyberpunk" 155 and *Constructing Postmodernism* Kindle Locations 5651-52). McHale notes that the "characteristic" world of this sort in cyberpunk is Gibson's "cyberspace" ("Elements of a Poetics of Cyberpunk" 155 and *Constructing Postmodernism* Kindle Location 5653). The psychologically shared virtualities of *Mindplayers,* however, also qualify. Those virtualities are also described in terms that conflate a virtual "system" and a space where one can "meet in mind-to-mind contact" (Cadigan, *Mindplayers* 16). In *Mindplayers*, "the mind is a dynamic system" in advance of the existence of technology (42). The human, in other words, is already cybernetic, already posthuman, and already constructed via feedback with others even before the influence of the novel's *novum*. With the aid of that *novum*, however, that construction also happens in "some space lying somehow 'within' or 'behind' the . . . screen of the" ocular interface (McHale, "Elements of a Poetics of Cyberpunk" 155 and *Constructing Postmodernism*

Kindle Locations 5656-59). Both *Synners* and *Snow Crash* feature similar microworlds arranged along a parallel axis via their inclusion of the "networks" in *Synners* and the "metaverse" in *Snow Crash*.

Likewise, McHale argues that this "shift of focus to ontological issues and themes" radically affects "models of the self": "a poetics in which the category 'world' is plural, unstable and problematic would seem to entail a model of the self which is correspondingly plural, unstable, and problematic" ("Elements of a Poetics of Cyberpunk" 157 and *Constructing Postmodernism* Kindle Locations 5699-701). This unstable model of the self is the epiphenomenon of the genre's tropic tension between teleological and anti-teleological qualities, is evident in Allie's *lessons* and the conclusion of *Mindplayers*, shapes the radical depersonalization of Mark and Art and their conflation into Markt, and governs the power of *me* and the metavirus to rupture the enclosure of the self in *Snow Crash*. I have already shown how this is the case in regards to every cyberpunk text I have discussed up to now throughout this dissertation.

Snow Crash even predominantly features the more typical "microworlds" McHale describes: "now a Burbclave, that's the place to live. A city-state with its own constitution, a border, laws, cops, everything" (Stephenson, *Snow Crash* 8).[40] Thus, I find McHale's argument regarding cyberpunk's use of literalized metaphors to ask such ontological questions fundamentally convincing. As McHale explains, "all these spaces, cyberpunk and postmodernist alike, are instances of what Michel Foucault called 'heterotopia,' the impossible space in which fragments of disparate discursive orders (actualized in cyberpunk as disparate microworlds) are merely juxtaposed, without any attempt to reduce them to a common order" ("Elements of a Poetics of Cyberpunk" 154 and *Constructing Postmodernism* Kindle Locations 5616-18).

McHale, however, fails to account for a key point of praxis: as a genre, cyberpunk is both epistemologically oriented detective fiction (of a sort) and ontologically oriented science fiction, and while any specific text may lean more to one direction than another, some texts act as both simultaneously to an equal degree.

This rare moment of a lack of in-depth perception in McHale's otherwise powerful analysis of postmodernism is evidence of the danger that accompanies not using a diachronic perspective when analyzing fiction. As Bukatman explains, "The significant failing of McHale's analysis occurs in his all too convenient separation of ontology from epistemology, which is indicative of the pervasive lack of historical grounding that characterizes his study" (Bukatman, *Terminal Identity* Kindle Locations 3419-20). History is the realm of diachronicity. Unfortunately, Bukatman's overall study ends up falling victim to the same type of historical blindness. While Bukatman finds the "significant conflation" between the detective story and science fiction "unsurprising" (Bukatman, *Terminal Identity* Kindle Locations 2983), his ultimate conclusion is that "the ontological mutability of the postmodern text does not simply exclude an epistemological position, but is fully a sign of epistemological surrender" (Bukatman, *Terminal Identity* Kindle Locations 3422-23). Bukatman agrees with Sponsler's assessment that cyberpunk has "so thoroughly problematized the relation between objects, events, language, and meaning that narration—and especially the form of narration we call the novel—has become nearly impossible" (Sponsler 643): "The world has lost visibility, corporeality, and comprehensibility" (Bukatman, *Terminal Identity* Kindle Location 3423). Sponsler and Bukatman's diachronic blinders have led these two critics to make a "failed" move in the interpretation *game*, thus providing evidence for the same dangers that Bukatman observed in McHale's analysis.

That is not to say that literary criticism should return its focus to "discovering" an author's intent. (Indeed, my use of the word "fail" is often knowingly problematic and uttered with some degree of irony.) Pavel explicitly agrees that "the notion of author . . . must give way to that of the scriptor" (8). Barthes's argument that "as soon as a fact is *narrated* no longer with a view to acting directly on reality but intransitively" a "disconnection occurs, the voice loses its origin, the author enters into his own death, writing begins" ("The Death of the Author" 142), is consistent with the content of *Fictional Worlds*: "texts can be conceived of as the result of linguistic games more or less independent of individual will and purpose" (Pavel 8). The reason for this is that the expectations of the fiction never quite ossify in a structuralist sense: "where conventions are stabilizations of coordination games, they are obligatory only in a weak, de facto sense. . . . Other solutions remain possible" (122), and "the memories of [a solution's] implementation can easily be recalled and the same game, or a modified one, can start again, leading to new solutions and new conventions" (123). Moreover, coordination games "sometimes dispense with the copresence of the participants. Since coordination can be achieved in spite of absence, the death of one or more participants does not create insuperable obstacles for the game" (121). The difference is that while one must accept that a synchronic interpretation might yield many different results, a diachronic interpretation provides us with the coordinate required to narrow down some interpretations as more or less valid on the basis of a text's reaction to the interpretations that readers have had to other texts operating in the same (or related) genres, and the texts that an author publishes as a move *played* after any given interpretation of their prior texts speaks to what aspects of the literary community's interpretations their *oeuvre* wishes to align itself with (whether any specific example does or not).

This model of interpretation explains how cyberpunk can simultaneously act like both a type of epistemic detective fiction and an ontological science fiction. Since its original inception, cyberpunk narratives have tended to feature worlds that are, at the beginning of any given narrative, cast in a type of entropic decay. In *Neuromancer,* the novel opens with a sky "tuned to a dead channel" (Gibson 3). Case begins the novel with a "nervous system" damaged by "a wartime Russian mycotoxin" (6). The novel's rag-tag group of criminals and mercenaries has no idea what they are doing or who they are really working for. In "The Gernsback Continuum," the story's first paragraph is a pastiche of descriptors that provide no meaningful data with which a reader can interpret the paragraph's content.[41] The story revolves around a character who has descended into semiotic madness. *Software* opens with Cobb Anderson suffering the effects of age, divorce, and boredom: "*I get so tired of being me*" (Rucker, *The Ware Tetralogy* 1, emphasis in the original). The robots on the moon, meanwhile, have found themselves in a state of civil war and "llosst touchh with what'ss reallly goinng on" (6)—a sentence that calls to mind entropy not only via its content but also its stylistic spelling errors. In "Tales of Houdini," the very first sentence tells us that "Houdini is broke" (Rucker 43). *Frontera* begins with characters who "look like hell" (Shiner 1). Kane and Lena's relationship is in a state of disarray (1-2). Kane's spaceship is "crashing" (2). Back on earth, the world is recovering from a corporate war.[42] In "Till Human Voices Wake Us," Campbell's marriage and environment are both depicted as being in a state of decay. In "Freezone," Rickenharp's band is about to break up "like a divorced couple" (Shirley, "Freezone" 156). The overarching narrative of *A Song Called Youth* begins in an even worse state of disarray: "Global warming. Climate change" (Shirley, *A Song Called Youth* Kindle Location 83); "a world war" (Kindle Location 86); a "dead" city (Kindle Location 121). *Schismatrix* begins with the breakdown of Lindsay and Philip's friendship and a

conflict between the Shaper and Mechanist factions: "The Mechanist and Shaper superpowers had exported their war into this quiet city-state" (Sterling, *Schismatrix Plus* Kindle Location 103). All are forms of decay.

In the coordination game that produced cyberpunk, this play on the part of the Movement authors became a convention. *Mindplayers* begins with criminal behavior that fragments Allie's mind. *Synners* beings with a character who is afraid that he is "going to die" (Cadigan, *Synners* 1), Gina being prosecuted for criminal activity (7), the Manhattan-Hermosa strip suffering as "the old postquake land of the lost" as a result of "the Big One" (8), and a mysterious note that nobody understands. *Snow Crash* opens with Hiro Protagonist, one of the programmers who wrote the lucrative "Black Sun" (Stephenson 49), working as a pizza "Deliverator" (3) and living in "U-Stor-It" (24). The world around him is also beginning to fall into viral disarray due to the spread of "Snow Crash." Diachronically, we can think of these examples as a textual acceptance of one of the *moves* made by the Movement authors.

The Movement authors also introduced a general plot structure in which a cybernetic feedback-loop is used to try to solve, via trial and error, the issues of the novel. In short, "The Gernsback Continuum" resolves the semiotic madness of its main character, making it clear that the solution was actually the implied content of the story's first paragraph via the context provided in the rest of the story. Whether Cobb Anderson survives his experience or not, his boredom is solved via the Moravecian, cybernetic upload: whatever Anderson becomes, he is no longer *tired of being himself*. More importantly, Sta-Hi ends up being the "hero" who solves what's really going on, if not for the robots, then at least for himself (Rucker, *The Ware Tetralogy* 51). Houdini makes his videotape and rides away in a white convertible, thus implying that he is no longer broke. Kane discovers his uncle's plot and foils it by giving Molly possession

of Verb's invention, thus bringing about an end to Earth's cycle of war and ushering in, at least for a time, peaceful coexistence between Earth and Frontera Base. Campbell finds his mermaid and discovers that it is not the romantic myth he imagined. Rickenharp joins a new "band"; instead of the life of an artist, he joins up with Carmen and the freedom fighters, after which "everything was different" (Shirley, "Freezone" 177). By the end of *A Song Called Youth,* those freedom fighters discover a way to stop the spread of the fascist Second Alliance International Security Corporation using the cybernetic "Plateau."[43] The novel's conclusion with the reunion of two separated lovers and implied coitus in the "freefall room" (Shirley, Kindle Location 15297) suggests a time of reconstruction and an end to the devastation that marks the narrative's introduction. Lindsey finds a way to escape the "Final Questions" and "Final Answers" of such events as the Shaper/Mechanist war, thus escaping the "Absolute" in favour of "Somewhere wonderful" (5860-86). The Movement clearly believed that the methodology of a cybernetic feedback-loop could achieve some form of positive resolution.

Neuromancer provides the most iconic example of such resolutions: Case's nervous system is repaired in Chiba's cybernetic clinics (Gibson, *Neuromancer* 39). More importantly, via a process of trial and error, Case learns that their ostensible employer, Armitage, is actually the rebuilt remains of "Colonel Willis Corto" (121), who "wheels for [the AI] Wintermute" (95), who has in turn arranged for the team of criminals to "cut the hardwired shackles that keep this baby [Wintermute] from getting any smarter" (132). Their investigation is implicitly framed in terms that allude to cybernetics. For example, while attempting to discover why Wintermute has hired them, Molly says, "This deal's real big, looks to me. We're out where the little waves are too broad, we can't see the rock that hit the center. We know something's there, but not why. I wanna know why. I want you to go and talk to Wintermute" (95). This metaphor of the

investigation as a process by which the two are steering a vessel to avoid hitting a rock calls to mind Wiener's original derivation of the word cybernetics from "*kubernētēs,* or 'steersman'" (Wiener, *The Human Use* 15). It is the genre's interest in the cybernetic feedback-loop that has inscribed the echoes of detective fiction into cyberpunk, for the cybernetic feedback-loop is being used as an investigative tool designed to solve the mysteries present in the chaos of each story's initial state.

This convention holds true for *Mindplayers*, *Synners*, and *Snow Crash*, but I have also shown that all the texts I have analyzed feature a radical degree of ambiguity. Where the field of cybernetics exists with a purposive ethos, cyberpunk fiction features an anti-teleological attitude as evinced by the way some of its representations of the cybernetic feedback-loop yield failures, and the narrated moments of unexpected, accidental input found in the genre are frequently described as leading to a change in purpose. If we imagine the genre as a sort of narrativization of the cybernetic feedback-loop used as an epistemic process, then Pavel's concept of fiction as being like a game that is played epistemically explains the role of these failures and altered purposes.

The various moments of failure in the text are a self-reflexive awareness of any given *player*'s potential failure. Marshal McLuhan has stated that "in reading a detective story the reader participates as co-author simply because so much has been left out of the narrative" (31). Ben S. Bunting *et al*. has made a similar observation about "digital games of various platforms that seek to empower the player not just as an avatar in a gameworld but also as a co-author of that gameworld, alongside the gamemaker(s)", in the context of "in-game storytelling" (143). Detective fiction should be thought of as a precursor to Bunting's "decades-long evolution of digital games" (143). Similarly, in the case of cyberpunk, given Pavel's notion of the cooperation

game of fiction, one should think of the reader as a *game-player* who participates as a co-author by engaging in the epistemic process of the hermeneutic code. As Aki Järvinen has observed, however, well designed games provide "experiences [that] are emotional rollercoasters: they manage to produce an oscillation between realization of success and victory condition (hope) and preventation [*sic*] of end condition and failure (fear)" (143). In short, structurally speaking, games require the possibility of failure.

The output from a synchronic object of study cannot call any interpretation of a Movement text a failure so long as that interpretation's internal logic is coherent. Given that fact, the meta-proclamations made about the difficulty in interpreting such texts by critics such as Bukatman and Sponsler are fair. Of course, the possibility of "failing" to read any given text in the manner its author may have desired is necessary for a text that wishes to avoid the *telos* that I claim the genre has, as a whole, chosen to attack. Self-reflexively using such ambiguity to its narrative advantage is the gift poststructuralism or postmodernism has given these texts as a tool of discussion regarding the posthuman subject. If Coyne's methodology from *Technoromanticism* has any value, and I believe it does, then his methodology can only achieve "success" insofar as it is enacted by a reader engaging in a text. The text may only provide the tools to make such interpretations easier to justify. The corollary of this is that texts may be used by some readers for objectives antithetical to the best possible expression of a text's internal logic (assuming such even exists).

As a diachronic method, however, one can use the texts published both before and after any given text as coordinate with which to frame their interpretation of a text in terms of its part in an *oeuvre* or genre. For example, it is entirely reasonable for one to accept that Movement "narratives are informed by romantic (Gothic) fiction, as exemplified in Gibson's *Neuromancer*,

in which cyberspace exhibits the trappings of the technological sublime" (Coyne 63), and that on the basis of this example, "cyberspace narratives conspire with notions of unity, ecstasis, and disembodiment to present a technological face to the Platonic universe" (63). It is entirely reasonable for one to conclude that a "reader is enjoined to be ambivalent about" (63) the technologically modern world by *Neuromancer*, but it is still coopted by technoromanticism and turned into a quasi-postmodernism because of the way its presentation of a technological world may seem to ground postmodernism in a technological cause. Once *Snow Crash* is used as a coordinate to interpret cyberpunk as a whole, however, it becomes clear that the text's input into the genre is that technology is merely another facet of the human reaction—that is linguistic in origin—to a pre-individuated un/realism, and that while cyberpunk claims that "information technology may have provided a space, disclosed something about the world, . . . there is a sense in which what it discloses is what was there all along" (Coyne 29). This breaks the chains of technoromanticism in a manner akin to what Coyne promotes. The more texts evince this position, the more unreasonable it becomes to argue that the genre of cyberpunk, as a whole, is legitimately coopted into producing quasi postmodernism.

A diachronic analysis of cyberpunk as represented by texts published between 1981-2020, given the authors I have chosen in this study, makes it far more difficult to reasonably claim that cyberpunk has been coopted into producing a quasi postmodernism. Perhaps, given the content of the majority (though not the totality) of the Movement texts published between 1981-1986, one can reasonably make that claim about the Movement's synchronic existence during its first wave of texts. Not only does *Snow Crash* problematize this interpretation as of 1992 (and *Mindplayers* by as early as 1987), however, but the moves *played* by key Movement authors suggests that such output is not even the most logical interpretation of their *oeuvre*. For

example, perhaps Gibson's *Neuromancer* can be read that way, but such arguments become less and less convincing with every iterative publication in his *oeuvre* until, by *Pattern Recognition* (which essentially retells the story from *Neuromancer*, complete with a protagonist whose name is pronounced the same way as Case—Cayce), originally published in 2003, his stories start taking place in the modern world, without any of the transcendent, apocalyptic technologies from Gibson's preceding, science-fictional entries.

My claim that *Pattern Recognition* steers Gibson's expression of cyberpunk away from transhumanism and towards a type of postmodern posthumanism follows from a quick survey of the critical work written about the text to date. While the text leaves the above-mentioned transhumanist technologies behind, Jameson still argues that *Pattern Recognition* moves "closer to the 'cyberpunk' with which he is often associated" ("Fear and Loathing in Globalization" 105). Wen Jin writes that when "*Pattern Recognition* came out in 2003, it surprised some critics by seemingly departing from the author's usual focus on the human–cyberspace interface. But the continuity is still visible" (Jin 249). Conor McCarthy provides evidence that, like *Snow Crash*, *Pattern Recognition* is more interested in looking towards the past as the source of its themes than the apotheosis of a technologically induced quasi postmodernism: "By the time Gibson writes *Pattern Recognition*, set in the approximate-present of the early twenty-first century, present and future may have caught up with one another in his work, but this novel's sense that the future is now is also accompanied by a surprising interest in the past" (McCarthy 8). Lest one be tempted to assume that the primary theme I have described has somehow disappeared, Susan Elizabeth Sweeny observes that *Pattern Recognition* is a "metaphysical detective story" in which the protagonist has "trouble distinguishing a mystery's actual solution—if it even exists—from their subjective interpretation of data" (Sweeny 15).[44]

Likewise, Easterbrook (who also agrees that the novel is connected to Gibson's usual cyberpunk themes) writes that "the novel itself adopts a postmodern historicism" ("Alternate Presents" 492). Of course, he interprets Gibson's books as having "become progressively more postmodern" (494). I would argue that if Gibson's books have become progressively more postmodern, it is only because with each move his *oeuvre* has *played*, it has responded to prior interpretations by narrowing down its message (that some already perceived in *Neuromancer*) and positioning itself against (other) readings it deemed antithetical to its desired output.

Expansive Play: *Trouble and Her Friends*

There is one final quality implicated as being game-like by a diachronic study of these texts. Interpretation is like a game in that unexpected modification of a game's expected modes of play are an observable phenomenon, especially when players are "not limited to acting or reacting to the game environment . . . as they have the possibility to design the environment through the creation of new artefacts that transform the environment" (Ang et al. 367). One *plays* fiction by engaging in the *make-believe* of a possible world, thus making such worlds the environment of the *game* of fiction. One might argue that the world of a text is fixed based on the utterances in that text, but that is not precisely true. At least some of the world of a text is fixed based on the utterances in that text, but in the play of interpretation, a reader always draws upon their external experiences as they construct—in the sense of imagine—the possible world of the novel. Thus, readers are not limited to acting or reacting to the novel's explicit environment. This is doubly true when a reader responds to a genre by writing a new novel belonging to it. Such conditions produce "expansive play": "activities that transgress the original game boundary and

transform intrinsic play in an unexpected way" (364). This type of play involves "a player connecting previously unrelated resources . . . to produce a *novel* idea" (367, emphasis added). Sometimes, this type of play can create a "completely new goal" of play (368). A diachronic study of the way Stephenson's *oeuvre* has reacted to the expansive play of *Mindplayers* frames cyberpunk as having become progressively more interested in what we can call the therapeutic production of posthuman identity.

Mindplayers engages in expansive play by creating a space for female identity in cyberpunk. *Mindplayers*, as previously mentioned, is a sort of psychological detective story; Allie both needs a pathosfinder and becomes a pathosfinder. *Mindplayers* is a narrativization of the process by which Allie constructs her own sense of self. In a sense in keeping with Coyne's reading of Anthony Giddens's *The Transformation of Intimacy*, *Mindplayers* is a story about "self help" (Coyne 247). Giddens explains that "we should recognise that self-identity becomes particularly problematic in modern social life" (Kindle Locations 472-73). Coyne's use of Gidden is in some sense poetic given that Giddens positions his claim against "Foucault's interpretation of the development of the self in modern societies" (Giddens, Kindle Locations 471-72), thought of as a technological construct.[45] Rather, Giddens roots the importance of this shift in "psychoanalysis" (Kindle Location 480-89). *Mindplayers* appears to be a less linear narration—rhizomatically spreading across both literal technology and psychoanalysis—of one of Giddens's important arguments: "The self today is for everyone a reflexive project—a more or less continuous interrogation of past, present and future" (Giddens, Kindle Locations 478-79). According to Giddens, in "modern societies," female identity and breaking "free from pre-existing gender roles" is a question of "particular intensity" (Kindle Locations 471-76).

Giddens's observation resonates with the role that women played in the early formation of cyberpunk. Ross has famously claimed that cyberpunk is composed of "the most fully delineated urban fantasies of white male folklore" (145), and that its "youthful male heroes" have "little to do with . . . feminism" (152). Lavigne observes that in the 1980s, "almost all of [cyberpunk's] major works were written by middle-class, heterosexual white men" (Lavigne, Kindle Location 369). To be even more precise, by claiming that the exact "moment of the genre's coalition is equally difficult to pinpoint" (Lavigne, Kindle Location 165-67) (and falling for the ahistorical trap of equating the influences described by McCaffery and Sterling as potential moments of its coalition), Lavigne accidentally glosses over an even more troubling observation: despite the fact that Dozois named Cadigan as one of five "cyberpunks" in "SF in the Eighties," thus giving the Movement its name, every single member of the Movement was a white man, and Shiner "was surprised to see Cadigan" on the list. ("Inside the Movement" 18). As Lavigne points out, foreseeably given this context, "the most frequent critiques of the genre came from feminists" (Lavigne, Kindle Location 371-72). Cadigan provides a potent counterpoint to the norm and became the "Queen of Cyberpunk" (Lavigne, Kindle Locations 541-711).[46]

Cadigan's work changed the way women were presented in cyberpunk. As Lavigne points out, while "other authors tended to introduce female characters either as sleek sex objects or haggard crones", characters like Allie or Gina provided "better rounded," more authentic, examples of female subjectivity in a cyberpunk world (Kindle Locations 631). It is, however, important to note—as Lavigne does—that Cadigan was "writing like a woman . . . not because her work is somehow more 'feminine,' in the stereotypical sense, but because her writing is, for multiple reasons, recognizably different from that of her male colleagues. (Kindle Locations 676-

77).[47] In this sense, Cadigan enacts Giddens's call regarding the importance of constructing the self as a reflexive project—*Mindplayers* is a narrativization of "self help" in the sense of "potent narratives that account for and reconstruct life in the digital age" (Coyne 44).

Cadigan was the first to *play* this move in the game of *cyberpunk*, but her intervention into the genre helped develop a trope that is perhaps of more immediate and pragmatic importance—despite nevertheless being bound up in this traditional posthuman problematic—than the esoteric tensions between *telos* and anti-*telos*. Where *Neuromancer*'s Molly might have contained only the "shadow" of a feminist position (Lavigne, Kindle Location 480), Stephenson's characters more closely follow in the footsteps of Cadigan. As Lavigne points out, in *Snow Crash*, "Juanita is the one who gives people in virtual reality the ability to communicate through the nuances of facial expression" (Kindle Locations 1306-07). This might seem like a minor component of the novel, but it has been interpreted as a shift of great importance by Lavigne.

The reason why becomes obvious when considering Haraway's "A Cyborg Manifesto" (originally published in 1985). To Haraway, writing in the cultural moment of the mid 1980s, "Communications technologies and biotechnologies are the crucial tools recrafting our bodies. These tools embody and enforce new social relations for women worldwide" (164). Haraway was not talking about a literal change in the human body. Rather, Haraway observed that the semiotic power of information technology could be used to produce images and narratives capable of, in a critically posthuman sense, rearticulating and constructing bodies through language. Haraway's argument is essentially a Marxist one: *seize the means of semiotic production lest we lose control of the product—our posthuman selves*—or as Braidotti puts it, "any theory of subjectivity worthy of its name must take into account the embodied and organic

structure of the subject" ("Posthuman, All Too Human" 197). Following this line of reasoning, Lavigne observes that "characters in women's cyberpunk who are deprived of their bodies suffer for it. Mental illness, a sense of loss, alienation or an inability to fully relate either in person or online are all consequences of losing one's bodily identity in these works" (Kindle Locations 1524-26). Juanita's reintegration of a semiotic, female, embodied code into the metaverse at least partly acknowledges "the feminist emphasis on corporeality's link with self and social identity" (Kindle Locations 1308-09).

I am not suggesting that *Snow Crash*'s efforts to represent women as multivalent entities are perfect. I am happy to concede the various moments of male gaze that Lavigne finds in *Snow Crash* throughout her analysis of the text. Rather, I mean to point out that the text at least tries to emulate the more complex positionality that Cadigan added to the genre. Yes, as Lavigne notes, *Snow Crash*'s Y.T. "is attractive and fit" (Kindle Location 1479) and Juanita is an "elegant, stylish knockout" (Stephenson, *Snow Crash* 70). In and of themselves, there is no problem with *Snow Crash*'s descriptions (nor does Lavigne claim that there is), but in what Lavigne calls "women's cyberpunk, female characters are portrayed with realistic diversity, and yet still acknowledged as attractive"—full figures, age lines, and all (Kindle Location 1498). *Snow Crash,* however, is only the first coordinate in Stephenson's diachronic *oeuvre,* and his later texts continue to show an effort to make his representation of women more multivalent on the basis of such critiques as the body of literature Lavigne uses to build her addition to such criticism—Melissa Scott's *Trouble and Her Friends,* for example.

Trouble and Her Friends was first published in 1994, about two years after *Snow Crash*. It features all of the structural traits I have been attributing to cyberpunk as well as many of its typical tropes. The novel's opening line informs the reader, "Trouble was gone" (Scott 13). The

sentence, however, turns out to be indicative of the opposite. “Trouble” in the sentence refers not to the usual use of the word but rather the nickname of a person. The first chapter focuses on Cerise—Trouble’s now ex-girlfriend. Trouble has left because “the U.S. rejected the Amsterdam Conventions” and instead passed “the supposedly benign Evans-Tindale Bill [that] would [in practice] destroy the cracker community, bring[ing] them all finally under an alien, ill-conceived, ill fitting law” (16). The novel opens in a state of chaos.

This chaos is only exacerbated when, three years after the events of the opening chapter, “Somebody who calls themself Trouble has been hacking the industrials” (41). The word “industrials” is a slang reference to corporations such as “Multiplane,” the very corporation that Cerise ends up working for as a result of the social and legal fallout created by the Evans-Tindale Bill (59). This results in the novel becoming a literal detective story. In fact, in the time period following the first chapter, Cerise has come to work as the “[h]ead of on-line security for Multiplane” (172). This job title refers to a role that is “[s]ort of a glorified syscop” (172). The term syscop—literally a truncated combination of the words “system” and “cop”—is used in the novel to describe someone who is an “on-line legal authority” (25). Before Trouble learns that she “is in trouble” (40) because of newTrouble’s behavior, she has also started working as a syscop (43). She loses her job because of the newTrouble’s behavior and the legal attention that behavior creates (79), and is subsequently forced to turn her attention to finding out who newTrouble is so that she can clear her name. Cerise is likewise tasked with finding and dealing with Multiplane’s “intruder” (67). The novel is a story of two thieves turned detectives who the world has set to “catch a thief” (170, 172)—newTrouble.

The technological *novum* used by Scott’s text is not only reminiscent of those found in novels like *Neuromancer*, *Snow Crash*, or *Synners*, but it also positions *Trouble and Her Friends*

as a critical, queer, and feminist response to the masculinist tendencies of the first wave of cyberpunk. The novel features a "net" not unlike the matrix described by *Neuromancer*. The net in Scott's novel is a virtual space filled with "signposts, vivid neon images, and the swirling rivers and lines of light that were the virtual reflection of the data itself" (15). This is a description directly in keeping with Neuromancer's "bright lattices of logic unfolding across [a] colorless void" (Gibson, *Neuromancer* 4-5). The net, like the matrix, is a "a graphic representation of data" that is described in language reminiscent of "city lights" (51).[48] The net also has various features reminiscent of the metaverse from *Snow Crash*. On the net, one must choose an icon and can choose one akin to the "Brandy" from *Snow Crash*: "a comic-book woman, all tits and hips and Barbie-doll waist, but done in one dimension only" (Scott 119). The means by which one connects to the net and controls their avatar, the similarity of "brainworm" used by the titular protagonists of *Trouble and Her Friends* to the *novum* of *Synners*, and Scott's various descriptions of women frames her description of the one-dimensional cartoon icon into a statement that looks like a direct response to the type of depictions found in *Snow Crash*.

In order to connect to the net, "you plugged yourself into the system—either via the implanted dollie-box and dollie-slot, the direct-on-line-image processor system, which gave a text-speech-and-symbol interface, or through the full-sense brainworm, with its molecular wires running directly into the brain that let you experience virtuality as though it were real" (15). As Graham J. Murphy observes, however, "What emerges is a conflict between the old-school hackers—white, straight, male who rely solely on their manual hacking skills—and the more-recent hackers, who use implanted brainworm technology to hack digital databases" ("Cyberpunk and Post-Cyberpunk" 524-25). The brainworm used to evoke this conflict by Scott bears a striking resemblance to the sockets that take the network by stroke in *Synners*.

The primary difference between the brainworm and other forms of interfacing with the net in *Trouble and Her Friends* is that the "brainworm responded perfectly, its impulses overriding the merely physical input" of the material world (Scott 17). This is because "the brainworm translates what is truly only electrons, data transferred from computer to computer, to sensation in [the] brain" (17, italicized in the original). In order to do so, however, "the brainworm requires placing hardware in the brain itself" (30). The hackers of *Neuromancer*, *Snow Crash*, *Synners*, and *Trouble and Her Friends* all put themselves in neurological danger. "*ICE*, intrusion countermeasure electronics" (Gibson, *Neuromancer* 28) ruined Case's career as a console jockey and killed many of the other hackers in *Neuromancer*'s APW. What *Snow Crash*'s titular virus did to Da5id has already been discussed, as has the stroke which spread across the network as a result of the new socket interface technology in *Synners.* The titular characters of *Trouble and Her Friends* put themselves at risk from a source reminiscent of the world inhabited by Case: "Intrusion Countermeasures (Electronic)" (Scott 15). Unlike Case's world, however, hackers without the brainworm do not face the same threat: "The dollie-slots and the associated implants didn't touch the brain, ran along existing nerves—less of a risk" (26). The brainworm is a risk for the same reason that the sockets of *Synner*'s turn out to be a risk: both are "a direct [neurological] interface for input-output with manufactured . . . nets" (Cadigan, *Synners* 184-85).

The manner in which *Trouble and Her Friends* aligns itself with the *novum* of *Synners*—a novel written by a woman who is conspicuously absent from membership in the Movement, despite being called a cyberpunk before the term came to be applied to either Rucker or Shirley—should not be thought of as incidental. The conflict that Murphy has made note of positions its titular protagonists as the group implanted with the brainworm: "This new

generation of hackers is clearly coded as women, queer, and/or persons of color and they are dismissed by the old-school hackers for relying on the implanted 'worm' and therefor not being true hackers" ("Cyberpunk and Post-Cyberpunk" 524-25). Furthermore, Trouble and her friends are coded as being willing to implant themselves with the brainworm precisely because of their experiences as members of at-risk communities. Trouble hated the installation process and its associated risks more than the following risks of cracking IC(E): "it was the installation itself she hated, and tuning her reflexes to the new system, body given over to pure sensation, inflicted without passion, without feeling, by a stranger's hands" (Scott 104). Trouble also theorizes that this is why the white, straight, male, old-school hackers hated the brainworm: "because it meant taking that risk, over and above the risk of the worm itself" (104). They are not prepared to deal with the vulnerability attached to illegal, surgical penetration. Trouble likewise muses, "Maybe that was why it was almost always the underclasses, the women, the people of color, the gay people, the ones who were already stigmatized as being vulnerable, available, trapped by the body, who took the risk of the wire" (104)—an alternative term for the brainworm used in the novel. *Trouble and Her Friends* is explicitly positioning itself against the masculinist tendencies of the first wave and aligning its APW with the *novum* created by a female author who, from a historical perspective, should be considered one of the genre's founders.

Taking this position was an explicitly intentional effort on Scott's part. Murphy notes, "In a roundtable discussion at the International Conference on the Fantastic in the Arts, Scott once acknowledged she was annoyed by cyberpunk's conservatism and wrote *Trouble and Her Friends* as an explicit rebuttal to cyberpunk's white, straight, masculinism" ("Cyberpunk and Post-Cyberpunk" 525). The novel's final antagonist—The Mayor—is "a thin man, cadaverously thin and pale" (Scott 291), but his hands dance across his computer system in a manner

reminiscent of Case: the Mayor's "hands on the controls were sure and competent, his whole stance that of an El Greco prelate (291). The description of Case controlling his own deck could be compared to Scott's description of the Mayor's technical prowess, for like Case, one could say that the Mayor was "only faintly aware of his hands playing across the deck, making minor adjustments. Translucent planes of color shuffled like a trick deck. Take a card, he thought, any card" (Gibson, *Neuromancer* 61). Indeed, the Mayer is in the process of trying to play an (albeit lethal) trick on Trouble during Scott's description of the Mayor quoted above. The conclusion of *Trouble and Her Friends* is designed to position this type of man's defeat so that characters like Trouble can rise to the occasion and "become Mayor in her turn" (294).

This effort also contextually frames Scott's descriptions of female characters, which deserves attention in its own right as an important *move*—a moment of expansive play—played by Scott in the *game* of the genre. As Murphy observes in "Penetrating the Body-Plus-Virtualisation in Melissa Scott's *Trouble and Her Friends*," the "fear the masculine old guard has toward the penetrative brainworm can be interpreted as a fear or hatred of the body, a contempt for the meat" (43). After all, they "feared the brainworm, feared the intensity of its sensations, data translated not as image and words alone, but as the full range of feeling, *the entire response of the body*" (Scott 98, emphasis added). As Lavigne explains, "women [cyberpunk] authors tend to . . . [put] more emphasis on the importance of the body in [the process of forming] identity and relationships" (31). They also, as a result, tend to describe women's bodies as being more multivalent and varied than the one-dimensional icons of masculinist desire often found in the first wave of cyberpunk.

Examples of such iconographic description as found in *Snow Crash* have already been referenced above; another powerful example of this iconography would be Molly from

Neuromancer. On one hand, Molly—a woman—is one of the novel's most effective combatants. The novel still, however, positions Case—a male—as its primary protagonist, and it moves its new frontier of heroism into cyberspace, which as Wolmark points out is provided a "sexuality implicit in the masculine interface" given "Gibson's use of the term 'jacked in'" (120). It is precisely such tendencies that Scott's text is a reaction against. That is not to say that Molly has no feminist qualities, but if *Neuromancer* "can be cited as quintessential cyberpunk, then it would seem to be the case that cyberpunk is able to make only the most tentative gestures towards the rethinking of gender relations" (120-21). This is evident in the idealized—at least from a masculinist perspective—initial descriptions of Molly's body: "She wore tight black glove leather jeans . . ." (Gibson, *Neuromancer* 25); she has "smooth pale skin" (24). Even her weaponized implants have an almost sexual connotation, for they are "ten double-edged, four-centimetre scalpel blades" housed "beneath burgundy nails" (25), not unlike the elongated artificial nails often applied in beauty salons. Given such observations, it is logical that Wolmark concludes that Molly is "indicative of the presence and influence of feminist SF, but [she] cannot be said to be an expression of cyberpunk's own willingness to tackle questions of gender identity and subjectivity" (121)

The opposite can be said to be true of *Trouble and Her Friends.* Trouble and Cerise are lesbian ex-lovers. The novel does not shy away from descriptions of same-sex romance. Moreover, in a sense, Cerise's cartoonish avatar described above is a parody of the expectations that the old-guard have about bodies in the APW she inhabits. Yes, the icon is "a comic-book woman, all tits and hips and Barbie-doll waist" (Scott 119). This, however, is "done in one dimension only" (119) to criticize the old-guard for perceiving her this way, for the text explicitly builds upon this description by explaining that the icon is "exactly like a comic book,

so that the shape is paper thin, absolutely flat from certain angles—and so is her current affiliation: the crackers [or white, male, old-guard] give her a wide berth, and she pretends not to see or recognize the familiar icons" (119). The novel explicitly calls out the first wave of cyberpunk and *Snow Crash* for their descriptions of such characters as Molly and Juanita.

Descriptions of real-world women in *Trouble and Her Friends*, on the other hand, match the kind of variety one would expect from a perspective not troubled with masculinist observation bias. The novel features "a dark, curvy little woman in a black skirt a little too short to flatter her short legs (122). The novel's most talented street surgeon is "a fat woman" (102). When Cerise considers how Trouble has changed over the course of three years, she thinks to herself, "Trouble had changed more than she'd expected, more than she herself had—she was heavier now, though not fat, the sexy child's curves maturing into something fuller, rounder, a shape that promised adult pleasures" (168). Stephenson's work following *Trouble and Her Friends* suggests he observed such criticism and attempted to follow suit.

The Diamond Age, originally published in 1995, is the second cyberpunk work in Stephenson's *oeuvre*, and it already shows an effort at growth. In *The Diamond Age*, Hackworth's daughter is "all lanky and awkward and beautiful, an incarnation of joy" (Stephenson, *The Diamond Age* 361). When Miss Matheson smiles, "her face [is described as] blooming into a sunburst of radiating wrinkles" (Stephenson, *The Diamond Age* 263). These appear to be the type of descriptions that critics like Lavigne find more in keeping with a feminist, embodied subjectivity such as that found in *Trouble and Her Friends*. I do not mean to suggest that *The Diamond Age* is a perfect icon of feminist writing. My only intent is to point out that the text shows a willingness to at least try and call out "some of these (rich sexist snob asshole) gentlemen" (Stephenson, *The Diamond Age* 119) that critics have in some sense

attributed as a problem of cyberpunk, and its plot, which Peter Brigg has summarized as being about a novel that "falls into the hands of Nell, a poor girl in Shanghai", who "through it" becomes "the leader of a vast army of Chinese orphan girls" (Brigg 122), appears to be a response to such rich, sexist snobbery. Thus, outside of specific synchronic moments, these various texts are indicative not of a division between female/male cyberpunk, but rather various moves in a coordination game whose overall diachronic pattern indicates an effort on the part of the genre to improve.

Diachronically Contingent Resolutions

The Diamond Age does so via the self referential *novum* of an interactive text. Brigg interprets this text as "a tool for the breaking of the pattern, the liberating of the minds of young women" (Brigg 123). Eileen McGinnis calls it a "hybrid figure" that "emphasizes the interrelationship of book and computer" (480).[49] I, however, find the observation that the text is "a vestige from classic cyberpunk" in the form of the "cyberpunk spirit of immersive video games" (Huereca 144) more powerful. That observation neatly coordinates with Vint's reading of this interactive game-book as an epistemic force used "to learn things outside of Nell's day-to-day experience and thus gain a critical perspective on her experiences" (164), while also giving Nell a "doubling of perspective" caused by "the gap between her experience and the [game-book that] allows her to gain a critical perspective on the [game-book's] advice" in turn (164)—an epistemic feedback loop. The implication is that *The Diamond Age* is, at least to some extent, aware of the diachronic and ludic nature of the language game it is playing with its literary community.

I am not downplaying the importance of what Lavigne calls "women's cyberpunk" to this diachronic growth of the genre. On the contrary, without Cadigan, *Trouble and Her Friends*, or the influence of the other authors that Levigne analyzes in *Cyberpunk Women, Feminism and Science Fiction*, the *game* of cyberpunk may have been played very differently. In fact, one of the most effective moves of this self-referential effort to *play* representation into existence can be found in the work of Goonan. Her first novel in the Nanotech Quartet, *Queen City Jazz*, originally published in 1994, might not seem like cyberpunk to someone who has, as Shiner once complained, reduced cyberpunk to "corporate mercenaries, wetware implants, or orbiting space colonies" (21)—the text seems to contain virtually none of these concepts at first glance. Published one year before *The Diamond Age*, however, *Queen City Jazz* has one thing in common with the aforementioned text—the *novum* of nanotechnology. Goonan's use of nanotechnology is evidence of just how important her contribution to cyberpunk has been.

Gibson's novel directly preceding *Queen City Jazz*—*Virtual Light* (originally published in 1993)—was also about nanotechnology. According to Easterbrook, "*Virtual Light* initiates both the mood and the mode of [Gibson's] second series. More sedate and understated than the oxymoronic overdrive that characterizes the Sprawl books, it also sets the stage for a more explicit interrogation of the present that provides a joy ride through the future" ("Recognizing Patterns" 50). This future, however, still shares an aesthetic with Gibson's earlier works. In fact, the novel highlights mirrored surfaces no less than fourteen times, and its primary *novum* comes in the form of "a pair of sunglasses, expensive-looking" (Gibson, *Virtual Light* 86).[50] Granted, Easterbrook argues that these glasses revise the "mirrorshades trope" to "introduce the notion of seeing through obscure or quotidian surfaces to uncover something secret or interpret something otherwise occulted" ("Recognizing Patterns" 51), but I think this fits with the "detective" like

quality that cyberpunk has always had. Regardless, the knowledge contained in these glasses is a plot to "rebuild San Francisco" (Gibson, *Virtual Light* 275) with nanotechnology, but in the process destroy every space that Gibson's characters describe as having "no agenda" or "underlying structure" (Gibson, *Virtual Light* 136)—spaces that Easterbrook describes as "counter-hegemonic" and "heterotopian" ("Recognizing Patterns" 51). Ultimately, while the *novum* of nanotechnology is new, *Virtual Light*'s story about corporations looking to use technology to destroy or control counter-hegemonic and heterotopian spaces while those living in such spaces guide the same technologies against their desired, corporate outcomes is a traditional cyberpunk narrative.

The narrative of *Queen City Jazz* is not. Rather, its narrative tells a story that Lisa Yaszek summarizes as a trope of "second-wave feminist cyberpunk" (36): this trope insists "that passion for others can drive change across communities, continents, and realities" (36). In Goonan's hands, this passion for others explicitly takes on a literary effort to write an embodied, feminist subjectivity into the *game* of the cyberpunk genre. The environment of that genre is imagined, by Goonan, to be apocalyptic. At first, the novel begins in a small-town, American environment that seems to suggest the end of urban life as we know it. As Lavigne explains, the "main concern of Verity's small community is plague, a nanovirus infection that causes people to develop odd obsessions and then build rafts to go down the river to New Orleans (a city that may or may not exist anymore)" (Kindle Locations 2025-26). This plague is deadly, as evinced by the "desperate dead humans stacked and glowing forever" (Goonan, *Queen City Jazz* Kingle Location 1136). The story of its nanotechnological plague is self-reflexively used as a tool with which to rewrite the problematic elements of past fictions and representations.

The effect on the "self" created by this process is a central theme of the text. Its very first page opens on a world where certain types of technology are "allowed by the *Scriptures*" (Kindle Location 39, emphasis added): literally, the authoritative books, texts, and statements regarded as a defined source of a univocal truth ("scripture, n."). In opposition to the "Shaker Heaven" of such scripture, however, Verity discovers a world "that wouldn't work at all without a lot of other things around to help it out" (Goonan, *Queen City Jazz* Kindle Location 332). A reader might be tempted take this statement on a literal, technological level, but the first object named from that world is an interactive library whose "solar powered" (Kindle Location 329) capabilities can act as a reference to both Plato's cave and hermeneutic systems that help Verity "check" the patriarchal "references" (Kindle Location 241) often provided to her by the men in her life. That being said, the "upward spiral" (Kindle Location 429) of such fact-checking ultimately does not lead to Plato's sun. Verity's efforts to fact check patriarchal systems help her find "Herself" (Kindle Location 438).

The implications of this effect on the self are explicitly posthuman. In order to explain this power to Blaze, Verity gives him access to "one book. *Huckleberry Finn*" (Kindle Location 507). Unlike a normal book, however, this one "could go into another mode and it was all like a hologram play" (Kindle Location 508). Blaze sees this experience as the "history of the *world*" (Kindle Location 515, emphasis in the original). The story of *Huckleberry Finn* is framed against the "Rafters" (Kindle Location 5185) created by the nanoplague—the very same Rafters who provide Verity with her first real example of a (cybernetic, cyborg even) "steerswoman" (Kindle Location 135) piloting her craft down the river towards New Orleans. The struggle of *Huckleberry Finn* is ultimately what allows Verity to find a "third option" other than self-alienation to technology or death (Kindle Location 5950). This option is framed as "*the personal*

struggle of each musician, then, each artist, each poet" (Kindle Location 5953, emphasis from the original). In the end, according to *Queen City Jazz*, playing the struggle of this story into existence *is* the posthuman experience, for it is the means by which one creates themselves.

The feminist implications of this experience cannot be ignored. Part of what Verity learns is that she is a reification of Haraway's warning from "The Cyborg Manifesto." The pictures "that came into her mind like shards of glass" or like "reading a book except much more intense" (Kindle Location 2607) are literally the effect of Durancy's efforts to retell the story of his relationship with Rose, but in such a way as to force his "future of You" onto her "future of myself" (Kindle Locations 4412-516). Verity's victory is a successful effort to tell "enough of her own Story to break the cycle" of Durancy's abuse (Kindle Location 6130), or to regain "freedom" (Kindle Location 5951) by telling her "new, and her own, Story" (Kindle Location 5990). In a sense fully keeping with Lyotard's notion of postmodern language games, in *Queen City Jazz*, to tell stories "is to fight, in the sense of playing" (Lyotard, *The Postmodern* 10). In Goonan's *Queen City Jazz*, the distance between the novel's capitalized use of "Story" and Haraway's use of "cyborg" is virtually nonexistent: "These tools embody and enforce new social relations for women world-wide" and "should be viewed as instruments for enforcing meanings" (Haraway 164).

That is not to say every element of *Queen City Jazz*, interpreted in synchronic isolation, is without ambiguity. As the headlines from the nan-Cities tell Verity, "ALL THINGS ARE POSSIBLE NOW!" (Goonan, *Queen City Jazz* Kindle Location 5540), and as the "white-haired Lady, apparently a famous scientist, said, 'I think both the best and the worst will happen. All the very bad and all the very good scenarios will come true, only we won't know which is which

until later'" (Kindle Locations 5540-42). One might interpret the technologies in the book in a manner not in keeping with its feminist ethos.

Just as one can help themselves interpret the beginning of a novel with the content of its conclusion, however, one can help themselves interpret the content at the beginning of a writer's *oeuvre* with their more recent publications as well. For example, in *Light Music* (originally published in 2002), the reader learns that the "nan-Cities that were to have been on the moon" (Goonan, *Queen City Jazz* Kindle Location 5539-40) may have theoretically been possible, but in practice, there is only the "time-forsaken moon colony of Unity" (Goonan, *Light Music* 79) with a "minimum of nanotech" (86). This game of coordinate clarification is not limited to mere matters of setting. *Light Music* regularly uses extradiegetic and intertextual quotes to frame *Light City*'s conclusion to the Nanotech Quartet: "The evolution of the brain . . . allowed us to construct a symbolic universe that seems more real and more vast than the universe itself" (Nadeu & Kafatos qtd. in *Light Music* 9); "Thanks to art, instead of seeing a single world, our own, we see it multiply until we have before us as many worlds as there are original artists" (Proust qtd. in *Light Music* 199); "Art is a lie which tells the truth" (Picasso qtd. in *Light Music* 199); "She who tells the stories controls the world" (Goonan, *Light Music* 43).[51] These quotes appear as standalone citations, separated from the diegetic content of the novel, and such intertextuality modifies the meaning of *Queen City Jazz* and emphasises its practice of storytelling to fight for a feminist meaning as well. The content of the Nanotech Quartet spread diachronically across Goonan's four publications in the series makes specific, key themes observable in a way that no single text on its own can, for time does tell.

The feedback loop between such citations, the fictional narrative, and Goonan's various publications implicates the process of Angelina's posthuman development as a *novum* of

particular importance. Her estranged husband gifts her with a book "studded with stamps" (*Light Music* 57). She ignores the instructions regarding how to read the book, instead choosing to "ingest" (60) its content as she sees fit. The experience of "*Hopscotch*" (60), the name of the fictional text that Angelina consumes, is similar to Goonan's metaphoric description of Verity's experience from *Queen City Jazz* and Nell's experience with her own game-book in *The Diamond Age*: "Somehow, she had left Hopscotch far behind, and was now extracting stories from all possible stimuli" (63). The final product of these extracted and synthesised stories (in combination with the play inputted from other characters in the story) is a "black sphere . . . in the center of the room. Perhaps five feet in diameter. But no, it was white, and a cube" (377), or rather a shapeless object possessed of simultaneously true but antithetical properties making it an impossible manifestation of Lacan's pre-linguistic un/real expressed in the truthful lie of Goonan's text.

Goonan's text thus seems aware that, even when such feedback loops are used for guidance, unexpected play always remains possible as a synchronic moment in the coordination game played by the literary community of cyberpunk fans, texts, and writers. How could it not in this manifestation of Lyotard's postmodern language game? Truth be told, insofar as Goonan's *oeuvre* is an effort at navigating the epistemic hermeneutics of the posthuman, it would not be fair to say that all ambiguity disappears with *Light Music*'s conclusion, but the text does provide a reader with some concrete details when they use diachronically-coordinate interpretive practices, and a reader can say that some interpretations are better *moves* in that coordination *game* than others. This is logical, for as Lyotard points out, "if there are no rules, there is no game" (Lyotard, *The Posthuman* 10). Despite any ambiguities, interpretive moves can still be

fruitfully compared to other points of coordination such as, for example, what Goonan has said and written about her own interests in nonfictional mediums.

Goonan writes, "Proponents of the transhumanist vision often gloss over the messy physical details of identity, but we are not only a brain at the top of a body, a soul in the corrupt and useless medium awaiting release" ("The Future of Identity" 194). No wonder, then, that every time a character in her novel seems close to "transcendence," their position as a protagonist either disappears from the text—their subjective reality having become a categorical unknown—or they choose not to "transcend." As Goonan explicitly states in her nonfictional work, "Uploading the consciousness is, essentially, a religious vision . . ." ("The Future of Identity" 194). Peabody, however, "was not a mystic. He was an Engineer" (Goonan, *Light Music* 385). Peabody chooses to stay in the corporeal world and "help" people (392-93), much as Goonan's *oeuvre* ultimately engages in the unexpected play of building spaces for alternative, critically-posthuman subjectivities.

Perhaps a scholar like Coyne would still accuse Goonan of falling for a technoromantic belief insofar as she finds the "place where nanotechnology meets biology" to be "a fascinating limen" (Goonan, "The Future of Identity" 198), and from that limen concludes that the "dream of uploading consciousness will be realized in a future that is, perhaps, almost beyond our ability to imagine" (199). She faults apocalyptic futurism for its history of ignoring the body, but believes that when we collapse the Cartesian divide, something like nanotechnology could realize a more complicated version of the "power of religious dreams from our ancient past" (199). If the "sounds" that come "out of that cube" of dreams are "kind of like going to church" (as Peabody observes while listening to the strange *post*-linguistic reality of its musical stories) (Goonan, *Light Music* 396), then the next time an object appears and stands in as imagery for that which

language cannot effectively describe in Goonan's *oeuvre* (post Nanotech Quartet), the coordinate implication of this degree of technoromantic ambiguity is largely rendered irrelevant.

Once again, the image that renders such ambiguity irrelevant is the *game*. The Nanotech Quartet never tries to explain or provide concrete details about our next stage of consciousness, nor does it present technology as a god that will come out of the machine to save us despite ourselves. Instead, the hard work of embodied characters combined with random chance is what allows a better world to potentially emerge in the APW of those texts. The indescribable nature of that world is coordinated with a virtually identical image used to produce a better world *In War Times* (originally published in 2007): the "small cube . . . that might navigate the deeps of time, take aim at heartache, disease, suffering, and war, and vaporize it" (Goonan, *In War Times* 269); the small cube that is not actually a cube, and cannot be accurately described, as it "mutated. It found the necessary shape. It's just an interface, really. Maybe what it really changes is . . . us" (325, ellipsis in the original); the small cube that finds its more powerful imagery not as a cube but rather as a "game board" that is "full of all kinds of stories" (310).[52] This game interfaces with its audience and creates better worlds not of its own agency, but rather through the play of critical posthuman subjectivity enacted across its infinite board (346), thus setting the stage for the themes Gibson would later revisit with his Jackpot series (discussed in the following chapter).[53]

Cyberpunk, insofar as it can be theorized as a diachronic entity, is an attack on apocalyptic *telos*; cyberpunk posits our desired outcomes as merely emergent possibilities that are necessarily grounded in embodied efforts. What is more, in doing so, the diachronic *game* of cyberpunk has positioned its critically posthuman concerns as matters of embodied subjectivity that are—via the technology of discourse—*played* into existence as stories. Of course, one

important last detail must be explicitly rendered when using theory as I have—*literature is not a game*.[54] I do not mean to say that my tool is ineffective. Whether the *game* of cyberpunk is a literal game or not, after *Queen City Jazz* and *The Diamond Age*, Gibson's *Idoru* "attempts to address the vagaries of the Rez/Rei union by granting it a physical medium: nanotechnology" (Farnell 473). Rather, I am attempting to guard my theoretical tool against the Platonic backhand in advance of its disorienting strike lest it in the future yield issues similar to those created by assuming that literature *is* language. This is particularly important, for one cogent *move* in the *game* of cyberpunk is the *Cyberpunk* game, and theoretical instability regarding the word "game" and the methodology by which one should interpret a literal, literary game have already resulted in the importance of this *move* being undervalued by academic *players*.

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[1] For additional context, see Shirly, *A Song Called Youth* Kindle Locations 544, 547, 601, 609, 615, 623, 1135, 2075, 2080, 2082, 2090, 8693.

[2] I use the term *novum* in the same sense as Darko Suvin, which is to say a "a strange newness" that defamiliarizes or estranges some aspect of the real world long enough for a reader to approach the subject without their initial, real-world biases (Suvin, "On the Poetics of the Science Fiction Genre" 373-374).

[3] For additional context, see Cadigan, *Mindplayers* 18, 25, 129, 145, 210.

[4] For additional context, see Cadigan, *Synners* 27, 33, 214, 260, 277, 349, 426.

[5] For additional context, see Jameson, *Postmodernism* ix, 71, 298-300, 378.

[6] The text's numerous references to video are so ubiquitous as to make a complete, qualitative catalogue of each of the word's 194 uses in that text an overwhelming and largely unproductive task insofar as my argument is concerned, but the sheer quantity of uses does

implicate the word with thematic importance. For additional context, see Cadigan, *Synners* 3, 5, 15-16, 28-29, 36, 54, 56, 58, 61-62, 64, 66, 72-73, 79-80, 88-89, 90-92, 94-99, 104-105, 116-119, 121-123, 140-141, 143, 146, 149-151, 153-55, 157, 159, 164, 173-174, 184, 203, 207-213, 215-216, 221, 226-227, 231, 236-237, 251, 253-254, 256-258, 262-263, 265, 271, 276-277, 280, 282, 296, 301, 302, 304-310, 312-316, 323, 326, 332-333, 335, 342, 355, 361, 394, 416, 434, 465, 473.

[7] Chernaik explains that this construction is not merely on the level of a new combinatory name. Rather, "they share a 'viral' quality" (78).

[8] In fact, among Stephenson's fans, it has become common knowledge that the novel "was originally designed as an interactive game" (Doc Ruby qtd. in Stephenson, *Some Remarks* 30).

[9] For additional context, see: Ronell 68; Derrida, "The Rhetoric of Drugs" 22; Milman 44-54.

[10] See Chernaik 68 for additional context.

[11] Anne Balsamo has also made similar claims; see "Forms of Technological Embodiment: Reading the Body in Contemporary Culture" for additional context.

[12] For more context regarding Jameson's various uses of critical distance, see *Postmodernism* 48, 70-71, 203.

[13] According to Lyotard,

> It is useful to make the following three observations about language games. The first is that their rules do not carry within themselves their own legitimation, but are the object of a contract, explicit or not, between players (which is not to say that the players invent the rules). The second is that if there arc no rules, there is

> no game, that even an infinitesimal modification of one rule alters the nature of the game, that a "move" or utterance that does not satisfy the rules does not belong to the game they define. The third remark is suggested by what has just been said: every utterance should be thought of as a "move" in a game. (*The Postmodern Condition* 10)

[14] Additionally, the novel reinforces the notion that a person is an emergent and accidental accumulation of events and choices by noting, early in its narrative, that "no matter how well you know someone, you can't predict the future" (Cadigan, *Mindplayers* 39).

[15] The novel's anti-teleological attitudes are nevertheless not erased fully. In fact, as if to remind the reader just how much of the novel's plot is driven by unexpected accidents, it closes not with Hiro's achievements and success but with "Uncle Enzo" trying to resolve an emergent situation created, at least in part, by "the unpredictable Y.T. He was not expecting her to jump out of a moving helicopter and get free from L. Bob Rife." (Stephenson, *Snow Crash* 549). As a result, Uncle Enzo feels that it is his prerogative to "stop Rife now, before he gets back to his home turf in Houston" (549). The novel leaves even Uncle Enzo's survival linguistically ambiguous: "Uncle Enzo, if he survives, will never hear well again" (556). The novel does not inform its reader whether Uncle Enzo does, in fact, survive. Only the reader's interpretation can be used to decohere this indeterminate state.

[16] While this trope of ambiguity has frequently been linked to questions of posthuman identity and agency, it should be noted that the ambiguity in question extends well beyond this arena. For example, much as Swanstrom grapples with the novel's various conflicting representations in regards to subjectivity, Jonathan Lewis has argued whether it is appropriate to label Stephenson's texts "dystopic" as "his work breaks with traditional definitions of dystopic

fictions at nearly every turn by offering scenarios where human creativity and cognition offer real hope against such potential disasters" (45). Hayles has made a similar argument about *The Diamond Age.* According to Hayles, "*The Diamond Age* would seem to have the elements of a utopia. . . . Yet somehow, although a utopian impulse clearly informs the text, these elements do not cohere to make a utopia" ("Is Utopia Obsolete" 95). Wolmark describes cyberpunk's ambiguity in reference to the result of the way "the critical distance between appearance and reality has disappeared" in the genre: "the effect of this collapse is ambiguous" (112).

[17] For example, Gina, Mark's lover, constantly finds herself "paying the price" for Mark's behavior. (Cadigan, *Synners* 8): "Mark had always been a flake" (117). Mark's overall attitude is put on a telling display after he first commits to a "deal," without consulting Gina, which he knows will cause Gina to have a negative, "apocalyptic" reaction (94). After, when reaping part of the rewards from that deal, Mark has a characteristically thankless attitude when he thinks, "That was it? A Purge detox and not even a fancy French breakfast? What a bunch of cheap-asses" (100).

[18] After all, it is only as a result of his transformation that Mark is able to effectively express his emotions: "'I want you,' said Mark. 'Always did. Just couldn't find my way through the noise. But the noise is gone, and the wanting is still there'" (Cadigan, *Synners* 465). It is only after the transformation that Mark is able to "be there for" other people: "It was only impossible in the real world" (465). Where Mark once used people, Markt is an integral player in the effort to "inoculate" the world against Mark's online brain illness; that effort is ultimately successful (464-65).

[19] This interpretation also presents "human" behavior as an artificial construct, thus bolstering the text's posthuman paradigm. As Chernaik points out, "the punning names make it

clear that to be human is to be constructed: artificial Art Fish and the 'synner' Visual Mark, named after his profession and wishing to be his creations, become Markt, marked, inscribed" (79).

[20] As Teresa Ebert describes it, such

> traditional science fiction . . . is based largely on the rhetoric of believability: it employs the mimetic conventions of the bourgeois novel with its preoccupation with socio-psychological realism and its commitment to a causal interpretation of the universe. (This obsession with causality usually manifests itself in the form of well-defined, linear plots.) (92)

[21] According to Ebert, the traditional model has given way to "metascience fiction" which "moves beyond thematic extrapolation and formal mimesis in order to celebrate the fabulatory human imagination in-and-for-itself" (92-93).

[22] Indeed, Hollinger even bolsters my argument from "Playing with Posthumanism" and "Play of the Movement, or, Anti-Teleology v. Teleology" by arguing that the "tendency to abandon what has been a traditional science fiction topos may be the conviction, conscious or not, that a kind of philosophical apocalypse has already occurred, precipitating us into the dis-ease of postmodernism" (38).

[23] For more context in regards to Jameson's discussion of "fictive time," see *Postmodernism* 75-76.

[24] For examples, see Coyne 2-8, 10-15, 19, 47, 50-53, 60, 70, 88, 101, 120, 123, 134, 180, 185-86, 198, 255-56, 258, 261, 265-67, 269-70, 272, 277-79, 284-85, 311-12, 326, 332.

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[25] For additional context, see Cadigan, "Rock On"; Brown (176); Gordon (196, 198, 200, 202); Hollinger, "Cybernetic Deconstructions: Cyberpunk and Postmodernism" (211); Suvin, "On Gibson and Cyberpunk SF" (350).

[26] The exact passage that contains the phrase Coyne is most likely alluding to reads as follows:

> At the simplest level, mere transcendence in cyberspace may flow from the way cyberspace will reorient the mind to the experience of sensuous information BODILESSLY—that is, by bypassing the normal route for sensuous experience and initiating it directly in that infinitely plastic sensorium, the brain/mind: that homuncular body without an organ. (Porush, "Hacking the Brainstem" 108)

[27] According to *Snow Crash*'s fictionalization of history,

> there is an informational entity known as the metavirus, which causes information systems to infect themselves with customized viruses. . . . Any information system of sufficient complexity will inevitably become infected with viruses. . . . At some point in the distance past, the metavirus infected the human race and has been with us ever since. (Stephenson 472)

[28] It should be noted that one can also read the division of the "meme" into the *me* as a poststructural shift from what the text calls "deep structure-based language" to "new languages that had nothing in common" (Stephenson, *Snow Crash* 474). In some sense, the text disavows the notion that there was ever a pre-linguistic existence, and instead, it affiliates a structurally cohesive world of linguistic communication with Lacan's "real" and a poststructural world of linguistic communication with Lacan's "symbolic." From an analytic standpoint, this narration is not without its problems.

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[29] The way Pavel did so is by theorizing that "in order to become immersed" in the world of a text "the reader must adopt a new ontological perspective, thereby entailing a new model of what exists and what does not" (Ryan, "Possible Worlds" 3.0.1). Pavel then subverted the normal modal organization by proposing that "the literary text establishes for the reader a new actual world which imposes its own laws on the surrounding system, thereby defining its own horizon of possibilities" (3.0.1).

[30] For more context regarding Leibnitz's influence on Pavel as explained in Pavel's own words, see Pavel 44.

[31] For more context regarding "modal semantics" as explained in Pavel's own words, see Pavel 43-50.

[32] In some sense, the entirety of *Fictional Worlds* is about this relationship. For additional context about "Worlds and Books about Them, a First Approach," however, see Pavel 50-54.

[33] It should be noted that Pavel builds this aspect of his theory from Kendall Walton's "Do We Need Fictional Entities? Notes Toward a Theory" (1984). Over the course of is career, Walton has made this argument in numerous texts. For example, in "Aesthetics—What? Why? And Wherefore?" Walton writes:

> As you may know, I recognize a very broad category of "representations," comprising novels and representational paintings and theatrical performances and much else besides. . . . All representations, in my sense, involve, in a certain way, an imaginative activity that I call make-believe; all possess the function of serving as props in games of make-believe. Intuitively, we can think of them as establishing *fictional worlds.* (158, emphasis in the original)

For additional context regarding Walton's statements on the subject, see "Fearing Fictions" 10-13, 15, 17-19, 24, 26-27 and "How remote Are Fictional Worlds from the Real World?" 15-16, 21.

[34] In her own work on the subject, Ryan expresses this concept as follows: "to be fictional is a mode of being, an ontological status specific to certain entities" (*Possible Worlds* 13).

[35] This aspect overcomes isolationism by creating a what Pavel calls "a *complex structure* linking two or more universes in a single structure so that there is a detailed correspondence between the components" (56, emphasis from the original). There are, in other words, two worlds—each with their own modal universe—which communicate with each other: the AW of the participants and the PW of the characters; events in the PW can affect the participant in the AW.

[36] For examples, see: Bukatman, *Terminal Identity* Kindle Locations 3019, 5632-33; Cavallaro 8-9; Farnell 473; Grassian 258; Jupin 64; McCaffery 14; McCaffery et al. 20; Olsen 68; Schwetman 125; Sponsler 629, 636.

[37] For more context, see Cadigan, *Mindplayers* 28, 42-43, 58, 76-77, 120, 156, 164, 166, 172, 199, 202, 210, 230, 247, 270-71.

[38] Granted, as in the case of *Mindplayers*, it would not be fair to claim that *Synners* is a typical detective novel. On the contrary, as Chernaik also points out, "the discourse of one character frequently does not encompass the discourses of the others. . . . By the end of the novel the enigma is solved and the note translated: so late that the narrative has moved beyond it" (71). Thus, "the enigma is not solved by the actions and thoughts of a single person, piecing it together like a detective" (73). The story is still, however, as Chernaik admits, grounded in "the hermeneutic code" (71). This code is one of "the five notorious codes (hermeneutic, semantic,

proairetic, cultural, and symbolic)" described by Barthes in *S/Z* (vii, viii). According to Barthes, the hermeneutic code governs any narrative moment defined by "the proposal of the enigma each time the discourse tells us, in one way or another, 'There is an enigma,' and the *avoided (or suspended) answer*" (31). Barthes explicitly describes "detective fiction" as a genre frequently governed by this code (47). In Bukatman's words, "the narrative sets up a central enigma which it is the task of the detective (and/ or the reader) to explicate" (*Terminal Identity* Kindle Locations 2984-85).

[39] It should be noted that, despite admitting that cyberpunk is grounded is the rhetoric of detective fiction, Wolmark does make a similar claim. After first claiming that the cyberpunk hacker recalls the hard-boiled detective, she then adds:

> The comparison is necessarily a limited one, however, since cyberpunk is not anchored in the same set of social and political perspectives as those informing the detective genre. In many ways the cyberpunk hacker is the postmodern equivalent of the quintessential flâneur, strolling anonymously and heroically through the new physical and social spaces of the modern city streets." (114)

[40] For more context, see McHale, "Elements of a Poetics of Cyberpunk" 152-53 and *Constructing Postmodernism* Kindle Locations 5571-13.

[41] For reference:

> Mercifully, the whole thing is starting to fade, to become an episode. When I do still catch the odd glimpse, it's peripheral; mere fragments of mad-doctor chrome, confining themselves to the corner of the eye. There was that flying-wing liner over San Francisco last week, but it was almost translucent. And the shark-fin roadsters have gotten scarcer, and freeways discreetly avoid unfolding themselves

> into the gleaming eighty-lane monsters I was forced to drive last month in my rented Toyota. And I know that none of it will follow me to New York; my vision is narrowing to a single wavelength of probability. I've worked hard for that. Television helped a lot. (Gibson, "The Gernsback Continuum" 1).

[42] For additional context, see Shiner, *Frontera* 7-8, 37, 40, 115, 165.

[43] For additional context, see Shirley, *A Song Called Youth* Kindle Locations 10747, 10748, 10764, 10813, 10854-55, 10858, 10884, 12566-68, 12635, 13164, 13560, 13612, 13819, 13862, 14625, 15044, 15050-51, 15055, 15064, 15101.

[44] Mind you, Sweeny connects this trope not in the context of cyberpunk texts, but rather traditional postmodern fiction such as *The Crying of Lot 49* and the "female gothic" (15).

[45] Of course, Foucault did not use this term in the colloquial sense of the word "technology," which is to say, the "branch of knowledge dealing with the mechanical arts and applied sciences; the study of this" ("technology, n."), but rather in the sense of a "discourse or treatise on an art or arts" ("technology, n."). The text that Gidden's refers to uses technology in the sense of the "technology of virginity" (Foucault, *Confessions of the Flesh* 167), the "technology of separation or rupture" (213), the "technology" surrounding "monasticism" (234), and the "technology of oneself" (247). Giddens's opposition thus stems not to the type of "technology" that Coyne opposes insofar as it is sometimes falsely propped up as the cause of postmodernism, but rather from a set of specific discursive relationships that Giddens felt were better—given his argument—positioned in psychanalysis.

[46] For additional context see: Calvin 41; Gillis 49; Yaszek 34.

[47] Readers who want to know more should read Lavigne's *A Critical Study: Cyberpunk Women, Feminism, and Science Fiction*.

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[48] To avoid confusion, it should be noted that these quotes come from *Neuromancer*, not *Trouble and Her Friends*, but the fact that I need to make that explicit to avoid accidentally misleading my reader does speak to my point.

[49] For another, similar example, see Lewis 58.

[50] For a list of all references to mirrored surfaces in *Virtual Light* see 1, 3, 10, 17, 22, 42, 70, 94, 121, 202, 224, 301.

[51] Goonan attributes this last saying to the Hopi American Indians, but in an ironic twist, the way Goonan genders the statement appears to be specific to Goonan and not the common, gender-neutral expression of the proverb I have seen or heard in passing.

[52] For additional context, see Goonan *In War Times* 283, 299-301, 310-12, 315, 317-19, 325, 334, 346.

[53] Indeed, one of its creators explicitly becomes "some kind of [counter] virus" (Goonan, *In War Times* 327) to the "virus of war" (324) in a manner reminiscent of *Snow Crash*.

[54] In fact, I have found it necessary to separate the theoretical *game* of cyberpunk from the actual embodied act of playing a game by using italics to divide the metaphor I have been constructing as an interpretive tool from the actual practice of playing games, or *gaming*.

Chapter 4: Gaming Cybernetic Dungeons & Draconic Agencies

The emergence of *Cyberpunk 2013* as a tabletop roleplaying game (or TRPG) in 1988 is an example of the influence that a genre can have on cultural arenas beyond the boundaries of the genre itself. I argue that *Cyberpunk 2013* marks an intervention into a ludic practice that—contrary to many assumptions—was ultimately conservative and exclusionary in the worst possible way. Specifically, *Dungeon and Dragons* was born of biologically deterministic views grounded in sexist and racist assumptions rendered no less problematic for the fact that they were concealed behind a thin veneer of mythological coding. Interventions *played* by *Cyberpunk 2013* helped to recode the expressive processes of the TRPG and create a more egalitarian space for modern *players* of such games. Given the fact that *Cyberpunk 2013* is the rare example of both a TRPG and a cyberpunk text written by a man of colour—Mike Pondsmith—in 1988 America, the power of this intervention should not be understated. It should also be emphasized that the terms of Pondsmith's recoding are distinctly tropological of the cyberpunk genre. This aspect of the game, however, has largely gone unnoticed by scholarly communities, likely due to the hermeneutic crisis regarding the relationship between narrative practice and modern gaming.[1]

The hermeneutic crisis regarding the interpretation of games has been a matter of academic interest for some time. The nature of that crisis in combination with cyberpunk's gestation as a literary genre has resulted in an erasure of the role that games (in a non-metaphoric sense) have played in its evolution. On one hand, because literary scholars have often treated narrative as a language whose syntax is defined by the experience of interpreting novels, in the *game* of cyberpunk, literary *players* have been blinded to the important influence of cyberpunk

games on the genre's literary community. On the other hand, ludologists have dogmatically refused to accept that a game can be used to tell a narrative, potentially reinforcing the dismissive attitude of some literary scholars studying the cyberpunk genre. The overall effect is that scholars have unwittingly provided evidence for two important propositions: games are not novels, but they can be used to transmit narrative, and the means by which narrative is transmitted across a mechanically nonlinear platform must be taken into account in order to accurately analyze the relationship between genre narratives told across both media platforms.

To explain my claims, I briefly return to a pair of novels that exemplify cyberpunk in its current form. Gibson's newest series—the Jackpot, so far composed of *The Peripheral* (originally published in 2014) and *Agency* (originally published in 2020)—provides an elegant snapshot of cyberpunk in the second decade of the twenty-first century. These texts are thematically similar to Goonan's *In War Times* and share many of the tropes I have previously discussed. At the level of surface aesthetics, *The Peripheral* includes allusions to digital "displays" described as being "rectangular black mirrors, framed in matte titanium" (Gibson 74). While these wall displays are not literally glasses (but rather full sized, stationary mirrors), their description is still evocative of Molly's mirrored insets, which is only highlighted by the similarly described "round titanium-wire glasses" (Gibson, *The Peripheral* 63) worn by one of the characters in *The Peripheral*. With those glasses, *Agency* fully adapts a plot point from *Virtual Light*, as the entire story centres around a pair of literal display glasses used to interface with illicit data. The aesthetic allusions used by such modern cyberpunk novels are not mere happenstance.

Both texts use these images not only to create a connection to an earlier moment in the history of cyberpunk, but also to self-reflexively note an evolution away from various elements

of the genre's original aesthetic. The "displays" described in *The Peripheral* belong to a character's grandfather and are intentionally used by a set of characters in the novel to create a familiar ambiance during a conversation with someone who is "entirely human. Gloriously pre-posthuman" (*The Peripheral* 75)—they are presented as being antiquated. The glasses from *Agency* are described as being "tortoiseshell plastic, with gold-tone trim, or an aspirationally Scandinavian gray" (Gibson 2-3)—in other words, more "sophisticated" than the 1980s-era mirror-shades typical of Movement texts. In fact, the outdated origin of such aesthetic calling cards is explicitly called out as being cyberpunk by Jackpot. In *Agency*, the "neural cut-out controller" (181)—a technological equivalent of *Neuromancer*'s "dermatrodes" (52), which were in turn a prior evolutionary *novum* of the interface glasses Gibson used in *Virtual Light* and an interface technology used to neurologically manipulate digital technology—looks like "a black cycling helmet. Studded with a variety of black components, it looked like a not-very-enthusiastic cyberpunk cosplay accessory" (Gibson, *Agency* 181). Gibson's contribution to cyberpunk's existence in the second decade of the twenty-first century is self-aware of its relationship to the overarching history of the cyberpunk genre.

My use of these novels is designed to build a bridge back into an event of the late 1980s whose importance has been obscured by scholarly practice. The ongoing importance of posthumanism to this genre is a matter of well documented, scholarly record. It is true that Bukatman once wrote, in 1993, that Sterling's "impact [on cyberpunk] has . . . been less overtly marked" than that of Gibson (*Terminal Identity* Kindle Location 5416). Thomas Foster explicitly interprets Bukatman's statement in terms of "*Schismatrix* and its trope of posthumanism" as compared to "the impact of Gibson's cyberspace metaphor" (27). Of course, as of 2005, Foster also explained that, "after the emergence of second- and especially third-generation responses to

cyberpunk, it is no longer 'difficult to think of' other writers who emulate 'Sterling's textual formations'" (27). Indeed, Jackpot explicitly references the term that Sterling originally coined as a noun: "posthuman" (Gibson, *The Peripheral* 6, 75 and *Agency* 209-210). Since then, numerous scholars have continued to explain the fundamental integration of cyberpunk with posthumanism: *The Routledge Companion to Cyberpunk Culture* (originally published in 2019) argues that cyberpunk "is integrated with other critical theoretical tenets of our times, such as posthumanism" (McFarlane et al. i); as Julia Grillmayr puts it in "Posthumanism(s)," "What contributes to cyberpunk's ongoing importance is without question its capability to put the idea of an original human essence to the test; this applies to the cadre of Movement-era authors in the 1980s onwards" (273). As I explained in "Gaming the Cyberpunk Genre," the concepts of *game* and *play* have been bound up with this critical, theoretical tenet of posthumanism since the early days of the Movement as well, but the importance of that phenomenon has not been documented nearly as well. The Jackpot series makes this connection easy to explain.

The Jackpot series is set in a reality where the metaphor of gaming alternative possible worlds—framed as alternative historical timelines—as a hobby for the purpose of creating better realities has been literalized. In this sense, it is thematically similar to Goonan's *In War Times*. *The Peripheral* spans two possible worlds and *Agency* spans three. The series features a central, science-fictional reality from which other "stubs" branch. Each stub is an alternative timeline that deviates from the central timeline. The central reality of Jackpot is able to reach out and contact other realities via digital information technology. Once they do, they enter into "a fixed ratio of duration with their [alternative] continuum: one to one. A given interval [of time] in the stub is the same interval here, from first instant of contact. We can no more know their future than we can know our own, except to assume that it ultimately isn't going to be history as we

know it" (Gibson, *The Peripheral* 92). That is because, as a result of contact, they "change all of it, the long outcomes" (70). While it is possible to gain capital in a stub (91), what the series alternatively describes as "agency . . . to act" (Gibson, *Agency* 31), one can only virtually—as opposed to actually—exist in an alternative possible world according to the series. At best, one can use telepresence to physically affect such a world through a drone- or biological robot-avatar called a "peripheral."[2] Those who interact with these stubs do so as a "hobby" (Gibson, *Agency* 211). One of the main characters in both novels of the series—Detective Inspector Lowbeer—is such a hobbyist whose "avocation is the making of better worlds" (Gibson, *Agency* 212).

If this sounds similar to playing a videogame, the reaction is one that the series self-reflexively fosters. In fact, in *The Peripheral*, the stub that exists as one of the two alternative possible worlds in the novel is already a near future where America's "economy is entirely about manufacturing drugs" (Gibson, *The Peripheral* 108), and those who wish to find other ways to make a living often do so by professionally gaming. More importantly, Flynne Fisher—also known by her gamertag "Easy Ice" (1)—first thinks that the alternative possible world that she visits with an avatar is "just a game" that she is beta-testing (2-3). The future does not only play the game of the past, but the past plays the game of the future. In Jackpot, like *In War Times*, alternative possible worlds are a game you play to make better possible worlds.

One might expect that the first literal game to be created in the cyberpunk genre would be of integral, critical value to scholars studying the genre given how important the literalized metaphor of gaming alternative possible worlds has become to one of the Movement's central authors.[3] *Cyberpunk 2013* is the first cyberpunk game, released in 1988, but scholars originally gave it a lukewarm reception at best. Take, for example, Ross's response to *Cyberpunk 2013* only three years after its publication. According to Ross, despite being written "in a [media]

genre that rejects the competitive, win-or-lose structure of the orthodox board game, all of the roles are still governed by the zero-sum action principle of 'the cyberpunk way': waste 'em or be wasted" (Ross 160). To Ross, the game is little more than a glorification of violence that fails to live up to the potential of its medium. Of course, Ross roots this quality in its role as a piece of cyberpunk media, not in its status as a game, and ultimately complains that technology "is demonized as if it were inherently oppressive rather than an instrument socially organized for the purpose of domination" (161). Ross chastises *Cyberpunk 2013*, but he does the same to the genre as a whole, often missing the point of such observations as those I made in "Gaming the Cyberpunk Genre."

Other texts, like Heim's *The Metaphysics of Virtual Reality* (originally published in 1993) miss the point for other reasons. In that text, Heim writes that the *Cyberpunk 2013* "portrays the visage of humanity twisted to fit the shapes of the computer prosthesis" (101). He interprets the game as an artifact that claims, at the level of "the computer interface, the spirit migrates from the body to a world of total representation. Information and images float through the Platonic mind without a grounding in bodily experience" (101). This is ironic, for as he notes, the game posits such technology as a force that can cause "you to lose your humanity" (101). Indeed, that is the exact nature of Ross's critique. If Ross and Heim are both correct, then *Cyberpunk 2013* seems to posit the computer interface as the border that fails at its project of total representation and undercuts the Platonic mind exactly because it does not adequately ground bodily experience. It is difficult to reconcile Heim's interpretation of a specific passage from one of the game's manuals with the general experience of playing it.

Such early responses mirror Shiner's attitude to such products as *Cyberpunk 2013*. Shiner complained that cyberpunk became "a marketing phrase used to sell . . . board games" and

described such marketing as "a very restricted formula; to wit, novels about monolithic corporations opposed to violent, leather-clad drug users with wetware implants" ("Inside the Movement" 17). Such complaints sound similar to Ross's critique of *Cyberpunk 2013* as being restricted to "the zero-sum action principle of 'the cyberpunk way'" (160). It is important to note that this original attitude towards *Cyberpunk 2013* was the content of more than a single reaction.[4]

Analyses of such products written as of the second decade of the twenty-first century, on the other hand, tend to have shifted towards a sympathetic tone. Curtis D. Carbonell's chapter "Tabletop Roleplaying Games" from *The Routledge Companion to Cyberpunk* concludes that it "has examined cyberpunk TRPGs within a continuum that first found its roots in literary and screened touchstone versions. The arrival of Pondsmith's *Cyberpunk 2013*, though, adapted the genre to roleplaying games, the study of which provides an insightful perspective" (206). The problem, however, is that while Carbonell's analysis of the aesthetic tropes of cyberpunk found across various cyberpunk TRPGs is a helpful catalogue, Carbonell's final conclusion that the observation of "critical importance is the shift from a focus on traditional cyberpunk tropes, such as the mechanical prostheses of cyborgs, to the genetic splices of the bio-engineered", which act "as an analog for magic, a seminal mechanism within traditional fantastic genres grounded in the mythic rather than in science or technology" (206), is not actually specific to TRPGs, nor is it clear that this shift is the primary influence of TRPGs. If my claim is true, then even contemporary analyses, despite being sympathetic, have trouble parsing the importance of TRPGs to the cyberpunk genre or their transmedial interaction with that genre.

There is a great deal of evidence for my claim that the qualities Carbonell describes are not unique to gaming. As Colin Milburn notes, "With its broad scheme to completely dominate

materiality itself, nanotechnology has been prophesied to accomplish almost anything called for by human desires" (109). Margaret Morse once wrote that a state of "ubiquitous computing would enchant the entire world, distributing magical powers to the most mundane aspects of existence" (Morse 7). Her statement comes from a text, *Virtualities* (originally published in 1998), that is still focused on a perspective pre-existing what Brooks Landon describes as the "shift from the paradigms of virtuality to those of nanotech" (138), and yet, Morse was already forced to conclude that with ubiquitous computing "we have entered a realm for which we have little vocabulary and few reference points except the language of magic tricks" (Morse 8). The nanotech paradigm of *The Diamond Age* and the Nanotech Quartet only reinforce Morse's observation. This is why one of the characters in *The Diamond Age* calls the product of nanotech "mites" a type of "magic" (Stephenson, *The Diamond Age* 54). This is why one of the regions in the "Leased Territories" is named "Enchantment" and referenced with a sign depicting a "princess" holding a "magic wand" (66-67). This is why Nell's nanotech primer is described as a "magic book" (150-51, 208, 215, 282, 293, 463). The Nanotech Quartet is filled with just as much of "this odd repeating magic" (Goonan, *Queen City Jazz* Kindle Location 3769). Afterall, the Nanotech Quartet takes place in a realm where one can be transformed into an enormous bee or imbibe every story ever written by eating the stamps off of a book possessed of as much "magic" as Nell's primer. There is little to link such *novum* to *Cyberpunk 2013* beyond the fallacy of *post hoc ergo propter hoc*.

Publication dates for various novels and TRPGs clearly indicate that Carbonell's observation, while interesting, is not specific to TRPGs or clearly linked to them in a causative manner. The first book of the Nanotech Quartet was published in 1994. *The Diamond Age* was published in 1995. The first version of *Cyberpunk* to feature "supertech motifs—i.e. technologies

that push extrapolated science into the fantastic" (Carbonell 200)—was not published until 2005. Carbonell's final example of a TRPG to feature such motifs—*Eclipse Phase*—was first published in 2009. Such motifs "may have emerged as of equal (if not dominant) importance in cyberpunk TRPGs" (200), but they did so after first arising as a prime focus of second-generation cyberpunk novels. *Shadowrun*, originally published in 1989, did provide "a mixture of magic and technology" (206) first, but it used literal magic, not "supertech motifs." Moreover, one could easily argue that Rucker's "Tales of Houdini" used literary, if not literal, magic as early as 1981.[5] Regardless, I do not mean to disagree with Carbonell's claim that "TRPGs differ from mainstream cyberpunk . . . [in] their willingness to blur boundaries and incorporate elements more common to fantasy and horror" (206). The reason for their willingness to blur boundaries and incorporate such elements, however, is only illuminated when *Cyberpunk 2013*'s publication is analyzed in the context of both its narrative genre and media format: cyberpunk and the TRPG.

To support my claim, I must first explain how *Dungeons and Dragons* shaped contemporary role-playing games. *Dungeons and Dragons* (*D&D*) was the first commercially successful TRPG. Many scholars have observed its cultural importance.[6] While there are claims about various roleplaying games being played in private communities before the publication of *D&D* by hobbyists, Gary Gygax and Dave Arneson's 1974 contribution is still the first verifiable and commercially successful publication of a TRPG.[7] *D&D* predated *Cyberpunk 2013* by fourteen years. In some sense, *Cyberpunk 2013* can be seen as both a positive reaction to the media format *D&D* proved could be commercially successful and a moment of expansive play regarding *D&D*'s problematic content not unlike Scott or Goonan's literary reactions to early cyberpunk novels, but to explain the nature of this reaction and its expansive play, I must also

summarize the current state of the scholarly debate regarding narratives and their relationship to games.

Narrative and Games

The scholarly community was predisposed to view TRPGs in a non-serious light. On one hand, as early as the 1950s, Johan Huizinga argued, "Play is older than culture . . ." and followed his statement by writing, "It is a *significant* function . . ." (emphasis in the original) that always "means something" (1). As René Reinhold Schallengger observes, this "puts play at the center of cultural development and what it means to be human" (Kindle Location 35). Huizinga also, however, placed *play* "outside the antithesis of wisdom and folly, and equally outside those of truth and falsehood, good and evil" (Huizinga 6). At best, it can be included "in the realm of the aesthetic", and even there, Huizinga's "judgement wavers" (7). Huizinga's argument was that play has a value in and of itself, in service to no other extrinsic activity, not even the aesthetic. As Schallengger notes, however, "this makes it highly suspicious to philosophies that are grounded on metaphysical truth-claims" (Kindle Location 934). Without the ability to explain clear causal truth-claims about the value of TRPGs, hindsight makes it seem predictable that literary critics like Ross were predisposed to see games like *Cyberpunk 2013* as little more than their surface aesthetic and representations of violence.

Gary Alan Fine—one of the first scholars to perform a serious study of TRPGs—discovered a similar problem in the field of Sociology and published his findings in *Shared Fantasy: Role-Playing Games as Social Worlds* (originally published in 1983).[8] When studying D&D and other early TRPGs, he noted that in his field scholars "who study leisure typically find

themselves attacked on two fronts. First, they are accused of not being sufficiently serious about their scholarly pursuits. Second, they are accused of alchemically transforming that which is inherently fascinating into something as dull as survey research tapes" (vi). The first issue naturally arises from the fact that "fantasy, play, and nonsense have been depicted as opposed to the important doings of human life—working and knowing the real world" (5). Nevertheless, Fine, echoing the claims of Huizinga before him—albeit in a more specific arena—argues that in the experience of this type of gaming "are questions of identity and identification" (4).

Huizinga expresses the *seriousness* of *playing* and the questions it raises in explicitly semiotic terms. According to Huizinga, "In the making of speech and language the spirit is continually 'sparking' between matter and mind, as it were, playing with this wondrous nominative faculty" (4). Language, according to Huizinga, is the output of an act of play: "Behind every abstract expression there lie the boldest of metaphors, and every metaphor is a play upon words" (4). Language is an example of the type of meanings that play, in advance of culture, creates. As René Reinhold Schallegger explains, play "opens up a secondary reality that is given existence and meaning by symbolic exchanges, proliferating the meanings contained within and shaping the semiosphere" (Kindle Location 905). As languages become fixed, languages then become components of cultures: "Thus, even though it predates civilization and is not exclusive to human behavior, play is constructed as the motor of human civilization, ultimately bringing forth language, society, and art" (Kindle Location 925). Play literally produces *meaning* in Huizinga's model.

Roger Caillois's scholarly response to Huizinga from *Man, Play and Games* (originally published in 1961) prefigures what would later become an ideological battleground between the "narratologists" and "ludologists" in more contemporary scholarship. Caillois complained that

Huizinga's "work is not a study of games, but an inquiry into the creative quality of the play principle in the domain of culture . . ." (4). Caillois also attacked Huizinga's definition of "play" as being "at the same time too broad and too narrow" (4). Caillois finally concludes, "Various approaches—from psychology to mathematics and, in passing, history and sociology—by reason of their special biases have been unable to contribute anything fruitful to the study of play" (175). Their debate parallels a set of exchanges between two academic disciplines as documented by such publications as the essays found in *First Person: New Media as Story, Performance, and Game* (originally published in 2004). As Andrew Byers and Francesco Crocco put it, "RPGs were the first to combine a complex game system with an interactive narrative. This merger eventually elicited a hotly contested debate between so-called 'ludologists' and 'narratologists' over the nature of RPGs and the compatibility of games and narratives" (5). As Schallegger summarizes, "The bone of contention in the theoretical debate is the status of games as an independent medium and the nature of their relation to narrative" (Kindle Location 1152).

In response to the notion that games might produce meaning as a type of narrative activity, Espen J. Aarseth argued that "stories and games are different structures that are in effect doing opposite things" ("Genre Trouble" 45). His arguments gave birth to the discipline of ludology, and the "strategy" employed by such scholars often, as Markku Eskelinen's writing evinces, relies on the claim that "comparisons between narratives and games usually result from too narrow, broad or feeble definitions of the former: usually it comes down to discovering 'plots' and 'characters' in both modes—games and narratives" ("Towards Computer Game Studies" 37). Essentially, the field of ludology can be said to have flowered from Aarseth's *Cybertext: Perspectives on Ergodic Literature* (originally published in 1997), which argued that literary theory had enabled "a systematic misrepresentation of the relationship between narrative

text and reader" (3), and that as a result, "traditional literary critics" were rendered unable to "perceive the difference between metaphorical structure and logical structure" (4). In this case, what Aarseth means is a metaphorical description of a structure and its literal operations. Aarseth essentially argued that literary scholarship was unable to contribute anything fruitful to the study of game-play due to its special biases and the blind spot those biases created.

Such approaches render perceptible the probability that Ross failed to interpret the value of *Cyberpunk 2013* because of his lack of tools with which to analyze the logical structure of the game as opposed to the metaphorical structures found in novels. I do believe that Ross failed to interpret *Cyberpunk 2013* accurately for this reason, but to follow Aarseth's argument and parallel his claim by saying that the difference between cyberpunk TRPGs and novels is "not the difference between games and literature but rather between games and narratives" (4-5) misses important elements of these types of games and fails to contribute anything fruitful to the study of TRPG-play due to the special biases of ludology. Thus, before claiming that *D&D* and *Cyberpunk 2013* should be thought of as the migration of narrative from the novel to the game and analyzing the nature of *Cyberpunk 2013's* definitively cyberpunk response to *D&D*, I must provide a set of definitions for the concepts of "narrative" and "game."

Eskelinen has been called "ludology's most outspoken and controversial proponent" (Wardrip-Fruin and Harrigan, "Ludology" 35), and as such, I will follow his lead and "use the theories of" ludology "against itself" by using his definition for these concepts.[9] Eskelinen analyzes an impressive body of definitions from an array of scholars in *Cybertext Poetics: The Critical Landscape of New Media Theory* (originally published in 2012) before settling on one that he uses: "we accept [Gerald] Prince's definition of narrative as the representation of real or fictive events by one or more narrators to one or more narratees" (Eskelinen, *Cybertext Poetics*

111).[10] Whether this is the best definition of a narrative or not, for rhetorical purpose, it is the definition I will adhere to in this text. Eskelinen's definition of "game" is a little more diffuse. His review of the ludological field covers multiple definitions provided by other scholars and yields the observation that "an overwhelming consensus [is] that rules, goals or variable outcomes, and play or player effort are the main definitional features of games" (259).[11,12] From that set of definitions, what follows appears to be the inability of ludology to effectively situate TRPGs.

TRPGs are a difficult artifact to define briefly, which is evinced by every scholar who has written about them to any meaningful degree. As Schallegger puts it, "Attempts to define RPGs in RPG theory have ranged from the comedic to the pedantic" (Kindle Location 1865). She then opts to provide a lengthy description of the experience and review of the definitions provided by other scholars instead of providing a clear definition herself. Byers and Crocco observe that various "scholars, game designers, and enthusiasts have attempted to identify the core features of RPGs, mostly overlapping in their classifications, but emphasizing different features" (4). They too follow this statement by providing a review of other definitions rather than providing their own. What both reviews have in common is eloquently summarized by the definitions of Daniel Mackay and Jennifer Grouling Cover. Mackay defines "the role-playing game as an episodic and participatory story-creation system that includes a set of quantified rules that assist a group of players and a gamemaster in determining how their fictional characters' spontaneous interactions are resolved" (4-5). In Cover's "view, the TRPG can be defined as *a type of game/game system that involves collaboration between a small group of players and a gamemaster through face-to-face social activity with the purpose of creating a narrative experience*" (167-68, emphasis in the original). While an outsider to such games, such as Aarseth, might describe it as a "strategy

board game" (*Cybertext* 98), as Schallegger points out, the description is "unjustified," and Aarseth's description of the medium's experience "shows a lack of understanding of what happens around a gaming table" (Kindle Location 1936). Ultimately, those scholars who are familiar with the experience of a TRPG and study it from the perspective of an insider tend to agree on one point—the experience is narrative.

This observation seems to be at odds with the conclusions of ludologists. As previously noted, the ludological position is clear—the structure of a game is not narrative. To be fair, however, Eskelinen does "recognized the possibility of hybrids" (*Cybertext Poetics* 213). More specifically, in "Towards Computer Game Studies" Eskelinen argues that "a story, a backstory or a plot" (37), does not make a narrative. Rather, in "games, the dominant temporal relation is one between user time [the actions of the player] and event time [the happenings of the game] and not the narrative one between story time [the time of the events told] and discourse time [the time of the telling]" (37). Thus, Eskelinen separates story or plot, which he uses to describe the content of an artifact, from narrative on the basis of the structural qualities defining the experience of interfacing with a medium. He admits the possibility of hybrids, but states that "there's no narrative without story and discourse times and no game without user and event times—everything else is optional" (39). The observations made by scholars studying TRPGs regarding its narrative qualities, given the possibility of hybrids, should not be as problematic as those observations often seem to be.

In theory, there should be no issue claiming that the TRPG is a hybrid artifact from the ludological position. Sarah Lynne Bowman argues that a TRPG must possess three qualities. Only her first two are important for my argument: "First, a role-playing game should establish some sense of community through a ritualized, shared storytelling experience amongst multiple

players. RPGs also should involve some form of game system, which provides the framework for the enactment of specific scenarios and the solving of problems within them" (Kindle Locations 121-24). This claim is not at odds with Eskelinen's definition of "narrative" or "game." First of all, Eskelinen chooses to "preliminarily situation [a word that he uses as a verb] transmediality on the level of stories, and thus [believes that] fictional films may present stories but not narrate them" (Eskelinen, *Cybertext Poetics* 111).[13] A game should therefore (theoretically speaking) be able to present a story, but not narrate it, as well. Even if we do not accept that TRPGs are a type of narrative activity born of a hybrid artifact, there is little reason to claim that they are not a story-based activity given that, at least as of 1979, *D&D* explicitly described itself as "an opportunity to watch a story unfold" (Gygax, *Dungeon Masters Guide* 2).[14]

Like many other scholars who have studied these objects from the position of an "insider," however, I also argue that their experience has elements that are properly described with the term *narrative*, even if we accept that this term has structural qualities relating to the presentation of a medium. Frame Analysis has been a standard component of the study of games since before Fine's published *Shared Fantasy*: "*Frame Analysis* is original in its invocation of the social organization of interaction to uncover perceptions of experience" (Fine 182, emphasis in the original), and games "seem particularly appropriate to the application of frame analysis because they represent a bounded set of social conventions" (182). Mackay builds upon Fine's original application of such analysis to the TRPG and notes, "I observe three frames—two in-character and one out-of-character—within the frame that Fine designated as the 'game-world.' I break this game world frame into three" (55). The *narrative* frame "occurs when the players and the gamemaster assume a storyteller, or raconteur, relationship by narrating their characters' actions in the third person as if they were spinning a yarn to an eager group of listeners" (56).[15]

This claim is not built upon "too narrow, broad, or feeble definitions" of "narrative." In fact, MacKay explicitly divides the *performative* frame, "which occurs when a player's first-person, in-character utterance, coincides with the enunciation" (55), and the *constative* frame, which "occurs when the gamemaster describes settings and situations to the players in-character and in the second person" (55), from this *narrative* frame. In other words, at least one frame of the TRPG experience is composed of "the representation of real or fictive events by one or more narrators to one or more narratees."

Admittedly, this does not—in and of itself—indicate that one should call a TRPG a narrative. Mackay observes a total of five frames when analyzing the TRPG. In addition to the three I have already referenced, he also includes the "social frame inhabited by the *person*" and the "game frame inhabited by the *player*" (56). A ludologist might argue that the TRPG is not a hybrid object, as only one of its frames is narrative, and as Jesper Juul admits: "1) The player can tell stories of a game session. 2) Many computer games contain narrative elements, and in many cases the player may play to see a cutscene or realize a narrative sequence. 3) Games and narratives share some structural traits" ("Games Telling Stories?"). Nevertheless, Juul still holds fast to his conclusion:

> 1) Games and stories actually do not translate to each other in the way that novels and movies do. 2) There is an inherent conflict between the now of the interaction and the past or "prior" of the narrative. You can't have narration and interactivity at the same time; there is no such thing as a continuously interactive story. 3) The relations between reader/story and player/game are completely different—the player inhabits a twilight zone where he/she is both an empirical subject outside the game and undertakes a role inside the game.

Each of these claims is important enough that I must address them individually. Nevertheless, before I continue, I will reiterate that the TRPG should be considered a hybrid entity composed of four temporal registers—story, discourse, user, and event—and none can be said to be subservient to any other.

A story cannot migrate from a novel to a game in the same way that it can migrate from a novel to a film. Insofar as Juul breaks narratives into the components of discourse (the telling of the story), the story itself, characters (existents), setting (existents), and events, and insofar as these are all said to have a fixed compositional arrangement, I categorically agree with Juul when he observes a structural discontinuity between the experience of the game and the fixed stories that can be translated between novels and films. What Juul calls "existents" (following Seymour Chatman) *can* migrate from a novel to a game, but if this is all that migrates between the medium of the novel and the game, then Eskelinen's eventual claim that "traditional conceptualizations of transmediality concern, if anything, simple cognitive surface patterns that apply only to the least aesthetically important (re)presentational aspects of art and media" (*Cybertext Poetics* 347) would be correct. If that were the case, then Shiner and Ross's perception of *Cyberpunk 2013* as possessing little more than a kitsch, surface transference from cyberpunk literature would be appropriate. Juul's observation, however, is incomplete. Juul was correct in stating the story of a specific play experience and its events can be transferred—after the fact—to another medium, but a strictly fixed arrangement of events cannot be transferred to the game, and the game's multiple, plastic arrangements of events cannot be faithfully transferred to a linear, static medium. So far so good, but Juul fails to account for the fact that a player will still *experience* a linear arrangement of events, and the TRPG does contain discourse (as I will expand upon later

in this chapter). The player will experience a story and moments of narrative frame regardless of Juul's first conclusion being true.

Juul's conclusion that narrative exists in relation to a past event and the interactions of a game as a present experience ignore oral storytelling traditions. Juul writes, "It is clear that the events represented cannot be past or prior, since we as players can influence them" ("Games Telling Stories?"). This assumes that the three frames of the "game-world" must coincide with the social and game frames. One needs only look at the multitude of games set in alternative or fictional pasts to see that this is not accurate. Certainly, the *story* has not already been *fully* composed in the *real world's* past, and the player is expected to partially compose the story during the process of play. If this, however, precludes a narrative experience, then oral storytellers who improvisationally narrate stories around campfires are not creating narratives either, for their products are also not fully composed in advance. There is literally no way to separate the experience of the narrative frame in TRPGs and other oral storytelling traditions. This aspect of Juul's conclusion thus contradicts Eskelinen's definition of narrative and is analytically untenable.

The remainder of Juul's claims collapse in the face of Mackay's use of Frame Analysis. You cannot have narration and interactivity at the *same* time, but you can easily experience both from the same artifact as a result of frame shifting. Indeed, *A Fantasy Role-Playing Game: A New Performing Art* is Mackay's monograph explaining that process in rigorous detail. In short, as a player, I occupy the narrative frame whenever I recount the fictive events of my character's behavior. When I am not authorized to recount a desired event, however, I switch to the game frame and use the game's rules to adjudicate the result. Afterwards, depending on the TRPG and table conventions, the appropriate player will step forward and enter the constative or narrative

frame as they describe the results of the game frame.[16] At any given time, a player can use the social frame to interrupt another player's narration and coordinate their own shift into the narrative frame. The overall experience is obviously not the *same* as traditional narrative, but there is no reason not to view it as a *type* of narrative. Oral storytellers must also shift from the social frame into the narrative frame when telling a story and potentially navigate with frameshifts as a result of a live audience—the difference is only the degree of frame-shifting complexity.

To be clear, I am not claiming, as Janet Murray did, "Games are always stories, even abstract games such as checkers or *Tetris*" ("From Game-Story to Cyberdrama" 2). I find that proposition as untenable as the claim that no games ever are. Of course, Eskelinen does argue, "Game ontologists and ludologists (Aarseth; Eskelinen, Frasca; Juul) made an ontological argument (games are not narratives or stories) that was misread as something completely different: a claim that games could not or should not contain stories or narratives or narrativity" (*Cybertext Poetics* 211-12). If the position that games are not narratives or stories is held as a theoretical position about the nature of "game" and "narrative" only insofar as the terms refer to "perfect," which is to say theoretical, objects, not messy real-world examples that are hybrid compositions, then I would find the argument of the ludologists eminently convincing. The TRPG, however, can be described as both a game and a narrative medium—a hybrid—but I can accept that—in theory—its narrative elements are not game elements, and its game elements are not narrative elements.

Ludologists, however, sometimes fall into the trap of treating their theoretical framework as existent *a priori* material examples and fail to see their hybrid natures as a result. Aarseth calls *D&D* a boardgame. Juul—for reasons that have nothing to do with its narrativity—recognizes

that "pen and paper role-playing games are not classic games because, having a human game master, their rules are not fixed beyond discussion" (Juul, *Half-Real* 66). Eskelinen gives this case a closer look and decides, "a game doesn't cease to be a game when it turns out to be poorly designed" (*Cybertext Poetics* 241-42).[17] This argument, however, ignores *why* the rules of a TRPG are not fixed beyond discussion. Anyone analyzing such games from the perspective of an insider would recognize that this lack of fixity is a feature, not a weakness of design. In fact, this lack of fixity was explicitly described as a feature of *D&D* as of its initial release: "These rules are as complete as possible within the limitations imposed by the space of three booklets. That is, they cover the major aspects of fantasy campaigns but still remain flexible. As with any other set of miniatures rules they are guidelines to follow in designing your own fantastic-medieval campaign" (Gygax and Arneson, *Men & Magic* 4). As I noted above, it becomes explicitly clear as of at least 1979 that such campaigns were conceived of as a story. Each game is played by a group, the majority of whom take the role of protagonists. One player takes the role of primary narrator. This "referee" (as Eskelinen calls them) has the ability to modify the rules as required to tell their *story*, expanding it beyond the expected boundaries of the game's *literary genre conventions*. Thus, the flexibility in question serves the direct purpose of facilitating story before mechanics, but ludologists seem blind to this. Ludologists look at the TRPG and tend to only see a game.[18]

I do not, that being said, dismiss ludology's observations about "the limits and shortcomings of the narrativist paradigm" (*Cybertext Poetics* 209). The inability of critics like Ross or writers like Shiner to evaluate *Cyberpunk 2013* in the context of its medium are a concrete example of the problems that arise due to such limits and shortcomings. To overcome such issues, one must approach the TRPG as both a game and a narrative medium using tools

designed to analyze both. With that in mind, Eskelinen's "ontological point concerning the dominant features," the argument that "the occasional presence of narrators and narratees in some games doesn't turn them into narratives, because the game features dominate the 'narrative' ones" (*Cybertext Poetics* 226-227), is potentially fair. As of yet, however, no scholarly tools exist with which one can accurately evaluate what type of features dominate the other in the TRPG, at least given "implied players and not real flesh and blood players" (315). Whether the story exists in service of the game or the game in service of the story, given the structure of the TRPG, is a matter of interpretation and not objective fact, and as such, I must admit that my interest in narrative certainly predisposes me to a bias.

The most useful tool with which to analyze the reason why people play TRPGs does not come from scholars but rather gamers. Schallegger reviews the types of theories that emerged from such communities in great detail.[19] For my purposes, The Big Model by Ron Edwards provides me with a "vocabulary and perspective that enable people to articulate what they want and like out of the activity, and to understand what to look for both in other people and in game design to achieve their goals" (*GNS and Other Matters of Role-Playing Thoery*). In Edwards's experience, there are three "distinct types" of "decisions and goals" that drive people to play TRPGS:

> **Gamism** is expressed by competition among participants (the real people); it includes victory and loss conditions for characters, both short-term and long-term, that reflect on [sic] the people's actual play strategies. The listed elements provide an arena for the competition.
>
> **Simulationism** is expressed by enhancing one or more of the listed elements in Set 1 above; in other words, Simulationism heightens and focuses Exploration as

> the priority of play. The players may be greatly concerned with the internal logic and experiential consistency of that Exploration.
>
> **Narrativism** is expressed by the creation, via role-playing, of a story with a recognizable theme. The characters are formal protagonists in the classic Lit 101 sense, and the players are often considered co-authors. The listed elements provide the material for narrative conflict (again, in the specialized sense of literary analysis). (*GNS and Other Matters of Role-Playing Theory, Chapter 2,* emphasis from the original*)*

"Gamism" is obviously entangled in the question of "goals or variable outcomes" that Eskelinen describes as a defining feature of games. According to Edwards's definition, the exploration of "simulationism" involves the "internal logic and experiential consistency" of five aspects:

> Character: a fictional person or entity.
>
> System: a means by which in-game events are determined to occur.
>
> Setting: where the character is, in the broadest sense (including history as well as location).
>
> Situation: a problem or circumstance faced by the character.
>
> Color: any details or illustrations or nuances that provide atmosphere. (*GNS and Other Matters of Role-Playing Theory, Chapter 1*)

These elements also conform to various ludological ideas about games. In the continuum from static to interactive fiction, Eskelinen describes the trajectory from "static" print narratives as being a move from "non-simulative" to "simulative interactive fiction" (*Cybertext Poetics* 196). Aarseth even argues, "The hidden structure behind [adventure], and most, computer games is not narrative—or that silly and abused term, 'interactivity'—but *simulation*" ("Genre Trouble" 52,

emphasis in the original), and posits the TRPG as "an oral cybertext, the oral predecessor to computerized, written, adventure games" (*Cybertext* 98). Two out of three of the goals that drive RPG players can thus be best analyzed from a ludological position.

That, however, still leaves the problem of those players who are primarily driven by "narrativism." Admittedly, Aarseth does accept that "there is a game genre that may also be called narrative. This is the so-called adventure game . . ." ("Genre Trouble" 51), of which the TRPG is an example. According to Aarseth, however, "Stories and simulations are not totally incompatible, but the simulation, as a primary phenomenon, must form the basis of any combination of the two, and not vice versa . . ." ("Genre Trouble" 52). This directly flies in the face of what gamers like Edwards have experienced. Indeed, as someone who has played TRPGs for the better part of three decades, the defining drive that has called me to the RPG table has been what Edwards describes as "narrativism." *Story* has always come first in my experience. The rules of the game are nothing but a subservient, adjudicatory function used to create an emergent narrative that cannot be said to belong to any individual players at the table, and the joy of the experience is derived both from participating in the creation of the story and experiencing the narration of it. (This happens to be precisely the justification TRPGs provide for allowing gamemasters to change the rules of the game when they believe such change is required *for the purpose of telling their story*.) The definitions of the TRPG that I provided from other scholars (as well as their work that required them to create such definitions) indicate that I am clearly not alone in my "narrativist" interests.

In fact, the hobby was born from literature. As early as Fine's *Shared Fantasy*, sociologists studying TRPG players observed, "Most gamers report that prior to becoming involved in fantasy role-playing gaming, they had interests in the *components* of fantasy gaming"

(49). Many shared an interest in "fantasy and science fiction literature" (49). As Bowman observes, "a group of war gaming enthusiasts utilized concepts from Tolkien's work to create the first official role-playing game in 1974, *Dungeons &Dragons*" (Bowman, Kindle Location 51). Gygax credits an even larger cadre of authors, directly citing "de Camp & Pratt, REH [Robert E. Howard], Fritz Leiber, Jack Vance, HPL [Lovecraft], and A. Merritt" as primary influences, and Poul Anderson, John Bellairs, Leigh Brackett, Fredric Brown, Edgard Rice Burroughs, Lin Carter, August Darleth, Lord Dunsany, P. J. Farmer, Gardner Fox, Sterling Lanier, Michael Moorcock, Andre Norton, Andrew J. Offutt, Fred Saberhagen, Margaret St. Clair, J. R. R. Tolkien, Stanley Weinbaum, Manly Wade Wellman, Jack Williamson, and Roger Zelazny as secondary influences (Gygax, *Dungeon Masters Guide* 224). Such influences are not unique to *D&D.* As Mackay observes, "The trend was to create role-playing games based on works of literature" (17). *Cyberpunk 2013*, for example, is connected to the Movement and its subsequent waves.

I do not mean to suggest that only literary scholars and not ludologists should be studying TRPGs. On the contrary, my work is deeply indebted to ludological insights. Because the TRPG is a game, to study it, one must have a body of research developed for and dedicated to the analysis of games. To claim that the transmedial content in TRPGs is nothing but "simple cognitive patterns that apply only to the least aesthetically important (re)presentational aspects of art and media," or that its simulationist aspects are dominant and "must form the basis of any combination" it has with narrative, however, is to ignore clearly observable phenomena in the real world. Studying the TRPG as a game, from a ludological perspective, would be required to understand its operations insofar as they relate to players with gamist or simulationist interests. The game, however, was strongly influenced by narrative, and for many players, narrative is its

most important quality. Literary scholarship is required to unpack the TRPG's relationship to genre and its role as a narrative artifact; such analysis still requires knowledge of the ludological field, and could only be supplemented by more purely ludological analyses, but it too holds integral value.

Here There be Dragons

When *D&D* and *Cyberpunk 2013* are compared as both literary artifacts and games, it becomes clear that *Cyberpunk 2013* is an intervention into the medium of TRPGs driven by the same ethical sources as the second wave of cyberpunk. Bowman argues that the "sixties brought a paradigm shift toward greater acceptance of diversity and experimentation with alternative lifestyle" and that this is one of the central "cultural shifts that contributed to the development of role-playing games as a subculture" (Kindle Locations 49-50). To Bowman, *D&D*'s interest in magic and fantasy was at least partly the "result of the breakdown of the conservative traditionalism and the widespread discovery of alternate forms of spirituality" (Kindle Locations 574-75). Certainly, *D&D*'s magical content might have been part of "a revision of traditional forms of ideology, including the critique of what some considered oppressive religious practices" (Kindle Locations 199-200).[20] *D&D*, however, can only claim to have been inspired by the "emphasis on diversity championed by the Civil Rights movement" (Kindle Location 575) insofar as it is a cryptographic and socially conservative reaction against such diversity. *Cyberpunk 2013* is a posthuman attack on *D&D*'s biologically deterministic ethos.

Gygax was a self-professed biological determinist. In 2005, during an online question and answer period with Gygax held over the *Dragonsfoot* forums, Gygax admitted to this: "As a

biological determinist, I am positive that most females do not play RPGs because of a difference in brain function" ("Q&A with Gary Gygax, Part III").[21] I admit that to claim a text necessarily possesses the same philosophical underpinnings as its author on the basis of nothing but the author's publicly stated beliefs (even if Gygax's statement was made as a justification for why he did not try to appeal to a women with *D&D*) is an autobiographical fallacy. The original editions of *D&D*, however, include a plethora of content clearly informed by Gygax's beliefs. The fact that Gygax was a biological determinist is not evidence for my claim that *D&D* is a socially conservative text; that fact is just context for early *D&D*'s socially conservative qualities.

To wit, the initial release of *D&D* contains sexist assumptions on the level of its *existents* (characters and setting). In some cases, these assumptions are subtle linguistic cues that are probably best attributed to the gendered language of society during the era of the game's publication. For example, what modern editions of *D&D* refer to with the gender-neutral term "fighters" are called "fighting-men" in the game's 1974 release (Gygax and Arneson, *Men & Magic* 6). Such linguistic assumptions, however, are reinforced by the game's description of certain types of creatures. For example, the game makes the following statements about centaurs: "Females are not generally armed and will not fight, and the young are also non-combatant, except in life-and-death situations" (*Monsters & Treasures* 15). This type of logic was not limited to non-human creatures. In fact, the game's original publication virtually reduced the entire human species to "men" (*Men & Magic* 9) and contains only three references to the existence of a non-male gender anywhere.[22] All three references are found in *Monsters & Treasures.* This observation is made that much more powerful when combined with one of the game's few references to "females": "Centaurs will be found in hidden glens. It is there that both their females and young are and where their treasure is hidden" (15). The fact that female

dragons or lycanthropes are described as combatants (albeit ones who fight primarily for the purpose of protecting their young) is an anomaly that the game calls out as an exception to the general rule (14-15), and the logic of the game indicates that women are either monsters or treasure, but certainly not adventurers.

The first edition of *Advanced Dungeons & Dragons* (Gygax's solo release of the game originally published between 1977 and 1979) contains even more egregious content than the game's initial 1974 release. Representation in the *Monster Manual* (originally published in 1977) mirrors that previously seen in *Monsters & Treasure*: there are more references to the existence of a female gender, but the content and gender assumptions in the references are similar.[23] The *Dungeon Masters Guide* (originally published in 1979), however, raises the stakes.[24] Its first reference to women is subtly problematic: "Considering that their women tend to be bearded too, it is not surprising that some dwarves are somewhat forward in their behavior towards females not so adorned" (16).[25] The assumption is that the behavior one directs towards a woman can understandably (if not justifiably) be localized in the appearance of that woman. The logic is uncomfortably similar to that espoused by those who blame the act of rape on rape-victims due to the clothes they (supposedly) wear. This implied attitude towards the subject of rape is replicated more explicitly in the "goodwife encounter": "Goodwife encounters are with a single woman, often indistinguishable from any other type of female (such as a magic-user, harlot, etc.). Any offensive treatment or seeming threat will be likely to cause the woman to scream for help, accusing the offending party of any number of crimes, i.e. assault, *rape*, theft, or murder" (192, emphasis added). The *Dungeon Masters Guide* not only replicates the logic of those who blame rape victims, it also uses simulation to reify the claim that women who accuse men of rape usually do so under false pretenses or are exaggerating.

It is not enough to merely analyze the content of the manual in terms of its textual utterances. In *Expressive Processing: Digital Fictions, Computer Games, and Software Studies*, Wardrip-Fruin explains, "When I play a simulation game, author-crafted processes determine the operations of" what can also be described as a narrative experience (4): "There is authorial expression in what the rules make possible—and also what they leave out, as compared with what we see in the everyday world of human conversation . . ." (4). In a computer game, "what processes express in their design" is often "not visible to audiences" (4). To explain, Wardrip-Fruin divides simulation games into "data and process" (7). Data refers to something akin to what Aarseth calls *textons*: "a string of signs . . . as they exist in a text" (*Cybertext* 62). Wardrip-Fruin describes data as "precreated media" of the type "stored in spreadsheets (lists and tables of information, with varying degrees of structure" (*Expressive Processing* 7-8). Process, on the other hand, is akin to what Aarseth calls *scriptons*: "a string of signs . . . as they appear to readers" (*Cybertext* 62). Wardrip-Fruin describes the process as "the working parts of the simulated machine" (*Expressive Processing* 8). When analyzing a traditional, literary text, a scholar need not think about both the data and process. That is because the *textons* and *scriptons* of a novel are one and the same.[26] The manuals of a TRPG are unique in that to analyze them we must both treat them as a literary codex *and* the data or textons of an experience whose scriptons only become experiential during the process of play.[27]

The *expressive processes* of *AD&D* suggest that, though the game does include more references to women among its *existents*, this increase in representation (however problematic the representation may be) on the level of the game's *data* is disingenuous when compared to the probable experience of an implied player. The "goodwife encounter," for example, comes from the "city/town encounters matrix" (191). The vast majority of characters an implied player meets

will be men given the process of generating an encounter from that table.[28] In fact, it is fair to estimate, based on the rules of the game as found in the *Monster Manual* (see footnote 20) and the description of encounters from this matrix in the *Dungeon Masters Guide,* that (unless the player-characters specifically visit a married character's home) only about 16-18% of the encounters one will likely have in a city or town will be with a woman, and almost half of those will be with a goodwife, who is likely to falsely accuse a player-character of rape, or a prostitute.[29] The game's expressive processes provide an experience which implies that women are less important to its world than men, less likely to be encountered outside of the home, and when they are, they are probably going to falsely accuse players of crimes like rape or be prostitutes looking to swindle them.[30]

This disingenuous quality of Gygax's written work is par for the course. Despite believing that it is "a waste of time and effort" to consider a female audience when writing a game ("Q&A with Gary Gygax, Part III"), he chose a "forward" for the *Players Handbook* (originally published in 1978) that says, "*D&D* players, happily, come in all shapes and sizes, and even a fair number of women are counted among those who regularly play the game—making *Dungeons & Dragons* somewhat special in this regard" (Carr 1978). Despite claiming, "You will find no pretentious dictums herein, no baseless limits arbitrarily placed on female strength . . ." (Gygax, *Players Handbook* 6), the game does exactly that. Female fighters have a significantly lower maximum strength (9).[31] While the game no longer calls fighters "fighting-men," it does impose a disadvantage on players who choose to play a *fighting-woman.*

Given Stuart Moulthrop's hypothesis about the "specific links between the emerging culture of serious play and the crises of the new century" (57), the expressive processes built into Gygax's simulation game are particularly worrisome. Moulthrop theorized that when simulative

media becomes "transparent," in the sense that "we lose consciousness of the medium" (66), we also lose sight of that medium's effect on us. The media becomes invisible, and thus, we do not see what it is doing to us. As a result, Moulthrop argues, "ordinary life requires us to apprehend these systems, to understand their rules and develop effective strategies for managing their effects and affordances" (67). This is logical considering how often role-playing systems are lauded for their ability to teach.

In *The Functions of Role-Playing Games,* Bowman argues that two of the important capabilities of RPGs are their use of a fictional world to expand the "comprehension of mundane reality and existing social dynamics" (Kindle Location 721) and provide a "useful tool for training and education purposes" (Kindle Locations 1076-77). The first capability allows the TRPG to enforce "social cohesion through shared dramatic experiences" (Kindle Location 1076), but logically speaking, the second capability can teach players how appropriate social cohesion should be practiced. Her argument is logical. Afterall, the RPG allows one not only to appreciate data by reading about it, but to also simulate the experience of that data and thus reify its claims experientially. Bowman examines the positive aspects of these capabilities in her monograph. As Moulthrop points out, however, if the medium becomes transparent to the point that it is not considered critically, then one may not be aware of its effect on social cohesion or the nature of its lessons. Given the type of sexist content present in *D&D*, its capabilities bear careful observation.

My research cannot draw causal conclusions about the effect that *D&D* had on its early player base, but the correlations between the possibilities Moulthrop and Bowman discuss and Fine's sociological research about TRPG subculture as it existed up to 1983 are troubling. Fine observed that, at that time, "the participants [were] almost entirely male" (41). The exact number

is a matter of debate, but Fine's work places around 5% to 10% of the total *D&D* player base as female at that time (41, 62).[32] Given his observations about how male players treated female characters, this is not surprising: "Frequently male nonplayers characters who have not hurt the party are executed and female nonplayer characters raped for sport" (44). Some of his interlocuters did not want women at their game tables because "[t]here's a lot of things you do in . . . [the game] that would embarrass you" if you did it with a woman at the table (69); they could not roleplay rape and considered "inhibitions that prevent characters from engaging in fantasy rape to be a problem" (69).[33]

Gygax's biologically deterministic input into the early editions of *D&D* is not limited to sexism: the game suffered from cryptographic racist content as well. The intersectional nature of such problematic and biologically deterministic content is evident in such examples as the "drow." The drow's first published appearance is in the *Monster Manual*.[34] They make their next appearance in *Dungeon Module G3 Hall of the Fire Giant King* (originally published in 1978). That story is clearly of North Germanic inspiration, as it features a descent into "Muspelheim, the home of fire giants" (2), where the players "hope to find both the answer to the riddle of what or who is behind the strange alliance of many different types of giants as well as great treasure" (2). Ultimately, the drow—or "dark elves" (15-16)—are proven to be the evil masterminds behind the alliance. An analysis of the drow's source of inspiration and unique presentation in *AD&D* clearly demark them as an expression of racist and sexist logics conflated under the banner of a single icon for the game's image of a master villain.

It is not clear that *D&D*'s concept of "good" and "evil" can be mapped onto the elves of Norse myth. Limited references do exist to "a mythological division between the black elves and the light elves" (Raudvere 237). They were called *dökkálfar* and *ljósálfar* respectively (237):

"Light-elves are fairer than the sun to look at, but dark elves are blacker than pitch" (Sturluson 19-20). It is not entirely clear whether there is a difference between elves and dwarves in that mythology: "The dwarfs have diffuse origins. According to Snorri's *Skáldskaparmál* some dwarfs are understood to be a sub-group of the 'black elves' (*svartálfar*) with whom they are thought to share dwellings in the underworld" (Raudvere 236). While some scholars believe that "Snorri is perhaps influenced by Christian dualism in his description, and thus translates the various groups of álfar into a kind of 'angels' and 'demons' (Raudvere 237), it bears noting that the extent of a moral judgement actually made in the *Gylfaginning* is to say that the two types of elves look different and have different "natures" (Sturluson 19-20), which is not expounded upon in detail (19-20). That being said, the statement might be a reference to the text's earlier claim that "[g]ood norns, of noble parentage, shape good lives, but as for those people that become the victims of misfortune, it is evil norns that are responsible" (18). Overall, textual references to dark elves are limited, and I am not entirely convinced that a contemporary understanding of "good" and "evil" applies to the *Edda*.

Regardless, there is no creature named a "drow" in the *Edda*, but the word does seem to refer to the *dökkálfar*. The *OED* defines "trow" as a "troll" ("trow, n.4."), gives the word's etymology a Swedish origin, and one of its listed historical examples of use comes from *The Pirate* by Walter Scott (first published in 1822). In that text, Scott writes that a character "had acquired some favour by her knowledge in old Norwegian ballads, and dismal tales concerning the Trows or Drows, (the dwarfs of the Scalds)" (76). Gygax does seem to have been inspired by the *dökkálfar*, and admittedly, the historical examples of use listed in the *OED* do sometimes classify the trow as malevolent (even if *dökkálfar* in the *Edda*, Norse myth in general, and drow in *The Pirate* are at least somewhat more nuanced). Gygax's statement that "Drow are mentioned

in Keightley's *The Fairy Mythology*, as I recall (it might have been *The Secret Commonwealth*—neither book is before me, and it is not all that important anyway), and as Dark Elves of evil nature, they served as an ideal basis for the creation of a unique new mythos designed especially for *AD&D*" (Gygax, "Books are Books" 29), should be taken at face value, and both texts Gygax named should be considered to have been important influences on *AD&D*, for as Gygax implied, the difference in content between the two was not that important to him.

That unique new mythos, however, translated this entity in a number of important ways. First of all, in Norse "mythology the giants are known as the gods' antagonists. The threats against the gods always come from the *Jǫtunheimr*" (Steinsland 228). In Gygax's new mythos, the drow are so terrifying that they are feared alongside the King of the giants and are listed as part of the reason why "even the [giant] females and young . . . . fight to the finish" (Gygax, *G3* 3). The drow are also unique in that, unlike most of the females described in the *Monster Manual*, or the regular elves (among whom only 5% of the female population are listed as combatants), a disproportionally large number of the drow combatants and leaders in the adventure are female—the females even have more powerful magical abilities than the males (16). The follow up adventure, *Dungeon Module D1 Descent into the Depths of the Earth* (originally published in 1978), makes this explicit: "the Drow are (chaotic) evil elves, driven from the upper world by the good elves. They bear undying enmity for all surface dwellers in general and elvenkind in particular. They are a handsome race, but most depraved. The females are better looking and generally more powerful than males" (Gygax 3). In fact, that adventure drops a hint that the drow have an overtly matriarchal culture as the adventures can find "a golden spider pin" on a high *priestess* "with engraved runes which say in Drowic, LOLTH, DEATH QUEEN MOTHER" (7, capitalization from the original). In *Dungeon Module D3 Vault*

of the Drow (originally published in 1981), this figure is revealed to be a "demoness" and "a very powerful and feared demon Lord [sic]" (Gygax 26). Drow are not only the rare example of a matriarchal society in the game, but that society is portrayed as being matriarchal *because* of the machinations of a demoness whose nature is so depraved that, given the internal logic of the game, she bears the masculine title of *Lord*.

The game takes extra pains to drive this logic home lest anyone doubt that, for Gygax's dark elves, being evil and being a powerful woman go hand in hand. This gendered "nature" of "evil" is emphasized by the fact that "roaming the streets" of a drow city "are bands of bitter youths, often outcasts. . . . The bands with elven-Drow members will be hostile to all they perceive as part of the system which prevails in their world, and the Dark Elves with them are of the few who are neither totally degenerate nor wholly evil—they are haters of the society around them and see no good in it" (Gygax, *D3* 16): these bitter youths are all "rakes," a word that generally means a "fashionable or stylish man of dissolute or promiscuous habits" ("rake, n.7."), and while it *can* mean a "woman of similar character ("rake, n.7."), the *Dungeon Masters Guide* clearly calls out the game's use as specifically pertaining to "gentle*men*" (192, emphasis added).[35]

No such characterization is given to the "trow" in Thomas Keightley's *The Fairy Mythology: Illustrative of the Romance and Superstition of Various Countries.* The text does discuss both the "Döckálfar (Dark Alfs) [who] dwell below under ground" (Kindle Locations 1220-21) and the "trow," or "Scandinavian Trolls, those of the land and those of the sea" (Kindle Locations 2609-10). The trow are described as a largely amoral force of mischief (Kindle Locations 2604-722). The text's description of the dark elves is a direct match for that given in the *Edda.* As such, it also references the "good" and "malignant Nornir" who shape fate (Kindle

Location 1233). At no point, however, does it make reference to them having a matriarchal society, nor does it expound upon their "malignant" behavior anymore than its source text, the *Edda*. They are merely an anthropomorphic manifestation of *fate*.

The game's use of the word "race" (Gygax, *D1* 3) to describe these black skinned elves is a translation of the North Germanic mythos that is just as important as that evinced by its description of the few male youths who "see no good" in their matriarchal culture's "depravity." There is no reference to dark elves, drow, trow, or *dökkálfar* in Robert Kirk's *The Secret Commonwealth of Elves, Fauns, and Fairies.* In the section of the manuscript attributed to Kirk's text, supposedly written in 1691, the word "race" is also never used. The comments and notes attributed to Andrew Lang in 1893, however, make frequent use of the word race to describe such figures as "a race of earth-dwellers" who "survive in popular memory as 'the legendary Feens,' and as the Pechts of popular tales, in which they are regarded as dwarfs" (7). Lang's notes regularly use of the word "race" both to describe real world peoples—such as the "Finnish race" (7)—and fantasy creatures. The *The Fairy Mythology*, originally published in 1828, does the same: "But there are many Nornir; those who come to each child that is born, to shape its life, are of the *race* of the gods; but others are of the *race* of the Alfs; and the third of the *race* of dwarfs" (Keightley, Kindle Locations 1226-27, emphasis added).

It is nineteenth century sources such as these that influenced Gygax and helped him decided to use the word "race" in a similar manner. This nineteenth-century affectation, however, has a well documented history of *racism*. Today, we know that "genetic science has demonstrated conclusively that the notion of biological race, developed throughout the eighteenth and nineteenth century, has no scientific basis" (Young 8). Nevertheless, as a modern concept, it evolved around the belief in the existence of "biologically determined, physical,

intellectual and moral differences between human groups" (Beasley 1). In her research, Helen Young breaks down "nineteenth century race-thinking" as the belief that "humanity can be divided into races" via logics that "link physical traits with the non-physical, and understand both as biologically heritable" (7). Nineteenth century assumptions about race rendered it possible to evaluate people hierarchically on the basis of their heritage.

The nineteenth century practice of using racial language to describe what Keightley called the "traditions of the peasantry" (Kindle Location 469), despite the lack of what the nineteenth-century believed to be "accuracy and determinateness with [the classifications] of natural science" (Kindle Locations 464) when doing so, did not escape the racist logic of this type of evaluation. Instead, it carried age-old prejudices regarding real-world peoples embedded in the traditions of the peasantry into the realm of racially pseudoscientific evaluation. Charles Kingsley's 1851 publication of *Yeast: A Problem* provides a story about the origin of the goblin-like "knocker": "They are the ghosts, the miners hold, of the old Jews, sir, that crucified our Lord, and were sent for slaves by the Roman emperors to work the mines; and we find their old smelting-houses, which we call Jews' houses, and their blocks of tin, at the bottom of the great bogs, which we call Jews' tin" (Kindle Locations 2613-15). Roland M. James explains that "the Cornish belief in the Tommyknocker included the idea that they were the spirits of Jews who had worked in the mine, most likely as a form of punishment for their role in the Crucifixion" (159), based on "a number of sources most of which were written [in the] nineteenth-century" (155). "Elf-like" (159) creatures such as these were both mythological and racially coded in the nineteenth-century.

Gygax's drow rearticulate this type of conflation between mythological and real-world racist coding using a set of stereotypes regarding people of African descent. Such people have

historically been characterized as innately lazy, aggressive, and hypersexual (Young 24). These all apply to Gygax's matriarchal "black elves." Gygax informs the reader, "Because of the chaotic nature of the Dark Elves, their continual feuding, and the degenerate nature of the city dwellers, there is no reason why a clever group cannot successfully muck around" in their city for a "considerable period of game time" (*D3* 3). The behavior of the players simply does not attract the "attention" (3) of the drow, who are too busy spending their time on "decadence" (15)—or in other words, being lazy. *D3* makes it very clear that "debauchery is the keynote of" the drow city in the adventure (15, 23). Just in case the nature of this debauchery is unclear, the "back streets and alleyways" of the drow city "boast of brothels," "pimps," "harlots," and "prostitutes" (15)—in other words, indicators of hypersexuality. The drow are also aggressive to such a degree that "these evil elves are hated and feared by the other intelligent races inhabiting the subterranean lands" (2). The parallels are so uncomfortably close to the stereotypes about people of African descent that, when *AD&D 2nd Edition* released *The Drow of the Underdark* in 1991, the text took the relationship to its logical conclusion by adding the following information: "We know very little of the Ilythiiri, or 'Elves of the South,' before this crucial event. Even then, they were known as Dark Elves, for the hue of their skins. They dwelt in the jungles and hot forests of the South" and were a "proud, warlike" people (Greenwood 46). In what is likely a moment of unintentional irony, *Drow of the Underdark* puts this coded information under the heading "Descent," thus conflating their physical and biological descent into the "Underdark" and from a people whose original homeland sounds suspiciously like a reference to the jungles of Africa.

Gygax's translation of North Germanic folklore into a collage of sexist and racist stereotypes is not mere coincidence, as is proven by the more explicitly anti-Semitic content of

"the lich." For most of the word's existence, it merely meant a "dead body; a corpse" ("lich, n."). In 1976, Gygax and Rob Kuntz published *Greyhawk* for the original edition of *D&D*, which translated the word "lich" into a description for "skeletal monsters . . . of magical origin, each Lich formerly being a very powerful Magic-User or Magic-User/Cleric in life, and now alive only by means of great spells and will because of being in some way disturbed" (35). There is nothing particularly anti-Semitic about this transformation. When Gygax, however, released his solo edition of the game as *AD&D*, the *Monster Manual* added an important extra detail to the creature's description: "A lich exists because of its own desires and the use of powerful and arcane magic. The lich passes from a state of humanity to a non-human, nonliving existence through force of will. It retains this status by certain conjurations, enchantments, and a *phylactery*" (61, emphasis added). This word literally means, "Either of two small leather boxes, containing Hebrew texts of the Bible written on parchment, worn by Jewish males during morning prayer on all days except the Sabbath and holidays, as a reminder of the obligation to keep the law" ("phylactery, n."). One of these small leather boxes are attached to leather wrappings that one binds around their arms during their morning prayers. The *Dungeon Masters Guide* makes it clear that this is what the word describes when it defines the word as an "arm wrapping with a container holding religious writings" (Gygax 229). There was exactly one reason to give the lich a phylactery: "One of the most powerful motifs in the popular conception of the Jew throughout the Middle Ages and into early modern times was the image of the Jew as sorcerer and magician" (Saperstein 9-10).[36]

The relationship between such prejudiced narratives and the expressive processes of the TRPG is of integral importance. When playing *D&D*, one does not merely read another person's racist utterances. When a player builds a female warrior in *AD&D*, the game's limitations on the

character make them a potential liability to the party's capabilities. When a referee or game master runs the *D* module line, telling its story, they reify the claim that a matriarchal society is inherently villainous by simulating that claim as an experience. Likewise, they also reify the notion that dark skin is a biologically deterministic marker of laziness, hypersexuality, and violence, thus simulating America's racist stereotypes about people of colour in a manner that makes such racist assumptions appear true, for in the alternative possible world of the story, they are. As a TRPG, *AD&D* does not merely tell a socially conservative story, but rather, it coopts its players, teaching them to accept such socially conservative tropes, and then invites them to either engage in expansive play by actively rejecting the game's rhetoric or else becoming an accomplice in spreading that rhetoric, for in order to play, one must participate in narrating the game's content.

The transmedial migration of mythology from traditional narratives to the hybrid media of *D&D* is a socially conservative reaction against diversity that uses its ludic qualities to coopt players into occupying a narrative frame and, whether they actually believe such socially conservative narratives or not, participate in narrating them. By treating *D&D* as "just a game," this expressive process is concealed. The power of this process and its ethical implications are only made visible when the TRPG is analyzed as both a narrative and ludic practice. *Cyberpunk 2013* is in turn a reaction to the aforementioned migration in that its migration of cyberpunk tropes from traditional narratives into the hybrid media of *Cyberpunk 2013* is a narrative *move* played on behalf of diversity.

Raiding Cybernetic Dungeons

The context of the TRPG as represented by the early editions of *D&D* and the sociological observations of Fine indicate that, at first, the game was a socially conservative artifact in positive feedback with a subculture that was, at the very least, possessed of an ugly sexist trend in behavior.[37] According to Schallegger, "the rise of postmodern theory and the emergence of this new medium is not a coincidence" (Kindle Location 133). She claims that issues of "textual authority, discursive power and the commodification of culture, the central questions of the postmodern age, come together in this new generation of RPGs" (Kindle Location 2809). Given Fine's observations from his sociological analysis of this medium's gamer culture and his assessment that the "creator is taken as *the* expert on all questions relating to his game" (34), Schalleger's statement may *seem* untenable to those not familiar with the evolution of the medium and its community of fans. Insofar as Gygax intentionally positioned himself as the author-expert of *D&D*, the author function does not seem to have died and allowed the game to become more than what Barthes described (in a text unrelated to *D&D*) as "a line of words releasing a single 'theological' meaning" ("The Death of the Author" 146); Gygax appears to have attempted to use the conversational model of communication to bypass interpretation and posit a biologically deterministic world-view.

Schallegger, however, is aware of this. She explicitly states, "Authorship and authority go hand in hand in Gygax's understanding of the medium, and he assumes discursive power, claiming ultimate textual authority" (Kindle Location 1414); She notes, "In his preface, he claims the position as final and singular authority in the medium" (Kindle Location 1411).[38] Gygax seems to have come to conclusions similar to those found in Wolfgang Iser's "Interaction Between Text and Reader." Iser observed that "dyadic interaction serves specific purposes, so that the interaction always has a regulative context" (1526). This is fundamentally different from

reading in that, when reading, "there is no *face-to-face-situation*" (1525, emphasis in the original). In short, there is no referee to regulate meaning and act as Gygax's "last authority" (*Players Handbook* 5). If TRPG mechanics actually center around "configurative practices" (Eskelinen, *Cybertext Poetics* 311) as opposed to the "narratological relationships between narrative and story, narrative and narrating, or simply between story and discourse that are of an interpretive nature" (312), Schallegger's argument would be in error; it is not.

The TRPG uses both configurative and interpretive practices in equal measure. TRPG players must interpret the narrative content of the game in order to enter the narrative frame and both build and respond to that content. If one has no context with which to make sense of their character, they cannot roleplay that character. If one has no context with which to make sense of a game's fictional world, one cannot create an outline of events that—upon the interaction of the players—become a story of that world. The issue at hand is that every TRPG is both a traditional literary codex and a game that uses that codex as its rules. At least some of the players at any table must first read and interpret that codex before playing the game. The process of play *is* a configurative practice, but not in a sense opposed to narrative. Rather, playing a TRPG is configurative in the same manner as the process of *telling* a story. In order to engage in that configurative practice, however, every player must also interpret narrative utterances made by both the manual and other players, much like an author who learns about the tropes of a narrative genre, before writing a text in that genre, by reading and listening to stories from that genre. In the case of the TRPG, trying to put either practice before the other is as fruitful as arguing about what came first—the chicken or the egg.

In a sense, then, the TRPG collapses the temporality of the ludic metaphor I explain in "Gaming the Cyberpunk Genre" into an experience that both takes far less time to observe than

the moves of a traditional literary community *and* a literal ludic practice. After one becomes aware of this fact, Schallegger's argument that many "of the core issues of postmodern thought inform the very structure and processes that make the medium, and even though it did not start out as a means of cultural critique and the questioning of dominant discourses, it has most certainly acquired the ability to function as such" (Kindle Location 133), becomes logical. The diachronically documented behavior of *players* (collapsed both into the word's literal meaning and a component of my ludic metaphor, which describes those who create such games for public consumption) proves Schallegger's point.[39]

Cyberpunk 2013 should be viewed as an important *move* made on the medium of the TRPG using the ethos of its titular literary genre. This is not to say that the game's representations are beyond critique. The game repeatedly uses masculine pronouns to refer to what are logically gender-neutral character options. This could easily give female players the impression that their gender is less important to the game and be interpreted as a symptom of the sexist assumptions often surrounding the representation of protagonists in popular media. I admit that this aspect of the game's representational design is not ideal, but the game does make a point of trying to inform a reader that its options are gender neutral and it is geared towards both male and female players in *View from the Edge: The Cyberpunk Handbook* (published in 1988).[40]


Fig. 1: Solo

The most important representational design elements of *Cyberpunk 2013*'s expressive processes, insofar as its feminist position is concerned, exist in regards to what the game does not do. *Cyberpunk 2013* does not include any mechanics that penalize a player for playing a female character. In fact, whereas *D&D* at first assumed that all fighters were fighting-men, and then allowed for fighting-women only with a limit to their capability that marked them as less effective than their male counterparts, *Cyberpunk 2013* represents its prototypical combatant with the graphic of a woman, albeit an oversexualized one (see fig. 1): Solo's are the "elite fighting machines of the *Cyberpunk* world" (Pondsmith, *View from the Edge* 5). I admit that this graphical representation can be critiqued in many of the same ways as William Gibson's "Molly" from *Neuromancer*, and thus at the level of data, this aspect of *Cyberpunk 2013*'s feminist position, as in cyberpunk's first wave, is a shadow at best.[41] In other words, the criticism that Wolmark leveled at Molly and that I discussed in "Expansive Play: *Trouble and Her Friends*" is equally applicable to this graphical representation, who notably happens to have a cybernetic weapon strikingly similar to that Molly's own artificial fingernails. That being said, the differences between the shadow of a feminist position and the actively sexist representations from the first two iterations of *D&D* cannot be overstated.

Cyberpunk 2013 may sometimes struggle to effectively provide a feminist position insofar as its textonic representation of women is concerned, but its representation of race is immeasurably more advanced than that of *D&D*. Where *AD&D* leaned heavily on nineteenth-century racial logic and medieval-to-early-modern peasant traditions to make cryptographically (as least for an audience unfamiliar with its sources of inspiration) racist statements, *Cyberpunk*

2013 provides a nuanced approach to race. First of all, in its core *rules* the word "race" does not appear. Given the text's description of American racial politics in its *setting*, this is not an inadvertent omission. Rather, this is an intentionally created and stark contrast to Gygax's *Players Handbook*, which casually mixed both physical and non-physical stat modifications and limitations on the basis of "race" (14-15), imposed stereotypical, non-physical abilities on racial choices in its "racial descriptions" (15-18), and limited a character's class choices or capabilities—in other words, their ability to develop certain constellations of skills as a result of lived experience—on the basis of their "race" as well (13, 15-18). Even without its virtually explicit racist propositions, *D&D* simulates and thus reifies the claims of biological determinism through the experience of its racial mechanics where *Cyberpunk 2013*'s design is an active choice not to.

Cyberpunk 2013's setting treats the concept of "race" as per its appropriate, real-world contexts. As Young points out, "Defining race is equally if not more difficult than defining . . . [a genre]; both are discursive formations, shaped by social and cultural forces contingent on time and place" (Young 6). Race, however, still has real-world impacts, because "race is a social construct which assigns non-necessary meanings to common phenotypical features of humanity in order to distinguish groups and assign hierarchical value to them" (6). The text that presents the game's setting, *Welcome to Night City: A Sourcebook for 2013* (published in 1988), constructs its world around the real-world impacts of race as of its opening sentence: "In the United States, twenty five years of corrupt government and economic destabilization have resulted in a nation divided— by class, by *race* and by economics" (Pondsmith 1, emphasis added). Despite such divisions, not once does the game use racist stereotypes to universally characterize an entire people, nor does the game provide a biologically determined villain on the

basis of its status as a racial *other*. On the contrary, where *D&D* posits its ultimate villain using a dog-whistle stand-in for women of African descent and visually labels them as acceptable targets of violence with their black skin, *Welcome to Night City* explicitly states, "Players shouldn't be able to tell who are the good guys and who are the bad just by looking at them" (6). Given the racist qualities of *D&D* at the time, the importance of this observation also cannot be overstated.

Of equal importance is the fact that the statement made by *Welcome to Night City* appears in a section of the sourcebook labeled "Getting Cyberpunk: Assorted Tips and Tricks for Doing the Cyberpunk Genre" (6-10). In *Cyberpunk 2013*, race never exists on the level of the game frame. Its existence in the APW of *Cyberpunk 2013* is limited to the constative, dramatic, and narrative frames, yet from those frames, it still affects a player's experience while they are playing the game. This is a direct mirror for the way "genetic science has demonstrated conclusively that the notion of biological race, developed throughout the eighteenth and nineteenth century, has no scientific basis" (8), but America still has no right to claim that it is what Young calls "post-racial, that is, a world in which an individual's race does not significantly affect his or her life" (151). The nature of that experience, the game's manual tells its reader, should not lead a player to be able to judge the moral qualities of any given character on the basis of their appearance, and the reason for that is (according to that manual) explicitly because being able to do so would be against the ethos of the cyberpunk genre.

Pondsmith's claim is logical according to my analysis of cyberpunk across the "Play of the Movement" and "Gaming the Cyberpunk Genre," which also indicates that this attitude is a function of something like critical posthumanism. Braidotti and Hlavajova's "Introduction" to the *Posthuman Glossary* is evidence that such paradigms often express an "ethical concern for the relationship between new concepts and real-life conditions" (1). In fact, in the entry about

"Transhumanism/Posthumanism," Ferrando explicitly states that posthumanism deconstructs the human on grounds that underly "the fact that, historically, not every human being has been recognized as such" and, "as a post-humanism, does not employ any hierarchical schemata in addressing" the "intersectional critical lenses of gender, race, class, sexual orientation, ability and age, among others" (439). The second wave of cyberpunk I analyzed in "Gaming the Cyberpunk Genre" exemplifies this quality in its effort to write a feminist subjectivity into existence.

Cyberpunk 2013 should also be thought of as an early expression of critical posthumanism. In its deconstruction of eighteenth and nineteenth century humanist racial structures, it does not fall into the trap of apocalyptic transhumanism or what Stefan Herbrechter describes as the "figure of the 'posthuman' (and its present, past and projected avatars, like cyborgs, monsters, zombies, ghosts, angels, etc.)" (94). Instead, *Welcome to Night City* asks, "If we continue on our current trend of replacing our body parts with metal, what will we have left in the end?" (Pondsmith 32). The expressive processes of the game model an answer to this question by including a statistic called "Empathy: This Stat represents how well you relate to other living things, a measure of charisma and sympathetic emotions" (Pondsmith, *View from the Edge* 12). Empathy is negatively affected by gaining cybernetic implants: "every piece of cybernetic equipment has a corresponding Humanity Cost" that causes characters to lose their Empathy (20). A character who loses too much "is driven by a maddening hatred of other humans or living things. At this point, there is no turning back—the character is taken over by the Referee, who plays it as a non-player character with all the worst attributes of a murderous, mechanized psychopath, called a cyberpsycho" (20). The transhuman in *Cyberpunk 2013*, then, is the ultimate symbol of bigotry—a symbol that is no more human than *D&D*'s lich. *Cyberpunk*

2013's posthuman protagonists, however, are a response to the "upheavals of the last twenty five years [that] have unified the poor, oppressed and angry of the nation. There are signs that the gang mentality of the early 2000s is giving way to a new movement, as Rockers, Nomads, Solos and Medias [all of which are character roles playable in the game] take to the streets to fight authority and oppression" (1). The game positions its player-characters against the corruption that has divided people by race and positions them via "the contemporary social discourse" (Herbrechter 94) of posthumanism.

Mike Pondsmith has made public statements that suggest this was his intent:

> When I wrote Cyberpunk many years ago, I meant it as a warning, not an aspiration. Of what happens when Power, Money, and Ruthlessness combine. Of what happens when the America you think you know morphs into a tyrannical state that combines the worst of corporate excess with the worst of authoritarian tendencies. We're speeding on the way towards that Dark Future right now, and the color of your skin, or the money in your bank account are not going to spare you. It's time to wake up; to face down the people who want in the end, to enslave all of us. (Pondsmith, "Cops and Racists")

In fact, his company's "Homebrew Content Policy" explicitly states,

> Racism, homophobia, transphobia, anti-semitism, sexism, ableism, and intolerance exist in many of the worlds we create, but if you include it in your homebrew content you must be respectful and treat them as the problems they are. Hatred and intolerance can be an aspect of the story you are telling, but the work itself should not be racist, homophobic, transphobic, anti-semetic, sexist, ableist, or discriminatory. For example, you can have a racist NPC in your homebrew

> adventure but you cannot present rules that include a "racial variation" that focuses on a particular real world ethnic or other group. (Pondsmith)

While authorial intent does not ensure that a text will be possessed of certain qualities, in this case, Pondsmith's statements align with qualities of *Cyberpunk 2013* that I have been describing.

Ross's complaints regarding *Cyberpunk 2013* in *Strange Weather* (originally published in 1991) do not only miss this point, they also fail to contextualize the importance of *Cyberpunk 2013*'s supposedly violent "cyberpunk way" (160). On the level of its existents, the game might claim that its world "is a violent, dangerous place, filled with people who'd love to rip your arm off and eat it" (Pondsmith, *View from the Edge* 2), but on the level of expressive processes, the game allows you to do something that *D&D* does not—build a non-combatant as a character: "Each character in this world is playing a role—a face that the person projects to the outside world as the real thing. There are nine Roles in Cyberpunk: Rockerboys, Solos, Netrunners, Corporates, Techies, Cops, Fixers, Medias, and Nomads. As a Cyberpunk player, you must select one role for your character" (Pondsmith, *View from the Edge* 3). Only solos are described as being essentially combatants by nature. More importantly, the game features a total of forty-three skills, only five of which are combat skills (Pondsmith, *Cyberpunk*). Nothing in the "Lifepath Section" (Pondsmith, *View from the Edge* 13-16) requires a character to pick even a single combat skill when generating a character, even if they are playing a solo. When a character gains "Improvement Points" from experience, the points are gained in the skill a character actually uses during that experience (17). Nothing in the game forces a character to use combat skills or requires that such skills be developed as a character advances. At the level of expressive processes, Ross's claim that *Cyberpunk 2013* forces one to "waste 'em or be wasted" (Ross 160) is objectively false.[42]

This is also in contrast to *D&D*. No matter what class you choose in any edition of *D&D*, every class forces you to gain combative capabilities as you gain levels in that class. Every class in both the original edition of *D&D* and *AD&D* is a combatant (Gygax and Arneson, *Men & Magic* 17-34; Gygax, *Players Handbook* 19-32). *D&D*, not *Cyberpunk 2013*, enacts the ethos that Ross attributes to cyberpunk on the level of expressive processing.

Given this stark contrast and the expressive processes of *Cyberpunk 2013*, one should interpret *Cyberpunk 2013*'s characterization of its world as a self-reflexive response to the type of observations made about gamer culture by Fine: "Within the context of the game, players are oriented towards murder and death without consideration of any moral niceties" (43). It is not merely *Cyberpunk 2013*'s dystopian world that is violent, but the world of gamer culture into which it was entering. Its claim that "traditional concepts of good and evil are replaced by the values of expedience—you do what you have to do to survive" (Pondsmith, *View from the Edge* 2)—are in contrast to its claims about players taking part in a cyberpunk revolution against the corrupt forces responsible for racist divisions. Thus, the narrator of its manual is an unreliable narrator whose statement about players not being able to recognize the good guys is a subtle jab against its intended audience, for the text's actual practices are closer to a claim made elsewhere by the game: "The best, eye opening, messages are in political issues and stories" (Pondsmith, *Welcome to Night City* 32). *Cyberpunk 2013* is a message written in response to *D&D*'s violent gamer culture, especially insofar as *D&D* directed that violence against racial targets, and an effort to introduce simulative practices and narrative components that might teach gamers to approach the subject of race with a more ethical paradigm than that authored by Gygax.

Ross failed to notice any of this because he was not armed with the lessons of ludology. Ross had no idea how to analyze *Cyberpunk 2013*'s ludic behavior. Similarly, however, to

pretend that *Cyberpunk 2013* is not a hybrid object but rather just a game that occasionally uses a narrative frame would blind an analyst to just how important *story* as *narrative* and the ethos of a *literary genre* are to *Cyberpunk 2013*'s message. It is not an accident that *Cyberpunk 2013*'s presentation is distinctly more literary than *D&D* as well. While the goal of *D&D* might be to tell a fantasy story partly arbitrated by ludic processes, every manual I have cited from that game reads like a manual, not a narrative. *Cyberpunk 2013*, however, argues that, as "the *Cyberpunk* genre is mostly literary, it seems fitting that we introduce you to *Cyberpunk* roleplaying the same way" (Pondsmith, *Welcome to Night City* 11). Not only does it, like *D&D*, suggest a genre appropriate reading list (11), but almost all of its textonic content is written as if from the perspective of someone living in its APW. It features pages of text that simulate newspaper releases from that world (Pondsmith, *Welcome to Night City* 32-37). "Never Fade Away: A Cyberpunk Adventure" is a short story in the game's manuals written about characters in that world (11-21).[43] To treat *Cyberpunk 2013* as nothing but a game is to fail to observe the importance of these narrative qualities and conclude that nothing but simple cognitive surface patterns migrate from cyberpunk novels to the *Cyberpunk* role-playing game.

The narrative qualities of *Cyberpunk 2013*'s manuals—specifically the content of "Never Fade Away"—also help reframe its feminist content as being at least somewhat more present than a mere shadow. On the level of its graphics, as previously mentioned, the game does seem to oversexualize its representations of women. There is one set of instances in the textual content that seems to do the same. The game informs its player that "a Netrunner is like a cybernetic magician", and its programs or software "are the spells he has at his command" (Pondsmith, *View from the Edge* 32). Among these "spells" is the "succubus," an AI capable of helping its netrunner, and which, depending on its interface, appears as either a "slender, nude woman with

floor length black hair", "voluptuous, nude female form, hairless, and made from shiny chrome metal", or "slender, redheaded woman dressed in a tight fitting, low cut green evening dress" (37). In the game's example of netrunner play, this program tells its user, "Good going, stud", and seductively "winks" at him (39). The program, however, is not a real woman. Rather, it is an artificial construct designed to appeal to a specific audience—both the netrunners of its world and the gamers in the real one who desire to play one. "Never Fade Away" undercuts the representational attitude of the "succubus" by presenting the actual women of its APW and their relationship to men very differently.

"Never Fade Away" features two female main characters: Alt and Rogue. Given that the story has five main characters, that is not an insignificant demographic. The story's first two pages present what appears to be a traditional, fairly sexist, introduction. Johnny Silverhand is a "famous Rockerboy" who is attacked and sent to a hospital in "eight seconds flat" (Pondsmith, *Welcome to Night City* 11). Beforehand, "Johnny steers Alt, his girlfriend, to his bad side" (11) to try and protect her. The story appears to be steering into traditionally problematic waters by giving Johnny the ability to steal Alt's agency and presenting her as little more than a damsel in distress. The first sign that the story is being disingenuous with its reader, given what *Cyberpunk 2013* says elsewhere about race, is that the attackers are presented as a 1980's caricature of violent, African American youth—their faces "scarred in African tribal tattoos" (11). Given that they kidnap Alt, which sends Johnny on a quest for "a little vengeance" (12), the racist stereotypes that permeated both America and gamer culture at the time of the story's publication, and that gamer culture's attraction to roleplaying sexual assault, one could be forgiven for assuming that a gang of African American youth have likely kidnapped Alt, a helpless damsel, to rape her.

Pondsmith's story stays true to his description of cyberpunk tropes—nothing is what it seems. As the manual informs a player elsewhere, "Technology has joined Africa under one government, and the last petty dictators and tribalisms are falling fast before the lure of the stars" (2). Africa is not presented by *Cyberpunk 2013* as a country of lazy, aggressive, dim, hypersexual stereotypes, and neither are its representations of people of African descent living in America. Johnny's attackers are "pros" (13) who intentionally made the attack "look like a gang job" (13) as a form of misdirection. They are using the racism of Johnny's world to mislead Johnny's expectations much like Pondsmith is using the racism of 1980's America to mislead the expectations of his reader. They were never after Johnny: "They didn't want you. They wanted her. She's an extraction. Business as usual" (13). Johnny does try and save Alt, but to do so he needs "the best" mercenary help he can find—his ex-girlfriend, a woman named Rogue (16). Alt is no more a helpless damsel in distress than Johnny's ex: "Alt was ITS's pet netrunner. She moved info up and down the Net and handled their security as well. She made a lot of classy software just for them" (13). In fact, she built "*Soulkiller*. the legendary black program that sucks the very soul from its Netrunner victims" (13). She is kidnapped for her skills, but according to the story, she nearly frees herself from her captors with those skills: "A brief flare of thought, and she engulfs the minds of her three guardian techs' interfaces, locking them out of the system" (20-21). A few years before the publication of *Trouble and Her Friends*, Pondsmith was taking a page from Cadigan and writing about a story where combat *and* programming mastery are *both* epitomized by female characters.

Ultimately, Johnny's entire effort to be a hero-protagonist is framed in light of his inability to see his world for what it is. Alt tricks her captors and takes control of Soulkiller, almost saving herself. Johnny's "*heroic*" efforts are not, for it is his ineptitude that gives her

captors the chance to break her body's connection to the program her mind is running. Johnny finds her, mistakes what he sees for a "lifeless body" (21), and after killing her captor in an act of vengeance (and thus depriving himself of the knowledge required to avoid making the situation worse), leaves while her disembodied consciousness "screams to him" (21)— "But he can't hear her as he walks away" (21). Given what the game says happens to those who delve too far down the transhuman rabbit-hole, the implication is that Johnny's repeated misinterpretation of the world around him, especially in relation to race and gender, kill Alt and turn her into an inhuman ghost. Numerous feminist scholars discussing cyberpunk have noted, "Feminist cyberpunk retains an interest in virtual environments but is much less prone to entertaining notions of bodily transcendence (Lavigne, Kindle Location 1199). Insofar as "Never Fade Away" positions disembodiment as a loss of agency that is both akin to death *and* caused by Johnny's masculinist approach to heroism, its feminist content (while certainly possessed of flaws) should probably be judged as more than a mere shadow.[44]

It would be easy to respond to this interpretation by saying that such feminist content is of a "low bar." After all, the story's point is still inscribed in violence committed against a woman's body. In some ways, I would not disagree with that assessment. There are, however, important historical details to this story that should not be swept away by such a response. Namely, the story positions female characters as being capable in every possible arena, including the digital one normally reserved for male characters among the stories from cyberpunk's first wave, thus following in the footsteps of Cadigan.

The story also makes a point of criticism not unlike Scott's own when Trouble screams, "Stop it, you stupid bastards, stop firing! He's dead!" (292). Just as the masculinist characters leap to overindulgent displays of violence in *Trouble and Her Friends*, so too does Johnny, and it

is this behavior that gets Alt killed. In other words, “Never Fade Away” is misrepresented as a story about a damsel in distress, but that is not what the story turns out to be. Instead of a story about a helpless woman who needs the violent intervention of a masculinist hero to save her, “Never Fade Away” is about a woman who, after being put in distress, nearly saves herself with her own capabilities; the insistence that she is a damsel in distress on the part of a character who is at first misrepresented as the hero, and who is indicative of a typical, violent masculinist paradigm, is the reason the story ends in tragedy.

The story is proof that Pondsmith is comfortable misleading a reader in order to make a contextual message. Johnny is the archetypical character of a white, male gamer, and the damage he does to those he loves is caused by the blindness that position engenders. The approach to gender in the story, and the clear placement of a woman as one of the best netrunners in the game’s fictional world, undercuts the masculinist language used to describe an example of netrunning in *View from the Edge*. The game’s world does not fall into the trap of presenting “cyberspace as a ‘feminine’ matrix, subject to the domination and control of male hackers” (Lavigne, Kindle Location 1978). Rather, it is self-aware that this is what many gamers want to see cyberpsace portrayed as. Given that the “succubus” is the fiction of a fiction—a representation created in the fictional world and not of it—the “demon” should be interpreted as a comment on the type of representations found in *D&D*. In fact, *Cyberpunk 2013* makes this explicit by pairing it with another, similar program—the skeletal “Liche” (36). This aligns the succubus as an icon of criticism not unlike the one-dimensional cartoon used by Cerise in *Trouble and Her Friends. Cyberpunk 2013* provides images appealing to the gamer culture of its time only to simulate an experience with the potential to make that audience more aware of itself.

Indeed, Pondsmith's rhetorical trickery is very likely why the story uses three "pros" with African tribal scaring in the first place. One should not forget that Pondsmith was a game designer of colour writing a piece of media for fanbase of a medium that was, at that time, notorious for its sexist behavior and predominantly organized around a product replete with racist content. His product was marketed towards the very people that it was designed to constructively criticize, thus forcing it to "lower the bar" of its ideological position for pragmatic reasons. It should further be noted that *Cyberpunk Red*, the newest edition of his game, gets rid of the sexist "demons." Instead, it includes the "Efreet," a program that appears to be a tall, "powerfully built Black man, dressed in elegant evening clothes complete with a fez and dagger" (Pondsmith et al. 212). Given that both Mike Pondsmith and his son Cody Pondsmith have writing, design, and project management credits for *Cyberpunk Red*, and Lisa Pondsmith has a business management credit, the game appears to have moved its focus to a critique of the racism that still often lurks among TRPG communities: tall, powerfully built Black—capitalized no less—men are imagined to be iconic "demons" by the white programmers in the game's APW. The Pondsmiths' continued use of this design strategy in *Cyberpunk Red* also undercuts potential critiques of *Cyberpunk 2013*, for it should be fairly obvious that this family of colour is not using the icon of the "Efreet" to demonize people of colour in America, and thus the intent of the "succubus" should also not be interpreted as sexism, but rather parodic and constructive criticism of its own audience regarding their approval of the representation of women in TRPGs like *D&D*.

It is not uncommon for cyberpunk TRPGs published after *Cyberpunk 2013* to follow in the footsteps Pondsmith helped pioneer. Every single manual that Posthuman Studios publishes for *Eclipse Phase*'s ongoing product line, whose first text was published in 2009, opens with a

short story designed to help acclimatize its players to its fictional world and predominantly uses untrustworthy narrators from its APW to present that world to its reader throughout the body of any given manual. Furthermore, its narrative content often takes cues from the same paradigm that informed both "Never Fade Away" and the feminist wave of cyberpunk epitomized by such texts as *Trouble and Her Friends*.

The story "Lack" from *Eclipse Phase: The Roleplaying Game of Transhumanist Conspiracy and Horror* provides an elegant example as of that game's very first publication. Its protagonist "is female" (6). Her muse also has a "feminine voice" (7). That voice is not unlike being "embraced by a lover" (7). This turns out to be unsurprising given the protagonist's sexual preferences: "Rati is my passion. The lover I hold above all others. She disappeared on me two years ago. No explanation. The sting still lingers" (7). The story replicates the same type of romantic situation that *Trouble and Her Friends* opens with and features a female, queer protagonist.

The game's expressive processes match its opening narrative. The most powerful biological body-morph (or genetically engineered species) used for combat purposes is the "fury":

> Furies are combat morphs. These transgenic human upgrades feature genetics tailored for endurance, strength, and reflexes, as well as behavioral modifications for aggressiveness and cunning. To offset tendencies for unruliness and macho behavior patterns, furies feature gene sequences promoting pack mentalities and cooperation, and they tend to be biologically female. (140).

The game provides them with bonuses to such combat related mechanical Aptitudes as Coordination, Reflex, and Somatics (140). In *Eclipse Phase*, Somatics "is your skill at pushing

your morph [or body] to the best of its physical ability, including the fundamental utilization of the morph's strength, endurance, and sustained positioning and motion" (123). In other words, as of its very first product, *Eclipse Phase* has been aligned with *Cyberpunk 2013* insofar as it is positioned in direct antithesis with *D&D*'s original assumptions about fighting-women.

Similar criticisms regarding *D&D*'s racial representations can be seen in *Shadowrun: Where Man Meets Magics and Machine*, a TRPG published in 1989, the year following the release of *Cyberpunk 2013*. *Shadowrun* is about a cyberpunk world undergoing a magical metamorphosis. This metamorphosis is transforming its people into fantastical creatures akin to those found in *D&D*: "'My folks are human. They'll die out soon, like the dinosaurs did, and have no idea why'-Jason Ironstone, Dwarf" (Charrette et al. 24). While this "Awakening" transforms people into elves, dwarves, orcs, trolls, and the like, the game makes an explicit point of trying to avoid Gygax's problematic racial language: "Since the Awakening, five major subspecies of *Homo sapiens* have appeared throughout the world. They are evenly distributed geographically, racially, and ethnically" (24). In other words, with its opening statements in the chapter dedicated to the subject, the game's manual informs its reader that the "races" of *D&D* are not races at all, and should not be described as such.

Given Pondsmith's use of the succubus, liche, and efreet, *Shadowrun*'s opening emphasis that the "races" of *D&D* should not be called races at all, and *Eclipse Phase*'s supertech motifs as evidenced by the fury, I am tempted to conclude that Carbonell's observation that "TRPGs differ from mainstream cyberpunk . . . [in] their willingness to blur boundaries and incorporate elements more common to fantasy and horror" (206) should be connected to the fact that every cyberpunk TRPG does not only enter into the language game of the cyberpunk literary genre, but also the contextual history of TRPG development. Such fusions often seem to be critical of the

philosophical and ideological position staked by *D&D*, the original TRPG, which was written in the fantasy genre. Cyberpunk TRPGs seem to use their blurred boundaries and incorporated elements to constructively criticize representation in the medium of the TRPG more often than not.

The effort of such games to self-reflexively position themselves as political entities has also become a mainstream practice:

> *Eclipse Phase* delves into numerous political themes; in fact, we start with the premise that *everything* is political. Like all authors, we write from the perspective of our personal biases. Our specific lens is radical, liberatory, inclusive, and antifascist. If you support bigotry or authoritarianism in any form, *Eclipse Phase* is not the game for you. (Boyle et al., *Eclipse Phase: The Roleplaying Game of Transhumanist Survival* 19, emphasis in the original).

Even the latest edition of *D&D* has started to follow in such footsteps. In 2020, the current *D&D* design team released an article entitled, "Diversity in *Dungeons & Dragons*." The article explicitly argues that "diversity is strength" and promises "to address legacy *D&D* content that does not reflect who we are today." While it would be an overstatement to claim that *Cyberpunk 2013* is the sole cause of this new trend in gaming, it is an example of a *move* played against the literary community of TRPG *players*, and it has done "some good along the way."[45]

It must, however, be emphasized that the productive efforts of *Cyberpunk 2013* are intrinsically literary and narrative. Just as the original editions of *D&D* attempt to coopt players into becoming an accessory in the production of socially conservative narratives, *Cyberpunk 2013* coopts its players into narrating a world where diversity is the state of reality and the logic of prejudice is a dangerous, corruptive *fiction* to be conquered, not a legitimate practice to be

enacted. *Cyberpunk 2013* invited players to narrate stories that bring attention to real world problems, especially insofar as those problems propagate in the community of RPG players, and more recently published TRPGs written in the cyberpunk genre have continued to invite players to do the same.

Transmedial Migrations

These successes reveal the ethical importance of *play* as an activity. They also reveal the important role that narrativity in the TRPG has played in this type of ethical play. It was not simple cognitive surface patterns that originally migrated from literary fantasy (like the novels of J. R. R. Tolkien or Robert E. Howard) to *D&D*. Rather, as Young explains, the "race-based ideologies behind the social systems which privileged them as White men very strongly influenced the shape of the worlds they imagined" (16), and under Gygax's tenure as steersman, *D&D* enhanced and emphasized those systemic privileges. *Racism* migrated from mythology (to fantasy novels) to *D&D*. In response, *Cyberpunk 2013* used the cybernetic and posthuman tropes of the cyberpunk literary genre to comment on, intervene with, and hopefully improve the narrative practices of its players by steering them away from *D&D*'s troubling ideologies. The game provided a more egalitarian space in which players could play their own agency into existence. As Bowman puts it, "Role-playing environments provide a safe atmosphere for people to collectively enact new modes of self-expression . . ." (Kindle Locations 1709-1710), and while *D&D* is evidence that this is not always the case, Pondsmith used that potential in his design of *Cyberpunk 2013*. Such practices and design choices have influenced other TRPG designers, and today, the industry more carefully considers the real-world implications of their game designs.

Gibson's Jackpot novels are in turn a related narrative design. The feedback from such ludic practices as *Cyberpunk 2013* helps explain why Gibson has literalized alternative possible worlds in his Jackpot novels. Like Gygax, in the Jackpot series, Vespasian's "hobby essentially consisted of being an evil god" (Gibson, *Agency* 25). That is because he was "sadistic in his treatment of the inhabitants of his continua, whom he set against one another in grinding, interminable, essentially pointless combat" (Gibson, *The Peripheral* 362). Lowbeer's avocation of making better worlds is, in some sense, a fictional parallel not only to the plot of Goonan's *In War Times* but also Pondsmith's real efforts with *Cyberpunk 2013*. The message of the Jackpot novels and *Cyberpunk 2013* is similar in that, according to the logic of both, fictional worlds are never just hobbies, for no matter their ontic status, they have the power to alter the world in which we live.

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[1] Thankfully, this may be in the process of changing. While writing this dissertation, *Fifty Key Figures in Cyberpunk Culture* was going through the process of being prepared for publication. This text includes an entry on Mike Pondsmith, written by Evan Torner, which explicitly notes that Pondsmith's "instrumental role in creating *Cyberpunk* (1988), among other tabletop role-playing games (TRPGs) cannot be overstated. *Cyberpunk* helped establish the aesthetic and mechanical basis for all future cyberpunk game franchises, including *Shadowrun* (1989–), *Deus Ex* (2000–), *SLA Industries* (1993), and *Invisible, Inc*. (2015)" (Torner 159). Torner even observes, "As a Black American game designer, however, Pondsmith also recognizes the roles of wealth disparity, structural inequality, and racist backlash, all of which are features of a cyberpunk universe" (162).

[2] For additional context, see Gibson, *The Peripheral* 30-31, 101, 116, 118-120, 124-125, 134, 136-137, 144-145, 152-153, 161-162, 170, 176, 179-185, 188, 191, 194-195, 199-201, 204-208, 211-212, 214, 216, 218-220, 223-226, 228-230, 240, 242-245, 255-258, 261-262, 264-265, 269, 273, 276, 281-282, 289, 311, 316, 325-326, 330, 335-336, 342-343, 345, 349-350, 353-354, 360-363, 369, 384, 389, 391-392, 399, 417-418, 424-426, 431-433, 441-443, 446-447, 449-450, 453-455, 457, 459-460, 462-463, 465, 473, 480, 484, and *Agency* 36, 80, 143, 185, 189, 190-192, 194, 196, 205-207, 210, 212, 216, 246, 269, 402.

[3] It should be noted that Gibson is not the only author to take this metaphor as a central *novum* in recent cyberpunk texts. In fact, Neal Stephenson's *ReamDe* is a similar example, albeit one that uses a literal videogame for its alternative possible world.

[4] Indeed, in some sense, even Gibson himself underrates the important role that *Cyberpunk* has played in transmediality migrating the imagery of playing alternative possible worlds as a game into literarily playing *Cyberpunk* as a game. According to Gibson, "The idea of 'third-worlding' the past of alternate continua owes everything to 'Mozart in Mirrorshades' (1985) by Bruce Sterling and Lewis Shiner, though there the travel is physical, with extraction of natural resources the focus of exploitation" (Gibson, "Acknowledgements and Thanks"). Still, this admission by Gibson does help prove just how important the cyberpunk of the 80s is to the content of his Jackpot series.

[5] For additional context, see "The Play of the Movement."

[6] Espen J. Aarseth writes that "*The Dungeons and Dragons* genre might be regarded as an oral cybertext, the oral predecessor to computerized, written, adventure games" (*Cybertext* 98). René Reinhold Schallegger calls the games 1974 publication the advent of "a completely new form of game, a so-called 'role-playing game'" (Kindle Locations 54-55). Daniel Mackay states

that *Dungeons & Dragons* was the first role-playing game ever" (10). Erik Mona once wrote, "Thirty-one years after the invention of *Dungeons & Dragons* [2005], the original role-playing game remains the most popular and financially successful brand in the adventure gaming industry" ("From the Basement to the Basic Set" 25). Noah Wardrip-Fruin agrees, citing Mona's research when he states, "The First Tabletop RPG was *Dungeons & Dragons,* created by Gary Gyax and Dave Arneson and published in 1974" (*Expressive Processing* 44). Kai-Uwe Werbeck is a little more hesitant, and instead writes, "According to academic lore, the genealogy of modern RPGs begins with Gary Gygax and Dave Arneson's 1974 *Dungeons and Dragons*" (237). Sarah Lynne Bowman similarly writes, "Most gaming historians indicate 1974 as the pivotal year for the inception of RPGs, marking the release date of the first coherent game system, *Dungeons & Dragons*" (Kindle Locations 116-117).

[7] As an example, *Follow: Fellowship of the Lands of the Lords of Wonder* claim to have been gaming since 1966. ("Follow: What Is It?").

[8] It should be noted that Fine used the term "fantasy role-play gaming" or "FRP" instead of TRPG when discussing these artifacts and their use (6).

[9] In "Towards Computer Game Studies," Eskelinen writes, "Obviously I need a strategy, and fortunately I have one: to use the theories of [narratologists] against themselves" (36).

[10] In "Towards Computer Game Studies," Eskelinen covers this position by summarizing as follows: "there must be two things or components to constitute a narrative: a temporal sequence of events (a plot, if you want to water down the concepts) and a narrative situation (with both narrators and narratees for starters)" (37).

[11] In "Towards Computer Game Studies," Eskelinen compares "narrative" to "game" by saying, "a sequence of events recounted [constitutes] a narrative, and perhaps a sequence of events produced by manipulating equipment and following formal rules constitutes a game" (37).

[12] Eskelinen describes "play" as an "ambiguous concept," but admits "that certain patterns are detectible in its use in different fields of scholarship for a wide variety of purposes" (354). Taking a page from Brian Sutton-Smith, Eskelinen accepts that there are seven types of play, each of which he describes as a rhetoric of fate, power, identity, frivolity, progress, self, or the imaginary (354). As for "free play," Eskelinen only states that it is "an activity notoriously hard to adequately define" (316).

[13] Later in the text, Eskelinen adds, "traditional conceptualizations of transmediality concern, if anything, simple cognitive surface patterns that apply only to the least aesthetically important (re)presentational aspects of art and media" (*Cybertext Poetics* 347). As such, it would seem that his interpretation would validate Ross's reading of *Cyberpunk 2013*, at least insofar as its relation to story is concerned.

[14] This concept was further built upon in 1989, as of the 2nd edition of the game, with explanations such as the following: "When your character travels or explores a dungeon, your DM will have prepared two types of encounters. The first are specific (planned) encounters. These are meetings, events, or things the DM has chosen to place in the adventure to build on the story of the adventure" (Cook 111).

[15] The first two frames that MacKay outlines are the "*performative*, which occurs when a player's first-person, in-character utterance, coincides with the enunciation" (55), and the *constative*, which "occurs when the gamemaster describes settings and situations to the players in-character and in the second person" (55).

[16] I provide two possibilities here, for the exact frame will depend on whether the game calls for the player to narrate the result in the third person, as if spinning a yarn, or the referee to narrate the result in the second person, thus informing the player of what happens. The former would be the narrative frame. The latter would be the constative frame. Both are theoretically possible, but in my experience, the latter is more common.

[17] Eskelinen also admits that, while such design might "too often interrupt . . . [the flow] by the necessity of discussing rules" (241-42), such design is not necessarily "a flaw because it can be pleasurable in its own right" (242).

[18] Nowhere is this more obvious than when Eskelinen writes, "The presence of a human referee or a game master responsible for deciding the outcomes of actions and interpreting the rules usually guarantees playability, and one could also argue that the game does have fixed rules in the sense that the referee or the game master has the final word and can overrule the players' interpretation of rules" (242). While he is correct, he still fails to observe *why* the texts themselves authorize game masters to modify the rules of the game, and he chooses to call the game master a "referee" rather than describing them by their more appropriate title—storyteller.

[19] From Schallegger:

> By the early to mid–1990s, RPGs were well established, and thus a theoretical framework was beginning to form to underline their status as a new medium. In 1994, Inter*Action magazine was created by Andrew Rilstone, serving as a platform for critical and theoretical articles from members of the community. Parallel to the magazine, discussions on the rec.games.frp.advocacy newsgroup enriched the understanding of the medium, and at the turn of the millennium, a

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> strong critical voice emerged in Finland that would assume a perspective utterly different from these earlier attempts. (Kindle Locations 2815-19)

"Constructing Understanding" from *The Postmodern Joy of Role-Playing Games* goes on to examine the theories emerging from these spaces in scholarly detail. I refer anyone interested in learning more to that work.

[20] This would help to explain why, as Schallegger observed, accusations of "Satanism were rampant" during the early years of *D&D*'s existence (Kindle Location 3793).

[21] As Stephen Jay Gould writes, "the errors of biological determinism are . . . deep and insidious" (26). Gygax may have admitted that "women can play as well as males," but by claiming that "they do not achieve the same satisfaction from playing" for biological reasons, and that it is "a waste of time and effort" to consider a female audience as a result ("Q&A with Gary Gygax, Part III"), Gygax was buying into "the general philosophy of biological determinism" and its claim that "race, sex, and class" are justifiably organized via the types of biological "hierarchies of advantage and disadvantage" that Gould explains in *The Mismeasure of Man* (Gould 112). Many articles and monographs have been written about why, even when such hierarchies are not steeped in explicit misogyny, the claims made by biological determinists are both false and socially destructive. Gina Rippon's *Gender and Our Brains* is a particularly powerful example:

> This book is about an idea that has its roots in the eighteenth century and still persists today. That is the notion that you can "sex" a brain, that you can describe a brain as "male" or "female" and that you can attribute any differences between individuals in behavior, abilities, achievements, personality, even hopes and expectations to the possession of one or the other type of brain. It is a notion that

> has inaccurately driven brain science for several centuries, underpins many damaging stereotypes and, I believe, stands in the way of social progress and equality of opportunity. (p. xi)

As that content is outside the purview of my research, however, I refer readers to the work of scholars like Gould or Rippon if they need an explanation for why this is the case. For my purposes, I am merely drawing attention to the fact that Gygax's belief in biological determinism is a matter of public record.

[22] The game has no instances of the word "women," "woman," or "girl," and seven instances of the word "female" spread between three non-player character descriptions: dragons (*Monsters & Treasures* 14), lycanthropes (14), and centaurs (15).

[23] The word "girl" does not appear in the text. The word "women" appears in the entry for the harpy (Gygax, *Monster Manual* 51), merman (70), and nymph (74). "Woman" appears under the entry for the leucrota, but unlike the other entries, this one is not a reference to characters who are women but rather information regarding the creature's ability to "imitate the voice of a man or a woman" (61). "Female" appears under the entry for the "warthog" (11), "bugbear" (12), "centaur" (14), "succubus" (18), "type V" demon (19), "erinyes (lesser devil)" (22), "dwarf" (35), "elf" (39), "cloud giant" (44), "fire giant" (44), "frost giant" (45), "stone giant" (45), "gnoll" (46), "gnome" (46), "goblin" (47), "groaning spirit (banshee)" (50), "halfling" (50), "hobgoblin" (52), "ki-rin" (57), "kobold" (57), "lamia" (59), "lion" (61), "weretiger" (64), "werewolf" (64), "caveman (tribesman)" (67), "dervish (nomad)" (68), "ogre" (75), "orc" (76), "pegasus" (78), "peryton" (78), "rakshasa" (81), "sahuagin" (84), "satyr" (85), "sphinx" (89), "su-monster" (93), "triton" (96), "troglodyte" (97), and "yeti" (103). The female pronoun "she" is used in the "ant, giant" (7), "chromatic dragon (Tiamat)" (32), "night hag" (73),

and “sahuagin” (84) entires. Of these references, the vast majority include females as characters who are usually non-combatants and are (generally speaking) only found among large groups or at home. In the case of the ki-rin, women are so rare that they “are never encountered” (57).

There are, however, a few notable deviations in thematic content. The entry about the satyr only references women to inform players that, if the creature encounters “comely females,” the satyr will try and magically charm them with music (85). Elves are unique in that they “have female fighters who will be mounted on unicorns, although this is rare (5%)” (39). Nymphs are “beautiful, ever-young appearing women [who] inhabit the loveliest of wilderness places, grottos in the sea, clear lakes and streams, and crystalline caverns. They dislike any form of intrusion, and they have means to prevent it” (74), but there is a “10% chance that the nymph will be friendly if approached by a good creature without the latter first glimpsing the nymph” (74), and a 90% chance that a nymph will be “favourably inclined” towards the most charismatic human males of “good alignment,” but only if she sees them first (74).

In almost every other case, the exceptions paint creatures who are universally women as evil abominations using sexist stereotypes. Harpies “are voracious carnivores and foul creatures” (51). The succubus is a female demon whose kiss “drains the victim” of energy (18). They “rule lower demons through wit and threat” (18). Type V demons “are taller than a man and far more terrible” (18). They are “cruel,” “domineering,” and demand a steady sacrifice of “strong [and by implication male] warriors” (19). The erinyes are female demons “sent forth to garner more souls” (22). The “groaning spirit, or banshee, is the spirit of on evil female elf—a very rare thing indeed” (50). Lamias have an “upper torso, arms, and head [that] resemble a human female, while their lower body is that of a beast. Lamias are very fast and powerful. They usually are armed with daggers” (59). Tiamat is an evil dragon goddess who “spawns all of evil dragonkind.

She hates all good as fiercely as she loves cruelty and hoards wealth" (32). Night hags "hate goodness, and they will attack any creature which is of good alignment as long as the possibilities of success appear favorable" (73). Most of the creatures that are universally female, with the notable exceptions of the "neutral (good)" nymph, "lawful evil" erinyes and Tiamat, and "neutral (evil)" night hag, are "chaotic evil" (49). Every such creature except for the nymph are *man* eaters (in either a literal or metaphoric manner) whose powerful femininity is an existential threat to the moral fabric of the world. While the nymph is not a moral threat to the world, unless the nymph sees a character first, the character is of good alignment, and the character has the highest possible charisma, she is an unattainable object of desire designed to frustrate efforts at interaction.

This trend regarding the "nature" of women is driven home with the entry about the "sphinx." The male (or "andro") sphinx is "chaotic good" (89). The female (or "gyno") sphinx is "neutral" (89). The males "resent the females' greater intelligence and neutral alignment" (89). The females "are both knowledgeable and wise," but, as "they are neutral, and prize gems and similar wealth, they will only help humans if they are paid" (90). Even among these generally good aligned creatures, intelligent females veer away from the moral code of their male peers and frustrate them.

[24] The *Dungeon Masters Guide* codifies the role of the "campaign referee" as the "Dungeon Master" (7).

[25] Other references tend to replicate the gender assumptions found in the *Monster Manual*. For example, "Noblemen can easily be mistaken for important city officials or very rich merchants; noblewomen can likewise be mistaken for a courtesan or procuress" (*Dungeon Masters Guide* 192).

[26] As Eskelinen also explains, "If we run a typical book through the typology of textual communication, it will have the following values: static dynamics, determinate determinability, intransient time, random access, impersonal perspective, no link and interpretive user function." (Eskelinen, *Cybertext Poetics* 69). What this means is that the text has a static set of scriptons, a fixed arrangement of scriptons, that the time in the text is not causatively controlled by the flow of time in the real world, a reader can access the scriptons on any page at any time, does not play the role of a character in the text, the book does not have links that a reader must follow, and a reader does not explore a simulated space or configure a narrative, but rather interprets an already-made artifact (21-22 and Aarseth, *Cybertext* 62-64). For this to be the case, the textons and scriptons must be the same, for the text has no textons which dynamically alter a user's experience of scriptons. The only *process* of a novel is the process of reading.

[27] In other words, on one hand, the TRPG manual has the following typology of textual communication: static dynamics, determinate determinability, intransient time, random access, impersonal perspective, a mixture of explicit links a user should follow and no links (depending on the manual), and an interpretive user function. This might seem similar to the novel, but that is only because we are examining the TRPG manual *as a manual*. As soon as we analyze the *game* and not the *manual*, the typology of textual communication changes. The TRPG has the following typology of textual communication: dynamic scriptons (the presence of scriptons changes based on the choices of the players and random chance), indeterminate scripton arrangement (not only the presence but also the arrangement of scriptons changes), intransient time, both transient and intransient time depending on which frame the players are occupying, controlled access to scriptons (as you are trapped in the current moment of a story and cannot access the scriptons outside of that event), and a configurative user function, for the players in

part choose and create the scriptons they experience whenever they occupy the narrative frame. This unique, bifurcated perspective is created by the fact that the TRPG is not processed by computer, but is rather a system enacted by the players themselves. The manual teaches the players how to use the textons via a traditional piece of literary-codex media. When actually playing the game, however, those textons become part of a new media that only exists as a communal practice.

[28] The "assassin," "bandit," "beggar," "brigand," "cleric," "demon or devil," "druid," "drunk," "fighter," "gentleman (ironically)," "illusionist," "magic-user," "merchant," "monk," "noble," "paladin," "pilgrim," "press gang," "rakshasa," "ranger," "thief," "wererat," "weretiger," and "werewolf" encounters are gender neutral (Gygax, *Dungeon Masters Guide* 191-92). The "city guard," "city official," "city watchman," "laborer," "mercenary," "rake," "ruffian," and "tradesman" encounters are gendered male (191-92). The "goodwife," "harlot," and "night hag" encounters are gendered female (191-92). The "doppleganger," "ghast," "ghost," "ghoul," "giant rat," "shadow," "spectre," "wight," "will-o-wisp," "wraith," and "vampire" (ironically) are not gendered at all (191-94). Some of these entries (such as the vampire) should probably be treated as gender neutral, but as they are all types of undead, I will leave them ungendered in this analysis.

That means that there is a 44% of an encounter with a specifically male gendered character, 7% chance of an encounter with a specifically female gendered character, 48% chance of an encounter with a character that could be either male or female, and a 1% chance of encountering giant rats during the day. At night, there is a 30% chance of an encounter with a specifically male gendered character, 9% chance of an encounter with a specifically female

gendered character, 47% chance of an encounter with a character that could be either male or female, and a 14% chance of encountering giant rats, a doppleganger, or undead.

[29] If a Dungeon Master rolls an encounter with a "gentleman," for example, there is an 80% chance that an encounter will be with a gentleman, but only a 20% chance that it will be with a gentlewoman (Gygax, *Dungeon Masters Guide* 191). The numbers for an encounter with a noble are similar at 75% chance that the noble will be male and 25% chance that the noble will be female (191). My estimate was derived by taking 20% of 48% and 47% and adding those values to 7% and 9% respectively. Even if I were to use 25% to generate my estimate—a choice that I do not think is more reasonable given the descriptions in the *Monster Manual*—not much would change. My estimate would become 19% to 20% (depending on whether it is day or night) and my conclusion would remain the same.

[30] According the game, "harlots" have a 30% of knowing valuable information, 15% chance of lying to you, and 20% of working with a thief, meaning that 35% of the time an encounter with one is likely to have potentially negative consequences for a player (Gygax, *Dungeon Masters Guide* 192).

[31] According to the "Strength Table 1," "18/01-50" is the "maximum strength possible for a female human or male gnome" fighter (9). To be clear, this means that female humans have the same maximum strength as the males of a species which stands about three feet tall (Gygax, *Monster Manual* 46). The game processes this number to mean 5% less chance of hitting with melee attacks, half of the damage adjustment or bonus, less than half of the weight allowance, about 16% less chance of forcing a locked portal (such as a door) to open, no possibility of forcing a magically locked portal to open (as opposed to a 33% chance), and 15% less chance of lifting a gate or bending bars than a human fighter with a maximum strength score.

[32] Some of his research suggests that the number might be "considerably lower" (Fine 62): 2.3%, 0.4%, and 3.8% female demographics were recorded in certain surveys (41).

[33] It should be emphasized that the reason for the small female demographic had nothing to do with their biology and everything to do with the toxic content of the system and its fans. Today, most TRPGs are written from a far more inclusive paradigm. The 5th edition of *D&D* has tried to revitalize its image for a modern audience, made efforts to be intersectionally inclusive, and often actively works to free itself from Gygax's ideologies on the level of expressive processes. The game's current motto is that "*Dungeons & Dragons* teaches that diversity is strength, for only a diverse group of adventurers can overcome the many challenges a D&D story presents" ("Diversity and *Dungeons & Dragons*"). An in depth of analysis of this motto and the game's current efforts is outside the scope of this dissertation, but it bears noting that in correlation to these efforts, the current demographic of female *D&D* players sits at 40% of the total player base as of their 2020 press release (Wieland).

[34] In that text, the reader is given only the following description: "The 'Black Elves,' or drow, are only legend. They purportedly dwell deep beneath the surface in a strange subterranean realm. The drow are said to be as dark as faeries are bright and as evil as the latter are good. Tales picture them as weak fighters but strong magic-users" (Gygax, *Monster Manual* 39).

[35] It should be noted that, while the game does use the heading "gentlemen" to refer to both "a foppish dandy" or a "gentlewoman," the text makes a point of specifically gendering the type of encounter in the body of its description (Gygax, *Dungeon Masters Guide* 191). As the body of description for the rake specifically describes "gentlemen fighters," making no mention of women, the overarching logic of the game clearly implicates the word's typical usage in the masculine mode.

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[36] Joshua Trachtenberg's monograph *The Devil and the Jews: The Medieval Conception of the Jew and Its Relation to Modern Anti-Semitism* explains this complicated history in great detail. It should be noted that, while the permissive attitude of the sixties that Bowman describes in *The Function of Role-Playing Games* has largely destroyed the idea that a sorcerer and magician is a derogatory label, the description was applied to Jews as the concept "undergirding the accusations that Jews were well-poisoners and spreaders of disease, desecrators of the host and murderers of Christian children, [and it] created the aura of fascination and dread with which the Jew was regarded by so many medieval Christians" (Saperstein10). The lich, as an "evil" creature that literally has the power to cause people to "flee in panic from fear" (Gygax, *Monster Manual* 61), harkens to this medieval attitude towards magic and not modern frameworks of the concept.

[37] Unfortunately, I do not have the evidence required to make a meaningful, scholarly statement about the community's behavior in regards to race. Anecdotally, my personal experiences among groups dedicated to early editions of the game suggest that their demographic attitudes towards people of colour are often similar to their attitude towards women, but such evidence is just that—anecdotal.

[38] Schallegger is referring to Gygax's statement that, "in a way, I have set myself up as final arbiter of fantasy role playing" (*Players Handbook* 5).

[39] Schallegger provides such a diachronic analysis of the evolution of the TRPG media in *The Postmodern Joy of Role-Playing Games.*

[40] The prototypical explanation for all character mechanics explains, "A beginning character always begins with his or her Special Ability . . ." (Pondsmith, *View from the Edge* 3). The rockerboy description lets a player know that the role can "incite and charm large numbers

of people through his or her performance skills" (4), and the manual references "rockergirls" (3, 7) as well. The solo does not use a gendered pronoun at all, in either the masculine or feminine case, but the page on which its description is found depicts a female character (4). In reference to "refereeing the net" for netrunner players, the reader is warned, "The Net poses a special challenge to even an experienced Referee. It allows the player to construct his or her own pocket universe" (40). Moreover, the referee themselves is rendered as potentially being female, as the "Referee should do his or her best to reflect this increasing level of reality through the interactions of Programs with the Netrunner" (28). Given that prescriptive grammar had not yet accepted the use of "they" or "their" as singular, gender-neutral pronouns at the time of the game's publication in 1988 (even if the practice had already existed in descriptive grammar for a few hundred years), this is a notable effort, if far from ideal.

[41] For additional context, see Lavigne, Kindle Location 473.

[42] The most recent edition of the game, *Cyberpunk Red*, does not use the same mechanics as *Cyberpunk 2013*, but the general attitude of its expressive processes is in keeping with my observations about *Cyberpunk 2013*. The game offers virtually the same list of roles that a character can play: Rockerboys, Solos, Netrunners, Techs, Medtechs, Medias, Execs, Lawmen, Fixers, and Nomads (Pondsmith et al. 29). The game has sixty-six skills (82-85). Of those skills, only nine or ten (depending on whether "demolitions" is interpreted as a combat skill or not) are intrinsically related to combat. It is true that the game forces you to start with at least 4 skill points invested in two combat related skills (Brawling and Evasion), but it also forces you to spend at least twenty-two points in non-combat skills (Athletics, Concentration, Conversation, Education, First Aid, Human Perception, Language [Streetslang], Local Expert [Your Home], Perception, Persuasion, and Stealth) (85-90). The method of gaining improvement points is not

the same as *Cyberpunk 2013* either, but like the game's first iteration, its most recent does not force you to enter into combat in order to improve. In fact, one only gains improvement points from combat if they tell their game master that their playstyle is "warrior" (410).

[43] This too is in keeping with the design paradigm of *Cyberpunk Red.* In fact, not only does *Cyberpunk Red* reprint "Never Fade Away," it also includes a second short story in its content: "Black Dog" (Pondsmith et al. 435-449). *Cyberpunk Red* both opens and closes the contents of its manual with a story.

[44] This interpretation is also in keeping with the most recent iterations of the game. Half of the main protagonists in "Black Dog" are women (Pondsmith et al 435-449). In the videogame adaptation of *Cyberpunk*, Johnny is not only the character who pulls the plug on Alt, but he is depicted as having an abusive relationship with her during the game's adaptation of "Never Fade Away" (*Cyberpunk 2077*). Moreover, both Alt and (by the end of the game) Johnny tell the player that Alt is dead, downloading yourself to the Net is a death sentence that creates an entity other than who or what you are, and Johnny is responsible for Alt's death.

[45] This is an allusion to the unreliable narrator's claim in *View from the Edge* that, "The traditional concepts of good and evil are replaced by the values of expedience—you do what you have to do to survive. If you can do some good along the way, great. But don't count on it" (Pondsmith 2).

Conclusion

I am now ready to summarize a story that begins at the confusing turn of the 1970s, if not the philosophic musings of the 1960s, but whose events are still ongoing. A set of permissive attitudes had not completely destroyed America's fear of representations of the supernatural by the 1970, but it had dulled that fear to the point that fantasy stories about heroic companies of humans, elves, halflings, and wizards could be told with only a relatively mild backlash. In France, as of the 1960s, a new school of philosophy was questioning the structuralist assumptions on which linguistics, semiotics, and literary studies had for some time come to be built. Politically, in both America and Europe, this time was also punctuated by a number of growing movements opposed to the discriminatory structures that society had, for many years, convinced its population were neither discriminatory nor avoidable. From this milieu, three important events entered into feedback with each other.

D&D was, as Sarah Lynne Bowman explains, made possible by the cultural paradigm shifts of the aforementioned period. It was not, however, grounded in a greater attitude of acceptance and egalitarian behavior insofar as those concepts related to the political movements of its time. Rather, it used the permissive attitude that America had developed towards representations of the supernatural to sublate a socially conservative attitude (likely in response to its historical moment). These socially conservative attitudes are apparent in the ludic structures the game used to simulate biologically deterministic ideologies, but in a form obfuscated by expressive processes and made palatable to its players. The game's manuals attempt to disarm criticism of such practices with the statement, *D&D* "is first and foremost a

game" that supposedly "does little to attempt to simulate anything" (Gygax, *Dungeon Masters Guide* 9). Nevertheless, as the field of ludology explains, games are inherently simulative, and the attitudes that spread throughout the early fanbase of the game implicate its practices as being far more caustic than many of its fans are likely to admit.

Posthumanism evolved as a concept in the years both preceding and following the 1970s, but its philosophic clarity comes into focus as of the 1990s. The concept, however, was heavily influenced by the poststructural scholarship of the 1960s and 1970s. There was a growing sense that, as Foucault eloquently stated in the 60s, "man is an invention of a recent date. And one perhaps nearing its end. . . . that man would be erased, like a face drawn in the sand at the edge of the sea" (Order of Things 422). Two philosophical interpretations of Nietzsche helped drive a response to this growing unease. According to one, the end of the human is but an ongoing part of the process that could be described, in a properly Hegelian sense, as a dialectic trajectory towards the *übermensch*. Essentially, "man" would become the "nothing with content" to a teleologically preordained and technologically constructed posthuman. This type of transhumanist response would come to idolize cybernetics as the power capable of purposively reconstituting "man." This attitude, however, is essentially neo-humanist and prone to the same pitfalls as liberal humanism. Indeed, it ignores the suspicion with which Nietzsche regarded the project of the Enlightenment and its liberal-humanist subject: the belief that a sort of capital T "Truth" could be attained. A more poststructural interpretation of Nietzsche's oeuvre influenced a form of critical posthumanism that, as opposed to the virtually religious and apocalyptic ideology of transhumanism, perceived of the end of the human as a discursive issue bound up in our conceptual framework surrounding that term. This branch of critical posthumanism would

often grapple with the imbalanced distribution of power that has accompanied the discursive technology of the subject.

Cyberpunk emerged as a literary genre in the 1980s. Where *D&D* used a ludic system to sublate socially conservative and biologically deterministic narrative tropes, cyberpunk was enthralled by the complicated systems that dissolved the boundary between the environment and the human, creating a posthuman subject in the process. Cyberpunk was influenced and accepting of all the various positive paradigm shifts of its day, but it was also a product of the negative qualities of its time. Its first efforts at rendering a feminist subject are but the seeds of a properly feminist subject. There are multiple reasons to critique its first efforts and the problems that accompanied them. However, as a whole, the genre does appear to have made every effort to learn from its mistakes and make space for a feminist second wave in the periods following its initial efforts. By the 1990s, in the hands of that feminist second wave, cyberpunk took up the cry of Donna Haraway's 1985 publication of the "Cyborg Manifesto"; feminist authors seized the means of the subject's production and used cyberpunk to write their own subjectivity into existence. The genre's efforts at producing subjectivities are critically posthuman in mode.

These attitudes, however, were already growing in the cyberpunk of the late 1980s. At that time, the sublated ideologies informing *D&D* came into direct conflict with cyberpunk's breed of prototypical, critical posthumanism when cyberpunk migrated from literary media to the TRPG. The social and ludic systems of the TRPG make for an ideal arena in which to emergently coauthor narratives about systems similar to those that compose the cyberpunk genre. *D&D*, however, had taken an almost humanist position, at least insofar as its obsession with biologically determined subjects was concerned. This position existed in direct opposition to the type of posthumanism found in cyberpunk, which perceived of such subjects as a fiction built

with discursive practices. *Cyberpunk 2013* was designed with ludic systems potentially capable of teaching its player-base to question and critique discursive practices even as players actively engage in using them to build their own subjectivities, thus potentially producing self-aware players capable of recognizing the issues in *D&D*.

Mike Pondsmith has made public statements that suggest this was his intent. While intention is not necessarily important, in this case, given the current state of the TRPG community and the shifts that have occurred even among *D&D*'s official policies and fanbase during the third decade of the twenty-first century, *Cyberpunk 2013* should be regarded as a successful intervention into the TRPG culture of the 1970-80s. As of at least 2020, Wizards of the Coast—the current stewards of *D&D*—explicitly argue that inclusion and diversity are central to the ethos of modern *D&D*. Where women once made up a drastic minority of the fanbase, today, almost as many women play the game as men. It would be an overstatement to lay such shifts as a consequence of nothing but *Cyberpunk 2013*, but Pondsmith's game is an example of one of the forces that helped change gamer culture as well as evidence of the power that a narrative genre can have beyond the boundaries of its own literary field: when stories and games are combined as a hybrid object, games are never just games, and they always simulate something.

In coming to this conclusion, a number of additional insights have also been rendered visible. A lack of ludological frameworks has often obfuscated the importance of the TRPG among literary scholars. Unlike traditional studies about narrative, to study this material effectively, one must also consider the implications of the mechanical systems—the output of their underlying probabilities and expressive processes—not just the explicit surface-claims made by any given game manual. Furthermore, the statements of any manual or player that

claims these artifacts are “just a game” and “don’t simulate anything” should be viewed with suspicion. They have never been “just a game,” and it is difficult to imagine how such a claim could ever be justified. Similar ludological claims, such as the statement made by Espen J. Aarseth that “the dimensions of . . . [a character’s] body . . . are irrelevant to me as a player, because a different-looking body would not make me play differently” (“Genre Trouble” 48), are short sighted and miss the point entirely. A purely ludological approach to analyzing these artifacts may obfuscate the importance that bodily representation plays in them, but that speaks to the need for a multidisciplinary mode of analysis when examining such hybrid objects rather than the actual value of bodily representation as expressed by any given artifact. The value of the TRPG and the content of a genre’s transmedial migration only become visible when such objects are examined as both narratives and games, with neither aspect being given preference over the other.

That being said, there is a fourth thread that should be added to the history I have braided here. My discussion of cybernetics in this dissertation has been entirely framed by its historical first order. There is a second order of cybernetics, sometimes called “neocybernetics” or “the cybernetics of cybernetics” (Clarke and Hansen 4), that remains undiscussed by this dissertation. Characterized by “the work of [Heinz] von Foerster and Gregory Bateson and extended from there by Henri Atlan, Humberto Maturana, Francisco Varela, Lynn Margulis, Susan Oyama, and Niklas Luhmann” (5), this development in cybernetics concerns “self-organization, emergence, and autopoiesis” (5). My reason for omitting this context is that the subject is rarely talked about in relation to the primary texts analyzed by this dissertation. Neocybernetic theories were still nascent in the 1970s, and while they were coming into their own by the 1980s, it is not clear that they directly influenced the first wave of cyberpunk in any meaningful way. Even the second

wave of texts published during the 1990s seem to have only a tangential connection to neocybernetics at most. In fact, Paul Youngquist has gone so far as to state, "Wiener and not Luhmann is the dark godfather of cyberpunk" (325).[1] Nevertheless, the important role postmodernism has played in scholarship about cyberpunk makes Wolfe's observations regarding the similarity between Derrida and Luhmann's work potentially indicative of an oversight on the part of those of us who have had a scholarly interest in cyberpunk: Wolfe explicitly argues that second-order systems theory is "the reconstruction of [Derridean] deconstruction" (Wolfe, "Meaning as Event Machine" 224) and implies that *Of Grammatology* is indicative of a similar reaction to first-order cybernetics akin to Luhmann's own (223).[2] Wolfe even argues that both are "crucial to any posthumanism whatsoever" (224). Additional research and analysis regarding the potential context that neocybernetics (and the concept of emergence as found therein) could add to cyberpunk should be added to the history I have constructed with this dissertation.

Finally, the scope of my analysis is necessarily incomplete—this story is not over. There are many artifacts whose study could further provide insight about the transmedial migration of genre from purely narrative media to the TRPG. *Shadowrun*, originally released the year following *Cyberpunk 2013*, presents an alternative possible world that is virtually a hybrid of *D&D* and *Cyberpunk 2013*. A more detailed examination of the role that its hybridity played in this complex migratory process would help to further explain the current state of the TRPG community. Contextualizing the various ideological shifts that the iterative editions of *D&D* have undergone in detail would do the same. An analysis cataloguing and comparing the ideologies usually found in TRPGs as grouped by their literary genres could also provide further insight into both the power of genre and what qualities accompany it in the migration from one

medium to another. Given my work to date, however, I close this dissertation with the following thought: TRPGs are currently experiencing a new golden age, and their cousin, the videogame, is as popular as ever; never has it been clearer that a literary education unaccompanied by an appreciation of the ludic processes used to tell many of the stories that enthral our contemporary population is blindsided by rhetoric and influences made invisible without such appreciation.

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[1] This comment is uttered from a perspective reflective of Cary Wolfe's description of the first order being "Norbert Wiener's version" and its second order being "Luhmann's retooling" (Wolfe, "Meaning as Event Machine" 220).

[2] In fact, according to Wolfe, "Derrida and Luhmann approach many of the same questions and articulate many of the same formal dynamics of meaning (as self-reference, iterability, recursivity, and so on)" (Wolfe, "Meaning as Event Machine 229). They just "do so from diametrically opposed directions" (229).

Appendix A: Some Important Dates[1]

1668—John Locke became a member of the Royal Society.

1689—John Locke's *An Essay Concerning Human Understanding* is first published and contains his famous musings about "the prince and the cobbler."

1946-53—The Macy Conferences, which were important to the invention of cybernetics, were held between this period.

1948—Norbert Wiener's *Cybernetics* is first published.

1950—Norbert Wiener's *The Human Use of Human Beings* is first published.

1960—Manfred E. Clynes and Nathan S. Kline coin the term cyborg.

1966—Michael Foucault's *The Order of Things* is first published.

1967—Jacques Derrida's *Of Grammatology* is first published.

1971—Ihab Hassan's "POSTmodernISM: A Practical Bibliography" is first published.

1974—Dave Arneson and Gary Gygax's *Dungeons & Dragons* is published by Tactical Studies Rules (TSR).

1976—TSR publishes *Greyhawk*; the version of the lich included in this product has virtually no direct connection to medieval, racist stereotypes about Jews.

1977—Ihab Hassan's "Prometheus as Performer: Toward a Posthuman Culture?" is first published.

TSR published Gary Gygax's *AD&D Monsters Manual*.

1978—TSR published Gary Gygax's *AD&D Player's Handbook*.

TSR published Gary Gygax's *Dungeon Module G3 Hall of the Fire Giant King.*

TSR published Gary Gygax's *Dungeon Module D1 Descent into the Depths of the Earth.*

1979—Jean-François Lyotard's *The Postmodern Condition* is first published. This is arguably the first philosophical use of the term "postmodern."

TSR published Gary Gygax's *AD&D Dungeon Master's Guide*.

1981—William Gibson's "The Gernsback Continuum" is first published.

Rudy Rucker's "Tales of Houdini" is first published.

Pat Cadigan's "The Pathosfinder" is first published.

TSR published Gary Gygax's *Dungeon Module D3 Vault of the Drow.*

1982—Rudy Rucker's *Software* is first published.

1983—Bruce Bethke's "Cyberpunk" is first published.

Pat Cadigan's "Nearly Departed" is first published.

1984—William Gibson's *Neuromancer* is first published.

Lewis Shiner's "Till Human Voices Wake Us" is first published.

Lewis Shiner's *Frontera* is first published.

Pat Cadigan's "Variation on a Man" is first published.

Gardner Dozois used the word "cyberpunk" in "SF in the Eighties," an article published in the Washington Post on December 13th, to describe a new genre, which quickly became synonymous with "the Movement" shortly thereafter.

Fredric Jameson's "Postmodernism, or the Cultural Logic of Late Capitalism" is first published in *The New Left Review.*

1985—John Shirley's first novel in the *Song Called Youth* trilogy is published under the title *Eclipse.*

Bruce Sterling's *Schismatrix* is first published.

Donna Haraway's "The Cyborg Manifesto" is first published in *The Socialist Review.*

1986—*Mirrorshades: The Cyberpunk Anthology* is first published.

John Shirley's "Freezone" is published in that anthology.

Marvin Minsky's *Society of Mind* is first published.

1987—Pat Cadigan's "Lunatic Bridge" is first published.

Pat Cadigan's first novel, *Mindplayers*, is first published.

1988—The first edition of Mike Pondsmith's *Cyberpunk* TRPG is published by R. Talsorian Games.

John Shirley's second novel in the *Song Called Youth* trilogy is published under the title *Eclipse Penumbra.*

Hans Moravec's *Mind Children: The Future of Robot and Human Intelligence* is first published.

Jean-François Lyotard's "Can Thought Go on Without a Body?" is first published.

1989—*Shadowrun* is first published by FASA, providing the first fusion of cyberpunk and explicit, literal magic.

1990—John Shirley's third novel in the *Song Called Youth* trilogy is published under the title *Eclipse Corona.*

1991— Jean-François Lyotard's *The Inhuman: Reflections on Time* is first published.

Fredric Jameson's monograph *Postmodernism, or, the Logic of Late Capitalism* is first published.

Pat Cadigan's *Synners* is first published.

TSR publishes *The Drow of the Underdark.*

1992—Neal Stephenson's *Snow Crash* is first published.

1993—William Gibson's *Virtual Light* is first published.

1994—Melissa Scott's *Trouble and Her Friends* is first published.

Kathleen Ann Goonan's *Queen City Jazz* is first published.

1995—Robert Pepperell's *The Post-Human Condition* is first published.

Cary Wolfe's "In Search of Post-Humanist Theory: The Second Order Cybernetics of Maturana and Varela" is first published.

Neal Stephenson's *The Diamond Age* is first published.

1997—Espen J. Aarseth's *Cybertext* was first published and subsequently inspired the birth of the field of ludology.

1999—N. Katherine Hayles's *How We Became Posthuman* is first published.

2002—Kathleen Ann Goonan's *Light Music* is first published.

2005—*Cyberpunk V3.0* is published by R. Talsorian Games and is the first edition of the game to contain what Curtis D. Carbonell calls "supertech motifs—i.e. technologies that push extrapolated science into the fantastic" (Carbonell 200).

2007—Kathleen Ann Goonan's *In War Times* is first published.

2008—N. Katherine Hayles's *Electronic Literature* is first published.

2009—*Eclipse Phase* is first published by Posthuman Studios.

2014—William Gibson's *The Peripheral* is first published.

2020—William Gibson's *Agency* is first published.

Wizards of the Coast publishes their public statement about "Diversity and Dungeons & Dragons."

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[1] Note that publications entered under the same year are not ordered temporarily, but rather by their appearance in this dissertation.

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