

REPETITION AND REMEDIATION IN RICHARD POWERS, SHELLEY JACKSON, AND  
OSHII MAMORU

by

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A dissertation submitted to the Graduate Faculty in English in partial fulfillment of the  
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## Abstract

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by

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Adviser: Professor Peter Hitchcock

In *Remediation* (1999), Jay David Bolter and Richard Grusin maintain that the novelty of new media results from its simulation of the formal characteristics found in older media. While this concept envisions divergent historical pathways for media, it risks falling into solipsism without drawing clear chronological borders. Moreover, the logical self-reproduction found in the rhetoric of new media is similar to postmodernism's predicament in challenging History and Modernity, which places new media in the broader context of postmodernist interrogations of origin, rupture, and genealogy. If, as with Modernity, new media at its core questions its own foundation as constituted by the opposition of old and new and rupture versus continuity, what is the value of remediation as the foremost theory of new media in conceptualizing Modernity's contradictions and imagining its exterior? Interrogating the assumption of remediation, this dissertation investigates the transformation of one medium through its appropriation of another medium's formal aesthetics, illustrated in Richard Powers's novel *Plowing the Dark* (2000), Shelley Jackson's hypertext fiction *Patchwork Girl* (1995), and Oshii Mamoru's digital animation *Ghost in the Shell* (1995). I argue that these authors' explorations of the representational limits of their chosen medium through remediation give rise to the value of repetition and renewal, differing from the solipsism demonstrated by new media discourse. I also suggest that the "origins" of art forms—novel, hypertext, and animation—can be obscured

through their complex relationships with earlier genres and forms. This dissertation examines Powers's juxtaposition of poetry and virtual reality, facilitation of the printed novel's reformation through conjuring a digital environment, and adoption of the unusual second-person singular point of view to induce readers' immersion into the text. My study of Jackson's hypertext rewriting of Mary Shelley's *Frankenstein* (1818) reveals how the original novel's use of the epistolary format prefigures the interactive storytelling in Jackson's work. Finally, I delve into Oshii's use of nonperspectival vision simulating Japanese graphic novel, cinema, and Eastern landscape painting, demonstrating alternative spatiotemporal relations to those of Renaissance optics and perspectival realism.

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To my parents

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## Introduction

Compressible, networked, and interactive: the genre categorization “new media” has gained currency since the second half of the twentieth century, particularly with advent of the computer and the Internet and the growing power of cyberspace. The term has broadened to encompass not only the digital computer but other technical media such as film, radio, and television, all in contrast to the traditional print medium dominating human communication into the nineteenth century. The power of new digital media manifests by remediating and transforming the contents of other media through digitization, collection, and re-presentation of eclectic sources from different media forms in cyberspace, a phenomenon Henry Jenkins calls “convergence culture” (4).<sup>1</sup>

The scope of new media is wide-ranging, but its influence is less than universally celebrated. Several scholars condemn the damaging influence of new media on our perception of reality and sense of identity. Fredric Jameson and Vivian Sobchack have accused electronic and digital media of disturbing organic perceptions of reality, leading to fragmentary selfhood and the mechanization of human nature. According to these critics, by dissecting, flipping, and incessantly recycling textual materials such as words and images, technical media disrupts the coherent experience of space and time, dissolving the organized sense of reality and subjectivity. However, others champion new media for the manner in which its repetition of preexisting texts unsettles the audience’s experience of coordinated space and time. This unsettling promotes a different spatiotemporality than that of the perspectival realism predominant since the advent of Renaissance Humanism. In coining the term “remediation,” Jay David Bolter and Richard Grusin

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<sup>1</sup> Jenkins’s book *Convergence Culture* shows how contemporary media convergence has revolutionized the relationships between producers and users, boosting active participation from the consumers’ side. His examples include globally successful media franchises such as *Survivor*, *The Matrix*, and *American Idol*.

argue that the novelty of new media results precisely from its repetition and simulation of the effects found in older media. The relations between old and new media cannot be defined either as a radical break or seamless continuity; nor is new media a simple replica of the old.

Reminiscent of Sigmund Freud's conception of the uncanny, the newer medium's repetition erases the identity of the "old," invoking the material heterogeneity inherent in the older medium. On the other hand, the effects of the "original" reverberate through the repetition. It is our desire to achieve immediacy through total mediation that drives the newer medium's impulsive returning to, and perfecting, the older forms. Yet this ultimate aim cannot be reached because the materiality within the medium acts against itself.

Hence, as Brian Lennon explains, contemporary media criticism describes new media as questioning its own foundation. New media's murky origins owe to its complex relations to its predecessors; either new media repeats the old, or the old prefigures the new. As a result, the ground upon which new media establishes itself is constantly shifting or infinitely receding. This disruption of chronology subsequently raises possibilities and dilemmas in our thinking about history and culture. In illuminating the divergent pathways existent in the history of media, new media's serial repetition offers a spatiotemporal logic distinct from the linear development from past events to present conditions. Conversely, the multiple beginnings and unfounded origins of new media can fall into solipsism. This mode of thinking undoes the temporal borders of the past and the present and dissolves the definitive boundaries of the old and the new, self and other; it is difficult to imagine what lies outside the present condition of media if today's media repeats and encompasses what is past and what is to come. With no delimitation, the narcissistic self-image of the eternal present is reproduced in an infinite time loop.

Unsurprisingly, this self-referential narcissism in the rhetoric of new media is similar to postmodernism's predicament in challenging History and Modernity, raising the question of whether to consider new media in the context of broader postmodernist interrogations into origin, novelty, rupture, genealogy, linearity and systemization. As the philosophical intervention with Modernity, postmodernism attempts to disrupt Modernity's systemic totalization and orientation toward progress. The critique targets Modernity's totalizing impulse as reflected in its exclusion and repression of the other, by showing that the desire of unity and identity inevitably fails precisely because of that exclusion and correlating blindness to its own logic. Nonetheless, even as it casts doubt on Modernity's assurance of progress and genealogy, postmodernism confronts its own solipsism and blindness as does every knowledge system. Postmodernist criticism suspends the exclusions and distinctions imposed by Modernity between old and new, past and present, self and other. In so doing, it invites the same risk of narcissism and homogeneity once the chronological distinctions or self-boundaries have been effectively erased, resulting in an infinite cycle of self-referential reiteration and a failure in delimiting discursive boundaries. Accordingly, the new repeats the old; the past is what is to come; and postmodernity is not posterior but internal to modernity, reconfiguring what modernity is. This logical elimination of the chronological borders of past, present, and future forecloses any attempt to imagine outside the present moment; thus, postmodernism repeats the very fault of Modernity's inability to posit its exteriority.

The same solipsism is found in the rhetoric of new media calling into question its own origins and undoing its self-boundaries. Is it then possible for new media discourse to avoid the pitfall of discursive totalization and logical self-reproduction demonstrated by the idea of Modernity and postmodernism as its critique? How do we posit the exteriority of new media if it

repeats old forms and remediates what existed before? If, as with new media, Modernity at its core questions and negates its foundation constituted by the opposition of old and new and rupture versus continuity, what is the value of remediation as the foremost theory of new media in conceptualizing Modernity's contradictions and envisioning its other? Can the material heterogeneity inherent in the medium, working against itself, potentially suggest an answer to these problems?

Seeking a resolution for these issues, I propose “repetition” as a valuable concept for the observation of new media art. In contrast to the discursive totalization intrinsic to the aforementioned new media criticisms, contemporary writers and film-makers reveal the innate negativity of art making self-same repetition impossible. As Theodor Adorno notes, one art form revisits a “past” form to enlighten the blindness of the present. Martin Heidegger likewise points to the mysteriousness of *poiēsis*, which lies in the double negative mode wherein the revealing of truth is unconcealment, since a being always appears other than it is. Therefore, the internal contradictions existent in art beget the differences in form even when invoking particular art forms. The texts analyzed in this dissertation—Richard Powers's novel *Plowing the Dark* (2000), Shelley Jackson's hypertext fiction *Patchwork Girl* (1995), and Oshii Mamoru's digital animation *Ghost in the Shell* (1995)—illustrate the material heterogeneity existent in the medium. While the absolute representation of reality is impossible due to that materiality, this breakdown generates multifold artistic expressions and interpreting meanings in the works.<sup>2</sup> These authors' remediation of other media forms also exposes their respective medium's own representational limits; this exposure and awareness of the limitations in representing reality differentiates their artistic practices from the systemization of the theory of new media.

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<sup>2</sup> For Japanese names in this dissertation, I have followed the Japanese naming convention in which a family name comes first followed by a given name.

Repetition carries other significances, as it has become the primary motif in theme and formal technique of electronic and digital media text. Repetition in recent media texts insinuates the possibility of intellectual learning and artistic creation based on recursive temporal logic. The cognitive system and perceptual apparatus of new media diverges from traditional media's textual condition as founded upon linear progression and sensory coordination. Accordingly, Oshii Mamoru, the director of *Ghost in the Shell*, points to apprehension of a digital text as dependent on repetition. Revisiting the "same" text, the audience attends to details missed in previous viewings and readings. The additional information then produces structural changes in the text, subsequently transforming the audience's perception and understanding of the text. As a result, the text is created anew each time it is visited. Although this process of apprehension and appreciation for an artwork is not unprecedented, new media narratives explicitly foreground the value of renewal as their formal strategy.

For instance, Chapter 3 of this dissertation examines hypertext fictions composed of lexias (an electronic equivalent of pages in print) and links. Words are literally spatialized throughout cyberspace. By linking lexias, readers gather pieces of writing into a meaningful narrative of their own creation. Marie Laure Ryan finds that hypertext's digital environment nurtures the spatial organization and linguistic/medial materialism inherited in part from postmodern literature; in so doing, hypertext adopts the postmodernist repudiation of self-coherent narrative, unified interpretation, and logocentricism.<sup>3</sup> Furthermore, not only does hypertext visualize the spatialization of writing, it also conceives a distinct time logic. Unlike conventional narratives conforming to Aristotle's unified plot and organic structure, meaning

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<sup>3</sup> Marie Laure Ryan connects hypertext to postmodern literature for their shared formal characteristics. She points out that linguistic formality, frequently using "puns, intertextual allusion, parody, and self-referentiality," is the common stylistic feature of postmodern literature in printed form and electronic narrative (*Narrative as Virtual Reality*, 4-5). In addition, the postmodernist promotion of unstable meaning and the writerly text anticipates the "self-renewable" and reader-activating electronic text.

emerges through repetition and variation of themes in the boundless forms of hypertext. Serial narrative consumption, wherein multiple visits to a text generate differences in interpretation, offers a new path for the perception of reality and organization of textual material. Reading hypertext depends upon the recursive cognitive process; the importance is not the final outcome of reading but what happens *during* that exploration of the text. In this way, hypertext exposes the limits of preexisting literary and aesthetic paradigms fostering representation and linear chronology. This exposure signals a broader epistemological transformation regarding how we see the world *in which* we live.

Digital animation, the genre of new media narrative scrutinized in Chapter 4, further illustrates how repetition and remediation operate in visual media. The issue of remediation links to new ways of constructing modernity and conceptualizing time, particularly in Japanese animation (anime). Influenced by Lev Manovich's concepts of new media, Thomas Lamarre views current digital animation as repeating its cinematic origins, complicating the genealogy of cinema and animation and analog and digital. Furthermore, anime scholars regard the birth of Japanese animation as owing to the Edo-era woodblock print (*ukiyo-e*), Eastern landscape painting and other traditional arts, considering these forms' unique aesthetic anticipatory of anime's formalistic features. This nonlinear view of art history in Japan can be traced to Karatani Kojin's thoughts; his work on modernity's multiple origins enormously influenced Japanese scholars in contemporary media theories such as Azuma Hiroki. According to Karatani, "premodern" Edo Japan is a refined form of the postmodern prior to Japan's official modernization in the late nineteenth century. Likewise, anime critics maintain that digital anime's remediation of older media forms repeats cinematic and other traditional arts. Oshii's digital anime *Ghost in the Shell* demonstrates these complex relationships among media genres

through his simulation of Japanese graphic novel (*manga*), cinema, and Eastern landscape painting, while the divergent historical paths of media found in Oshii's animation intimate the presence of learning and growth founded upon everyday renewal. Thus, as in Harry Harootunian's "uneven temporalities" (47), our production of a different time logic offers a useful conceptual tool for grappling with the homogeneous world time of capitalism and its compulsive reproductive cycle.

To illustrate how repetition works in texts as a formal strategy, in this dissertation I have studied the remediation whereby writers and film-makers simulate the effects of other media to transform their chosen medium. My analysis focuses on three discrete media texts—novel, electronic hypertext, and digital animation—with respect to each medium's respective self-transformation through appropriation of another media's formal aesthetics. Richard Powers's *Plowing the Dark*, Shelley Jackson's *Patchwork Girl*, and Oshii Mamoru's *Ghost in the Shell* are contemporary texts placing the problem of new media in the context of postmodernism. These authors' media ecology, crossing the border of the animate and inanimate, is more politically invigorating than the portrayal of cyberspace in William Gibson and cyberpunk. Gibson's *Neuromancer* (1984) presents a dystopic picture of humanity trapped in the circuit of transnational capital and an informational "matrix" of cyberspace. In contrast, the post-cyberpunk narratives of Powers, Jackson, and Oshii depict mankind's dynamic interactions with their media environment. Rejecting pessimistic media-determinism, these authors highlight the medium's generative power to invent subjectivity. Creative use of each medium—Powers's printed words, Jackson's hypertext, and Oshii's digital cinema image—draws new definitions of the human and the living. While Jackson illustrates the body of becoming through hypertextual assembly of fragmentary pieces of writing, Oshii expresses a posthuman sensory experience

using digital media tools yielding unique audiovisual relations between voice and image. Along these lines, Powers turns to the function of language as the primal medium for bringing life into existence.

As each work reflects the authors' respective act of writing or filming, these authors specifically explore media relations by appropriating other media to transform the medium of their choice, probing and testing those mediums' representational limits through borrowing and simulating the effects of other art forms. Rewriting Mary Shelley's *Frankenstein* (1818) in *Patchwork Girl*, Jackson connotes the kinship between electronic text and the printed novel, revealing how the original novel's use of the epistolary format prefigures the interactive storytelling in her own hypertext fiction. The "origins" of literary forms—novel and hypertext—are obscure because of their complex relationships with, and remediation of, earlier literary genres and forms. Shelley and Jackson demonstrate generic transgression, crossing and recrossing the distinctions between the lyrical, epistolary, novelistic, and hypertextual modes of expression. Their engagement with these literary forms is essential to the promotion of heterogeneous voices and discursive diversity introduced in the novel (*Frankenstein*) and intensified in hypertext (*Patchwork Girl*). Borrowing the epistolary frame, Shelley cultivates a sense of community and human connections; the letter format enables her to rework lyrical isolation into the communal cacophony characterized by Mikhail Bakhtin as novelistic dialogism while proposing an open-ended, accretive narrative form forecasting hypertextuality. This is closely related to Jackson's transmediation in *Patchwork Girl* of the novel, children's literature, journal entries, and theoretical treatises, reinforcing the novelistic heteroglossia. The hypertext fiction usurps oral conventions such as recurring story patterns and "kaleidoscopic," interactive storytelling. At the same time, its references to electronic media logic—combination and

feedback through the functions of cut, paste, and copy—reflect the postmodern quandary of self-reproduction and perpetualization of an ending.

Oshii's remediation of other media in *Ghost in the Shell* provides an interesting locus from which to explore animation's representational limits. Just as the media-networked cyborg body in his film problematizes the distinctions between human and nonhuman, the "bodiless" voice and nonperspectival vision are his experimentations with animation's creation of the illusion of life. Particularly by adopting other art forms—imitating manga's flatness, cinematic three-dimensional depth, and computer-generated virtual images—Oshii brings forth visions beyond the perspectival optics prevailing in post-Renaissance arts, including the anthropocentric gaze standard in cinema. The audiovisual experiments in his film epitomize digital media's non-figurative simulation of the world as information, pushing the representational boundaries of the animation apparatus to contest the very idea of mimesis. The film synchronously reveals what it fails to achieve in terms of digital animation's articulation of a life. This recognition of inadequacy in representation thus sets up digital media's aesthetic and perceptual horizons, posing self-criticism of its own creative practice.

In his juxtaposition of poetry and virtual reality, Powers as a novelist stresses the common ground emerging from the relationship between the printed novel and digital media. He focuses on the power of language, upon which both old and new media tools are built. Referring to that role, he demonstrates how the simulation of a digital environment can facilitate print medium's reformation. *Plowing the Dark* conjures new media's immersive textual environment by adopting the second-person singular point of view, which resembles the speech patterns of early textual computer games. This unusual voice, calling out the reader ("you"), induces readers' immersion; they feel as if they walked into the story and *experienced* what the character

does in the textual world. Using this literary device, Powers indicates that older art forms such as poetry, story, music, and painting have already provided the phenomenological experience of immersion for the audience. As “[t]he mind is the first virtual reality” (130), it is human imagination that creates its world, providing a virtual experience even when new media technologies are not in use. In producing that immersion, this narration technique departs from conventional representational realism wherein readers maintain a distance in observing textual material. Powers’s experimentation with narrative voice, therefore, defies traditional literary representationalism colluding with modernity’s impulse of mastery and objectification. *Plowing the Dark* ultimately bespeaks the nature of language as technology, which in essence works against itself. The inevitable limits of verbal representation nonetheless can be regarded not as a failure but rather as a redemption, rescuing us from the desire of immediacy brought through contemporary media technologies cooperating with the global capitalism and military imperialism of the transnational, neoliberal era.

This dissertation is divided into four sections exploring the works of Powers, Jackson, and Oshii. The first chapter is dedicated to theoretical scrutiny of the aesthetic, political, and historical implications of new media in relation to postmodernism. The subsequent three chapters investigate the respective medium and art form chosen by Powers, Jackson, and Oshii: novel, hypertext fiction, and digital animation. Analyzing how these authors recast each narrative form through remediation of other art genres, I investigate their formulations of what it means to be human and the living. The theoretical survey of new media in Chapter 1 centers on the temporal (re)turn of new media discourse and practice. The study of new media’s serial temporality provides an opportunity to consider what lies beyond the “spatial turn” of postmodernism, the dominant cultural paradigm in past decades. The chapter concentrates on the significance of

repetition as the central theme and aesthetic strategy of new media, and examines the recursive cognitive process which hypertext fosters while inspecting the problem of self-reproduction posed by digital animation's remediation.

While Chapter 1 focuses on new media narratives, Chapter 2, in analyzing Powers's *Plowing the Dark*, reflects on the older narrative form of the novel. Connecting poetry and virtual reality, Powers illuminates the function of language as the primary medium through which mankind builds other artifacts and brings itself into existence. His ideas allude to Heidegger's account of poetry's power of worlding, as one of the main underlying themes of *Plowing the Dark* is the conundrum of humanity's image-making, from mathematical calculation (as in virtual reality) to verbal articulation (as in poetry). The novel portrays the precariousness of artistic creation, playing with life and assuming the role of the Creator. Powers explores the relations between old and new media through the verbal simulation of new media's immersive environment in place of traditional literary representation. For Powers, realism is not a timeless and universal mode of expression but a historical and philosophical construction of post-Enlightenment modernity aspiring to the conquest and reframing of the world into a governable picture. In this, Joseph Tabbi finds that Powers's novels exhibit "cognitive realism" moving beyond conventional representational realism (76).

Chapter 3 studies Shelley Jackson's *Patchwork Girl* alongside Mary Shelley's *Frankenstein*, which it rewrites, focusing on each fiction's remediation of earlier literary genres and forms. The two texts resemble each other in the textual materiality and figuration of femininity. In *Frankenstein*, the dismembered female creature is reincarnated as the novel, Shelley's "hideous progeny," the feminist figure resisting representation. The partial reincarnation of the female monster in *Patchwork Girl* is then Jackson's appropriation of

Shelley. Thus, the female monster is always in the state of becoming, not only as a figure but also as textual condition, illustrating N. Katherine Hayles's "subjectivity-as-assemblage." Her "body" can only be per-formed by the virtual linking of autonomous body parts into the unrepresentable whole of the "body," just as the meaning of the text is produced by connecting lexias into the "work." Jackson also inherits Shelley's creative impulse to transgress generic boundaries: *Frankenstein* is an epistolary novel remediating the private letter format, and its intense lyricism resonates with that of Romantic poetry; stressing heteroglossia, *Patchwork Girl*'s hypertextual collage of novel, children's literature, journal entries, and theoretical treatises suggests the possibility of interactive storytelling. An open-ended narrative violating Aristotelian mimesis calls into question the definition of narrative and literature.

Finally, Chapter 4 examines the voice and vision in Oshii's animation *Ghost in the Shell*. Scrutinizing the "bodiless" voice alienated from the imaged body, I argue that the body persists in Oshii's film in aural form. This view of voice as bodily extension disputes the alleged claim of the absent filmic body in digital animation. The protagonist's "bodiless" voice fabricates the illusion of character identity for audience and their psychological identification with characters. This audio-visual split and inversion exemplifies "plasmaticness," Sergei Eisenstein's life coming into being via animation. Instead of habitual image-voice conformity, audio-visual separation casts doubt upon the organic unity of body and mind and image and sound exemplified by cinematic perceptual coordination. Oshii additionally probes animation's potential for representation by appropriating the nonperspectival vision; the visual array of manga, cinema, and superflat image in the film assembles alternative spatiotemporal relations to those in the Renaissance perspectival systems postulating a geometric three-dimensional space

established by a single unified viewpoint. Thus, Oshii's critique of Cartesian conformity between body and mind, voice and vision, extends to Renaissance optics and perspectival realism.

Powers, Jackson, and Oshii borrow the aesthetic effects of other media in order to explore their chosen medium's perceptual horizons and representational limits in an attempt to break those boundaries. They equally demonstrate how one medium can be refashioned through appropriating another's formal characteristics. The newer medium's repetition of older forms further reveals the heterogeneity existing in the latter. This revelation by artistic practice gives rise to the value of repetition and renewal in new media, which differs from the solipsism demonstrated by new media discourse.

## Chapter One

### The Impasse of New Media: Repetition and Temporality

In the last resort what has left its mark on the development of organisms must be the history of the earth we live in and of its relation to the sun. Every modification which is thus imposed upon the course of the organism's life is accepted by the conservative organic instincts and stored up for further repetition. Those instincts are therefore bound to give a deceptive appearance of being forces tending towards change and progress, whilst in fact they are merely seeking to reach an ancient goal by paths alike old and new.

—Sigmund Freud, “Beyond the Pleasure Principle” (*S.E.*, 18:37)

Well, what if there is no tomorrow? There wasn't one today.  
Today is tomorrow. It happened.

—Phil Connors, from *Groundhog Day*

*Groundhog Day*, a 1993 film directed by Harold Ramis, portrays a nightmare in repetition of tedious daily life. In this film, Phil Connors, a TV meteorologist, is caught in a time loop and destined to relive the same day over and over again. Beneath the movie's apparent moral lessons of self-reflection, spiritual rebirth, altruism, and true romance—through which the spell of time loop is finally broken—lurk interesting questions about repetition. I begin this chapter by delineating the significance of repetition as portrayed in two films—Ramis's *Groundhog Day*, and Oshii Mamoru's Japanese animated film, *Innocence* (2004)—to illuminate the issues of new media and postmodernism that are the central topics of the chapter. For electronic and digital media, repetition has become an essential theme and formal technique of composition. Repetition in new media opens up the possibility of learning and creation, knowledge and art, as founded upon recursive temporal logic, distinctive from cognitive systems strictly based on linear chronology. However, the self-referential temporal loop in new media art

poses the problems of solipsism and totalization. This predicament in the deployment of new media as aesthetic tool is analogous to the impasse of postmodernism as a criticism of Modernity. Because its self-referentiality interferes with its positing its own exterior, postmodernism inevitably confronts its own blindness, as with any other systematic knowledge. This chapter interrogates the condition of new media as art and discourse to explore possibilities for breaking through the inherent solipsism of Modernity, equally present in postmodernism as a critique of Modernity.

*Groundhog Day* shows diverse aspects of repetition. Phil's apprehension gained from the experience of going through the same event multiple times—for example, learning to skip over a puddle after stepping in it several times—suggests that knowledge is a pattern-recognition based form of problem-solving. This episode recalls the cybernetic notion of knowledge and anticipates the aesthetics and tactics of writing and interpreting electronic narrative. The flipside of this repetition is that Phil's unconscious, habitual response to recurring events turns him into an automaton operating with robotic and mechanized behavior. The ultimate message of the film's repetition, however, is positive. While Phil's attempts at suicide fail to bring an end to his predicament, his conscious efforts to change his behavior over each repetition eventually free him from the time loop as well as the underlying ennui in his life.

The film's setting—Phil is covering a small town's Groundhog Day festivities—enhances the symbolism. As Groundhog Day prematurely celebrates that winter *will* end at some point in the near (or slightly less-near) future, its temporality messianically anticipates redemption even while perpetually deferring the actual outcome. The annual observance of not-yet-spring is cosmological and ritualistic, like the Nietzschean eternal return. At the film's end, Phil and his now-lover Rita express their desire to live forever in Punxsutawney, the utopia-within which

they have “discovered” through continually reliving the experience of it. The temporal and spatial effects of electronic media—Phil’s TV coverage of the event—also reiterate the theme. By continually invoking its mechanized dictation and reflection of our notions of time and space, the film refers to electronic media’s logic of recursive temporality, which Fredric Jameson criticizes as “the simulacrum of fictive time” (*Postmodernism*, 75) and Vivian Sobchack denounces as “a homogeneous experience of discontinuity” (57). Then, the plot response highlights the positive, or at least effective, results of the experience of repetition, as shown by Phil’s eventual redemption through reliving and thus reconstructing a particular moment in his life. Indeed, the media ultimately becomes a vehicle for bringing together individuals and a community, as Phil’s reports gradually progress from putative and heartless to eloquent and appreciative.

Oshii Mamoru’s Japanese digital animation, *Innocence*, offers another rendering of repetition. In this somber sci-fi animation, two police detectives, Batou and Togusa, travel to a Western-style manor in the Far North to meet Kim, a notorious hacker who holds the key to their investigation of serial murder cases committed by androids. With his brain penetrated by Kim’s virtual reality trap, Togusa hallucinates the scene in which he and Batou enter Kim’s manor (Chapter 12-14). This is repeated four times, each with slight differences. While giving the audience the illusion of watching the same scene over and over again, the repeated hallucination leads Togusa to doubt his sense of self, his humanity, and reality in general; he finds himself to be a mechanical doll when the scene occurs for the fourth time. The repetition here recalls the Freudian uncanny in which duplication erases the authenticity of the original. Freud defines the uncanny as “nothing new or strange, but something that was long familiar to the psyche and was estranged from it only through being repressed” (*The Uncanny*, 148). Cognitive uncertainty of

the uncanny originates not from the unknown quality of the object but from its ambivalence; the term itself contains this insecurity, as “das Heimliche” can mean both the home-like and the un-home-like (“das Unheimliche”). As Freud notes, the uncanny mode of existence, “to switch to its opposite” (148), is schizophrenic in the Deleuzian sense. This is the digital: life is flipped to death, the animate to the inanimate. The above episode in *Innocence* implies this through Kusanagi’s riddle, invoking the inversion of “aemaeth” (truth, life in Hebrew) and “maeth” (death). In this sense, the uncanny constitutes the epistemology of the border in punctuating the very moment representing the uncanniness of the canny and the revival of dead beliefs about the dead.

*Innocence*’s invocation of the uncanny adds significance to Oshii’s view of digital media as a tool for film-making. He has asserted the importance of repetition in appreciating his film: “I enjoy making the world [of the film] as detailed as possible. I get absorbed in the finer points – like what the back of a bottle label looks like when you see it through the glass... I want people to go back to the film again and again to pick up things they missed the first time” (no pagination). Reminiscent of Phil’s behavior in *Groundhog Day*, Oshii here points to the value of a recursive learning practice in watching a film multiple times. Bits of information gained in each view structurally transform the audience’s reception of an art work; therefore, we discover the work anew, not by its pure novelty but by our revisitation of it. Oshii’s film, however, invokes the flipside of horror inherent to this feedback loop through Kim’s speech in the aforementioned sequence: “science seeking to unlock the secret of life brought about this terror, the notion that nature is calculable, inevitably leads to the conclusion that humans, too, are reducible to basic, mechanical parts” (Chapter 12). The film warns us of the possibilities for perversion through repetition of modern science and technology; the incessant desire to

transcend nature and the instinct for perfection result in nothing but the reproduction of Kim's "inadequacies of human awareness."

As illustrated by *Groundhog Day* and *Innocence*, repetition is both a core theme and formal technique—with one mirroring the other—in electronic and digital media texts. Repetition is the primary motif for learning and creation, knowledge and art. Oshii's comment regarding re-viewings reflects this; a return to the "same" text in order to attend to details results in a different experience as the textual information goes through structural changes each time it is revisited. This mode of apprehension is based on a time-logic distinct from the linear temporal order upon which the conventional knowledge system depends. Through his conception of the uncanny, Freud demonstrates that repetition erases the identity of the 'original' and simultaneously reverberates its effects. The problem with the infinite loop of self-referential reiteration is, then, that it may foreclose any attempt to imagine its outside. How do we avoid falling into this trap of self-legitimization and vicious cycle of self-same repetition? How do we posit the outside of new media when it repeats the old and remediates what exists before? What does new media's self-contradiction potentially suggest as answer to these problems? Further, new media discourse presents a problem of having difficulty positing its own exterior, which resonates with Modernity's predicament lying in the risk of its totalizing impulse excluding its other whose attempts inevitably fail precisely because of that exclusion. Then, what is the value of remediation as the primary discourse developed in new media to interrogate Modernity's contradiction, when, like new media, Modernity at its heart questions its own identity as constructed by the opposition of old and new, revolution versus evolution?

To explore these questions, I first survey criticisms of new media to investigate the premise that new media is the latest variation on postmodernism. Electronic and digital media

have been condemned for impelling the fragmentary self and mechanization of humanity by destroying the coherence in our sense of space and time, through recycling of textual materials, words and images. Conversely, some scholars advocating new media work with these problems of spatialized time and repetition of preexisting materials by reframing them as positive elements of contemporary technical media. “Remediation,” coined by Jay David Bolter and Richard Grusin, reflects that the novelty of digital media originates from its repetition and simulation of effects from earlier media. Their idea is comparable to the previously discussed notion of the uncanny in Freud as well as Oshii’s explanation of how re-viewing of a film makes the text anew by generating different interpretations. Hence, like the discourse on modernity, that of new media unsettles its own foundation from its inception by positing its origins as repeating its predecessors rather than breaking from them. This view, undermining strict chronology and linear history, opens up the possibility of imagining history and culture with knowledge operating on a different kind of temporality. It can also collapse into the solipsism and homology that is postmodernism’s predicament through lack of the spatial and temporal borders of the old and the new.

To illustrate these problems and offer possible suggestions for addressing them, in the subsequent sections I investigate specific instances of hypertext literature and Japanese digital animation, which become the main subjects of this dissertation. Electronic media including hypertext is deemed as contributing to the postmodern spatialization of time. In hypertext, words and pieces of writing are literally spatialized in the form of lexias and links; the textual pieces are then collected by readers for meaning-making. While the boundless form of hypertext seems to violate the Aristotelian unified plot and its aesthetic privileging organic structure, hypertext highlights redundancy and repetition as the substance of its theme and style. Reading hypertext

literature necessitates multiple visits to a text, engendering differences in meaning each time it is read due to temporal intervention and the accumulation of information. Based on the resultant different temporal order of serial repetition, this mode of knowledge accumulation and transmission via repetition has larger implications in regard to how we sense reality and organize it into meaningful knowledge.

Japanese digital animation illustrates how the repetition and remediation operating in visual media can link to the construction of modernity, especially in Japan and East Asia. Animation's repetition of its cinematic beginnings complicates the genealogy from cinema to digital animation, analog to digital. In the contemporary media theories of Japan, this complexity works with modernity's unfounded grounds and multiple origins as maintained by critics such as Karatani Kojin. According to this line of thought, contemporary animation repeats, in advance, the digital mode of the older medium of cinema—just as “premodern” Edo Japan is a refined form of the postmodern prior to Japan's nineteenth-century modernization. This view suggests the possibility of renewal as found in everyday ritual, in place of progressive modernity. However, it also raises a question regarding how to envision the outside of the present historical moment, as well as the discursive exterior to new media logics such as remediation. Consequently, Japanese digital animation offers a space in which postmodern cultural products, contemporary media discourse, and East Asian history converge.

### **New Media and Postmodernism**

Many scholars have considered the development of technical media in the context of the cultural paradigm shift from realist modernism to postmodernism. For instance, indicating the problem with cognitive mapping and aesthetic representation posed by contemporary culture,

Fredric Jameson uses an example of electronic media to define his concept of postmodernism. He points to schizophrenia as one of postmodernism's critical symptoms. Drawn from the linguistic model of Jacques Lacan, who sees schizophrenia as perversion, the result of foreclosing the Symbolic (Lacan 135), Jameson characterizes schizophrenia as the cause for the breakdown of the correspondence between nature and culture; content and surface image; reality and its representation; and past and present. This clash results in a weakened sense of history and identity, a crisis of representation, and the debasement of humanity (*Postmodernism*, 26-8). Jameson condemns schizophrenia as valorizing the ideology of "difference" and fragmentation.<sup>1</sup> He turns to technical media to illuminate postmodern schizophrenia and spatialization via "mediatization." Video, the predominant art form of postmodernism, exhibits schizophrenic aesthetics, epitomized by the immersive "total flow," "ceaselessly reshuffl[ing] the fragments of preexistent texts, the building blocks of older cultural and social production, in some new and heightened bricolage" (96). For Jameson, the infinite circulation of heterogeneous textual materials prevents the emergence of meaning and cancels the critical distance between observer and text, subject and object. Video accelerates "the simulacrum of fictive time" and mechanical depersonalization foreshadowed by the modernist art form of film (75).

Following Jameson's view, Vivian Sobchack elaborates on electronic media's contribution to fractured subjectivity and temporal spatialization as compared to other dominant media forms of modern periods, such as photography and cinema. Sobchack sets up a media paradigm juxtaposing the photographic, the cinematic, and the electronic visual apparatus in

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<sup>1</sup> Gilles Deleuze and Félix Guattari take a different view of schizophrenia. For Deleuze and Guattari, schizophrenia is a tendency to differ, which means breakthroughs not breakdowns. Schizophrenia is one of the two poles of capitalism—the process towards hyperdifference and proliferation (deterritorialization)—against paranoia and fascism (reterritorialization) (*Anti-Oedipus*, 282). More a metaphor than referring to the clinical disorder per se, the schizophrenic do not know the Lacanian lack, and therefore may break off the capitalist production-consumption cycle sustained by the structural production of that lack.

correspondence with historical delineations regarding modes of production and representation: the 1840s, 1890s, and 1940s; or, realism, modernism, and postmodernism. The motto of the photographic regime is “self-possession,” in which “real” life is crystallized as an object by the photographic freeze in the “secured space of a moment” (“Toward,” 52). Cinema foregrounds embodied subjectivity; with the spectators’ presence and perspective mechanically constructed, the cinematic apparatus reconstitutes a heterogeneous time and space into a unified correlation of a specific “lived-body-experience” (56).<sup>2</sup> Electronic media, on the other hand, dissolves the viewer’s sense of coherent subjectivity by slicing, reproducing, and flipping images. Unlike filmic worlds “accumulated and projected as a conscious and embodied experience,” electronic media, constituted of the simulation and saturation of information, renders a “homogeneous experience of [temporal] discontinuity” (57).<sup>3</sup> In a more positive assessment, Yvonne Spielmann posits spatialization as electronic and digital media’s distinctive characteristics. Spielmann works with the idea of “intermedia” based on Edmond Couchot’s distinction between electronic media (television and video) and the digital image. Whereas the former shares analog registration with the cinematic mode, the digital image—“*l’image simulée*”—is non-representational, dependent on computation (“Expanding Film,” 134). Diverging from time-based cinema in that “the simultaneous organization principles of image elements...create effects of density,” electronic media exists in the intermediate space between the temporal cinematic and the spatial digital visual order.

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<sup>2</sup> Deleuze’s conceptualization of cinema differs from this established view. He emphasizes cinema’s heterogeneous representational regime, which, interestingly, is shared by many animation critics. See Alan Cholodenko’s *The Illusion of Life* for the essays linking Deleuze, cinema, and animation.

<sup>3</sup> Sobchack’s recent criticisms on digital media and animation suggest a change in her position. See: “When the Ear Dreams: Dolby Digital and the Imagination of Sound,” *Film Quarterly* 58.4 (2005): 2-15, and “The Line and the Animorph or ‘Travel Is More than Just A to B,’” *Animation* 3.3 (2008): 251-65.

What Jameson, Sobchack, and Spielmann agree on with respect to new technical media is its enforcement of a fragmentary sense of self and mechanization of human nature. This is in part due to the disruption of a coherent sense of organized space and time essential to consistent lived experience in the world. Instead of the analogous correspondence between sign and meaning, reality and appearance, and the continuity of past and present, new media presents an immersive “total flow” of information. The incessant recycling of textual materials saturates the audience’s mindscape without generating coherent signification.

Interestingly, new media critics consider the repetition and recycling of preexisting materials condemned by Jameson, positive constituencies of electronic and digital media. Lev Manovich, Jay David Bolter, and Richard Grusin, maintain that the novelty of digital technologies originates precisely from its repetition and simulation of preexisting artifacts including perspective paintings, photography, cinema, and television. Those art forms likewise came into existence by remediating the earlier incarnations. Using Dziga Vertov’s *Man with a Movie Camera* (1929) as an exemplar, Manovich demonstrates cinema’s birth as prefiguring the language of digital media: the avant-garde modernist collage resurfaces as the “cut-and-paste command” in computers; spatial montage is equivalent to multiple windows on a computer screen; and the nonhuman, machinic vision of “kino-eye” becomes a digital grid. This cross-temporal link between cinema and digital media denies a clear-cut break between old and new. Rather, new media repeats and refines—even revolutionizes—its origins through five principles: “numerical representation, modularity, automation, variability, and cultural transcoding” (20). Bolter and Grusin additionally position contemporary media’s newness as follows: “What is new about new media comes from the particular ways in which they refashion older media and the ways in which older media refashion themselves to answer the challenges of new media” (15),

arguing that remediation works through the twin logics of immediacy and hypermediacy: “Our culture wants both to multiply its media and to erase all traces of mediation: ideally, it wants to erase its media in the very act of multiplying them” (5). Seemingly oppositional, the effects of immediacy—the medium’s apparent disappearance presenting the thing itself—is achieved by hypermediacy, multiple mediation. With hypermediacy offering the vivid experience of mediation itself, there is a contradiction between epistemology (knowing the mediation) and psychology (feeling its vividness). Such relations invoke the difference between “looking at” and “looking through.”

Manovich’s juxtaposition between cinema and digital media and Bolter and Grusin’s stress on the feedback process in mediation describe and prescribe the directions of theories developed for new media. For instance, N. Katherine Hayles employs her idea of “electronic literature”—“a first-generation digital object created on a computer and (usually) meant to be read on a computer” (*Electronic Literature*, 3)—to inquire into the definition of the literary, instead of simply claiming the newer medium’s break from print. While each medium serially repeats “the earlier medium’s effects within the new medium’s specificities” (58), accumulated literary knowledge and conventions emerge differently from one medium to another. Also, Marie-Laure Ryan’s concept of immersion and interactivity resonates with Bolter and Grusin’s immediacy and hypermediacy. Narrative is constituted by the paradoxical marriage between (linear/solid/cerebral) immersion and (spatial/fluid/corporeal) interactivity, sometimes at the expense of one another, generating for readers the immersive simulation absorbing them into the fictional universe while the self-referential signification allows them the distance to play with signs (*Narrative*, 4). Reading works with these two principles of immersion and interactivity.

Manovich, Bolter, and Grusin, largely focused on the intrinsic qualities of media, have been criticized for ignoring the social significance and historical context of new media technologies. Bolter and Grusin invoke Raymond Williams for his conception of socially-determined technology, remarking that media's agency is "constrained and hybrid" in users, media, and objects (78). Nonetheless, their main agenda is the study of technical specificities and aesthetic features of electronic and digital media. Thus, criticizing Bolter and Grusin, Lisa Gitelman and Wendy Hui Kyong Chun emphasize the socio-historical creation, determination, and reception of media technologies by society within its technological, political, and cultural networks.<sup>4</sup> Juxtaposing the nineteenth-century phonograph and twentieth-century Web, Gitelman argues that both media artifacts are "historical subjects." She defines media as "socially realized structures of communication, where structures include both technological forms and their associated protocols, and where communication is a cultural practice, a ritualized collocation of different people on the same mental map, sharing or engaging with popular ontologies of representation" (7). Recalling Michel Foucault's archeology of knowledge, Chun holds that, in light of new media, both old media technologies and their surrounding cultures and histories are rediscovered and transformed (2-4).<sup>5</sup>

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<sup>4</sup> Alan Liu's *The Laws of Cool*, Rita Raley's *Tactical Media*, and Eugene Thacker and Alexander Galloway's *The Exploit* study the political and ideological implications of new media, not only from a consumer's perspective but also a producer's. Particularly, Thacker and Alexander Galloway explicate how network systems can be both highly controlled and decentered, as they state, "*protological struggles do not center around changing existent technologies but instead involve discovering holes in existent technologies and projecting potential change through those holes*" (81). Raley studies new media artists-activists' "virtuosity" to disturb and redesign the semiotic code of the neoliberal global capitalism, which offers users ways of perceiving, understanding, and interacting. It is a subjective and modular "political activity that would supplement but not displace other forms, modes, and practices of politico-aesthetic engagement in the network society, specifically refusal, destructivity, cyberactivism, and hacktivism" (25).

<sup>5</sup> Other influential studies on new media include Eugene Thacker's *Biomedica* and Lisa Nakamura's *Digitizing Race*. Thacker defines "biomedica" as follows: "an instance in which biological components and processes are informatically recontextualized for purposes that may be either biological or nonbiological." They are "particular mediations of the body, optimizations of the biological in which 'technology' appears to disappear altogether. ('What is Biomedica?,' 52). Nakamura's book observes the reconfiguration of race and ethnicity in cyberspace.

Despite Gitelman's and Chun's criticism of Manovich's and Bolter and Grusin's lack of consideration for the sociopolitical dimensions of media, the latter approach to new media has dominated the discourse. "New" media discovers old media anew by unearthing not only its technologies and aesthetics but also the surrounding politics, social structures, ideological constructions, and cultural practices "forgotten" since the bygone era. Neither a break nor continuity constitutes the relation between the old and the new, nor is new media a simple replica of the old. The novelty and origins of new media reside in the impulse to return to older forms in an attempt to perfect what previously existed—accomplishing immediacy by eliminating the gap between symbols and objects through total mediation. While this recurrent movement begets the distinctions between newer and the older forms due to the spatiotemporal gap between them, the final goal of immediacy cannot be achieved due to the materiality inherent in the medium as acting against itself.

This attention to the newness of new media relates to broader interrogation into origins, novelty, rupture, genealogy, linearity and systemization, ultimately leading to the postmodernist challenge to History and Modernity. The issue with postmodernism's questioning of earlier modes of cultural production and philosophical frameworks—Modernity's systemic totalization—is the difficulty postmodernism has delimiting its own boundaries. This solipsism is shared by new media criticism; that "new" media is founded upon the questioning of its own origins and relations with predecessors in turn results in problems with any act of definition. The attempt to problematize the boundary between old and new media thus causes a universalizing tendency. Erasing the temporal distance, new media encompasses "other areas of culture, both

past and present” (Manovich 13) through principles such as remediation.<sup>6</sup> As Bolter and Grusin state, “...so for our visual culture there is nothing prior to mediation” (56). This idea of media convergence is found in Frederick Kittler’s “universal Turing machine,” Hayles’s “regime of computation” and Henry Jenkins’s “convergence culture.”<sup>7</sup> Ultimately, the “always already new” status of media proves that discursive totalization is indispensable to any act of representation and systemic knowledge, including the definition of new media.

Moreover, the homologies in which theory and practice conspire in new media contribute to the borderless media ecology. The recursive feedback logic, originating in cybernetics and shared by contemporary cultural theories, has also been influential to new media in theory and practice, reflecting the intertwining of technology and culture and science and ideology. Brian Lennon’s critique of new media’s emergence against the backdrop of postmodernism and global capitalism is significant in this context. Lennon outlines new media homologies revealing the “structural affinity, of critical [theory] with literary writing itself;” this is the symbiosis and concurrent development between discursive and artistic practice in new media, each mirroring and augmenting the other. For instance, for first-generation hypertext authors such as Michael Joyce, creating a work of art with a new medium has been a theoretical, philosophical, and pedagogical agenda. Lennon also claims that temporality is the main theme of new media studies, evident in guiding terms such as the “residuality” (Charles Acland), the “deep time”(Siegfried Zielinski), “prehistory” (Lisa Gitelman), and the “forensic imagination”

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<sup>6</sup> Manovich argues that the “new media revolution” encompasses all areas of living through ubiquitous effects of computerization: “the computer media revolution affects all stages of communication...; it also affects all types of media—texts, still images, moving images, sound, and spatial constructions” (19).

<sup>7</sup> Kittler writes, “one century sufficed to transform the ancient storage monopoly of writing into the omnipotence of integrated circuits...All data flows end in a state *n* of Turing’s universal machine: numbers and figures become (in spite of romanticism) the key to all creatures” (“Gramophone,” 117-8). Jenkins studies the relationships among the three major changes in media culture: convergence (of old and new media, grassroots movement and commercialization, producer and consumer); participatory culture; and collective intelligence (2-4).

(Mathew Kirschenbaum). Temporality has become the thematic nexus of new media following (or concurrent to) postmodernism's spatial turn.

As Lennon's description of new media homologues suggests, new media as a field of knowledge depends upon recursive temporal movement in which divergent temporal paths develop internally or envelop into multiple directions. The form and aesthetic strategy of new media art is also deeply embedded in the practice of repetition. However, in contrast to Lennon's suspicious stance, I see the temporal (re)turn which new media discourse and practice revive in a positive light. Although a problematic concept, it can provide a productive space for thinking beyond postmodernism as a cultural paradigm. If new media is viewed as the residual of the old repeating at its origins, this claim has a larger implication with regard to the construction of modernity, as postmodernism is considered not an object of posterity but internal to Modernism; this then reconfigures what modernity is. This leaves questions of externality: how do we envision the exteriority of modernity? In what ways can the repetition of new media be useful in framing and exploring these possibilities?

In the following sections, I use examples of hypertext fiction and Japanese digital animation to explore the question of repetition and temporality. With respect to the mode of repetition, Deleuze holds that "the aim is not to rediscover the eternal or the universal but to find the conditions under which something new is produced," (*Dialogues*, vii). This involves not mere repetition of the old but a "return of the conditions for change." Each instance of hypertext literature and digital animation investigated demonstrates the possibilities of new media's strategic repetition of the old without courting perversity, by possessing awareness and exposure of its own conceptual and aesthetic limits.

### **Spatialization of Narrative in Hypertext**

One of the most distinctive features of hypertext is its spatialization of narrative. Invoking Descartes's equation of vision and reason, Walter Ong notes the "spatializing of the word" in modern technical media such as the print press and electronic media: "The sequential processing and spatializing of the word, initiated by writing and raised to a new order of intensity by print, is further intensified by the computer, which maximizes commitment of the word to space and to (electronic) local motion and optimizes analytic sequentiality by making it virtually instantaneous" (133). In a similar vein, electronic technologies do not make printed books—along with the analytical reflection induced by them—obsolescent but proliferate them. In hypertext fiction composed of numerous lexias (the electronic equivalent of pages in print) and links, readers are expected to collect bits of writing dispersed in cyberspace by linking lexias into a meaningful narrative of their own.<sup>8</sup> A feedback loop generated by the self-organizing, self-evolving mechanism of hypertext allows readers to perceive different symbolic sequences each time they read. As there are multiple, often recurrent, reading paths chosen by readers and programmed by the computer, hypertext not only literally disseminates words and narrative but also institutes a sense of space and time distinct from the linear progression of pages in printed narratives. Digital environments foster the spatial organization and linguistic/medial materialism inherited from postmodern (print) literature; therefore, Marie Laure Ryan connects electronic narratives to the formal experiments of postmodern literature. The playfulness of electronic narratives is forecasted in the mid-twentieth century's "linguistic turn"—when linguistic formality emphasizes "puns, intertextual allusion, parody, and self-referentiality" (*Narrative as Virtual Reality*, 4-5), while the postmodern tendency toward unstable meanings and playful

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<sup>8</sup> See Shelley Jackson's *Patchwork Girl* in Chapter 3 for a specific example of hypertext fiction.

readings is the outcome of plot experimentation and structural permutation. The “self-renewable” and reader-activating electronic text subsequently inherits the postmodernist challenge to totalizing interpretations and self-coherent narratives cooperating with Modernity’s logocentricism.

George Landow, a founding scholar of hypertext literature, sheds light on its potential for liberating reading practices from the chronological rigidity in linear following in pages of print narrative. Landow defines “computer hypertext” as: “[T]ext composed of blocks of words (or images) linked electronically by multiple paths, chains, or trails in an open-ended, perpetually unfinished textuality described by the terms *link*, *node*, *network*, *web*, and *path*” (2). Despite later criticisms, Landow’s early study is a fruitful point for departure in discussing the originality of hypertext as a narrative form. Like other pioneers who theorized hypertext (one of them is Jay David Bolter), Landow regards Barthes’s ideal text as prescribing hypertext principles—“the plurality of paths, the multiplicity of approaches, the infinity of codes, even the principle of randomization” (Chaouli, 603-4). Jane Yellowlees Douglas cites Umberto Eco’s “indeterminacy” and inexhaustible performance of “opera aperta (the open work)” to explain hypertext (183). Hypertext’s open-endedness is reminiscent of Eco’s “opera aperta”: “Every [textual] performance *explains* the composition but does not *exhaust* it. Every performance makes the work an actuality, but is itself only complementary to all the other performances of the work” (15-6).

However, Landow’s association of hypertext with the poststructuralist theory of textuality has been contested as reductive and misleading. Michel Chaouli argues that Barthes’s concept originates from his concern with print technology. He says, “Metaphorical deconstruction [in understanding of a text] depends on literal stability [of the text itself]” (610). This overturns the

long-sustained claim that hypertext technology is a “vindication of postmodern literary theory” (Bolter) and an embodiment of poststructuralist ideas such as intertextuality and intersubjectivity (Landow). Espen Aarseth also concludes that it is a mistake for Bolter and Landow to align Wolfgang Iser’s phenomenological reader response theory and Barthes’s semiological poststructuralism with the “philological (material) concept of hypertext” (83), as Barthes’s and Iser’s theories are not so much “a normative attack on the limits of a specific communication technology (printing)” as general “descriptive, epistemological investigation of signification.”

The coronation of hypertext as a technology incarnating or fulfilling poststructuralist literary theory is unfair to both sides, as each has sprung from different combinations of socio-historical climate, technological development, and ideological milieu. Yet what troubles me in Landow’s theorization is not his employment of theory to justify the nascent technology of hypertext and explain its aesthetical and cultural significance as revisiting our idea of narrative and knowledge system; it is, rather, the absence of critical reflection on hypertext’s connections to that theory. In his enthusiasm for hypertext, Landow stops short of delving into a deeper critical assessment of the relationship between postmodernism and hypertext technology, such as that Jameson considers for electronic media. What sociopolitical networks, historical forces, and ideological frameworks engender technologies fostering recombination and multiplicity, and vice versa? In accepting the technology as natural, Landow’s conception of hypertext tends to authorize contemporary cultural and theoretical dominants without addressing questions about the nexus of technology, ideology, and politics. Likewise, he could further stress hypertext’s fundamental unsettling of definitions for narrative and literature, positing a new concept such as

Hayles's inception of "electronic literature," Aarseth's "cybertext," and Ciccoricco's "networked fiction."<sup>9</sup>

Nonetheless, when Landow cites Paul Ricœur to indicate how hypertext's lyricism "dechronologize[s] narrative" (225), he not only calls attention to hypertext's multimodal, lyrical nature but implicitly places hypertext technology in the larger cultural context of postmodernism's spatial turn. Robert Coover accordingly remarks that "[t]he traditional narrative time line vanishes into a geographical landscape or exitless maze, with beginnings, middles and ends being no longer part of the immediate display" ("The End of Books," no pagination), voicing a similar tendency in hypertext's spatialization of narrative.

As Landow and Coover suggest, one of hypertext's critical challenges to traditional narrative is its destabilization of Aristotelian temporal organization of unified action through plot.<sup>10</sup> In his *Poetics*, Aristotle defines plot as "a probable or necessary sequence of events." Aligning an aesthetic object and a living organism, he says, "Well-constructed plots should therefore not begin or end at any arbitrary point, but should employ the stated forms"; "Any beautiful object, whether living organism or any other entity composed of parts, must not only possess those parts in proper order, but its *magnitude* also should not be arbitrary; beauty consists in magnitude as well as order" (14). If so, the labyrinthine and borderless structure of hypertext does not conform to Aristotle's definition of beauty in an object as an organic whole

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<sup>9</sup> Derived from the Greek "*ergon*" (work) and "*hodos*" (path), ergodic literature is a work in which "nontrivial effort is required to allow to reader to traverse the text" (1). Ergodic text (also called cybertext) is considered a literary machine in which built-in textual devices modify themselves by controlling production and consumption of signs. Despite "structural kinships," cybertexts such as hypertext fiction and adventure games differ from preexisting literature. As Aarseth writes, "the cybertext reader *is* a player, a gambler; the cybertext *is* a game-world or world-game; it *is* possible to explore, get lost, and discover secret paths in these texts, not metaphorically, but through the topological structures of the textual machinery" (4).

<sup>10</sup> Narrative, here meaning the story in general, differs from Aristotle, where narrative is a means for verbal delivery of information by a narrator and which is differentiated from the dramatic mode.

made up of well-arranged parts in a definite form and limited magnitude. Hypertext fiction conversely calls into question his conception of plot and disputes his aesthetic rules.

Furthermore, given that one of narrative's main functions is transmission of knowledge, hypertext's formal transgression implies a possible change in the way information is organized and transmitted into meaningful communication. This transformation leads to a broader shift in our cultural value system and the nature of humanity beyond aesthetics. Interrogating the assumption that historical narration should be value-neutral and strictly scientific, Hayden White famously demonstrates how the representation of events in storytelling promotes moral value systems: "narrative is a metacode, a human universal on the basis of which transcultural messages about the nature of a shared reality can be transmitted" (6). Emphasizing the moral impulse for unity, coherence, and closure in the traditional narrative act, White continues, "[the] value attached to narrativity in the representation of real events arises out of a desire to have real events display the coherence, integrity, fullness, and closure of an image of life that is and can only be imaginary" (27). Given White's Aristotelian view of narrative as advocating unity and wholeness not only in representing events but also in imagining of human life, does this imply that hypertext, which facilitates the proliferation of knowledge that is not unilinearly organized or hierarchically transmitted, lacks beauty and morality? Does Michel Chaouli's commentary on hypertext's "semantic laxness," excessive gaps in the text, additionally suggest corresponding moral laxness? Electronic media often faces such questioning not only its aesthetics but its ethics, exemplified by Vivian Sobchack's criticism of electronic media's inhuman lack of physical—and presumably moral—gravity, although her case concerns visual media comparing cinema versus video and television.

Interchangeably, can we say that hypertext as a narrative form in the digital era signals a transformation of our aesthetic judgment? Does it then indicate changes in our moral values as well as our sense of humanity? First, two considerations must be addressed here: the usefulness of Aristotelian plot in reading hypertext and the issue of redundancy in his theory. Hypertext does not abandon all the components existing in Aristotle's plot. Many hypertext scholars continue to discuss narratives written in the new medium within those boundaries, using his concepts such as sequence, closure, and redundancy. Instead of dispensing with the idea of sequence, hypertext narrative can be seen as multi-sequential, wherein the responsibility of organizing events shifts to the reader. With respect to narrative closure, Jane Yellowlees Douglas and Espen Aarseth work with Aristotelian tension and discharge in narrative consumption. Douglas argues that what produces a sense of closure in hypertext is neither spatial nor temporal limits of the text, but readers' psychological satisfaction and exhaustion resulting from their adoption of a storyline from among many possibilities. Aarseth likewise claims that an experience of "aporia" and "epiphany" exists in hypertext not by accident but as a result of textual constructions (91).

Furthermore, Aristotle himself acknowledges redundancy in plot whereby an omission, addition, or exchange of story's components does not repudiate its entire structure. Hypertext foregrounds this redundancy as a pathway to meaning emerging from repetition and variations of a theme rather than strict sequential unilinearity. The cognitive process involved in reading and sense-making in the hypertext is recursive; aggregation of information and its repetition engender a breakthrough, in turn revealing what happens *during* the reading. The apparently linear process of reading and interpretation of a text—data input and its outcome, beginning and end—disguises the actual recursive process wherein the text is revisited multiple times during

reading and cognitive processing. For instance, as Douglas and Aarseth observe, Michael Joyce's *Afternoon* allegorically presents the recursive process of cognition. Readers of *Afternoon* experience traumatic aporia, stuck in a vicious circle of reading paths with no sense of progression, until reaching the node; this "white afternoon" intimates the protagonist's culpability in a fatal car crash involving his ex-wife and son. The breakthrough is only possible through experiencing mandatory journeys to designated pages describing a psychotherapy session triggered by the node "I call," the key to unlocking the main mystery at the heart of the fiction. The implication is that the therapeutic dialogue relieves both the protagonist's guilty conscience and the blockage in the readers' hermeneutic progress. In Joyce, hypertext fiction involves multi-sequential reading paths by which breakthrough or Aarseth's "link-out" is rendered possible, dramatizing repetition as a theme used for formal strategy. Thus, this hypertext fiction revolves around a structural redundancy of plot.

In turn, repetition is the dominant mode of electronic narrative in theme and style. Accordingly, in his study of "network fiction," David Ciccoricco maintains that new media writing is deeply immersed in repetition for not only content but also technique and aesthetics. He defines network fiction as a genre of interactive narrative, "[which] emerges gradually through a recombination of elements" (6).<sup>11</sup> Ciccoricco's claim is based on Deleuze's distinction between "bare" and "masked" repetition. Deleuze defines the former as the "repetition of the Same, explained by the identity of the concept or representation" (24). In contrast, the latter repeats itself with difference; it "includes itself in the alterity of the Idea." Deleuze writes, "One

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<sup>11</sup> Ciccoricco classifies hypertext literature into three groups: axial, arborescent, and networked narrative, following Deleuze and Guattari. Deleuze and Guattari make this distinction between an arborescent and a rhizomatic form: "unlike trees or their roots, the rhizome connects any point to any other point, and its traits are not necessarily linked to traits of the same nature; it brings into play very different regimes of signs, and even nonsign states" (*A Thousand Plateaus*, 21). Ciccoricco borrows from Deleuze and Guattari the idea of rhizomatic forms defined by "connection" and "heterogeneity"; the rhizomatic forms are seen as "powerful figures of thought and expression for subjects caught in the flux of information society" (5).

is negative, occurring by default in the concept; the other affirmative, occurring by excess in the Idea.” The former is “static” and called “bare repetition”; the other is “dynamic” and called “a covered repetition, which forms itself in covering itself, in masking and disguising itself.”

Whereas bare repetition re-inscribes the original, masked repetition issues difference consciously and thus serves as a critique of Western metaphysics privileging identity and the unity of mimetic representation.<sup>12</sup>

In hypertext, repetition occurring from the rereading of lexias and recycling of nodes cannot be repetition of the same due to data accumulation and temporal intervention (when and how it was/is/will be read). The “same” lexia is read differently each time, influenced by the varying connections it makes to other lexias in the network of information. Those readings, then, change the overall structure and the meaning of the text; in this context, repetition impacts both the temporality and spatiality of narrative. Hypertext reveals specifically serial repetition wherein unfulfilled desire leads to further narrative consumption. Because time is indispensable to any reading act, this serialization does not bring forth the cancellation of temporality, but implies the dependence of hypertext upon a different temporal order than unilinearity. Robert Coover’s lament of the hype and shapelessness of the Net, which he reads as hostile to meditative and slow-paced literature, is partially incorrect; electronic narrative simply entails a different temporal order from that of the conventional printed novel. Hypertext also privileges “*connection over location*,” navigation over representation, topology over topography (Ciccoricco 46). Thus, Carolyn Guyer refers to this: “The difference between reading hyperfiction and reading traditional printed fiction may be the difference between sailing the

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<sup>12</sup> Freud has featured those two repetitions as follows: the perversion of schizophrenic phobia (as illustrated by the Schreber case); and repetition with positive transference, as elaborated in *Beyond the Pleasure Principle*. He presents them as two distinct forms of repetition: mourning and melancholia, life instinct and death drive.

islands and standing on the dock watching the sea” (no pagination). Consequently, the topological space of hypertext and its modular navigation expose the limits of the preexisting aesthetic paradigm founded upon representation and linear chronology. The different spatiotemporality initiated by hypertext thus has larger implications for the transformation of both aesthetics and epistemology; this is how we observe the world *in which* we live, not from outside.

### **Japanese Digital Animation and the Construction of Modernity**

While hypertext literature shows the postmodern spatialization of electronic media through its dispersed narrative form, Japanese digital animation illustrates how the new media logic of remediation complicates the way the question of Modernity is framed. Recent criticism on Japanese animation (anime) demonstrates how repetition working in visual media can be aligned with one of the main concerns of the area: the construction of modernity in Japan and East Asia. Under the rubric of new media’s popularized principle of remediation, animation and cinema are regarded as entangled in their common origins. Animation’s repetition at its cinematic origins—undoing the linear development from cinema to digital animation, analog to digital—unsurprisingly resonates with modernity’s shifting ground and its divergent origins as theorized by scholars such as Karatani Kojin. Japanese digital animation has become an arena where digital media theory, postmodern cultural phenomena, and East Asian historic specificities intersect. Animation forecasts backward the digital mode of expression from its cinematic beginning, just as “premodern” Edo Japan is an already perfected form of the postmodern in

advance of Japan's nineteenth-century modernization.<sup>13</sup> This view of multiple modernities liberates us from the rhetoric of fixed origins and teleological progress, even as the argument retains the problem of positing its own discursive exterior, the same predicament found in Modernity's totalization.

Recent anime criticism considers digital anime films as repeating other preexisting media technologies and simulating earlier media such as manga, cel-animation, and cinema. This claim contests the sense of chronological development in visual media, from old analog to new digital. The novelty of new media in the postmodern era such as digital animation paradoxically springs from the perpetual "end" of older media such as cinema, pointing to its simultaneous break from, and fulfillment of, the parental medium. Thomas Lamarre claims therefore that new media has abandoned the rhetoric of progressive evolution—from beginning to end, from old to new—when its hyperrealism captures previous media forms to produce a sense of the real, instead of indexical records of reality per se. Following Lev Manovich, Lamarre argues that "Cinema repeats in advance all new media," as "animation best expresses the serial repetition of cinema that lies at the heart of new media." He concludes that seriality opens into "ritual, festival, and fetish" (176). For example, digital anime such as Rintaro's *Metropolis* (2001) employs the dialectical tensions and chaotic citations among manga, cel animation, and cinema. The phenomenon echoes Walter Benjamin's dialectical image: "an experience of the coexistence of incommensurable temporalities or spatialities that defies dialectical resolution or mediation"

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<sup>13</sup> Although critics such as Yvonne Spielmann distinguish between electronic and digital media, in anime the distinction between electronic (anime made for television and video) and digital (feature films) is less important than that between electronic/digital and the cinematic apparatus.

(184). Thus, Lamarre coins the term “cinemation” to designate hybrid forms of animation and live-action film.<sup>14</sup>

Nonetheless, the temporal loops and serial repetition of digital media can be a troubling sign of postmodern self-reflexivity—reproduction of the self without delimiting its boundaries. Digital media’s solipsism and self-reproductive logic are obstacles of postmodernism even as they repeat modernity’s blind self-referentiality. Expanding on Lamarre’s premise, Thomas Looser defines the cinematic mode as being analogic against the anime-ic digital, although the relationship between these two modes is supplementary and co-existent rather than oppositional. Modernism is preoccupied with the analogous correspondence between reality and appearance, interior and exterior; it adopts visual technologies such as cinema to emphasize perspectival depth and spatiotemporal coherence. In its reaction, postmodernism features a loss of origin and absolute dimension, manifesting non-mimetic “anime-ic” technologies to generate complexity emerging from relations among surface visual elements (“From Edogawa,” 308). This is characteristic of digital simulation; anime often moves in zigzag between the cinematic and anime-ic modes, straddling the analog strategy of modernism and digital aesthetic of postmodernism. Looser’s criticism is most productive for exploring the conceptual limits of the recursive temporal logic of postmodernism—the common ground for both digital media theory and the cultural criticism influenced by scholars such as Karatani Kojin in Japan.

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<sup>14</sup> Analyzing Sakaguchi Hironobu’s *Final Fantasy: The Spirits Within* (2001), Livia Monnet further develops Lamarre’s cinemation to explain cinematic hyperactive artificial life or a-life. The phantom’s persistent return in the film as uncanny life-effects resonates with digital animation’s obsessive simulation of cinematic animism. The phantom “a-life” can be considered “manifestations of actualized life that dwell in pure virtuality and that represent life for a living” (206). Monnet connects cinemation’s desire for artificial resurrection, which repeats early cinema’s animism, to contemporary theories of artificial life in the field of information-based life science: “life as a sovereign entity disappears, leaving instead various forms of liveliness, or life effects, as criteria for determining what is alive.”

In “One Spirit, Two Nineteenth Centuries,” Karatani maintains that “Japan” was “discovered” by the West in the nineteenth century as representing its exteriority to overcome modernity. Japan embodies that exterior as the negative of the Heideggerian sense of spirit through the two Japans of the Edo era: the amodern Edo Japan seen by the West as the Other, an empire of signs lacking interiority and meaning (261-2); and the Japan of the last decade of the nineteenth century that confronts the inevitable struggle with its own modernization. The foundation of Japanese modernity is not a belated feudal society but the already perfected formation of Edo urbanity as exemplified by a culture of *iki* (seduction); likewise, Japan repeats the postmodern mode of existence of consumer society prior to modernism. While Karatani’s argument destabilizes the Western chronological fixation authorizing the nineteenth century as Modernity’s culmination, it invites other questions. Karatani’s concern, to which his own theory of two Edo-Japans ironically contributes, is that Japan is always reduced to a signifier of the postmodern as opposed to Western modernity. “Japan,” prefiguring the postmodern as the non-chronological, eternal present, is rendered as a space excluded from modernity’s progress. Subsequently, with the present return of Edo popular culture, Japan’s struggle for modernity through a laborious process of internalizing objectivity and self-reflection succumbs too easily to uncritical acceptance of postmodern cultural flattening and the effortless collapse of subjectivity.<sup>15</sup>

More importantly, although intended as a criticism of postmodernism, Karatani’s postulation of multiple beginnings for Japanese modernity entails the risk of absorption by the postmodern logic of looping temporality. In rejecting the linear historical progression of Western

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<sup>15</sup> Brett de Bary criticizes other logical loopholes in Karatani’s rejection of a linear history, for example his assumption of non-existing interiority in Japanese literature prior to the Edo era. She adds, “Thus, while on the one hand he uses the concept of history and origins to defamiliarize the natural and commonsensical in Japanese modernity, Karatani on the other must insist on the radical unknowability of the other-than-modern” (6-7).

modernism, he theorizes the amodern Edo, but this paradoxically solidifies the equation of Japan with the non-modern or post-modern; it also leads to cultural narcissism relinquishing temporal borders and spatial limits, while inviting the historical exclusion whereby Japan remains outside history. The impasse for Karatani's premise of looping temporality and the impossibility of modernism in Japan is shared by the digital media theory engendered by Japanese critics such as Azuma Hiroki. Japanese contemporary media products including manga and anime are read as repeating (in advance) the effects and techniques of Edo-era artifacts such as the woodblock print.<sup>16</sup> This view of contemporary media culture erases the border between new and old media as well as the historical boundaries of premodern, modern, and postmodern.

Like Karatani, Azuma confronts the dilemma of problematic reception of postmodernism in Japan through his superflat theory. As an alternative vision to the illusory unity and singularity of Modernity, Azuma particularly challenges Renaissance perspectivalism along with the Western conceptualization of the modern subject. By foregrounding image's planarity, superflat envisions non-perspectival spatiotemporal relations supplementing the geometric three-dimensional space and unified viewpoint of Renaissance optics.<sup>17</sup> Not only does superflat theory interrogate the single vision of Modernity, it also reconsiders the postmodern condition of the flattening affect through consumer behavior toward the visual narrative. As if responding to Manovich's inquiry on "how to merge database and narrative into a new form" (xxviii), Azuma

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<sup>16</sup> Taking Yoshimoto Nara's *ukiyo* painting "Cup Kid" as an example, Thomas Looser illustrates superflat art in relation to the Edo-era art ("Superflat," 99). In "Cup Kid," there is an overlap between the foundational Edo-era woodblock print and the overwriting upper layer of otaku kitsch art. This image reveals the layers of authorship, style, media, and dominant ideology from disparate time periods. Looser further explains the "anime-ic" superflat as follows: "...the ground (or background surface) of a 'digital' pictorial image no longer serves to frame the figures within the picture *as* background, but, rather, the background becomes part of the figure"; "[r]elations between images or figures are therefore more those of an open montage, in which each figure or element finds a different identity depending on which of the other elements it is brought into relation with, and there is no single correct perspective by which to orient these relations between the figures" ("From Edogawa," 308).

<sup>17</sup> See Chapter 4 for a detailed discussion of Azuma's theory of superflat visual arts.

formulates the “*double-layer structure*” of narrative consumption (31). This consists of both the deep inner layer of the database of grand non-narrative and the surface signs of small narratives. *Otaku* (obsessive collectors of manga and anime) serially consume the stories and images, infinitely generated from combining elements of characters as well as settings of the database.<sup>18</sup> Consequently, postmodern individuals are “*dissociative*,” and need to learn “the technique of living without connecting the deeply emotional experience of a work (a small narrative) to a worldview (a grand narrative)” (84). Thus, the two levels coexist separately. Similar to the concept of schizophrenia formulated by Deleuze and Guattari, the animalization of *otaku* manifests the annihilation of intersubjective desire and variations of lack-satisfaction circuits. Database animals consume image and fiction instead of reality, while projecting their affect onto the spectral eyes of manga and anime characters.

Azuma’s conception of database animals offers a snapshot of postmodern individuals in the posthuman world, but it also raises its own questions. First, his assessment of the animalization of postmodern personhood does not provide an obvious alternative to the increasingly dehumanizing consumer society of Japan. It is unclear whether his theory of *otaku* intends to criticize or justify this phenomenon. Furthermore, while Azuma regards *otaku* consumerism as a hybrid condition of Western influences combined with the reemergence of “amodern Edo Japan,” his idea of “database animals” is indebted to Alexandre Kojève’s conjecture of the post-national and post-historical world, dividing the world into American animality and Japanese snobbery. Azuma denounces the cultural narcissism of 1980s Japan wherein “modernity equals the West, [and] postmodernity equals Japan” (17). Yet by adopting

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<sup>18</sup> Jonathan Abel and Shion Kono define *otaku* as follows: “*Otaku* are those Japanese, usually males and generally between the ages of 18 and 40, who fanatically consume, produce, and collect comic books (*manga*), animated films (*anime*), and other products related to these forms of popular visual culture and who participate in the production and sales of derivative fan merchandise” (*Otaku*, xv).

Kojève's worldview of Japanese cultural snobbery, Azuma reiterates the Western-oriented historical vision. The evolutionary perspective viewing history as stages in progress is also reflected by his chronological distinctions dividing the phenomenon of *otaku* into three generations. He envisions Japanese postmodernity as defiant of the Western model, but simultaneously homogenizes Japanese cultures within it. This contradiction is a critical loophole in comparative studies towards deconstructing modernism. Harry Harootunian considers this the "denial of coevalness," which dismisses the uneven temporalities within Japanese contemporary cultures (42). Azuma's re-territorializing gesture thus contradicts his own view on the manifold origins of *otaku* consumerism springing from the *iki* of Edo-era Japan.

Azuma's plight poses a central dilemma for other critics, as demonstrated by Ueno Toshiya's take on techno-orientalism and Tatsumi Takayuki's "Japanoids" manifesto (25). Techno-orientalism, a phrase coined by David Morley and Kevin Robins, designates the phenomenon whereby Japan and East Asia in general have become a sign of the Western projection of the Other. This "Other" signifies the obsolete past and at the same time the postapocalyptic future. Ueno Toshiya, Oda Masanori, Hara Makiko, and Tatsumi Takayuki all point to (often self-imposed) robotic images of Japanoids in cyberpunk, either with caution (Ueno and Oda) or enthusiasm (Hara and Tatsumi). Self-chosen Otherness—Ueno's double consciousness (230) and Tatsumi's "creative masochism" (3)—as expressed in Japanese cultural products such as anime results from the bizarre combination of global market interest and a unique national psyche which has experienced colonialism (both as colonizer of other Asian nations and as the colonized by Western capitalism) and post-nuclear trauma. The distinctive history and geopolitics of Japan and East Asia begets a historical schizophrenia in which the

nation straddles two temporalities, a modernist ideology and postmodern material base, and the ensuing self-alienation and self-imposed otherness.

These issues posed by Japanese animation and the media theory of the superflat raise certain questions. How do we imagine temporality, which does not fall into either progressive modernity or looping postmodernity? What alternative theories can we produce concerning media and modernity as envisioning space outside its own discursive formation and homogenized, empty time? The effort to recontextualize the present historical moment is a daunting task, but it is indispensable. In this context, Harootunian's "uneven temporalities" is useful. Simply positing the "specters" of modernity of non-Western regions against the West may authorize the West-oriented, Eurocentric models of modernity. Referring to Ernst Bloch, Harootunian instead proposes "the contemporaneity of the non-contemporaneousness" and "non-synchronous contemporaneity," wherein past and present are not necessarily successive but simultaneously produced...., or coexist as uneven temporalities," as a preliminary solution to the impasse of Modernity" (47). This concept of temporality is found in everyday renewal, learning, and growth, acting against the world time of capitalism and its compulsive reproduction. *Groundhog Day* suggests a similar utopian redemption achieved by the conscious reliving of the everyday.

Despite the risk it entails, the superflat theory also offers a possible method for thinking of the present in relation to other historical moments without positing a determined origin or being incorporated by limitless spatiotemporal loops. Evaluating its potential "retheorization of possibilities in the present," Looser holds that "the Superflat image shows us how the Edo era was a truly different world—a kind of limit to our own—even while it can also be very much part of the definition of our time" (108). In this regard, Japanese animation and the surrounding

media criticism provide ways to define our present historical moment. Thus, new media in practice and theory enables us to frame the question of repetition and temporality within the historical context of modernity and post/modernism.

Theodor Adorno's analysis of the significance of film against the backdrop of social changes in late-nineteenth and early-twentieth century Europe illustrates how we reconfigure the question of new media within the dialectics of art and cultural industry. Art has an ambivalent relationship to cultural dominants, with its representation simultaneously resisting and reiterating reality when it becomes a commodity entering the empirical world of production and consumption of the capitalist system and political networks (6-7). Subsequently, one art form always returns to the "past" art form, illuminating the blindness of the present. This negativity in art pushes society to resist surrendering to the totality of the barbarous system and compulsive reproductive cycle of capitalism. New media as art and cultural industry is not free from this relation between artistic representation and empirical reality; rather, to provide that newness which awakens the mind and refreshes perception, new media should maintain the negativity that is the basis with which true newness works.

## Chapter Two

### From Representation to Immersion: Richard Powers's *Plowing the Dark*

But poetry, as the authentic gauging of the dimension of dwelling, is the primal form of building. Poetry first of all admits man's dwelling into its very nature, its presencing being. Poetry is the original admission of dwelling... Man is capable of such building only if he already builds in the sense of the poetic taking of measure. Authentic building occurs so far as there are poets, such poets as take the measure for architecture, the structure of dwelling.

—Martin Heidegger, “...Poetically Man Dwells...” (224-5)

New Media have to date suffered not from a *surfeit* of virtuality but from not being *virtual enough*.

—Richard Powers, “Being and Seeming” (no pagination)

Richard Powers's *Plowing the Dark* (2000) is set simultaneously in a research lab in Seattle and a prison cell in Beirut. The novel consists of two narrative strands: a story of the creation of immersive virtual environments by a group of researchers residing in Seattle, and that of a young Iranian-American hostage in Beirut. The uncanny convergence of the two storylines at the end signifies Powers's challenge to mimetic realism. Neither realist novel nor conventional science fiction, Powers's work holds a unique position among contemporary American literature. The novel's unusual second-person singular narrative, inducing readers' immersion, problematizes the distinction between old and new media, while the juxtaposition of poetry and virtual reality intimates that language is the ultimate medium through which humanity builds other artifacts and brings itself into existence.

Evaluating the novel's dual structure, Daniel Zalewski writes, “‘Plowing the Dark’ is a novel of brute juxtaposition, a work that cross-cuts between these two disparate realms in order

to draw connections between the virtual reality of cyberspace and the virtual reality of the human mind” (no pagination). His praise stops short of complete acclamation; he calls the novel’s surreal ending “an empty sort of razzle-dazzle,” which “feels like a sentimental feint.” In response to this criticism, Charles Harris and Trey Strecker regard the fantastic ending as Powers’s attempt to contest conventional mimetic realism. Although not considered typical speculative fiction, *Plowing the Dark* nonetheless can be seen as Powers’s exploration of the margins of representational realism. His challenge to realism can be read within the context of postmodernism, which in general interrogates modernity’s totalizing impulse toward mastery via complete literary representation.

Neither realist nor metafictionist, Powers is distinct among postmodernist novelists. He has often been criticized for his essayist fiction and apparent disinterest in character development,<sup>1</sup> leading to critical dissatisfaction with the lack of traditional realism in his novels. However, as Powers says, “focalized information *is* character.” His characters are depicted as embodied forms of information rather than full-blown realist personages with psychological depth. He defines his novel as a hybrid “generating new terrain by passing ‘realism’ and ‘metafiction’ through relational processes” (“Making,” 308). Accordingly, Tom LeClair calls Powers’s work a “prodigious novel,” along with the fiction of William Vollmann and David Foster Wallace. Influenced by Thomas Pynchon and other 1970s and 1980s’ novelists absorbing the cultural impact of cybernetics, Powers, Vollmann, and Foster Wallace “insist on transforming the synecdochic scale of traditional realism, ‘overloading’ their stories to reflect the accessibility and relevance of technical information in the lives of contemporary characters

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<sup>1</sup> Michiko Kakutani evaluates *Plowing the Dark* as a “highly schematic novel of ideas, a static if often provocative book that reads like a series of essays...” John Sutherland considers the novel “intellectually discursive...to expound complex topics.” He says, “[Powers is] not too hot on character development” (20).

(“Prodigious Fiction,” 16). Joseph Tabbi considers Powers’s aesthetic “cognitive realism,” pointing to “an essayistic aesthetic whose truths are primarily cognitive rather than representational” (*Cognitive Fictions*, 76). Consequently, Powers is considered in the lineage of John Barth’s “maximalist fiction,” Thomas Pynchon’s “encyclopedic narrative,” and Don DeLillo’s “systems novel,” in exploring the “worldness” overreaching our abilities of cognitive mapping and aesthetic representation.

As in his novel *Galatea 2.2* (1995), Powers’s *Plowing the Dark* explores the potential and limits of human language in visualizing and creating reality, conversely calling into question what constitutes the human and the real. *Galatea 2.2*, a novel about “teaching a human to tell” (318), revisits humanism as a specific condition and ideological product of post-Renaissance Europe. *Plowing the Dark* suggests that realism is not a timeless and universal mode of thought and expression but a particular historical and philosophical construction of the post-Enlightenment modernity. Thus, Powers’s indictment of dreams of perfect realism, exemplified by the aspirations of new media technologies, can be regarded as a broader critique of modernity’s desire to conquer and objectify the world as a controllable picture.

The aforementioned ending exemplifies Powers’s interrogation of mimetic realism. The *mise-en-abyme* structure in which Adie’s story is incorporated in Taimur’s narration and Taimur’s in Adie’s goes beyond a metafictional moment disrupting total representation of reality and complete immersion into story. This unusual structure demonstrates how narrative is reshuffled and characters’ and readers’ observations are reformed, as the reading circles back on itself like a feedback loop. Powers’s use of a “projective” technology such as virtual reality, which exists in the real world but has not been developed to the extent described in the novel, is also a strategy for questioning of the real. Thus, the blurred boundaries between real and

imaginary recall Tzvetan Todorov's concept of the fantastic on the one hand, and connect Powers's fiction to cyberpunk on the other.

As art enables the interrogation of reality, Powers further compares the use of words and symbols—humanity's prime artifacts for expression and creation of reality—by poetry and virtual reality. Subsequently, the distinction between old and new media becomes confused; language as material builds both poetry and virtual reality art and makes the audience's immersion into the work possible. The novel's "stereoscopic" of past and present, memory and imagination, poetry and virtual reality, illuminates the creative power of language in the Heideggerian sense: language is not a simple tool but the space for humanity to dwell and define reality; it is the "ultimate medium." On the other hand, complete immersion or representation is impossible due to the dual nature of language as technology, which in essence works against itself. Language's issues with visualization and its supplementary relationships with other modalities—image, sound, smell, and texture, which new media art directly reproduces—have become negative proofs revealing the inescapable limits. This failure is nonetheless a proof of not the impotence but the redemption of language as an artistic medium and technology. Language's proximity to and distance from reality—"the gap between sign and thing" (*Plowing the Dark*, 400)—creates a mediating space for counteracting the tendency toward the total aestheticization of modernity. It also suggests the possibility of intervening with the rapid compression of spatiotemporal distance, induced by contemporary media technologies which conspire with the interests of global capitalism and military imperialism of the transnational, neoliberal era.

### **The Fantastic: Powers's Challenge to Mimetic Realism**

Typical of Powers's novels, two storylines intertwine in *Plowing the Dark*. The novel is set in the Realization Lab of the corporation Terasys, located in the Pacific Northwest of the United States. Adie Klarpol, a painter turned commercial illustrator, joins her college friend Steve Spiegel and a group of researchers, engineers, and computer programmers to create immersive virtual environments. A three-walled space they build is called the Cavern, reminiscent of Plato's allegory of the cave as well as the University of Illinois's CAVE technology launched in 1992. Through their own imagination assisted by virtual reality (VR) technology, the lab workers transform an empty projection cubicle into virtual environments simulating the paintings of Henri Rousseau's *Dreams* and Vincent van Gogh's *Bedroom in Arles* as well as the Hagia Sophia, the Byzantine cathedral in Istanbul. Adie finds out later that their work is marketed to military and corporate buyers; however, out of despair and hope, instead of destroying everything she has built, Adie creates another room representing the destruction and regeneration of civilization. The second narrative strand tells of the kidnapping and four-year imprisonment of an Iranian-American teacher, Taimur Martin, in Beirut. It is implied that the small cell in which Taimur is held is analogous to the Cavern. Both are "screening rooms" where the human mind projects memory and imagination. The two narrative streams surreally merge at the end: when Adie enters the Cavern one last time and soars to the dome of her cathedral installment, she sees a ghostly figure of a man, suggested to be Taimur; simultaneously in Beirut, Taimur mentally projects himself inside the Hagia Sophia, watching an angelic creature dropping from the sky.

*Plowing the Dark* begins with two epigraphs illuminating the meaning of the novel. One proclaims art's autonomy from its surroundings, while the other suggests the artifact's power of

worldly creation and destruction. The first epigraph expresses W. H. Auden's creed of the modernist aesthete: "Poetry makes nothing happen." The second comes from the point in Gertrude Stein's autobiography where she catches the moment of Pablo Picasso's artistic epiphany as he watches a camouflaged cannon on the boulevard Raspail in Paris: "C'est nous qui avons fait ça...it is we that have created that." Picasso implicitly acknowledges that the techniques of color and light used by modern painting since post-Impressionism unwittingly contributed to the development of weapons technology. Throughout the novel, Powers oscillates between these two apparently opposite views on art as an autonomous object transcending the material world and a powerful technology for creation and destruction. Yet it is clear that the novel tips the scale toward the latter. Picasso's astonishment is echoed by Adie's horror as she realizes the unlikely connections between her crayon dreams of "[making] something beautiful" and smart bombs, SCUDs and Patriot missiles—technologies of military bombing and surveillance.<sup>2</sup> Watching the first Gulf War unfold—the first globally televised war-as-spectacle—she asks her colleague Karl Ebesen, "*Did we do this?*" (397). The naïve aestheticism regarding art as merely "the mirror of nature" and "the thing that made nothing happen" falls into its own trap when employed by "the world machine...to bring itself into existence" (398). Here, Powers indicates that art *does* result in destruction when it is merely instrumental.

The novel provides a snapshot of the state of VR (virtual reality) in relation to the technology of visual representation and real-time surveillance used for military warfare and capitalist interest. Exemplified by the development of ARPANET (the prototype of the Internet), state military cooperation with virtual technology has a long history reflected in Steve's

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<sup>2</sup> Carl Scholz says, "In 1995, exclusive manufacturing and marketing rights to UIUC's CAVE technology were acquired by the Canadian company Fakespace Systems, which has among its clients the U.S. Army, Wright-Patterson Air Force Base, General Motors's Defense Group, and the nuclear-weapon national laboratories at Los Alamos, Livermore, and Argonne" (298).

comment: “*If you want to know the truth, we’re stealing their code. The whole runaway century, living off military spin-offs*” (396). Ryan Bishop and John Philips have observed the novel’s reference to the link between technologies of visual representation and military R & D projects in the context of the repeated history of the Cold War in the post-Cold War world. The “New World Order” shaped by the Tiananmen Square protests (1989) and the first Gulf War (1990), the novel’s background, and the War on Terrorism, anticipated by the novel, repeats Cold War rhetoric of the preemptive strike and “projectile identification”<sup>3</sup> through advanced satellite simulation technology. It aims at “creating targets, targeting targets, watching targets, and striking targets” (Bishop and Philips 281). The goal and logic operating in both VR and military technology is the elimination of mediating spaces between sign and reality (in VR) and the perceiver and target objects (in combat missions). Virtual reality dreams of “the final interface” and “the ultimate display” which would erase the gap between symbols and things (400).

However, the military mission and technological dream of erasing the interface through virtual reality is impossible due to the technology’s ambivalence working against its own impulse for absolute representation and mastery. Along these lines, Bishop and Philips point to the common ground on which Cold War rhetoric and Powers’s novel are based—“[t]he promise of the technical sciences and representation...found in their operating ‘as if’ their goals were possible...converging with the impossibility of this completion in the undesirability of both positions” (284).<sup>4</sup> They conclude that, like Adie’s VR and Taimur’s mental projection upon a

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<sup>3</sup> Bishop and Philips’s term “projectile identification” is derived from Sigmund Freud’s “projective identification” which in itself is “an extension of Nietzsche’s idea of action at a distance.” Projectile identification “invests the object relation with a ballistics that increasingly quickly closes the gap between distance and proximity” (277). The term recalls Paul Virilio’s study of the symbiosis of cinematic technology and military warfare in *War and Cinema*. Indicating the eye (later replaced by a sight machine such as intelligent satellites) being a weapon, Virilio writes “A war of pictures and sounds is replacing the war of objects (projectiles and missiles)” (4).

<sup>4</sup> Bishop and Philips write, “The fictional that is mobilized out of the impossibility of completion as the grounds for its own emergence becomes in Powers’s novel the means of for making not only representation possible but for

blank wall, Powers's storytelling can be seen as a projectile technique participating in Cold War escapism which, through the duplicating power of representation, aims to destroy the terror of reality and the unknown future rather than the "enemy" apparent. While I agree with Bishop and Philips's double logic of the promise and impossibility of technologies and representation, they incorrectly equate what the characters say and how the novelist frames it, ignoring the novel's outer structure critical of the very aesthetic escapism evinced by the characters' conversation and narration. Powers's narrative goes beyond mere self-reflection on Cold War rhetoric on which it is found; it emerges as a powerful self-criticism of the impulse of linguistic mastery and aesthetic realism.

*Plowing the Dark* deals with VR in the two realms of the technology of cyberspace and virtual reality of human imagination, asking fundamental questions about what the real is and how we experience and represent that reality. As Bradley Smith argues, the novel foregrounds the "perception-based" phenomenological real founded upon St. Augustine's "lived-time," in opposition to Newtonian mathematical time. Rather than reality objectively existing outside us, the real from a phenomenological perspective is "the things that help us create our presence" in the world (97). As "the passage of time and the presence of space extends from within us," Bradley states, "'reality' occurs when the time-spaces of two or more observers seem to coincide" (99). Reality then is defined by the experiences shared by multiple observers connected to one another in a space, whether real space or cyberspace. This definition recalls William Gibson's "consensual hallucination" describing cyberspace (5). One of the most crucial occurrences in *Plowing the Dark* is the uncanny encounter of Adie and Taimur inside the Hagia

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making fiction, especially in the past century and a half, also possible. *Plowing the Dark* explores how the novel itself participates in the processes that emerge from the historical grounds of the Cold War, and foregrounds the implications... Several key passages in the novel equate the *projectile identification* of ideas with that of narrative itself" (284-5).

Sophia (one in cyberspace, the other in human imagination) at the novel's climax. As the two characters live in the same time-space momentarily, the convergence of the two plotlines blurs the distinction between reality and virtuality, creating an experience of "something more than allegory" and "less than real," "more than representation, but not yet stuff," according to the unnamed narrator in Chapter 43 (400).

The novel's fantastic climax of "stereoscopic" union<sup>5</sup> is central to Powers's questioning of reality and mimetic realism. Near the novel's end, agonizing over her unintended complicity with military development of weapons, Adie decides to destroy all her contributions. When she enters the Cavern one last time and soars to the dome of the virtual Hagia Sophia for an overview, she sees the figure of a man:

She twisted and looked down into the breach below. The God's-eye view: in simulation, but not of it. And deep beneath her, where there should have been stillness, something moved.

She dropped her finger, shocked. The winch of code unthreaded. She fell like a startled fledging, back into the world's snare. The mad thing swarm into focus: a man, staring up at her fall, his face an awed bitmap no artist could have animated. (399)

Adie's shock in finding the ghostly man inside her virtual Hagia Sophia is juxtaposed with Taimur's vision of an angelic figure in his mental projection. A dozen pages later, Taimur, upon his release, narrates to the authorities how his hallucinatory visit to the Hagia Sophia rescued him from collapse into madness during his final days as a hostage:

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<sup>5</sup> Stereoscopy is a technique for creating illusory depth and three-dimensional visual space in an image. In the novel, Jack Acquerelli, "Jackdaw," explains to Adie: "*The stereoscopic effect comes from the glasses. Shuttered lenses. We've settled on a hundred-and-twenty-hertz oscillation. Alternate left-eye and right-eye views, each flashing sixty times a second. We sync the projected images to the shutter rate. Your eyes put the two back together. That's where you get the sense of depth. The stereo 3-D*" (27).

You'll have to say, someday: how the walls of your cell dissolved. How you soft-landed in a measureless room, one so detailed that you must have visited it once. But just as clearly a hallucination, the dementia of four years in solitary. A mosque more mongrel than your own split life, where all you memorized Qur'an and Bible verses ran jumbled together...

The walls bore the wounds of a protracted battle... Strange flickers led you deeper into the light, until you stood dead center, under the stone crown. Then you heard it, above your head: a noise that passed all understanding. You looked up at the sound, and saw the thing that would save you. A hundred feet above, in the awful dome, an angel dropped out of the air. An angel whose face filled not with good news but with all the horror of her coming impact. A creature dropping from out of the sky, its bewilderment outstripping your own. That angel terror lay beyond decoding. It left you no choice but to live long enough to learn what it needed from you. (413-4)

Daniel Zalewski dismissively considers this passage as “a sentimental feint.” While this assessment takes into account the passage’s placement in the traditional narrative whole, it ignores Powers’s deliberate narrative technique of defamiliarizing verisimilitude in art and disrupting representational realism.<sup>6</sup> The passage’s un-realism or surrealism momentarily shatters the novel’s smooth representational frame and awakens readers to its fictionality.

Charles Harris recognizes “a dual schizophrenic meltdown,” as demonstrating Powers’s postmodern metafictional mode: “... ‘a sudden jump-shift in epistemic levels’ (“A Dialogue” n. p.) ruptures the novel’s referential dimension, making clear that, despite its realistic surface,

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<sup>6</sup> Among notable contemporary criticisms of realism, Andrew Gibson’s comment is worth mentioning. Gibson writes, “At all event, it is time for postmodernity to think mimesis and anti-mimesis together, as intertwined parts of a puzzle that we shall possibility solve” (103). In cinema criticism, Teresa de Lauretis also regards representationalism as ideological construction (qtd. in Harris 110).

*Plowing the Dark* participates in the ongoing postmodernist critique of representational thinking”(110).

What further differentiates Powers from earlier generations of postmodern novelists such as Don DeLillo and Curtis White is his targeting of the Platonic aspiration to pure Forms and disembodied information, manifested in the virtual technologies in the Cavern. As a critique of total representation, the above passage defies the realism inducing readers’ absolute immersion into the text, erasing the distance between fiction and reality. In so doing, it poses a doubt on VR’s metaphysical dream of bypassing the interface eliminating the gap between symbols and realities. Whereas Powers’s use of the second-person singular in Taimur’s narrative simulates the immersive mode, the final breakdown of plotline boundaries disrupts that total immersion. Harris holds that “Adie uses the technology of virtual reality to undermine VR’s technoromantic dream, just as Powers uses the codes of realism to problematize the adequacy of the mimetic relation to the real” (123). Adie’s involvement with VR awakens her from blind aestheticism and her own dream of absolute representation, allowing her to resurface to the world refreshed, just as the demonstration of her final installment ensures for the audience that “no one walks out the way he came” (410). Likewise, Powers’s troubled relationship with mimetic realism offers the experience of “not a closed aesthetic loop, but [it] spirals us back into the world...” (Harris 122). Similarly, Powers notes that the essential value of story is “denuding,” which is “laying the reader bare.” He writes:

...the force of that denuding lies not in our entering into a perfect representation, but in our coming back out. It lies in that moment, palpable even before we head into the final pages, when we come to remember how finely narrated is the life outside this constructed

frame, a story needing only some other minds pale analogies to resensitize us to everything in it that [we've] grown habituated to.

("Being and Seeming," no pagination)

Powers's comment implies that the reading experience is analogous to what occurs to the audience's mind as it leaves the Cavern in the novel. Every art, including that of story, defamiliarizes reality to allow for rediscovery of the world.

The surrealism surfacing at the novel's climax can also be considered Powers's inquiry into rationalism. Not only does the passage's metafictional instance interrupt the reader's complete immersion into fiction, it also momentarily suspends the reader's judgment based on distinctions between the real and the imaginary. Given the spatial distance and temporal gap between them, Adie and Taimur's rendezvous is unaccountable with current scientific knowledge. Yet the textual logic *almost* convinces readers of the space of the probable—if not intellectually, then emotionally. Zalewski's "sentimental feint" unexpectedly illuminates this overloading of feeling as opposed to knowing, exhibiting the power of the literary originating from the questioning of what is accepted as "fact" and "truth." There can be a number of plausible explanations for Adie and Taimur's virtual encounter. Both Adie and Taimur have hallucinations; the ghostly man in Adie's VR installment and the angelic figure in Taimur's vision inside the Hagia Sophia might be the products of each character's imagination. Or, Adie's virtual reality machine has indeed successfully incorporated the reality of Taimur's captivity within the system (in which case *Plowing the Dark* is speculative fiction). Or, the merging of two different timespaces across the spatiotemporal gap can be explained through topology and systems theory, to which I will return later. Or, there is no rational explanation for this fantastic

resolution; we accept it as the author's allegory or poetic metaphor connoting the power of imagination.<sup>7</sup>

These (im)possibilities for making sense of the passage result in the readers' feelings of ambiguity and hesitation, recalling Tzvetan Todorov's theorization of "the fantastic." According to Todorov, in the genre of the fantastic dealing with the experience of limits to nature and humanity, a hesitation is common for the reader and character "who must decide whether or not what they perceive derived from 'reality' as it exists in the common opinion" (41). The fantastic is adjacent to two other genres: the uncanny, if the puzzling circumstances are explained by existing laws of reality; and the marvelous, if new laws are required to explain the phenomena, as in science fiction.<sup>8</sup> Moreover, as the fantastic calls into question "the existence of an irreducible opposition between real and unreal," it moves beyond genre to represent literature in general; "[by] its very definition, literature bypasses the distinctions of the real and the imaginary, of what is and of what is not" (167-8). Todorov's analysis of the fantastic is based largely on eighteenth- and nineteenth-century European gothic, an expression of the premodern remnants and "bad conscience" of the rationalist era established on the metaphysical distinction between reason and superstition. Indeed, gothic is not so much a genre in the strict sense but "a recurring moment within the history of modernity" from the eighteenth century on, according to Christopher Keep (paragraph 12). The fantastic ending suspending the reader/character's belief in the distinction between the real and the imaginary in *Plowing the Dark* thus revisits the neo-rationalism of contemporary post-humanist dreams of transcendence, illustrated by the Realization Lab's building of the Cavern in the novel.

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<sup>7</sup> Ursula K. Heise interprets the encounter as "a metaphor for global connectedness" (226).

<sup>8</sup> Todorov particularly calls science fiction the "instrumental marvelous." In science fiction, "the supernatural is explained in a rational manner, but according to laws which contemporary science does not acknowledge" (56).

*Plowing the Dark* even unsettles Todorov's classification within the fantastic—that is, the distinction between the uncanny and the marvelous. The novel belongs to neither the uncanny nor the marvelous, and the hesitation from the climatic scene is not quite resolved through suggestion of a single reasonable answer. *Plowing the Dark* is not a typical science fiction depicting alternative universes with different sets of rules operating and explaining things, nor is it an entirely realist novel; the description of VR derails actual reality as it exceeds the degree of the current status of that technology in the real world. In this context, Carter Scholz compares Powers's quasi-realist use of "projective" technology with the speculative futurity and "counterfactuality of 'what if'" in conventional science fiction. The virtual reality in *Plowing the Dark* and the Artificial Intelligence in *Galatea 2.2* can be misleading in that they exist in the real world and thus are not entirely fictional, but have not developed to the extent that the novels describe. Therefore, Scholz states, "Powers steps us sideways, not into futurity, but into a false alterity, a world exactly like ours, except that a nascent technology has been plausibly amplified and extended" (295-6). Powers's prose, loaded with scientific information in the detailed essayist descriptions characteristic of his style, contributes to the plausibility of the projective technology and the uncanny proximity of a "false alterity" to our world. The technology actively in use such as UI-UC's CAVE, upon which the revolutionary VR in *Plowing the Dark* is modeled, "faded into...a shadow existence" in reality due to its lack of commercial value and technological incapability. Powers's "rhetoric of exposition," with its meticulous technical details, leads the reader to believe in the technology's existence. The strangeness of Powers's universe is different from that of conventional science fiction in which our world is often deliberately displaced or estranged for allegorical purpose.<sup>9</sup> His universe as set in our contemporary world feels strange in

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<sup>9</sup> Darko Suvin defines science fiction as "a literary genre whose necessary and sufficient conditions are the presence

part because it is founded upon real technology but tweaked with a false acceleration rate, resulting in Powers's unique "jump-shift of epistemic levels" from reality to fiction, from contemporaneity to alterity.

This shift between contemporaneity and alterity, and the blurred boundaries of reality and fiction, relate Powers to cyberpunk within the larger context of postmodernism and the genre of science fiction. As Istvan Csicsery-Ronay, Veronica Hollinger, Brian McHale, and J. P. Telotte propose, cyberpunk's originality as a subgenre of science fiction springs from the circulation of common motifs between 1960s/'70s New Wave science fiction and the mainstream postmodern fiction of Thomas Pynchon and William Burroughs. Brian McHale suggests that, through cyberpunk, science fiction has become postmodernized and the postmodern novel science-fictionalized, by relying on thematic and stylistic materials from a common intertextual reservoir (*Constructing*, 229; 233). Cyberpunk's achievements can be summed up as the literalization of postmodern metaphors: consider for example Gibson's coinage of "cyberspace" for the allegorical representation of the unrepresentable "worldness" of the world, and the metaphor of "simstim" for the out-of-body experiences and multiple perspectives taken on by the decentered postmodern subject ("Elements," 150).

Cyberpunk's stock characters and settings such as cyborgs and cyberspace are particularly troubling categories, problematizing the barrier between imagination and reality. These fictional speculations have their equivalents in the real world; the World Wide Web offers a parallel to cyberspace. Though not used allegorically, the virtual reality in *Plowing in the Dark*, which is ambiguously factual and imaginative, makes Powers's work a mainstream counterpart

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and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author's empirical environment" (7-8). Carl Malmgren argues that by using a science-fiction framework a writer provides the reader with an estranged or alternative social order (5). According to Malmgren, the typical plot of science-fiction often includes the protagonist's visit to a utopian or dystopian society, during which the visitor and in some sense the reader are invited to compare that society with their own.

of cyberpunk. The projective technology of the Cavern's virtual environments is not totally factual but nonetheless based on real scientific developments. Powers's detailed description of technology, the knowledge of which he obtained both firsthand as a former computer programmer and secondhand as a layman researcher, also contributes to readers' *false* conviction of the make-believe of the projective technology. Rather than the allegorical fashion in science fiction, Powers's essayist writing provides specific disciplinary information; this element contributes to his deconstruction of Todorov's generic categories of the uncanny and the marvelous.

### **Tales of a Painting: From Representation to Immersion**

The uncanny encounter of Adie and Taimur at the climax of *Plowing the Dark* exposes the influence of contemporary scientific theories on Powers's work. The passage demonstrates the moment of "reentry" defined by systems theory, described by Niklas Luhmann as occurring "whenever a system makes the difference between system and environment and *copies* that difference in the system to be able to use it as a *distinction*" (36). This is a recursive procedure in which the observer makes "a new distinction, which then enters into the system it describes and alters it" (Tabbi xxii). Thus, according to Trey Strecker, the mise-en-abyme structure where Taimur is located within Adie's VR machine and Adie within Taimur's imagination illustrates the second-order observation which "observes 'the observer in the world observing the world'" (190). Fiction (and art in general) divides the world into the real and the imaginary to provide this opportunity for self-observation and location of its blind spots. In *Plowing the Dark*, that distinction between reality (the unmarked environment) and the world of fiction (the marked system) is copied within the novel as the distinction between the novel's reality and the virtual

reality of the Cavern. Adie's entrance into Taimur's world and Taimur's into Adie's mirror the process in which the observer enters the world of their creation and observation and alters it while being altered by it. The two characters' virtual interaction and the merging of the two plotlines showcase the recursive structure of the novel. The result of this recycling is that the meaning of the novel is constantly reshuffled, as the characters' minds are reshaped. The information is likewise restructured as the reading process moves backward, forward, and circles back.

The Cavern in the novel represents the timespace founded upon these principles of recursivity and feedback, illustrating Powers's conception of the universe as well as the reading process suggested by the novel. The Crayon Room—the Realization Lab's demo creation and the first virtual environment which Adie experiences—prefigures the topological, warped space of the Cavern, and further anticipates the novel's textual space in which the two storylines unfold and interconnect across the spatiotemporal gap between Adie and Taimur. Reminiscent of the Garden of Eden, the Crayon Room is dimensionless, unpopulated, and “prelapsarian” (19). The anonymous narrator explains, “The Crayon World feels bigger than it is. Its space is curved. It wraps back onto itself.” With looping trails and recycled scenes providing observers with a certain sense of *déjà-vu*, in the Crayon World “the path is past preserving, and the crayon adventure knows no goals except itself (20).” The Crayon Room, symbolic of mankind's infancy, ultimately connects Adie's childhood of crayon dreams and the final scene of the childish drawing in which Taimur's daughter sketches her father—“a crayon man, returning to a crayon home” (415). This motif of circling reiterates the novel's recursive structure; the novel's characters cannot “[walk] out the way [they] came” from the demonstration room (410), despite the initial design of the Crayon Room as “[t]he test of how to enter it, and walk back out intact.”

Due to his comprehensive use of scientific discourses such as systems theory for plot development, and his incorporation of encyclopedic knowledge into story, Powers has been linked to authors such as Thomas Pynchon and Don DeLillo in the traditions of “encyclopedic narrative” and “systems novel.” Illustrating Melville’s *Moby-Dick*, Joyce’s *Ulysses*, and Pynchon’s *Gravity’s Rainbow* as examples, Edward Mendelson defines encyclopedic narrative as follows: “Each major national culture in the west...produces an *encyclopedic author*, one whose work attends to the whole social and linguistic range of his nation, who makes use of all the literary styles and conventions known to his countrymen, whose dialect often becomes established as the national language...” (1268-9). Encyclopedic narratives “attempt to render the full range of knowledge and beliefs of a national culture, while identifying the ideological perspectives from which that culture shapes and interprets its knowledge,” often making extensive use of synecdoche.

In reference to Mendelson’s definition of encyclopedic narrative, Trey Strecker also writes: “these massive fictions must originate during periods of cultural turmoil, articulate an emerging culture’s sense of its existence, catalogue a range of literary styles and narrative forms, and represent the current state of knowledge through a synecdochal account of technology, science, art, or sociopolitical vision (“Ecologies,” 68). The new generation of encyclopedic writers such as Powers differs from their predecessors, whose work single-mindedly attempts to represent the cultural dominant of their era. Contemporary novelists including Powers, Vollmann, and Foster Wallace do not follow the “hard-wired and solitary geniuses of tradition” (LeClair 15). While showing how individual consciousness processes information, these authors demonstrate how the consciousness is integrated with informational networks and shaped by natural and technological environments. There is no sense of a totalizing picture of ultimate reality presented

by an external observer independent from the world which s/he observes; rather, the observer is incorporated as part of the system that they are observing.<sup>10</sup> Accordingly, for Trey Strecker, Powers's novels—particularly *The Gold Bug Variations* (1991)—have a cross-referential system, “not a totalizing ‘literary monument’ but a *narrative ecology*” (“Self-Organization,” 230-1). Through the “complex, hybrid networks of information systems linked by narrative,” Powers invents the ecologies of signification. Strecker writes, “As readers of *The Gold Bug Variations* move through the text’s multiple cross-referenced narrative trajectories, they notice nonlinear feedback where earlier ‘states’ of the system’s (novel’s) iteration are reiterated in proliferating narrative variations.”

Relating Powers to earlier generations of systems novelists, Joseph Tabbi regards Powers against the backdrops of cognitive science, cybernetic theory, and media ecology. Powers's novel resides a marginal space “not of representation but *resemblance*” (*Cognitive Fictions*, 76). Neither realism nor metafiction, his aesthetic of “likethisness” is cognitive instead of representational: it is “an aesthetic like realism, but not; like postmodern metafiction, but not... .” Tabbi terms Powers's aesthetic “cognitive realism,” shared by other writers such as Thomas Pynchon, Paul Auster, and David Markson. Deriving from systems theory and other cognitive models, cognitive realism originates out of “the narrative interplay *between* first- and third-person accounts, as the reading mind fluctuates between concrete and conceptual discourses” (xxi). The journal-like narratives of these authors represent “not thought as such but its systems of *notation*, material marks on a material page written by a particular thinker in the course of her thinking.” In these author's works, the character as well as the reader is not so

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<sup>10</sup> Tom LeClair explicates the term “systems novel.” The term refers to postmodernist novels characterized by the theme of modern individuals rendered as part of technological environment. These novels also use excessive telling and narrative feedback. See LeClair's *In the Loop* with respect to the systems novel as exemplified by DeLillo's work. The systems novel is often associated with John Barth's “maximalist fiction,” Bruno Latour's “scientification,” and James Wood's “hysterical realism.”

much an interpreter of a text as an observer of a system constantly restructured by feedback of information as the self-conscious mind reenters into the system. Their narratives aim at momentary self-observation rather than either a full presentation of reality or complete character development. Thus, Tabbi concludes, moving beyond “the suspension of disbelief required of a conventional, representational realism,” Powers’s fiction “challenges bounded conceptions of the mind in favor of a mind able to reflect back on itself and reengage the environment after the accumulation of (previously indistinct) information,” Tabbi concludes (76).

Many of Powers’s novels unfold the “worldness” exceeding individual cognition of the world beyond representational limits. As with the earlier postmodern novelists such as Barth, Pynchon, and DeLillo, Powers’s work presents an ontological probation, the distinguishing factor Brian McHale finds between postmodern literature and modernist novels focusing on epistemological exploration (*Postmodernist Fiction*, 9-11). Additionally, Powers’s posthumanist characters as embodied forms of information are a kind of closed system, decentered and simultaneously interconnected to the broader network of information and the natural and technological surroundings.

As Powers’s novel employs cognitive realism influenced by systems theory, his characters are often rendered as focalized units of information, unlike the full-blown human characters of conventional realist novels. James Wood bemoans this postmodernist trend wherein “information has become the new character,” maintaining that many contemporary novelists have stopped inquiring into “language and the representation of consciousness” (43). Yet whereas Powers’s characters act in part as embodied information units, language and the consciousness remain the focal points in *Plowing the Dark*. Adie can still be read as part of the bildungsroman tradition, in her development from a naïve aesthete to a more mature artist

conscious of the surrounding politics and technological changes of the world to which she belongs. The difference between Powers and his predecessors is that he regards the consciousness as overreaching individual boundaries. The consciousness of modern individuals emerges from their interactions with environments and connections to historical, political, cultural, and technological networks exceeding the horizons of individual minds. Hence, as Powers himself remarks, the systems novelists who have influenced his work represent “not *elements* of character or milieu, but complex *processes* of reciprocity in which selves and environments come together to bring about and shape each other” (“Making,” 306).

Furthermore, as in his other novels, language is Powers’s main concern in *Plowing the Dark*. Suggesting the potential and limits of verbal representation in relation to the new media mode of immersion, *Plowing the Dark* delves into the power of poetic language as humanity’s most characteristic artifact and a prime resource to build other technologies. It is no coincidence that “Sailing to Byzantium,” a poem by William Butler Yeats, is the novel’s underlying theme, continually invoked by Steve Spiegel and other researchers working at the Realization Lab to reach their Platonic dream. With Yeats’s “Meditations in the Time of Civil War,” the poetic prerogative looms large throughout the novel. Steve, once an aspiring poet who desires to “[program] golden mechanical birds,” in a line appropriated from “Sailing” (216), views the Cavern as “a life-sized poem that [they] can live inside” (159); “a good, polished program was everything [he] thought poetry was supposed to be” (215). Adie and Steve’s virtual building of imaginary spaces—the jungle of Rousseau’s *Dreams*, van Gogh’s bedroom, and the Hagia Sophia—insinuates that the poetics of VR is founded upon the resourcefulness of artistic medium of language.

Chapter 26 specifically juxtaposes poetry and VR art with respect to the artistic materiality making the reader/user's phenomenological immersion into a work possible. The chapter contains of Powers's stereoscopic of past and present as well as of poetry and VR, and, as in many of Powers's novels, character-doubling governs character relationships: the past love triangle of the "Mahler Haus"—Adie, Steve, and Ted Zimmerman, a music prodigy who was Adie's lover and Steve's mentor—is juxtaposed with the "new nuclear family" of Adie, Steve, and Jackdaw at the present-day Cavern. Narrated from Steve's perspective, the chapter presents a thread of the narrative relating the virtual building of van Gogh's *Bedroom in Arles*, blended with Steve's flashbacks to his college days including the pivotal scene of Adie's recitation of Yeats's "Sailing to Byzantium." The two narrative threads harmoniously echo each other, foregrounding the theme of art-making and its embodied experience—the common ground shared by poetry and VR.

The chapter is a crucial turning point with regards to the emergence of Adie as a character of embodied information and the emphasizing of language's power through the convergence of poetry and VR. Bruno Latour analyzes Steve's flashback to Adie's recitation of "Sailing" by focusing on Adie's sudden incarnation as a person to Steve and simultaneous thickening as a character for readers at roughly the midpoint of the novel. Adie emerges as "a temporal character" through the words she speaks and with which Powers describes her. In flashback, Steve sees Adie reciting Yeats's "Sailing to Byzantium" in an English class: "Once out of nature I shall never take/ My bodily form from any natural thing" (ll.25-6). Powers conveys the wonder of Steve, "the boy engineer," who is mesmerized by the beauty of the language spoken by Adie:

Once out of nature. The train of syllables struck the boy engineer [Steve] as the most inconsolably bizarre thing that the universe had ever come up with. And this female mammal uttered the words as if they were so many fearsome, ornate Tinkertoys whose existence depended upon their having no discernible purpose under heaven. The words would not feed the speaker, nor clothe her, nor shelter her from the elements... And yet, they were among the most elaborate artifacts ever made. What was the point? How did evolution justify the colossal expenditure of energy? Once upon a time, rhythmic words might have cast some protecting spell. But that spell had broken long ago. And still the words issued from her mouth, mechanical birds mimicking living things. Sound with meaning, but meaning to no end. (199-200)

“But such a form as Grecian goldsmiths make.” The girl’s lips were a factory of ethereal phonemes. “Of hammered gold and gold enameling.” Spiegel had never heard words pronounced that way—alloys of confusion and astonishment. Her mouth became the metal-worked machine its sounds describe. Whole sentences of hammered gold tumbled out of it. (200)

For Latour, through such moments, the novel revisits the conceptual categories of “idea,” “character,” “fact,” and “realistic psychology,” raising the question of what happens if we dare to “produce *flesh and blood* realistic characters out of idea, signs, symbols, calculations” (“Powers,” 266-7). This premise of making a realistic image from mathematic calculations (as in VR) and verbal articulation (in poetry) invokes the prohibition in the Second Commandment against image-making. The instantiation of the “humanoid character” in this scene illustrates the precariousness of artistic creation producing the effect of life via words and symbols, assuming the godly act. Latour connects this to Powers’s character composition, wherein “the *writing itself*

produces the pixelization” and “continuity of agency is a literary effect,” both artificial and ephemeral (267).

This leads to the nature of language as material as illuminated in the recitation passage. It is ironic that, whereas Yeats’s lines express the aspiration to disembodiment and eternal life through artifact, Powers’s passage foregrounds the materiality of verbal language; words are “the most elaborate artifacts ever made.” Not only does Adie become personified through language, she embodies the things she says—the mechanical bird whose mouth turns into “a factory” and “the metal-worked machine” that pours into the world “the whole sentence of hammered gold tumbled out of it.” Powers’s appropriation of Yeats’s poem here subverts the contentions of the original poem. Writing of the mind’s aspiration to transcend the aging body through art, Yeats dismisses the materiality of words through which “the artifice of eternity” (l.24) is invented and with which he writes. This blindness to matter in art is echoed by Steve’s VR dream of immediate knowledge and the disappearance of the interface, modeled upon the ethereal aestheticism expressed by “Sailing.” Powers puts his doubts in Adie’s mouth as she rebuffs Steve: “*All the arts, all the technologies in the world have failed to placate people. Why should it be any different this time around?*”; “*The problem is inside us. In our bodies*”; “*...We habituate. Something in us doesn’t want to stay sublime for very long*” (160).

The parallel between poetry and VR emphasizes how each of these artifacts is an earthly product created by man striving for the transcendence of nature and humanity. Artifacts are human crafts built with bricks of words and numbers, and artists assume the godly act of life-giving that goes beyond the human prerogative. In the same chapter, Yeats’s “Meditations in the Time of Civil War,” cited by Steve, mirrors Adie, Steve, and Jackdaw’s creation of van Gogh’s *Bedroom in Arles*. Powers juxtaposes Yeats’s lines, “We have fed the heart on fantasies, / The

heart's grown brutal from the fare; / More substance in our enmities / Than in our love; O honey-bees, / Come build in the empty house of the stare," against the building of the *Bedroom*. The words gradually substantiate the room—Adie, Steve, and Jackdaw's workshop and the virtual *Bedroom* which they build: "The room filled in. It materialized, up through the oils of half-finished underpainting, the penned cartoon here and there still showing through... And week by week, Jackdaw, the unlikeliest of Geppettos, labored away at the code that threatened to bring these woody constructs to life—to a life that life would accredit" (211-2). The living algorithm of the bedroom consists of words and numbers based on human imagination. The result recreates van Gogh's *Bedroom*, "a life-size poem" and livable space; rather than a mere reproduction of the original painting's image, the room is alive, surprising its makers with unexpectedly realistic responses. Steve states earlier that VR is not a mere image of a thing that they try to create; the makers conjure the thing's description as made up of words and codes, and they program the genetic algorithms in the way a real thing is created, so that it ultimately grows itself (37).

Thus, the novel intimates that all artistic creation, including poetry and VR, gives life. Adie is incarnated into a person via the words that she utters. Her bedroom comes alive by way of the code and symbols that she and her colleagues generate. "Spider" Lim, one of the Realization Lab employees, says, "...*life is not just some outside thing that happens to us. It's something we come into and remake*" (130). What the Realization Lab dares to do through decoding and recoding images of cultural monuments is not a simple visual imitation but recreation of the idea of life dependent upon the power of words and symbols. This moves Adie's half-mockingly allusion to the Biblical Savior—"the word made flesh" and the ultimate medium—with regard to what the technicians attempt to do (215). Art plays with life, and thus the artist assumes the role of the Creator. This motif of artistic reproduction in Chapter 26 and

throughout the novel, from the Realization Lab's virtual creation to Taimur's reading of the Q'uran to the symbol of idolatry and iconoclasm that is the Hagia Sophia, acts in direct conflict with the injunction against playing God that drives the Second Commandment's prohibition against image-making.

Powers's relation of art and language is reminiscent of Martin Heidegger's commentary on art and technology. Another painting by van Gogh, *A Pair of Shoes* (1886), is Heidegger's departure point for the controversy regarding art and technology and the debate on the limits of representationalism.<sup>11</sup> Delineating how van Gogh's painting reveals the essence of shoes as well as the peasant's world and her mode of being, Heidegger argues that "[t]he artwork opens up in its own way the Being of beings" ("The Origin," 165). The artwork's self-manifestation, through which it comes into presence and "erects" a world, is analogous to the position of truth as revelation. Thus, Heidegger says, "*Art then is a becoming and happening of truth*" (196). Poetry has a unique place in art as "language alone brings beings as beings into the open for the first time" (198), due to its projective power of naming. For Heidegger, poetry is "the primal form of building," enabling "man's dwelling into its very nature, its presencing being" ("...Poetically Man Dwells...," 225); thus, through language, poetry brings things into existence in their true form and opens mankind to its authentic presence in the world.

Heidegger's conception of art and poetry's power of worlding is echoed in *Plowing the Dark*. The idea of life comes into existence through words, numbers and symbols, in poetry and VR. As in Heidegger, language as technology is not merely a tool; it is a space in which mankind dwells and defines its existence. In this sense, it is significant that *Plowing the Dark* is

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<sup>11</sup> Jacques Derrida's *Truth in Painting* is in part a critique of Heidegger's representationalism. Fredric Jameson analyses van Gogh's *A Pair of Shoes* in juxtaposition with Andy Warhol's *Diamond Dust Shoes* to illustrate postmodernism (10). In contrast to the "realist pathos" in Heidegger's reading of van Gogh, Warhol's painting showcases postmodernism's superficiality and floating signifiers.

essentially about two rooms, Adie's Cavern and Taimur's white-walled prison cell, where human memory and imagination is projected. The two tales of Adie and Taimur merge twice: once through their encounter inside the Hagia Sophia—Adie in cyberspace and Taimur in his hallucination—and earlier in van Gogh's *Bedroom*. The chamber which the famous painter once occupied, the bedroom in Arles (the room as well as the artwork), combines Adie's imagination of the artist's mindscape and Taimur's memory of home. This convergence also illustrates the characters' and readers' immersion; they walk into an art work instead of observing the text from a distance.

The building of van Gogh's painting is a pivotal moment for Adie's growth as an artist, and it signals a shift in focus within the novel as well, from representation to immersion. Adie's first work as a Realization Lab employee, the creation of Henri Rousseau's *Dreams*, is a failure, deemed a mere imitative patchwork of visual quotations clipped from the masterpieces of Western paintings. Adie's *Dreams* does not realize the potential within VR, an environment in which the user can make things happen in the work. Launching into the production of van Gogh's *Bedroom*, Adie finally recognizes what the new medium provides its makers and users with in principle—the possibility of interaction with and immersion into the work. The user does not “walk through” but “walk into” the space, at which point “the room [comes] to life” (167). In the virtual *Bedroom*, the floorboards creaks when someone steps on them; the table drawer opens when touched; and the bed remembers visitors by retaining the impression of their bodies after their departure.

However, as his use of the second-person pronoun in Taimur's narrative implies, Powers also suggests that “old media,” including poetry, story, music, and painting, have always provided those possibilities of immersion. As Spider Lim says, “*The mind is the first virtual*

*reality*” (130). It is ultimately human imagination that makes virtual immersion possible.

Chapter 38 delineates the virtual tour of Chicago—including the exhibit of van Gogh’s *Bedroom* at the Art Institute—pictured by Taimur in his solitary cell. The chapter demonstrates how memory and imagination creates the world on its own, emphasizing the role of language. The unusual second-person singular narrative, directly addressing readers as “you,” induces readers’ immersion into Taimur’s projection. The use of the second-person pronoun and active verbs resembles the command mode of early textual computer games, whose communication with users in second-person address is earlier seen in the game played by Jackdaw in Chapter 16. This connection between speaking and action suggests the central function of language to immersion both in VR and narrative. This provides another stereoscopic union wherein Adie’s *Bedroom* merges with Taimur’s vision of the same painting; after several futile attempts, Taimur finally succeeds in evoking the painting in his head:

One night you walk clean to the goal. You come right up to it [*Bedroom in Arles*], and nothing breaks the spell. You stop in the archway, suffused by the Provençal sun pouring from the gallery beyond. You step across into this straw-colored guess, the one that made Gwen cry to look on. The peace that the two of you fought so hard to reach. Everything here has waited for you, the look of thought.

Soap and water and towel, a spare shirt, a wall of tilted pictures: what more does a life need to live? The bed is a little narrow for two. But in such a room, she will want to sleep close. Here you can sit still until she finds you. (354)

This chapter parallels the narration of Adie and Steve’s building of *Bedroom* in chapter 26. Both chapters jumble past memories and present creations, whether through technology or human imagination. One man’s solitary imagination “inside a similar hive” envisions for readers the

Chicago cityscape and its people in “[f]ull-color, high resolution,” not unlike VR (350). Human memory has already realized VR’s dream, immediate, untouchable, and “dimension-free.”

Taimur says, “Nothing human can harm a single pane of this illusion”; “[t]ime here is caught in the thinnest frozen section, sliced off and held to the light” (351-2). It is verbal language that enables readers’ immersion in Taimur’s illusory dreamworld.

Samuel Delany’s “paraspace” can be useful for framing the nature of language in the conceptualization of the dream space of Taimur’s imagination in the aforementioned passage as well as the cyberspace of the Cavern. The term represents the conceptual spaces of science fiction—a supplementary space questioning the ordinary, including outer space and cyberspace. It is doubly technological because we enter this world with the aid of technology, and is a purely verbal construction. Language to describe paraspace is always “shifted,” “rotated,” and “aspiring toward the lyric,” in imitation of the space that it depicts (168). The function of this lyrical language, or paralanguage, is similar to paraspace; it calls into question the transparency of rhetoric and the naturalness of ordinary language, foregrounding its technicality. Scott Bukatman notes that the meaning of a sentence such as “her world exploded” in science fiction can be both literal and figurative (*Terminal Identity*, 12; 157). Through erasing the distinction between literal and figurative, the paralanguage of science fiction draws attention to the fundamental construction of language itself.

In *Plowing the Dark*, the Cavern’s cyberspace and Taimur’s white room resemble Delany’s paraspace, an alternative dream space in which reality is called into question and the limits of verbal language manifest. Early in the novel, Adie takes Steve on a tour of the jungle of *Dreams*: “They walked on, through the clipping gallery” (129). Here, the meaning of “walk” is ambiguous because of the virtuality of the very space the two characters occupy. It means that

they enter the Cavern and walk through the gallery of the Jungle room watching a collection of bits of art that Adie have clipped from the existing paintings. Yet, since they are in the cyberspace of the Cavern, their bodies are immobile and thus cannot walk in the “real” sense. They walk virtually in cyberspace, but not in reality. This ambiguity of signification due to the lyrical language describing a paraspace questions not only the sense of the space habituated but also the meaning of the “real,” recalling Todorov’s idea of the fantastic. Todorov regards the nature of literature as “to go beyond.” Subsequently, the vocation of literary discourse is “to say more than language,” and “destroys the metaphysics inherent in all language”; “literature embraces the antithesis between the verbal and transverbal, between the real and the unreal” (175). Powers’s paraspace and his language moving towards the lyric depicting dream space exposes the impossibility of language as the condition of literary discourse in which the border between the literal and figurative is broken down.

Thus, while Powers illuminates words’ power to visualize, he also interrogates the conditions of aesthetic representation. *Plowing the Dark* portrays the current status of multimedia and its impact on humanity to intimate the limits of linguistic representation and the word’s supplementary relations to other medial and sensory modalities, such as image and sound. Ronan O’Reilly, an economist at the Realization Lab, contends that the dilemma of media technology is the problem of visualization, the same predicament faced by “a nineteenth-century neurologist stymied by how to study human thought without slicing into the living brain” (79). As the Realization Lab researchers discover, other modalities such as sound and texture are also essential to our sense of spatiality and reality. Not only the visual stereoscopic, but also the synchronization of image and sound, is crucial to users’ geometrical immersion in the virtual environment (257). The synchronizing “3-D trick” provides users with the phenomenological

experience of depth and perspective essential to our sense of reality. In illuminating this problem in media technologies of visualization and the supplementary relations among perceptual modalities, Powers's novel interrogates the conditions of artistic creation of reality. Nonetheless, the dilemma confronted by both "old" and "new" media based on language does not imply powerlessness. Rather, the issues regarding representation in language and media redeem us from the impulse toward total aestheticization and instrumentalization of technology.

### **The "White Male Novelist" and New Media**

Kathleen Fitzpatrick observes the fear expressed by postwar American novelists such as Thomas Pynchon and Don DeLillo of the passing of the printed novel in the age of electronic media.<sup>12</sup> She maintains that the "obsolescence" of print medium is a discourse generated by these novelists' representation of culture. Pynchon and DeLillo represented technology in three ways—as machine, spectacle, and network: "technologies of mechanization have produced concerns about dehumanization; technologies of image production have been greeted with concerns about illusion and ideology; and technologies of interconnection have confronted concerns about the loss of the individual" (*The Anxiety*, 27). This reflects the anxiety of marginalization felt by white hetero-normative males whose sense of individual autonomy is threatened by the indistinctive mass of racial and sexed others in association with new technologies. This "exhaustion" rhetoric, glorifying that marginalization, contributes to the sustention and rejuvenation of their cultural hegemony conspiring with print medium and the novelistic form. Patriarchal dominance subsists on logic perpetuating the "death of the novel" and angst about the impending demise (or, at least, subversion) of book-centered institutions.

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<sup>12</sup> John Barth's "The Literature of Exhaustion" and Robert's Coover's "The End of the Book" also express the writers' anxieties over the obsolescence of printed books and traditional novels.

Fitzpatrick considers Powers's *Galatea 2.2* the latest variation on this theme, as the computer as man's other disrupts our sense of the human by its performative simulation of humanity. The novel's representation of the writing machine redraws the boundaries of the universal human for the autobiographical male protagonist, "Powers," at the expense of his unnamed love objects, A and C, and the feminized computer Helen ("The Exhaustion," 556).

Nonetheless, Powers differs from other white male novelists promoting the "exhaustion" rhetoric. *Plowing the Dark* shows that language as common ground for both poetry and VR effectively erases the conventional distinction between old and new media. Language is humanity's primal artifact, whose materiality is the resource for creating other technologies; its dual power creates the world and destroys what it creates. The boundaries between the old and the new are additionally blurred by Powers's use of the second-person singular narrative simulating computer games, generating an immersive effect usually associated with new media. Instead of one replacing the other, the convergence of verbal narrative and new media technology such as VR highlights their shared foundation in art and creation—language and imagination—responsible for bringing man's existence into the world.

Finally, the virtual Hagia Sophia, the Realization Lab's ultimate architectural creation, mounts a critique of individualism and universalism, the ideological products of the white-male-centered Enlightenment. A work of human collaboration exceeding human capacity, the Hagia Sophia realizes Steve's dream of building of a life-size poem incarnating Yeats's Byzantium. It is also an embodiment of the confluence of human civilization—old and new, East and West, and Christian and Islam—whose scale vastly outreaches human capabilities. The church as the site of the convergence of the two storylines suggests that the experience of reality requires

community and communication among human beings.<sup>13</sup> A question remains: if *Plowing the Dark* is a novel simulating new media's immersion, how does readers' immersion into the novel change in the textual environment and make something happen in the novel? Facing the challenges which new media technologies pose to the traditional novel form, Powers returns to the virtual space of literature, engendering new meaning each time we visit.

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<sup>13</sup> See Sue-Im Lee's *A Body of Individuals* for Powers's portrayal of individual and community in comparison to that in other contemporary novels.

## Chapter Three

### Lyrical Novel, Novelistic Hypertext: Remediation in *Frankenstein* and *Patchwork Girl*

In this ideal text, the networks are many and interact, without any one of them being able to surpass the rest; this text is a galaxy of signifiers, not a structure of signifieds; it has no beginning; it is reversible; we gain access to it by several entrances, none of which can be authoritatively declared to be the main one; the codes it mobilizes extend *as far as the eye can reach*, they are indeterminable...; the systems of meaning can take over this absolutely plural text, but their number is never closed, cased as it is on the infinity of language.

—Roland Barthes, *S/Z* (5-6)

This chapter focuses on electronic narrative's uniqueness as a form of storytelling and its relationships with printed literature. I compare Shelley Jackson's hypertext fiction *Patchwork Girl* with its "sibling" *Frankenstein*, the Mary Shelley novel Jackson rewrites. My analysis concentrates on the texts' shared concerns of textual materiality and figuration of femininity, and on both fictions' transgression and reformation of the generic boundaries of lyrical, epistolary, novelistic, and hypertextual mode of discourse. An epistolary novel remediating the private letter format, *Frankenstein*'s lyricism resonates with Romantic poetry, while *Patchwork Girl*, a hypertext transmediating the printed novel, exhibits archival narrativity and mediated orality. My comparison between *Frankenstein* and *Patchwork Girl* ultimately aims to demystify the novelty of "new media" and contest linearity in media development by exploring the characteristics of electronic narrative, which both connects to and breaks from printed narrative.

The term "hypertext" was coined in 1963 by Theodore H. Nelson, who described it as "non-sequential writing—text that branches and allows choices to the reader, best read at interactive screen." Anticipating hypertext's reader-orientedness and screen environment, Nelson posited basic rules for reading and writing hypertext by depicting it as "a series of text chunks

connected by links which offer the reader different pathways” (0/2). George Landow more recently delineates “computer hypertext” as “[T]ext composed of blocks of words (or images) linked electronically by multiple paths, chains, or trails in an open-ended, perpetually unfinished textuality described by the terms *link*, *node*, *network*, *web*, and *path*” (2). Landow emphasizes hypertext’s multisequentiality and open-endedness, which he sees as the “literal embodiment” of theories of textuality—Barthes’s writerly text, Jacques Derrida’s textual openness, and Mikhail Bakhtin’s heteroglossia (53). N. Katherine Hayles has further developed the broader concept of “electronic literature” encompassing a variety of new media literary genres. Networked and programmable, electronic literature is a “‘digital-born,’ a first-generation digital object created on a computer and (usually) meant to be read on a computer” (*Electronic Literature*, 3). She divides electronic literature into several categories: hypertext fiction, network fiction, interactive fiction, locative narratives, installation pieces, “codework,” generative art, and the Flash poem.<sup>1</sup> Despite the differences between Landow’s theory-based definition and Hayles’s medium-oriented definition, these critics have been the foremost proponents of computer-mediated literature.

In contrast, some critics are doubtful of electronic literature’s potential to radically transform our practice of reading, writing, and meaning-making. Michel Chaouli’s criticism

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<sup>1</sup> Hypertextual nodes and links are the most conspicuous features of classical hypertext fictions such as *Afternoon*, *Victory Garden*, and *Patchwork Girl* written by so-called the Storyspace school. Post-1995 network fictions including *Califia*, *Twelve Blue*, *The Jew’s Daughter*, and *Lexia to Perplexia* utilize multimodal schemes and navigation functions of the Web, while Interactive Fiction (IF), such as *Savoir-Faire*, *All Roads*, and *Deviant*, borrows computer-game components. While locative narrative combines virtual reality and actual movements in three-dimensional spaces, multimedia installation pieces authored by Cayley, Memmott, Gillespie, and Wardrip-Fruin introduce kinetic and haptic reading in which words as moving objects interact with the reader’s body. Wardrip-Fruin’s *Regime Change* illustrates generative art “whereby an algorithm is used either to generate texts according to a randomized scheme or to scramble and rearrange preexisting texts” (Hayles 18). Stephanie Strickland and M. D. Coverley, Brian Kim Stefan and Young-Hae Chang Heavy Industries (YHCHI) are among the authors who have written notable Flash poems. Hayles additionally includes a few print novels such as *Extremely Loud and Incredibly Close*, *The People of Paper*, and *House of Leaves* as they “[imitate] electronic textuality”—layered, fractured, and multimodal—and “[intensify] the specific traditions of print” (162).

specifically targets hypertext fiction wherein stories take shape by the reader's choices in linking fragmentary textual units called nodes or lexias. In discussing what constitutes a fiction, Chaouli disputes the value of hypertextual "interactivity." Because interactivity "interferes with the unfolding of literature" (607), it is incompatible with fiction, where hierarchy is indispensable to both literature and transmission of knowledge. While narrative demands uneven communication between reader and writer, interpretation requires a fixed text enabling the reader's freedom to explore the ambiguous moments and silent blanks within the text. Hypertext fiction's "semantic laxness"—additional gaps imposed by the machine and its programmer—aggravates the reader's interpretative burdens and hinders readers' imaginary projections precisely because of the overload of choices offered by the technology. Chaouli further calls Landow's premise into question by suggesting that poststructuralist theories of textuality are based on their problems with printed texts, demanding that we reexamine their validity in discussing electronic media.<sup>2</sup>

A thorough discussion of the legitimacy of hypertext as fiction or a complete mapping of the trajectories of electronic narrative is beyond the scope of my intended investigation here. However, the aforementioned criticisms help locate a branch of the current scholarship on new media narrative. What particularly interests me in this debate on hypertext fiction is its apparent "failure" to qualify as narrative, which conversely calls into question the very definition of "narrative" or "fiction." Rather than simply condemning it as invalid, I suggest that the abnormality of hypertext fiction in turn creates a space for probing literariness and narrativity foreclosed by existing literary and critical paradigms. In this vein, the narratologist Espen Aarseth has proposed a new conceptual genealogy of "ergodic" literature, and Marie Laure Ryan

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<sup>2</sup> Chaouli puts, "metaphorical deconstruction [in understanding of a text] depends on literal stability [of the text itself]" (610). His objection overturns the long-sustained claims that hypertext technology is "a vindication of postmodern literary theory" (J. David Bolter) and an embodiment of poststructuralist concepts such as intertextuality and intersubjectivity (George Landow). Espen Aarseth also points out Landow's and Bolter's misreading of Barthes and Iser in theorizing hypertext literature (84).

has posited narrative as “virtual reality.” My interest lies in a hypertextual mode of communication, leading to my exploration of hypertext’s literariness through analysis of Shelley Jackson’s *Patchwork Girl*. Given its remediation of a novel, to what extent does *Patchwork Girl* envision the possibility of storytelling in a form other than the printed novel, the dominant literary institution since its birth in the modern era? As an epistolary novel, *Frankenstein* blurs genre distinctions due to its remediation of letter format as well as the thematic influence of Romantic poetry. The formalistic mishmash exhibited by both *Patchwork Girl* and *Frankenstein* consequently leads to an interrogation of the boundaries of the lyrical, the novelistic, and the hypertextual mode of literature. Thus, while *Patchwork Girl* reveals that Shelley Jackson shares with Mary Shelley an impulse for formal transgression breaking genre-boundaries, it manifests two distinctive characteristics of hypertextuality: mediated orality (or Walter Ong’s “secondary orality”) and archival narrativity.

Furthermore, hypertextual orality draws attention to the issue of gendered textuality. Feminists have studied the conceptual usefulness of electronic textuality in resetting the triad of sexuality, textuality, and subjectivity. For example, linking hypertext to *l’écriture féminine* (gendered women’s writing), Ann McClellan notes that nonhierarchical, collaborative, and accretive hypertext bears similarity to traditional feminine labor such as weaving (102).<sup>3</sup>

Hypertext can produce an alternative epistemology to the patriarchal order prioritizing the hierarchy, linearity and rationality often associated with the codex format of modern books. I do

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<sup>3</sup> Hélène Cixous characterizes *l’écriture féminine* as corporeal, excessive, cyclical and recursive. Just like woman’s unbounded libido, “[woman’s] writing can only keep going, without ever inscribing or discerning contours.... She lets the other language speak-the language of 1,000 tongues which knows neither enclosure nor death.... Oral drive, anal drive, vocal drive-all these drives are our strengths, and among them is the gestation drive-just like the desire to write (*New French Feminisms*, 259-60). Unlike McClellan, Diane Greco, Michelle Kendrick, and Kathleen Sullivan express their suspicion of hypertext being “coded as masculine.” Hypertext represents the disembodied mind, which is privileged over the codex book, the body. These critics maintain that hypertext has lost its potential when it becomes a tool for male critics who “[replace] the power of author with that of the reader” without changing the structure of knowledge and power based on the principle of the male gaze and logocentrism (McClellan 101).

not assert that electronic narrative is a literary panacea to liberate us from the alleged phallogocentrism and logocentrism of printed books, as it would merely be another essentialism to claim that hypertext is a feminine medium and print masculine. However, the particular case of *Patchwork Girl* reveals how hypertext's open-endedness and mediated orality voicing feminine sexuality can assure feminist utopian traditions opening up not only writing space but also the biological realm of nature. Indeed, women's writing is Jackson's main agenda in composing *Patchwork Girl*. Through its corporeal imagination of an open space in writing that simulates the oral style of collaborative communication, *Patchwork Girl* navigates life's indeterminacy and narrative's nonhierarchical open-endedness. In this manner, as Jackson claims in her essay titled "Stitch Bitch," "Hypertext is everything that for centuries has been damned by its association with the feminine" (no pagination).

The questions I would ask then are: what media logic works for a novel's remediation of other genres of writing and hypertext's transmediation of the printed novel? What does the generic mixture and discursive hybridity of *Frankenstein* imply about Shelley's feminist poetics? How does electronic narrative help formulate *l'écriture féminine* and feminist narratology? Does it produce alternative literary and sexual paradigms? What does Jackson's rewriting of *Frankenstein* suggest with respect to new media's serial repetition? How do we configure hypertext fiction—in which "[t]he traditional narrative time line vanishes into a geographical landscape or exitless maze" (Coover, "The End," no pagination)—into the debate on postmodernist spatialization? Probing these issues, I examine the kinship between *Patchwork Girl* and *Frankenstein* with focus on their common ground of gendered writing as well as their different media modalities. A subsequent close reading of *Patchwork Girl*, in particular the

section titled “Crazy Quilt,” specifically illuminates hypertext’s open-endedness and mediated orality.

### ***Frankenstein’s Sibling***

As a rewriting of *Frankenstein*, *Patchwork Girl* tells a story of the transatlantic adventures of the female monster. In Shelley’s novel, Victor Frankenstein attempts to create a female companion for the Creature upon its request, but destroys it for fear of the sexual reproductivity that would lead to an inevitable war between species, mankind against its deviant creations. In *Patchwork Girl*, after being completed by Mary Shelley, the female monster travels to America to live 175 years before disintegrating in Death Valley. While the main plot follows her various excursions in Britain and America, numerous nodes (also called lexias, the hypertextual equivalent of pages in print) tell stories of other characters, including the lives of the women whose body parts are used to assemble the female monster.

The fiction consists of five parts: “Body of Text (philosophical reflections on hypertext and the human body); “Graveyard” (the stories of people whose body parts are assembled to create the female monster); “Journal” (Mary Shelley’s diary recording her relationship with her creature); “Story” (the female monster’s modern adventures, incorporating excerpts from *Frankenstein*); and “Crazy Quilt” (a collection of quotes from *Patchwork Girl of Oz*, *Frankenstein*, and other theoretical treatises). Each part is composed of small segments that are linkable to each other across the part divisions. Compared to other hypertext fictions written in the Storyspace software program such as Michael Joyce’s *Afternoon* and Stuart Moulthrop’s

*Victory Garden*, *Patchwork Girl* has more linearity of plot.<sup>4</sup> Jackson retains hypertext’s freedom of exploration in multiple directions and divergent paths revealing the story’s manifoldness, as readers can take different routes to compose variable stories; however, readers are also guided by the system-generated cognitive map and other external maps—a tree map, an outline view, and a chart view—which help locate the readers’ place within the text.

Portrayed by Robert Coover as the quintessential text of the “golden age” of hypertext literature (“Literary Hypertext,” no pagination), *Patchwork Girl* has been enthusiastically received by feminists as embodying new gender coding. Interestingly, a majority of criticism relating *Frankenstein* and *Patchwork Girl* reacts negatively toward the former, which can be understood as a strategic move to foreground the significance of the latter in opposition. Astrid Ensslin emphasizes the power shifts that hypertext facilitates, from creator to creature, author to reader: “Self-sufficiency of [hypertext]” indicates “an ever-changing, essentially indefinite ‘live’ organism” (213). Laura Schackelford’s comparison of *Frankenstein* and *Patchwork Girl* brings attention to combinatory sexual relations and accretive textual composition that hypertext endorses. Using Niklas Luhmann’s “structural coupling”—“the interrelations among cognition, the nervous system, and social systems as relations of non-identity or incommensurability”—Schackelford inquires into the fluid subject boundaries catalyzed by humanity’s increasing dependence upon technological prostheses amid the ongoing transition to new media (67). *Patchwork Girl* conceives interdependent relationships between subjects and technological prostheses, between author and text, between meaning and medium. They are structural couplings, not unlike a hypertext link and “a stitch in sewing, or scar—both ‘mark a cut and commemorate a joining’ (Journal/Scars/*cut*).” In contrast to the hierarchical heterosexual

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<sup>4</sup> For further discussions of the Storyspace software, see N. Katherine Hayles’s *My Mother Was a Computer* (pp. 152-3) and the fourth chapter of Matthew Kirschenbaum’s *Mechanisms*.

relations evinced by *Frankenstein's* codex form, *Patchwork Girl* digitally configures combinational sexual and textual mechanisms that “reproduce rules of differentiation, a morphology that guides the production of meaningful bodies and guides their possible combination or interrelations” (92-3).

Yet Schackelford's otherwise brilliant analysis ignores the complex sexual/textual dynamics of *Frankenstein*. Despite her insight, her take on *Frankenstein* as a printed novel lacks a substantial reading of the text, dismissing Shelley's dilemma of feminine authorship revealed in the novel. In addition, while Schackelford's juxtaposition between “heterosexual” print narrative and “combinatory” digital hypertext repudiates normative sexuality, it unfortunately posits another binary opposition of printed literature versus electronic narrative. In opposition to Schackelford's observation, my reading of *Frankenstein* and *Patchwork Girl* here, underlines the sibling, if not parental, relation between the two texts, alluding to the ambiguous kinship between print and electronic narrative. Jackson's strategic use of hypertext helps her express the ideas of textual materialism and figuration of femininity at the heart of Shelley's *Frankenstein*. However, Jackson's guilt-free incorporation of passages from *Frankenstein* and other sources shows that *Patchwork Girl* is not a product embodying the author's Oedipal struggle and attempt to overcome Shelley's influence. It rather evinces digital combinatory logic and electronic media's remedial principle as proclaimed by Marshall McLuhan in his famous dictum—“the ‘content’ of any medium is always another medium” (23).

*Frankenstein* displays Shelley's dilemma regarding feminine authorship, sprung from a conflict between Romantic (male) creativity and the fixed gender roles of her time. Mary Poovey, Barbara Johnson, and Anne Mellor consider the monstrous self-figuration of the novel a

symptom of Shelley's modification of Romantic self-assertion.<sup>5</sup> Shelley's introduction to the 1831 edition reveals her dual sense of authorship: a Romantic self-fashioning of the divine vision on one hand, and a materialist notion of collaborative authorship on the other. She affirms her visual insemination of the novel, saying "I saw—with shut eyes, but acute mental vision—I saw the pale student of unhallowed arts kneeling beside the thing he had put together" (227-8). But, as Clayton Koelb notes, there is verbal impregnation involved in that creation (128). Shelley acknowledges that a storytelling competition and conversations among the members of Lord Byron's circle contributed to her composition, just as Frankenstein's (mis)reading of scientific and philosophical texts leads to his creation of the monster in the novel. Shelley writes, "Invention, it must be humbly admitted, does not consist in creating out of void, but out of chaos; the materials must, in the first place, be afforded" (226). This resonates with Frankenstein's begetting of the Creature as animating not an individual but a collection of body parts without coherent organizing principles.

If Shelley, with her materialist view of creation, calls the novel her "hideous progeny," the text is a living organism emerging independently from the author's conscious control, like the Creature at large. The textual fragmentation and contradiction is also the manifestation of the material conditions of the industrial era. Mark Hansen calls *Frankenstein* "a machinic text—a text constructed from materials (most centrally language, but also materially concrete social institutions like the law, the family, and indeed technology itself)" ("Not Thus," 578).

Indicating the plot's dependence upon chance and "strange coincidences," Hansen maintains that

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<sup>5</sup> In response to the view of *Frankenstein* as a weaker twin of male poets' high Romanticism, Mary Poovey has shown Shelley's accommodation of Romantic self-assertion balanced with a strategic gesture of feminine self-effacing. Barbara Johnson's reading suggests that the text is an allegory of the feminine predicament to represent the self as nothing but a monster, as "the very notion of a self...has always...been modeled on the man" (10). Anne Mellor's biography examines both the novel and the author's life focusing on issues of scientific advancement, the division of gender roles, and male fear of uncontained femininity.

*Frankenstein* can be read as a testimony to realities of the industrial society, the world of pure machinery uncontrollable by either scientific knowledge or poetic creation. Both the Creature and the text are less an allegory of self-referential literary invention than an “*a-signifying performance* of a technological machine” (603). Shelley’s vision is in sharp contrast to the ideal of high Romanticism that poetry would negate technology’s monstrous impact. The novel thus brings into question the ideological reinvigoration whereby technology’s effects and material forces can be overcome by the power of literature.

While the contingency and contradiction of the textual logic reflects the historical condition of the Industrial Revolution, *Frankenstein* also criticizes the idealist figuration of humanity in high Romanticism. The novel critiques asexual male birth, the father’s failure at proper parenting, and the imperialist enterprise and scientific advancement of the industrial age, all of which cause Frankenstein’s Promethean fall. The Creature’s birth at Frankenstein’s lab—the “workshop of filthy creation”—marks the historical juncture of post-Enlightenment and post-Revolution hope and despair. Frankenstein’s totalizing dream of the “Universal shape” to create the masculine figure of humanity, in Cynthia Pon’s words (38), only materializes in the creator’s replica; his technoscientific enterprise fails to govern “nature.” On the other hand, as Pon claims, the abortion of the female creature is Shelley’s paradoxical gesture at creation of negative feminist figures of humanity which “resist representation, resist literal figuration, and still erupt in powerful new tropes, new figures of, and new turns of historical possibility,” as in Donna Haraway’s definition (quoted in Pon, 42-3).<sup>6</sup> The dismembered female creature is reincarnated as the novel instead. Shelley’s Penelopean poetics of weaving and unweaving stories undoes

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<sup>6</sup> The novel’s description of the abortion scene as follows: “I thought with a sensation of madness on my promise of creating another like to him, and, trembling with passion, tore to pieces the thing on which I was engaged” (164).

Frankenstein's egotistical quest for knowledge as told in Walton's monological letters to his silent sister.

The partial reincarnation of the female monster in *Patchwork Girl* can thus be considered Jackson's appropriation of Shelley's negative feminist figure resisting representation. Stillborn in *Frankenstein*, the female monster is always in the state of becoming in *Patchwork Girl*, not only as a figure but also as the textual condition. Jackson adopts Shelley's themes of textual machinery and feminist figures to criticize patriarchal idealism. "Graveyard" and "Body of Text"—the sections contemplating the processes of biological and artistic composition—display the shifting boundaries of the body, both physical and textual, to imagine the performative subjectivity which Hayles calls "subjectivity-as-assemblage." The female monster's organs and limbs (each as a *lexia*) are linked to one another as the reading progresses. Her "body" can only be per-formed by the virtual linking of autonomous body parts into the unrepresentable whole of the "body," just as the meaning of the text is produced by connecting *lexias* into the "work." Thus, a full-figure body and textual unity in *Patchwork Girl* exist merely as an idea whose complete representation cannot be achieved. Her physical frame is always in the process of being assembled as the textual body, illustrating the body as becoming. The readers' willing act of clicking on and linking of hypertextual units creates the female monster's subjectivity and the text's meaning, both of which are always in the process of being made and unmade. This method of reversible, divergent signification in hypertext literalizes a reading process implicit in understanding of Shelley's *Frankenstein* and other printed novels. Jackson's use of hypertext, a technology actualizing the kind of knowledge independent of linear temporal logic, facilitates her conceptualization of fluid bodies assembled and reassembled out of matter. By underlining

the value of the labor of weaving, conventionally associated with women, it also feminizes the creative processes of signification and subject formation.

*Patchwork Girl*'s story depends on readers' active plotting; it also builds upon the contingency originating from the collaboration between human author(s), story-writing software, and the computer. The text is a material wherein meaning is generated through the building blocks of words and linking textual units of lexias. *Patchwork Girl* is an allegory of performative signification in which meaning can be made and unmade when the reader follows a different path by choosing an alternative link at a forking point. Yet instead of a passive object to be arranged by readers, the hypertext fiction is an autogenetic text coming into existence by organizing itself. Christopher Keep claims that "[The text has] a robust alterity that persistently draws attention to itself, ... [and] compels [the reader's] awareness of the text as a productive force in its own right, calling itself into being..." (paragraph 4). Therefore, reading *Patchwork Girl* involves more than interpretation through choosing and arranging narrative objects; it is a somatic effort of gathering body parts, digging up the (un)dead and resurrecting the inanimate. Keep concludes that the formative grounds of subjectivity and signification suggested by Jackson are corporeal and technological. *Patchwork Girl* is gothic, not in terms of genre but as "a recurring moment within the history of modernity" haunting both eighteenth-century rationalism and the contemporary posthuman dream of transcendence (paragraph 12).

Jackson's rendering of the text as material, a living thing, is more clearly illustrated by the dual resurrection and insurrection of the body, both as a text and figure. The female monster says in "graveyard": "I am buried here. You can resurrect me, but only piecemeal. If you want to see the whole, you will have to sew me together yourself." There is thus a motive for bodies to not only "resurrect" but also "in-surrect" as disparate limbs and fragmentations (Carazo and

Jimenez 122), indicating not merely a simple regression but life/narrative's openness and potentiality. "Diaspora" describes the spectacular disintegration (and anticipated regeneration) of the female monster's limbs and body parts: "...limbs ejected like sprung seed-pods bearing only a raw beginning, the place to start a story from, and the thing ending no longer the same thing at all in the ending, so not ending, not beginning either..." This passage suggests that the same principle of simultaneous dismemberment and assemblage applies to the mechanism of hypertext. The textual condition of hypertext's insurrection is return to the original fragmentary state, working both with and against readers' effort to gather the limbs/lexias and shape them into the body/story; it counteracts the constructive desire of a coherent narrative. Therefore, the "story" section where the female monster finds herself breaking into pieces is the ambiguous "ending" to her journey, as not only does the ending circle back to the beginning, it also implies the endless feedback and digital recombination resulting in monstrous bodies and amorphous texts.

The dynamics of resurrection and insurrection of body parts as well as the in(ter)dependence among textual fragments (lexias) connects to the hypertextual mode of narrative consumption and serial repetition. In "graveyard," each organ and individual limb presented by a discrete lexia provides a biography of every organ/donor: Tituba's eyeball, Margaret's lips, Susannah's tongue, Flora's ears, Geneva's nose, Judith's molars, Charlotte's nipple, Aspasia's breast, Helen's veins, Roderick's liver, Bella's stomach, Thomasina's lung, Mistress Anne's guts, Tristessa's arm, Jennifer's leg, and Bronwyn's foot. Each tells us a story of a lived experience whose (body) parts are used to create the female monster. An individual organ/lexia is part of the larger whole, and yet independent from the others and meaningful in itself. A single organ/lexia is simultaneously autonomous and connectible to others without

subordinating to the whole, defying the organizing principle of part-to-whole unity. Hence, *Patchwork Girl*, a prosthetic text in content and form, deconstructs the opposition between dependence and autonomy. If each lexia is seen as a self-contained episode in a serialized narrative, *Patchwork Girl* is not only a spin-off from *Frankenstein* but also a serial, further complicating its narrative genealogy. As a spin-off to *Frankenstein*, it feeds upon the original novel for story, character, theme, and image; as a serial subsisting by itself, self-contained lexias/episodes can either be consumed independently or combined with other lexias to constitute a larger narrative. This prosthetic structure expresses the biological excess of the body. The textual condition manifests life's overflowing energy through the links "that allow the reader to traverse the text from point to point" (Keep, paragraph 11), the transmedial migration from novel to electronic narrative, and the internal movement of serial consumption.

Thus, going against the Aristotle's rule of plot, Jackson holds that the storyteller's role is not creating a seamless account of beginning, middle and end, but assembly of discrete moments of history. Jackson's textual materialism leads to her celebratory reflection on her "myopic" authorship of electronic space in contrast to the traditional authorship of literary invention:

Assembling these patched words in an electronic space, I feel half-blind, as if the entire text is within reach, but because of some myopic condition I am only familiar with from dreams, I can see only that part most immediately before me, and have no sense of how that part relates to the rest. When I open a book I know where I am, which is restful. My reading is spatial and even volumetric. I tell myself, I am a third of the way down through a rectangular solid, I am a quarter of the way down the page, I am here on the page, here on this line, here, here, here. But where am I now? I am in a here and a present moment that has no history and no expectations for the future. ("this writing")

In lieu of a poet's insight achieved through Oedipal struggle with an artistic model, Jackson's "half-blindness" and her dependence upon machinic contingency make the text "spatial" and "volumetric" in denial of textual totality. *Patchwork Girl*'s title page attributes the text to "Mary/Shelley & Herself;" Shelley is not just Jackson's source but the co-author. As the writer composes hypertext with myopic authorship, its reading demands the "modular and fragmentary" gaze (Carazo and Jimenez 116) in place of the totalizing male gaze. "A cyborg readership" likewise requires the reader's prosthetic relationship with the text.

Therefore, as Carazo and Jimenez argue, if *Frankenstein* illustrates "the exacerbated Romantic expression of the [solipsistic and Promethean] self" and its failure, *Patchwork Girl* comes out of a postmodernist thought "where identity is defined...in terms of the fragmentary, the composite, and the hybrid" (122). If *Frankenstein* reflects upon the radical exteriority of technology's inhumanness in the industrial era in horror, *Patchwork Girl* mirrors a willingness to accept ongoing technological change with humor. Jackson's postmodern agenda is not to humanize technology's effects or attempt to synthesize matter and mind, but to entertain the possibility of human-machine co-evolution building of a "cognisphere"—"a co-evolving and densely interconnected complex system" of "dynamic cognitive flows between human, animal and machine (Hayles, "Unfinished Work," 165). This move signals another shift in focus within postmodernism and posthumanism: from figure to sphere, from the Harawayan cyborg to the system and environment.

### **From Lyrical to Epistolary to Novelistic: Remediation in *Frankenstein***

The previous section discussed textual materialism and feminist figuration, themes that *Frankenstein* and *Patchwork Girl* share despite the different historical periods in which these

works were produced. Another common element is each author's impulse toward migration in terms of genre formation. Critics have argued that *Frankenstein's* fragmented form and Shelley's decision to become a novelist are due to her paradoxical social position as a woman and author. Considering *Frankenstein* autobiography, Barbara Johnson maintains that the novel betrays Shelley's "unresolvable contradictions inherent in being female" who writes an autobiography, the genre of man's education from St. Augustine to Freud (9-10). The outcome is a "hideous progeny," the Creature as well as the novel itself. The Creature is a figure of autobiographical self-reproduction in both creation and writing representing "feminine contradiction *from the point of view of its repression.*"

In contrast to Shelley's agony, Jackson's *Patchwork Girl* openly celebrates the monstrosity of femininity through the figure of female monster still embodying aberrant writing. Jackson's willful choice of the hypertext medium serves precisely this purpose of imagining the feminine figure through *l'écriture féminine*, which hypertext's fragmentation and accretive writing flesh out. Thus, each author's engagement with the respective literary form of her choice is critical in determining the gender politics and feminine epistemology expressed by their works. In addition, each of their works reveals traces of other genres and discursive modes: lyric poetry and epistle for *Frankenstein* and novel and nonfiction for *Patchwork Girl*. What results from both authors' appropriation of diverse genres and writing formats is discursive hybridity and heterogeneous voices. The cacophony and discursive heterogeneity inherent in the novel becomes intensified in hypertext remediating the novel.

Although the relation of *Frankenstein's* lyricism to Romantic poetry is recognized, the genre question is often ignored. The influence of Romantic poetry on *Frankenstein* is undeniable; in addition to Shelley's literary background and her incorporation of Coleridge's and

P. B. Shelley's poem in her writing, the novel's theme and structure connect to Romantic poetry. As in Romantic lyric, philosophical self-probing through psychological/geographical excursions to the edge of reason/civilization is delivered by a lyrical voice of "I." The first-person protagonist relates his journeys in the liminal space of the earth and the untrodden region of the mind, resulting in uncanny encounters with the alienated self, the monstrous in reason, and the inhuman of the human. Critics such as Ralph Freedman, Eugene Goodheart, and Bert Bendner define the "lyrical novel" as showing man's internalization of the world (Freedman), assertion of individual personality and feelings (Goodheart), and exhibition of the character/speaker/author's surrender to the higher order of Nature/God (Bendner).<sup>7</sup> Although none of these scholars mention *Frankenstein*, the novel qualifies as lyrical according to their criteria.

What interests me in regard to *Frankenstein's* lyricism is not the genre determination per se but the motive for Shelley's formal migration from poetry to epistle to novel and the resulting transgeneric palimpsest. *Frankenstein* is a novel affecting the forms of other genres and simulating their discursive modes. While the power dynamics between speaker and listener in the characters' dialogues illustrates Shelley's remediation of the lyrical voice from Romantic poetry, the novel's epistolary frame and dialogic form neutralize the violence of Romantic egotism represented by Frankenstein's Promethean enterprise and fall. The network of voices, including the voice of the other (the Creature), transforms lyrical solipsism into the communal and social cacophony, characteristic of Mikhail Bakhtin's novelistic dialogism.

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<sup>7</sup> Eugene Goodheart characterizes the lyrical novel as "defiant affirmation of the individual personality in a threatening social world," with Thomas Hardy's example (217). Selecting *Moby Dick* as his example, Bert Bendner points out that the organization of the lyrical novel derives from the "psychological attitude" of the lyric poet: a turn-away from the audience and voluntary surrender to God. Ralph Freedman's notion of lyrical narrative defines it as "a mood, a type of literary sensibility, a way of approaching knowledge." In lyrical narrative, "[t]he world is reduced to a *lyrical point of view*, the equivalent of the poet's 'I': the lyrical self" (8).

Consisting of such dialogues, *Frankenstein* is a novel about telling. A series of dialogues amongst the characters shape the novel: those between Frankenstein and Robert Walton; Frankenstein and the Creature; Walton and his sister Margaret Saville through letters; and perhaps between author and reader through the author's famous 1831 introduction. The nature of utterance and the relationship between speaker and listener in each dialogue illuminate the dynamics and interaction among characters. Although the novel employs a conversational form, there is a clear hierarchy between listener and speaker. With one speaker (Frankenstein to Walton, the Creature to Frankenstein, Walton to Margaret) dominating each conversation with the other, he demands not so much response as one-sided reception. These conversations press not verbal intercourse but imperative moral action, such as Frankenstein's acceptance of the Creature's request for a companion and Walton's withdrawal from the self-destructive expedition. Each dialogue is monological, demanding a certain action, save for Walton's final encounter with the Creature. In the pivotal confrontation between Frankenstein and the Creature at Montanvert, the Creature "demand[s]" that his creator to "hear [his] tale" (96); it frantically places its hands before Frankenstein's eyes, taking away the listener's sense of sight. Frankenstein's tale, fixating Walton, diverts the latter from an inhuman pursuit of knowledge. The conversation between Frankenstein and Walton, whose relationship is comparable to that of the mariner and the wedding guest in Coleridge's "The Ancient Mariner," provides a model of knowledge transmission dependent upon a hierarchy. Finally, the novel's outer epistolary frame, consisting of Walton's letters to his sister Margaret, resembles the structure of a verse letter from "conversation poems," such as Coleridge's "The Eolian Harp" and Wordsworth's "Tintern Abbey." The male speaker addresses an absent, often female, listener whose response is logically

excluded as her silence is the guarantee evoking his poetic utterance;<sup>8</sup> Margaret's voice is never heard in *Frankenstein*.

In this sense, Shelley's adoption of the epistolary form in *Frankenstein* is crucial for her reworking of the poetic utterance and monological conversation into novelistic dialogism. As in lyrical poems, the epistle is premised on the speaker's physical isolation. Yet whereas lyric poetry, Romantic lyric poetry in particular, privileges the internal transformation within the speaker's mind instigated by the outer scene, the epistle assumes a sense of community and human connections. William Dowling points to the rejuvenation of epistolary form in the eighteenth century as a solution to the post-Enlightenment solipsism and the question of audience. Likewise, scrutinizing Samuel Richardson's epistolary novel *Clarissa*, G. Gabrielle Starr links the verse and the novel of the eighteenth-century Britain through their shared connections to the epistle: "the epistolary writer is isolated as a feeling subject, imprisoned at the very least by the force and uniqueness of emotion, and attempts to use the letter as a tool to build a true consensus and community" (11). The isolation that summons speech and the need for communication apply equally to the speaker in a verse epistle and the narrator-character of an epistolary novel, exemplified by Walton in *Frankenstein*. While agreeing with Starr's argument

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<sup>8</sup> M. H. Abrams describes the "Greater Romantic Lyric," which include Coleridge's conversation poems and Wordsworth's "Tintern Abbey," as follows: "They present a determinate speaker in a particularized, and usually a localized, outdoor setting, whom we overhear as he carries on, in a fluent vernacular which rises easily to a more formal speech, a sustained colloquy, sometimes with himself or with the outer scene, but more frequently with a silent human auditor, present or absent. The speaker begins with a description of the landscape; an aspect or change of aspect in the landscape evokes a varied but integral process of memory, thought, anticipation, and feeling which remains closely interwoven with the outer scene. In the course of this meditation the lyric speaker achieves an insight, faces up to a tragic loss, comes to a moral decision, or resolves an emotional problem. Often the poem rounds upon itself to end where it began, at the outer scene, but with an altered mood and deepened understanding which is the result of the intervening meditation" (527-8). Sara Guyer studies Shelley's parody of this structure of Romantic lyric, exemplified by *Frankenstein*'s "apostrophic solicitations" of spirits, mockingly fulfilled by the monster's appearance. Walton's final encounter with the Creature—in which, reminded of his "duties," he "called on [the monster] to stay" (216)—is in contrast to *Frankenstein*. Guyer maintains that Walton's utterance "assumes the monster's face and is a response to the voice of the non-human, a response that does not humanize him, but allows for the words of this human less-than-animal to sound" (110).

of the generic contamination among ballad, epistle, lyric and novel, I suggest that Shelley's use of the epistolary form achieves more than mere simulation of lyrical effects. In employing the epistolary frame for writing a novel, Shelley foregrounds the multivocality inherent in the genre, ultimately distinguishing her from the poetic tradition of the Romantic era.

Shelley's appropriation of the letter form also sheds fresh light on her 1831 introduction addressing the reader. The introduction includes the envoi "I bid my hideous progeny go forth and prosper" (229). Borrowed from ballads, the envoi is "an appendage to a former production" accounting "the origin of the story" (222), also implying that the novel is the author's gift to readers. If the novel's frame of dialogues and letters provides the moral dimension of storytelling, à la Coleridge's "The Ancient Mariner," Shelley's introduction is yet another level voicing what is excluded from the novel: woman's response. Claiming her authorship, Mary Wollstonecraft Shelley (M. W. S.) addresses her audience on behalf of Margaret Walton Saville (M. W. S.), the silent recipient of Walton's letters. While this narrative device embraces the violent content of an egotistical male quest for knowledge, it also gives voice to the other.

Shelley's migration from the lyrical to the epistolary to the novelistic mode not only achieves Bakhtinian heteroglossia emancipating women from compulsory silence but also envisions an open-ended, accretive narrative form prefiguring hypertextuality. In this light, Mary Favret describes *Frankenstein* a hypertextual, "interactive combination of tales" (180). While Walton's fractured letter deviates from the convention whereby letter-writing produces a sense of community, it nonetheless assumes the "epistolary movement" via genre shift from letter to journal to confessional autobiography. The outcome of this generic transformation is the intersection of disparate discourses and dissonance among competing voices. Favret writes, "This novel works to show the limits of that individuality and to replace the individual voice

with a network of voices”; this mirrors Frankenstein’s monster, whose life “exceeds the dimensions of any one individual” (178). Therefore, the novel weaves the vocal network while also visualizing an open narrative whose form is prosthetically extended from the Creature’s tale to Frankenstein’s confession to Walton’s letter to Shelley’s autobiographical introduction. The introduction, “an appendage” to her novel, suggests composition by assembling verbal pieces of information, prefiguring the way the Creature is stitched. The web of voices and the network of narrative apparatuses, therefore, project a sense of collectivity as in feminist weaving.

The multimediation employing telescoping structure ambiguously dilutes and reverberates the content of violence and violation in the Creature’s tale. Walton’s final letter is open-ended, interrupted by the monster whose haunting presence lingers “in darkness and distance” (221). Such institutionalizing of heterogeneous voices and hybrid discursive modes is essential to Shelley’s intervention with the Romantic tradition, redirecting her poetic energy to the newer literary form of novel. Her crossings of the formal boundaries of poetry, epistle and novel provide her authorial voice and produce an original novel despite the social mores restricting her from public pursuit of poetry. Her confinement thus ultimately allowed her breakthrough in carving a space for her brand of Romanticism.<sup>9</sup>

### **Recycling and Archival Narrative**

In writing *Patchwork Girl*, Shelley Jackson owes Mary Shelley the tale of a monster. More importantly, Jackson inherits Shelley’s creative impulse to move from one genre to

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<sup>9</sup> See also Tony Jackson for discussion of the communication technology of writing in *Frankenstein*. Neither oralistic nor novelistic, *Frankenstein* is a hideous “postnovel folktale” because it shows “monstrous effects of writing in human life” (65). Shelley’s attempt to adapt the supernatural tale associated with epic and drama to the scientific, alphabetic form of the novel begets the “hideous progeny.” The Creature is an instant materialization of writing, an unnatural invention in the sense that he is born to literacy; therefore, he “has no core of nonliterate sense to return to” (74).

another. *Patchwork Girl*'s transmediation of *Frankenstein*, as well as of other fiction and nonfiction, intensifies the novelistic heteroglossia present in the original. Intersections of disparate discourses heighten the incorporation of languages from diverse social and linguistic strata, characteristic of Bakhtin's dialogism; these are intensified by the adoption of various literary genres, including fiction and nonfiction. While reinforcing heteroglossia, *Patchwork Girl*'s interactive storytelling and its hypertextual collage of novel, children's book, journal entry, and theoretical treatise insinuate possible forms of narrative other than the novel it recycles. Examining these possibilities, in this section I examine "Crazy Quilt," presumably the conclusion of *Patchwork Girl*. "Crazy Quilt" refers to its own electronic media logic—the combination and feedback through cut, paste, and copy. While the recycling logic questions the eighteenth-century idea of originality, it also reveals the trauma of endless self-reproduction and perpetuation of an ending without an actual end.

Linking life creation and literary composition, *Patchwork Girl* illuminates life's openness and narrative's retellability.<sup>10</sup> Digital media's combinational morphology formulates the anatomical and literary organism produced from foreign connections and associations. Likewise, Jackson's medium of hypertext embodies the theme of the collective life open to merging with other bodies. Textual plurality resulting from divergent reading paths and recombinable meaning blocks, facilitated by lexias and links, offers us new possibilities in storytelling, while an incompleteness of narrative defying the Aristotelian plot and mimetic poetics has become a productive area for hypertext criticism as it presents problems for conventional narratology.<sup>11</sup>

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<sup>10</sup> Jo Alyson Parker focuses on the chronological uncertainty of electronic narrative with non-linear plot development, which challenges the unisequential temporal logic of printed books. She illustrates hypertext's reshaping of the triad of linearity, temporality, and narrativity based upon concepts such as Paul Ricoeur's "human time" and Gérard Genette's "reading time" (42).

<sup>11</sup> In lieu of a simple opposition of print and digital media, Marie Laure Ryan and Espen Aarseth rework modernist narratological paradigms to create a genealogy traversing printed fiction and electronic narrative with their

Espen Aarseth describes a hypertextual reading experience including a sense of ending by using the concepts of “aporia” and “epiphany.” In cybertext—narrative in which “nontrivial effort is required to allow the reader to traverse the text” (1)—aporia is literally an impasse rather than semantic ambiguity as in printed narrative, whereas epiphany is a textual construction rather than an accident (91).<sup>12</sup> Jane Yellowlees Douglas claims that, with the absence of a physical ending (the last page) in a maze-like hypertext, the reader’s psychological satisfaction and feeling of exhaustion constitutes closure. A sense of ending is perceived by “a [subjective] resolution of the tensions” which “accounts for the greatest number of ambiguities in the narrative” (169-70). Another possibility is that the reader reaches the end of a particular interpretative scheme constructed from among the many narrative models offered by the hypertext.

*Patchwork Girl* forsakes the labyrinthine structure and endless reading loop explicit in other Storyspace hypertext fictions such as *Afternoon* and *Victory Garden*. Mary Laure Ryan believes that the reader reaches the conclusion and avoids “hidden tricks in the linking strategy” such as guard fields. As a result, it “looks toward a narrative structure that will flourish under a new generation of computers systems and authoring programs: the structure of an open archive” (*Avatars of Story*, 147). Nonetheless, the structurally-embedded loop in “Crazy Quilt,” the supposed conclusion of *Patchwork Girl*, exhibits an interesting absence of the narrative dynamic of tension and release. The traumatic looping and the virtual “link-out” provide a unique

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respective concept of the “ergodic” text (Aarseth) and narrative as “virtual reality” (Ryan). Ryan defines narrative as virtual reality wherein a union of immersion and interactivity, sometimes at the expense of the other, makes possible for readers to create a palpable three-dimensional space through the act of reading. According to Aarseth, cybertexts add an additional level ergodics (the reader’s choices) to the existing narrative structure of description and narration.

<sup>12</sup> In Aarseth’s view, the guard-fields function of the Storyspace software—which restricts readers’ access to a specific portion of the text until they satisfy a mandatory trip to another section intended—is crucial for the experience of aporia and epiphany. For instance, in Joyce’s *Afternoon*, after experiencing the aporia, being “caught...[in] circular paths and [their] own impotent choices,” readers finally reach the node called “white afternoon,” which intimates the protagonist’s culpability for the fatal car crash involving his ex-wife and son. This breakthrough is only possible by an obligatory travel to the textual portion describing a psychotherapy session triggered by the node “I call.” It implies that the therapeutic dialogue releases the protagonist from his guilty consciousness and the readers from their blockage in interpretation.

experience of “end” vis-à-vis Aarseth’s aporia/epiphany dialectic and Douglas’s hypertextual closure. “Crazy Quilt,” in which twin lexias mirror each other, twists a sense of ending by adding another open layer. While Ryan emphasizes the “goal-oriented navigation” as a distinct feature of archival narratives such as *Patchwork Girl*, I want to explore the trauma of the archive, characterized by perpetuation of the ending and cross-dimensional openness.

The section’s title, “Crazy Quilt,” originates from L. Frank Baum’s *Patchwork Girl of OZ*. In Baum’s story, Crazy Quilt is the nickname of the Patchwork Girl, the life-size puppet stitched together and animated by the magic powder of life. Jackson includes quotes from *OZ*, *Frankenstein*, and the theoretical writings of Bolter, Cixous, Lyotard, and Deleuze and Guattari in the twenty nine pairs of twin lexias comprising the chapter; each pair contains the same content with different typographical presentation. The quotes in the first lexia from the subsection “Scrap Bag” are cited and presented with discrete typography (bold, italic, or underlined type); the quotes in the second lexia are seamlessly integrated. The following examples are two lexias, both titled “composition”:

**Lacking sense and loving fun**, it is with considerable difficulty that I remember the original era of my being; all the events of that period appear confused and indistinct. *Biological parcels moved across up and down as if they were endless lists without copulas. We will passical the classical. You organize the writing spaces by grouping them together on the screen, and by placing writing spaces inside other spaces. and one thing so presupposes another that whichever way you turn your patchwork, the figures still seem ill-arranged. Who put noodles in the soup?* A strange multiplicity of sensations seized me; I saw, felt, heard, and smelt at the same time; and it was, indeed, a long time before I learned to distinguish the operations between my various senses.

This lexia also includes the bibliographical information of its sources: Mary Shelley's *Frankenstein* (presented in normal type), Barbara Stafford's *Body Criticism* (italic), Frank Baum's *The Patchwork Girl of OZ* (bold), Jay Bolter and others' *Getting Started with Storyspace* (underlined), and Harriet Beecher Stowe's *The Minister's Wooing* (bold italic).

Then, a simple click on the screen or follow-up of the embedded link transports the reader to its twin lexia, a seamless version with no source indications but a dotted line at the bottom.

Lacking sense and loving fun, it is with considerable difficulty that I remember the original era of my being; all the events of that period appear confused and indistinct. Biological parcels moved across up and down as if they were endless lists without copulas. We will passical the classical. You organize the writing spaces by grouping them together on the screen, and by placing writing spaces inside other spaces, and one thing so presupposes another that whichever way you turn your patchwork, the figures still seem ill-arranged. Who put noodles in the soup? A strange multiplicity of sensations seized me; I saw, felt, heard, and smelt at the same time; and it was, indeed, a long time before I learned to distinguish the operations between my various senses.

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These twin lexias in "Crazy Quilt" show the recycling logic—cut, copy, and paste—operating in electronic narrative. The cuts and scars in electronic flesh are exposed stark and naked—"bare," to borrow from Deleuze—in the first lexia, while they are woven smoothly—"masked"—in the second. Whereas the former is the exact copy of the original, the latter disguises itself by altering typographies. The original texts of Shelley, Baum, and the above-noted theorists, crossing over

space, period, and genre, are patched into the network of meaning wherein readers' labor in making intertextual connections between eclectic sources generates interpretation.

Recycling as the compositional rule of electronic narrative is indicated elsewhere in *Patchwork Girl*. In "basket," Jackson writes, "Indeed, there were remains—unused lengths of venous plumbing, fatty trimmings, deleted passages, a page that blew off a table in the garden where a rock imperfectly anchored an untidy slew of manuscript pages while she [Shelley] wandered in a reverie,..." The passage refers to the basket containing the female monster's remains thrown into the ocean by Frankenstein in Shelley's novel. The female monster is created out of chaotic remnants and "useless" patches from a recycle bin. "Crazy Quilt" is a manifestation of this recreation of Patchwork Girl, both the monster and the text, out of an open archive—the effect of postmodern pastiche. The work basket, a group of deleted passages and lost pages put together in writing spaces, visualizes the cacophony of the stitched texts voicing non-hierarchical multiplicities. It defies traditional notions of authorship conspiring with eighteenth-century concepts of property ownership, cementing the filial relationships among authors. Accordingly, Hayles maintains that *Patchwork Girl* challenges the concept of literary property by exhibiting "unceremonious appropriation."

More importantly, the link between the seamed lexia (first) and its seamless version (second) brings the disparate temporalities of the original source and its appropriation into the zone of contact, through topological proximity across space and time. The dotted line at the bottom of the second lexia hints at this Möbiusian structure—not of opposition but of inversion—between raw material and finished work. Earlier, the female monster describes the dotted line as "[indicating] a difference without cleaving apart for good what it distinguishes."

It is a permeable membrane: some substance necessary to both can pass from one side to another.

It is a potential line, an indication of the way out of two dimensions (fold along dotted line): In three dimensions what is separate can be brought together without ripping apart what is already joined, the two sides of a page flow moebiusly into one another. Pages become tunnels or towers, hats or airplanes, cranes, frogs, balloons, or nested boxes. Because it is a potential line, it folds/unfolds the imagination in one move. It suggests action (fold here), a chance at change, yet it acknowledges the viewer's freedom to do nothing but imagine.

It is paradoxical: more innocent than the solid line (above which rises, on a sewing pattern, half a pair of scissors, oddly askew)...

A dotted line demonstrates: even what is discontinuous and in pieces can blaze a trail." ("dotted line")

A dotted line is a trace of Möbiusian (dis)connection transforming a two-dimensional page into a three-dimensional virtual space, the figurative to the real. The two sides of a page (lexia) seem distinguishable, but they are one and continuous, able to cross over from each other by a simple click on the screen. The relations of the flat to the palpable, the possible to the real, form a conceptual double. The reader's clicking action triggers an imaginary folding of the page along the dotted line; a two-dimensional page envelops a three-dimensional virtual space in between. Ryan similarly notes the archival structure of *Patchwork Girl*: "...one conjectures a shift from the one-dimensional computer memory of ones and zeros to the two-dimensional map to the three-dimensional space when the page is folded by the dotted line." Hence, the dotted line in

the seamless lexia in “Crazy Quilt” illustrates the cross-over between the original and its copy, raw matter and artistry, and the virtual and the actual.

Thus, unlike the tree structure of other sections, “Crazy Quilt” resembles a maze or loop. The cognitive map generated by the Storyspace software displays the architecture of the enclosed sphere of “Crazy Quilt.” The lexias tend to connect to the other lexias of “Crazy Quilt” rather than moving beyond the part boundaries, as the system-generated cognitive map shows. The seamless lexia of each pair links only to its twin, forming an endless circle. Consequently, escape from the claustrophobic loop and a break from interpretative impasse are achievable only through the invisible link embedded in the text as a trace—the dotted line. This internal access suggests cross-dimensional contact and continuity. Exit is possible not by tearing apart but by folding along the dotted line. Aarseth’s tropes of aporia and epiphany, a sense of imprisonment by circular paths and the ensuing “link out,” are evident, yet in place of conventional narrative tension and release we observe serial folding and unfolding simulated by the dotted line. The virtual link-out of “Crazy Quilt” is thus comparable to Michael Joyce’s “recursus,” which include a loop and “renewal”— “an escape inward and outward simultaneously” (135). Renewal exemplifies “narrative origami,” as “linking itself—re-reading itself—has discovered and opened a new story dimension.”

Regarding the hypertextual sense of closure, *Patchwork Girl* provides an alternative to Douglas’s models, through both the traumatic looping and the implication of dimensional crossings and the virtual spaces within. There is neither complete satisfaction—even subjective—nor a feeling of exhaustion, but rather serialized consumption of narrative enacted by folds and unfolds. Instead of Aristotelian tension and discharge, the virtual openness imagined by the dotted line points to the serial movement of intertextual, transmedial electronic

narrative; the folds and unfolds intimated by the dotted line suggest an opening of the text, the body, and life.

### **Mediated Orality and Gendered Textuality**

With the advent of electronic media, Walter Ong predicted “the secondary orality” which follows the hegemonic culture of literacy dating back to the development of the ancient Greek alphabet. Haunting oral-based rhetoric has resurfaced in electronic discourse as an ambiguous return to oral culture. While permanently dependent on typographical composition—writing and print press—its group-mindedness and spontaneity are self-consciously practiced and analytically reflected.<sup>13</sup> Feminist enthusiasm about electronic media can be understood in this context of the return of orality as promotion of the maternal voice repressed and exploited by the monopoly of writing. In addition to the sensorial shift from vision to sound, there are other similarities between oral and electronic narratives. Both are “kaleidoscopic” storytelling systems in which a group of textual fragments are combined to generate new meaning each time they are put together. Janet Murray states, “what the computer would provide would be a means for using formulaic patterning, in much the same way the oral bards did, as a system for assembling multiform plots” (212).

*Patchwork Girl* showcases the electronic simulation of the oral conventions such as recursive patterns, narrative redundancy, collective authorship, and interaction between speaker/writer and listener/reader. These characteristics stand in opposition to the analytic individual reflection, unisquential layout, and tight closure that printed books accommodate.

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<sup>13</sup> Ong asserts that electronic technologies do not make printed books obsolescent but rather proliferate them: “The sequential processing and spatializing of the word, initiated by writing and raised to a new order of intensity by print, is further intensified by the computer, which maximizes commitment of the word to space and to (electronic) local motion and optimizes analytic sequentiality by making it virtually instantaneous” (133).

Against the Aristotelian convention of narrative tension and release, narrative's internal openness promotes inexhaustible possibilities in storytelling; there is no limit to the options for narratives composed by combining words and meaning blocks. In addition, the idea of "stitching" links oral discourse to the women's labor of weaving. Ong writes, "'Text,' from a root meaning 'to weave', is...more compatible etymologically with oral utterance than is 'literature',... Oral discourse has commonly been thought of even in oral milieus as weaving or stitching—*rhapsōidein*, to 'rhapsodize', basically means in Greek 'stitch songs together'" (13). If electronic narrative revives orality along with the group-mindedness and spontaneity, it facilitates the embodiment of the feminine voice and presentation of women's lives through secondary orality; this is a departure from the passive, voice-giving Mother theorized by Friedrich Kittler.<sup>14</sup>

Similarly, Jackson's use of mediated orality by simulating conversational forms and breaking down the pronoun barriers of "I," "you," and "we" serves the purpose of electronic narrative's emphasis on community and spontaneity. *Patchwork Girl* begins with the author's ("Mary/Shelley & Herself") imperative statement: "I am buried here. You can resurrect me, but only piecemeal. If you want to see the whole, you will have to sew me together yourself" ("graveyard"). The author summons readers to perform the collaborative labor of gathering body parts and building stories in direct address. Jackson uses the first-person plural pronoun to formally bind readers into the text. In "bodies too," she writes: "We are inevitably annexed to

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<sup>14</sup> Kittler holds that for German Romantics, the Mother's Mouth assumes the position of the oral source of discursive production and medium through which nature and spirits are unified in poetry. The "state-instituted mother" came into being with universal alphabetization and mandatory education circa 1800 (*Discourse*, 27). The monopoly of writing, "grammatology," was then replaced by the monopoly of fiber optics; subsequently, the same process replaced memories and dreams with technological reproduction of the dead and ghosts. Thus, the simultaneous media development of typewriter (technical signs, the symbolic), film (optic illusion, the imaginary), and phonograph (meaningless babble, the Real), beyond human-scale storage and transmission around 1880, signals the demise of the visible, audible world created from words ("Gramophone," 114). Finally, with computers, the storage function of writing is superseded by digitization: "all data flows end in a state *n* of Turing's universal machine; numbers and figures become...the key to all creatures" (118).

other bodies: human bodies, and bodies of knowledge. We are coupled to constructions of meaning; we are legible, partially; we are cooperative with meanings, but irreducible to any one.” The plural pronoun “we” crosses the boundaries of author and reader, humanity and the nonhuman world of matter. From “it thinks”: “Matter thinks. Language thinks. When we have business with language, we are possessed by its dreams and demons, we grow intimate with monsters. We become hybrids, chimeras, centaurs ourselves:...” The use of these plural pronouns assuming the oral convention contributes to the theme of multiplicities and communication.

The boundary-crossings of author/reader, fiction/reality, and I/you further demonstrate life’s unbounded potential and excess. In “universal,” the female monster’s direct address to readers as “you” calls readers into the text and stitches them into the textual flesh: “likewise I shall fill the universe to bursting with flesh flesh if I want to. You will be all part of me.” “You already are,” she says, “your bodies are already claimed by future generations, auctioned off piecemeal to the authors of further monsters. These monsters move among you already, buried in your flesh....” The networked and distributed bodies invoked by this passage are more clearly indicated by the metaphor of clouds, simultaneously singular and plural, both autonomous and linkable to a broader entity: “Keep in mind, though, that on the microscopic level, you are all clouds. There is no shrink-wrap preserving you from contamination: your skin is a permeable membrane... if you touch me, your flesh is mixed with mine, and if you pull away, you may take some of me with you, and leave a token behind” (“hazy whole”). Jackson’s use of metaphors such as “bacteria” and “a swarm” also resonate with the theme of collective, accretive, and excessive life, embodied in hypertextual form; this collective life, *zoe*, exceeds the limits of individual life/death, *bio*, in the human realm.

Through its corporeal imagination of an open space in women's writing, *Patchwork Girl* navigates life's indeterminacy and narrative's open-endedness. Jackson shares with Shelley's feminist poetics and creative impulse of generic migration. Her accidental writing is disorderly, somatic, and addictive, overflowing the rational boundaries of individual consciousness and normative biology.<sup>15</sup> In so doing, Jackson creates monsters and grotesque bodies, incarnated as *Patchwork Girl*, related to Shelley's hideous progeny, *Frankenstein*.

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<sup>15</sup> For Jackson's somatic writing, see also her most recent work—in collaboration with invited participants—called *Incredible Stain: Skin Project*. <<http://ineradicablestain.com/skindex.html>>.

## Chapter Four

### Anime Language and the Simulation of Life in Oshii Mamoru

“Blessed are those with a voice.”

—Kusanagi Motoko, *Innocence*

“For now we see through a glass, darkly, but then face to face.”

—The Puppet Master, *Ghost in the Shell*

Sergei Eisenstein’s notion of “plasmaticness,” derived from his insight into Disney cartoons, is the focal point for defining the formal characteristics of animation. Indicating the ecstasy essential to animation spectatorship, Eisenstein writes: “Ecstasy is a sensing and experiencing of the primal ‘omnipotence’—the element of ‘coming into being’—the ‘plasmaticness’ of existence, from which anything can arise. And it is *beyond* any image, *without* an image, *beyond* tangibility—like a pure sensation” (46). According to Eisenstein, animation stimulates viewers’ pre-logical sensuous thought—as opposed to consciousness—as the eye moves along with the contoured motion of the animation. He regards Disney’s animation as “a rebirth of the animal epos” of French materialism as exemplified by La Fontaine’s fables, which sought to overcome the metaphysical distinction between exalted spirit and lowly nature (33). As with La Fontaine’s promotion of universal animism, Disney’s animation, a workers’

lullaby of the modern era and postlogical return to primitive art, evokes the power of unrest and transformability dormant in the human mind.<sup>1</sup>

More recently, Vivian Sobchack discusses the aesthetic potential of animation, as exemplified by Raimund Krumme's line animation, in reference to Eisenstein's plasmaticness. Sobchack's analysis foregrounds animation's uncanny power to generate the effect of movement—most particularly, an impression of an essential life on the verge of the motion's collapse. As a genre of art, animation manifests the formal recursivity of image, almost simultaneously creating and dissolving figures; thus the animated image continuously posits and negates itself, embodying Derridean *différance* ("The Line," 257-8). What Sobchack terms the "doubled ontology of the animated line" (254)—the near-simultaneous pose and movement, figuration and disfiguration, of cartoon images—points obliquely to the paradox of life's entwinement with death. Patricia Pisters similarly notes Eisenstein's anticipation of the image's immanence as formulated by Deleuze. The famous quote, "If it moves, *then* it's alive," likewise represents life as traced movement without reference to a model, illustrated by the image's immanence; thus the immanence allows for crossings of the thresholds between true and false images, the actual and the virtual, life and death (3). Both Sobchack's and Pisters's studies also echo Keith Broadfoot and Rex Butler's earlier observation of Muybridge's horse images: "Movement is not a series of forms or Ideas put into motion.... Instead, it is movement itself which produces these forms or Ideas" (264-5).<sup>2</sup> What these critics commonly point to when

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<sup>1</sup> Interestingly, Eisenstein's commentary on animation addresses Japanese Edo Era woodblock prints, which some critics consider the precursor of Japanese animation. His emphasis on the "sensuous" (or prelogical) thought brought forth by animation also, in many senses, resonates with Freud's idea of the "omnipotence of thoughts" in the animistic belief system. See Michael O'Pray's article in *A Reader in Animation Studies* (198).

<sup>2</sup> *The Illusion of Life* (1991), one of the first scholarly attempts to bring together animation and poststructuralist theories of Derrida and Deleuze, contains a few articles studying both the similarities and discrepancies between animation and Deleuze's approach to cinema. See Alan Cholodenko, Keith Clancy, and Keith Broadfoot and Rex Butler in this book. Other notable publications regarding animation include Donald Crafton's *Before Mickey* (1982);

attempting to define animation as an art form, is its ironic gesture of simultaneously positing and negating an idea in exploration of its own representational limits.

Japanese animation (anime) has developed its own aesthetics and techniques to express the image of life. In particular, anime addresses the meanings found in the gap between the stillness and motion of animated objects. In configuring anime as a discrete art form, critics have studied its connections to cinema, manga (Japanese comics), and Japanese traditional arts such as *ukiyo-e* (woodblock print). Susan Napier's foundational book, *Anime from Akira to Howl's Moving Castle*, emphasizes East-West pop-culture confluence in anime, what she calls transpacific "cross-pollination" (22). Meanwhile, Thomas Looser, Daisuke Miyao, and Mark Driscoll examine Edo era painting, Japanese "pure film" movement, and Imamura Taihei's media theory, respectively, in an effort to trace anime's origins and genealogy.<sup>3</sup> However, the notion of limited animation elaborated by Thomas Lamarre and Marc Steinberg is most directly related to this chapter's discussion of motion/stoppage dynamics in anime.

It is difficult to say that limited animation is a Japanese invention, as Steinberg finds prototypes in American cartoons such as *Popeye* and *The Jetsons*, both of which aired in Japan in the 1960s. Nonetheless, its unique visual and stylistic techniques have certainly been fostered by anime masterminds such as Tezuka Osamu and Miyazaki Hayao. As a way to overcome the postwar lack of economic and technological resources, Japanese limited animation utilized a number of labor-conserving methods that ultimately shaped the formal aesthetics of anime: three-frame shooting; stop-images; pull-cels; repetition and sectioning; dual-use or cel bank; and short shot length (Yamamoto quoted in Steinberg, 198-9). These devices result in anime's

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Norman Klein's *Seven Minutes* (1993); *A Reader in Animation Studies* (ed. Jayne Pilling, 1998); and Paul Wells's *Understanding Animation* (1998) and *The Illusion of Life II* (ed. Cholodenko, 2007).

<sup>3</sup> See the special issue of *Japan Forum* (14.2) for their essays on anime's genealogy.

stylistic character: jerky movements, reductive facial expressions and exaggerated gestures, and explicit ventriloquism. Given that each art form uses a unique structural mechanism and grammar to reconstruct reality, these formal features distinguish anime from Western animation.

Interestingly, whereas Lamarre and Steinberg agree that the formal characteristics of Japanese limited animation were produced by the historical conditions of postwar Japanese society, they differ in terms of its particular instances. Steinberg considers Tezuka the founding father of both manga and anime; he associates Miyazaki's Toei Studios productions with Disney full-length films by virtue of their shared aspiration to cinematic realism (196). He regards *Astro Boy* (*Tetsuwan Atomu*) as undermining Lyotard's premise of "acinema:" in his view, the extreme immobility exerted by the use of still shots and techniques of limited animation, visibly alternating poses and movements, nonetheless sustains, or is sustained by, a capitalist circulation of surplus ocular desire through the "media mix."<sup>4</sup> In contrast, Lamarre's take on media relations among cinema, animation, and anime via Miyazaki's labor-saving craftsmanship and philosophy ultimately leads to a critique of the "jitters" of information society and technological advancement.<sup>5</sup> According to Lamarre, by decoding and recoding live action cinema through the tactics of "moving drawings," combined with conventional drawing movements, Japanese limited animation interrogates the minimal conditions of life (conceived by the elongation of the

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<sup>4</sup> Lyotard conceptualizes "acinema" as a possible resistance to the libidinal economy of the cinematic institution. In pursuit of either immobility or hypermobility, it eschews a consummation of movement induced by the endless production/consumption cycle of image-capital. Steinberg argues that, through the media mix, commodities embodied in *Astro Boy*'s still images were to proliferate through a series of media: from manga to TV animation to chocolate advertisements. This development boosted the postwar reconstruction of Japan's financial and symbolic economy.

<sup>5</sup> Miyazaki film's rendering of the flatness and weightlessness of images, as well as his characters' floating and gliding movements, are specific instances of anime-style representation accomplished with minimum use of technology, offering an alternative to the ballistic depth of cinematic realism. Lamarre's notion of "moving drawings" can be juxtaposed with Norman McLaren's well-known definition of animation: "not the art of drawings-that-move, but rather the art of movements-that-are-drawn" (quoted in Solomon 11). Emphasizing the significance of the intervals between frames that generate movement and give the impression of life, McLaren states, "what happens *between* each frame is more important than what happens *on* each frame."

interval between one image and another), and investigates the life-like movement that emerges from repeated intervals (“From Animation,” 340).

In light of anime’s creation of the illusion of life, and its appropriation of other media (manga and cinema in particular), Oshii Mamoru’s animated film *Ghost in the Shell* (*Kōkaku kidōtai, The Shell Squad*; 1995) provides a particularly interesting locus from which to explore anime’s representational limits. Oshii’s artistic vision has transformed Japanese limited animation and is distinct from Tezuka’s or Miyazaki’s. In this chapter, I discuss how Eisenstein’s plasmatic coming-into-being in animation can be reconfigured in Oshii’s anime. The film’s theme of evolution, concurrent with a media revolution, is allegorized by the protagonist Kusanagi’s media-networked cyborg body. Nevertheless, the viewer also thinks of his work along the continuum of poetic endeavors at representing the unrepresentable; this stems from Oshii’s envisioning of life forms as untimely and displaced traces of movement, and his digital remediation of analog media. In discussing the trope of vision in Oshii’s anime, Christopher Bolton indicates how his mode of oscillation—between real and artificial, palpable and flat, adult and childish, human and nonhuman—is the key opening the body’s virtual third space, through feelings aroused by a mediated text. Following Bolton, but focusing on voice instead of vision, I argue that, despite the distributed gaze and the absent filmic body in digital animation, it is the presence of the protagonist’s “bodiless” voice that creates the illusion of character identity, and therefore the spectators’ psychological identification with the character. The digitally processed human voice has two-fold significance: first, it is an extension of the character/actress’s body and a persistent marker of humanity to which the audience can relate; nevertheless, its presentness can only be expressed as a disembodied echo, literally reverberated by an audio production system called “spatializer,” without any visual reference to the body per se. Hence Oshii’s film,

using the trope of electronic-brain dialogue (“jacking-in”), foregrounds the ventriloquism inherent to the animation apparatus. Instead of fabricating conventional image-voice conformity, the cybernetic dialogue scenes—where characters’ voices are heard but their bodies are motionless due to dimensional lapse—question the “naturalness” of body-mind unity. They reveal, contra cinema, the artificiality of anime puppetry and the “falsity” of unifications of image and sound in traditional cinema.

*Ghost in the Shell*’s critique of Cartesian body-mind conformity extends as a challenge to Renaissance optics, which assumes a unified viewing position for constructing three-dimensional realist space. Oshii’s remediation of other media—simulating manga’s reductive flatness, cinema’s palpable depth, and computer-generated “superflat” images—cancels privileged perspectival spatial relations in appropriation of inorganic gazes and spectral eyes. Thus, animation’s fatal repetition of its cinematic origins (*pace* Lamarre), or vice versa, complicates the strict teleology of media revolution and human evolution, both of which stem from the myth of novelty and progress of modern times. In this sense, Oshii’s cyborg character acts as an allegory for the self-organizing being who enacts the language of the digital media—which autobiographically rewrites and erases itself by resurrecting the “old” media. Like Deleuze’s speculative mind, a thinking entity that puts its limits into play, the cyborg pivots around the antinomy of life’s own potentials and limits, thus expressing its author’s simultaneous desire for perfection and anxiety of regression. Oshii’s machinic dreams express the ecstasy of a being in animation as “capable of assuming any form and...skipping along the rungs of the evolutionary ladder” (Eisenstein 21); the difference lies in its attachment to celluloid dolls instead of animals.

### Presence of Voice, Absence of the Body

Alongside Otomo Katsuhiro's *Akira* and Miyazaki's *Spirited Away* (*Sen to Chihiro no Kamikakushi*), Oshii's *Ghost in the Shell* is a contemporary work of anime that has gained international fame for its artistry and stunning visuals. A cyberpunk musing on humanity in the digital age, the film is based on Shirow Masamune's science-fiction manga. Major Kusanagi Motoko is a cyborg agent in Section 9, a special government unit in charge of Japanese national security in the near future. The plot unfolds as the Puppet Master, a cybernetic entity born out of the internet, infiltrates Section 9 in pursuit of Kusanagi, with whom it seeks to unite and beget offspring in cyberspace. Kusanagi finally accepts the Puppet Master's "marriage" deal, leaving behind her human agonies over origin, personhood, and freedom; her merger with the information network is interpreted as the next step in human evolution. If *Ghost in the Shell* is a posthumanist bildungsroman in which the mind grows by incorporating information beyond a human scope, the cyborg Kusanagi becomes an allegory for the technologized self of the digital era. Many critics, such as Susan Napier and Wong Kin Yuen, rightfully note how the film's theme of body-mind dualism and its techno-orientalist retrofuturistic mise-en-scène connect with cyberpunk classics, William Gibson's *Neuromancer* and Ridley Scott's *Blade Runner*.<sup>6</sup>

According to Brian McHale, as a genre, cyberpunk explicitly visualizes postmodern metaphors such as schizophrenia and the proliferation of the body ("Elements," 150). Likewise, the alienation of body and mind in *Ghost in the Shell* is literal, rather than symbolic. Kusanagi's "ghost" is represented by animation voice, traveling in and out of her "shell," the computer-generated image of a synthetic body. The ventriloquist junction and disjunction between her

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<sup>6</sup> See also Ueno Toshiya's articles in *The Uncanny Cyborg* (2002) for Oshii's cyberpunk connection, and for how anime appropriated the Western projection of the technological "other" onto Japan.

metallic voice and de-spirited body graphically represents the virtual existence and flickering presence that N. Katherine Hayles thematizes in *How We Became Posthuman*.

Early scholarship on *Ghost in the Shell* focused on the cyborg figure as postmodern icon and the problem of reproductive sexuality, in addition to the cyberpunk confluence previously noted. Based on the theories of Luce Irigaray, Elizabeth Grosz, Donna Haraway, and Judith Butler, Sharalyn Orbaugh asserts that *Ghost in the Shell* provides a postmodern worldview promoting multiplicity and hybrid subjectivities, as embodied by the cyborg, to contest the modernist nexus of unified subjectivity, sexual binarism, and individual ideology (“Sex and the Single Cyborg,” 438-9). For Susan Napier, the film is about Kusanagi’s spiritual quest through the vehicle of her vulnerable and powerful body; Napier reads this narrative as a series of “falls” intimating Kusanagi’s transcendence and transgression in the film, compared to *Neon Genesis Evangelion* and *Blade Runner* (107-8). Carl Silvio maintains that, despite Kusanagi’s apparent transgressions of human and gender boundaries, the film reiterates hegemonic sexual politics and fixed gender roles; this is illustrated by Kusanagi’s visual objectification and her cybernetic marriage to the Puppet Master, indicating Reason’s union with, and dominion over, Matter (67-8).

In contrast, Christopher Bolton’s study of anime vis-à-vis Japanese puppet theater (*bunraku*) stresses the artificiality of highly-mediated anime bodies, which seems to hamper the audience’s emotional investment in the violence and sexuality experienced by anime characters. Bolton highlights the film’s oscillation between the theme of transcendence, as manifested by the dialogue, and the visual fetish of the body. This points to multiple layers of signification (body, voice, and action) and a stratification of theatrical signs complicating the dichotomy of the unified or dispersed subject (“From Wooden Cyborgs,” 748-50). Bolton’s reading of a serial self

and its manifold signification—indebted to Roland Barthes’s interpretation of *bunraku* puppetry—defies the longstanding dialectical opposition of organic nature and technological artistry. Just as the Puppet Master who personifies information is Kusanagi’s “mirror image,” the body and mind are relational but not necessarily analogical or oppositional. Bolton also avoids the pitfall of mechanical reductionism or total aestheticization of the body, while foregrounding art’s unusual power to evoke a semblance of the living organism, the Freudian uncanny of animation. The life of the cyborg/puppet is created by the outside “pen,” animation technology—despite the illusion of that life coming from the inside “ghost” (743).

Taking a cue from Bolton, I further examine “the networked self” (749) as expressed by the disjunction between image and voice in *Ghost in the Shell*. Examples of body-voice alienation include Kusanagi’s voice infiltrating the diplomat’s brain in the opening sequence, and the gender inversion in the climax scene where the Puppet Master’s male voice comes out of the female cyborg’s body. Bolton regards these scenes as graphic proofs of the Barthesian premise of disembodied existence within a discursive network. However, unlike Bolton’s exploration of Western reception of Japanese puppet theater, my investigation of Oshii’s anime addresses the audio-visual hierarchy in Japanese limited animation, distinct from the practice of Western animation. My focus is to examine to what extent Kusanagi’s image-less voice, digitally recorded by the spatializer, can resonate with or alienate the audience’s sense of identification with the animated character. Similarly to what Sobchack claims in her study of digital sound systems, Oshii’s use of voice-echo is a way to test the extent to which digital media can be tuned to the audience’s phenomenological experience and affect psychological identification, as compared to analog media’s perceptual coordination. Through this discussion of the audio-visual split and bodiless voice, I argue that this unique convention of Japanese limited animation—the

deliberate use of still images combined with traveling voices—not only generates emotional response from the audience but also stimulates economic and cultural interest from its multilingual and transmedial circulation in the international market.

In *Ghost in the Shell*, presence and absence, being and non-being, and life and death are envisioned not as fixed categories but as phenomenological matters of translation, whereby the essence of being is registered as a constant migration through different temporalities, dimensions, scales, and media. The trope of being and visibility, in which a vision can be lost and found during media transmission, is played out through the film. The iconic opening sequence—a dizzy display of ones and zeros on screen (later appropriated by *The Matrix*)—exposes human illiteracy of computer language: the numbers on the screen are the digital translation of the cast credits.<sup>7</sup> The thermo-optic camouflage suit granting invisibility is another motif destabilizing the connection between being and the visible. The scene where Togusa uncovers Section 6's scheme to steal the Puppet Master shows how machinic intelligence can translate the ostensibly imperceptible into the perceptible, i.e. as an automatic door sensor perceiving micro-differences of weight and pressure. Here, Oshii highlights technology's ability to capture traces of Being.

Addressing the chiasmic intertwining of presence and absence, *Ghost in the Shell* also reveals the cognitive dissonance between human knowledge and other reasoning mechanisms, positioning each as relational rather than hierarchical. The vivid representation of the complete alienation of body and mind ironically suggests that chiasmic relationship. As seen in Kusanagi's out-of-body virtual existence in cyberspace, neither is the visible body a decisive marker of one's presence, nor is invisibility ontological nothingness. Her ghost—the animation voice—travels in

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<sup>7</sup> See the DVD's supplementary material.

and out of her shell, the cyborg body. It is, then, the voice rather than the body image, the acoustic instead of the visual, that marks Kusanagi's identity and bodily presence.

Sharalyn Orbaugh asks how the audience can identify with Kusanagi in *Innocence*, the sequel to *Ghost in the Shell* ("Emotional Infectivity," 155). This Kusanagi has no anchoring body image, a result of her total fusion with the Puppet Master. I suggest, first, that it is her voice, more exactly the prosthetic voice-over of the actress, that enables spectators' affective response to the character and sustains that identity. Second, Kusanagi is not totally disembodied if the voice is considered an extension of the body. The question is whether Oshii's subversion of the usual audio-visual hierarchy should be regarded as a critique of the dominant hegemony in Cartesian optics, where vision corresponds to the reason, or whether it is an expression of the perpetual self-presence of voice/Word in Derrida's sense. In *Ghost in the Shell*, the voice, a material sign of identity and human property, is an ambiguous vestige of disembodied presence, a simulacrum, an echo, an effect of life. "Bodiless" voice dispersed through the net seems to intimate the theological self-presence of a spirit, the Cartesian cogito.<sup>8</sup> And yet, it is the unique property of "her" voice belonging to "Kusanagi" that is fetishized by audience, precisely because of its materiality as the body's extension.

Sound and voice play a significant role in the development of Japanese limited animation, in regard to its distinctive ventriloquist convention, despite the lesser critical attention given to audio than visual components, which appears to be true of cinema criticism in general. Philip

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<sup>8</sup> The idea of a spirit, or *chi* which animates a life, brings us back to the meaning of the "ghost" in the film. Ueno Toshiya explains the ghost as follows: "Rather than the mind (*seishin*), a 'ghost' is more like a person's spirit (*tamashii*), and logically it is also unconscious; in general it is made up of past experiences and memories. It's something like water in a cup, premised upon the existence of some kind of shape (such as a metal suit or a shell)" (qtd. in Orbaugh "Sex and the Single Cyborg," 447). The idea of ghost here is complex. Endowed prior to birth, it is further shaped by a person's life experience and memory. The ghost cannot exist separately from its shell (the body); it is the shell that defines the ghost just as the container determines the form of water it holds. In the film's Japanese version, both the English word "ghost" and "tamashii" (translated as a "soul," mostly of humans) are used, yet with a slightly different nuance.

Brophy's studies on animation and sound are thus crucial to any discussion of the topic.<sup>9</sup> His landmark work, "The Animation of Sound," contends that, unlike cinema, the sound-image fusion in the animatic apparatus pursues the perceptual model of dynamism—that is, the sensation of movement internal to the image itself. The act of filming in animation is "itself coming into life," unlike the cinematic animism of "bringing something to life" (70). Brophy's observations in "Sonic—Atomic—Neumonic" of anime sound, in reference to East Asian calligraphy and "Oriental" thoughts on *chi* (energy or force), demonstrate anime's capability for audible graphic mapping and audio-visual manifestation of the invisible. Conventional audio-visual hierarchy, where the sonar is subordinate to the graphic, is subverted by anime text to the extent that there is a temporal split between sound and image. This "dimensional split," which culminates in *Akira*'s climatic Big Bang scene where the visual explosion is dead silent lends itself to a question of the fundamental operation of sound-image relationships working within "dimensional warps and shifts" (197). For instance, in Takayama Hideki's *Wandering Kid: The Legend of the Super God (Urotsukidōji: Chōjin Densetsu)*, psychic conversation occurring through different spatiotemporal dimensions complicate the narrative. In this context, indicating the acoustic event's carryover of the past occurrences, Brophy notes that "voice—inhabiting multiple locations—is the vehicle by which the soundtrack registers dimensional warps and demonstrates the neumonic role of the dialogue" (204-5). This delocation or multilocation of voice contributes to the open-endedness of Eastern narrativity, recalling the flow of *chi*.

It is ironic, then, that anime's acoustic disruption, exemplified by *Akira*'s sound-image dislocation and *Wandering Kid*'s dimension-crossing voice, becomes almost mundane in *Ghost*

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<sup>9</sup> Juxtaposing the sound effects of pre-war Disney cartoons with that of post-war Warner Bros. productions, Brophy illustrates how the latter's noisy "cacophony" has undone Disney's "symphony" of life, which synchronized the graphic and the musical. His comparison between the two studio systems includes their production conditions (idyllicism versus pragmatism), thematic elements (natural aesthetics versus urban mechanical sensibilities), and textuality (poetics of movement versus speed and explosive effects) (89).

*in the Shell*. This is due to its generic appropriation of cyberpunk. The cyberpunk narrative logic legitimizes the spatiotemporal separation between voice and body and between sound and image without violating any conceptual rules. Among many instances of cyber communication, the most vivid example of the audio-visual split is an early scene where Kusanagi's electronic brain communication with Chief Aramaki occurs in cyberspace, while her shell is chasing the sanitary department truck (Chapter 4). Kusanagi's echoed voice, a symptom of dimensional warp, is heard off from her corpse-like body. This scene frames the genre's metaphysical question of potentials and horrors, not only of disembodiment but also sensory estrangement, within the stunning graphic of Kusanagi's body emptied of her ghost. The spectator shares the humanist shock of Togusa—with no prosthesis attached, the most human character in the film—witnessing Kusanagi's de-spirited torso and expressionless face while simultaneously listening to a synthetic voice echo, the aural marker of cybernetic mediation. With her ghost out of the shell, her virtual presence is instead (dis)figured as a moving arrow of digitized information on the flat computer screen simulating the city's geography.

Instead of audio-visual fusion and a harmonious relationship between the acoustic and the graphic, no matching image is offered for the voice-echo except dead stillness. This is essentially the reverse of *Akira*'s silent explosion. The resulting sensory break between sound and image, and the dimensional gap between space and time, illustrates animation's heterogeneous representational regime, which reopens the chasm of unified sensory registers and disrupts coherent corporeal experience.<sup>10</sup> The lifeless image of Kusanagi's body on the screen also

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<sup>10</sup> With regard to the division between the body and the voice, Deleuze's notion of "electronic image" is also noteworthy. He writes, "...the regime of the 'tear', where the division into body and the voice forms a genesis of the image as 'non-representable by a single individual', 'appearance divided in itself and in a non-psychological way'. The puppet and the reciter, the body and the voice, constitute neither a whole nor an individual, but the automaton.... As in Kleist, or Japanese theatre, the soul is made from the 'mechanical movement' of the puppet, in so far as the latter appoints itself an 'internal voice'.... the visual and the sound do not reconstitute a whole, but

intimates animation's mechanism to reveal the paradox of life and death, stillness and movement. The viewer experiences a series of dead images creating the effect of life whereas the movement itself, the trace of time inscribed across space, is unseen.

Furthermore, as Brophy remarks about the neumatic role of voice in anime, Kusanagi's cybernetic voice-echo can also be read as the reverberation of an event that is carried over to another space-time, and thus opens up multiple dimensions. Her "original" voice is lost during the cybernetic transmission; only the echo, the ripple-like effect of the acoustic source, is heard. In production notes included in the DVD, sound director Wakabayashi Kazuhiro comments on the acoustic effects of the cybernetic voice, as created by the "spatializer," a unique sound processor:

[The spatializer] is something that creates a type of sound that actually doesn't exist in [the] real world. It makes an unusual reverberation which is different from an echo, and it makes the sound seem bigger. For example, the sound source might seem far away from camera, but in actuality, it's close by. Based on this illusion, I tried to use a spatializer as much as possible to modify the voices during the electronic brain conversations.

Wakabayashi's exploration of new spatial-temporal relations by manipulating sound effects suggests that animation's sonic imagination indeed calls forth a life into being, which is subjectively perceived by spectators in the absence of a matching image on the screen. His commentary resonates with Brophy's definition of the animatic apparatus's dynamism as opposed to cinema's animistic life. Not only does sound-image dislocation, the effect produced

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enter into an 'irrational' relation according to two dissymmetrical trajectories. The audio-visual image is not a whole, it is 'a *fusion* of the tear'" (268).

by the spatializer, indicate a being's inhabitation of multiple dimensions, it also posits a phantasmatic concept of life—or conceives a life that cannot exist in the real world. Kusanagi's immobile but sonorous image acoustically visualizes invisible events and disembodied communications.

The acoustic imagination of disembodied cyber-presence, and the sonar embodiment of the absent body image in *Ghost in the Shell*, attest that digital media's envisioning of corporeal experience is incompatible with the perceptual coordination of analog media. In scrutinizing promotional trailers for Dolby Digital Sound, Sobchack states that Dolby's audio-vision embodies the "desire to mark *sound as visible* rather than the *visible as sounding*" ("When the Ear Dreams," 4-5). Challenging Michael Chion's condemnation of digital sound's non-human scale amplification, Sobchack emphasizes the kind of "poetic reverberation" that digital sound makes, which is "not objectively inscribed in the sound but, rather, comes into existence subjectively—locating and amplifying its sonorous being in the listener's whole body" (10). Dolby's hyperreal "here-ness" and amplified "present-ness" reverberate with spectators' internal temporality and quicken their liveliness into ecstasy.<sup>11</sup> The reverberation of Kusanagi's voice as processed by the spatializer makes an interesting case à la Sobchack's "acousmatic perception." The audience perceives Kusanagi's virtual ghost as marked by the voice coming into existence despite the lack of movement seen on the screen. The ghost travels not only in and out of the body but also on and off the screen. However, whereas Sobchack's perception of the paradoxical

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<sup>11</sup> Sobchack says that the Dolby trailers provide "an 'audio-vision' of...how that 'acousmatic' perception (in which cinematic sound is heard without its originating cause being seen on screen) is rendered graphically as a visible appearance" (4-5). Comparing a Dolby trailer titled "Train" to the Lumière Brothers' *Arrival of a Train at La Ciotat* (1895), she argues that Dolby's "Ghost Train" never quite forms into a fixed image as it moves away from us. It arrives on the screen "too late" as the train image is called forth into being as an echoed response to the sound. This audio-visual inversion has become a testing ground delimiting the horizons of digital imagination (13). The Dolby trailer images' internal echo of the digital sound not only punctuates the latter's power but also supplements what it lacks. Looking forward to new perceptive orders emerging in cinema, they present us with the grounds in which "they dream [their own audio-visual] possibilities and test these limits within a *digital horizon*."

here-ness and now-ness of Dolby trailers devoid of material time and space underscores their subjective, non-referential (hyper)realism, the eventfulness of *Ghost in the Shell* stresses the impossibility of a being on time. The delayed arrival of Kusanagi's ghost-voice as an echo signifies the being's untimeliness, always registered too soon or too late. As in other art forms, animation can present a hyperlife devoid of actual life. The ghostly voice-echo in *Ghost in the Shell* is an aural representation of an event that only comes into palpable being as a trace visualized by the imagery of Kusanagi in the thermo-optic suit: barely visible but leaving ripples when she jumps across the water surface.

Marc Steinberg and Keith Clancy stress the heterogeneity of animation's representational regime as compared to the relatively homogenic cinematic mechanism of analogous sensory experience and coherent spatiotemporal relations. The audio-visual split in *Ghost in the Shell* offers an instance in which sound and image cancel each other out, creating a suspension of action and disrupting the seamless figuration which Brophy and Sobchack characterize as the essence of animation's plasmaticness. Yet despite its innovations, *Ghost in the Shell* does not totally abandon the roots of Japanese limited animation. The minimalist convention originates in part with the need to economize resources; the resulting diegetic excess of speech over image, featuring psychic dialogue and internal monologues accompanying still images, grants anime its signature contemplative mood and philosophical depth. Luca Raffaelli notes anime's minimalist aesthetics in its use of still close-ups to draw emotional response from spectators (131). Another characteristic technique is mouth-flapping in which nothing except the character's mouth is moving in the frame with the voice dubbed in. The electronic brain dialogue in *Ghost in the Shell* can be considered a twist of the mouth-flapping convention and psychic dialogue, as it stylizes speech without the mouth moving.

Oshii's use of sound effects exposes his hybrid artistry, grounded in the conventions of Japanese limited animation on the one hand and that of cinema on the other. Indeed, there is a discrepancy between the film's cyberpunkish indulgence in technology, as manifested by its theme, and the minimum use of techniques exemplified by the cyber-brain dialogues discussed above. Oshii follows Tezuka and Miyazaki's anime tradition of self-conscious use of technology; however, he is not as humanist or minimalist as Miyazaki. As a director of both anime and live-action film, Oshii works with a hybrid of Lamarre's "cinemation," which may explain why he works with both the labor-saving technology of limited animation and digital software packages to simulate cinematic effects.

From a cinematic perspective, Oshii's experimentation with anime voice in the form of e-brain conversation scenes complicates cinema's voice-off conventions. According to Mary Ann Doane, the synchronization of sound and image is crucial to a full presentation of the unified organic body, where the voice is its own property (374).<sup>12</sup> This provides the phantasmatic filmic body with self-presence and coherence. With the advent of asynchronous sound, a body *in* the film becomes a body *of* the film. The body is displaced or dispersed into the screen space, but the voice as a physical extension is still anchored by the spatial body. The use of voice-off where we hears a character but do not see him/her because s/he is off video, on the other hand, creates a virtual dimension of the diegetic space beyond the spatial limits of the visible screen. It additionally takes the risk of revealing the material heterogeneity of the cinematic body (378).

What is interesting about the psychic voice engaging in electronic brain conversations in *Ghost in the Shell* is how the correlation between voice and body results neither in

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<sup>12</sup> Doane's illustrations of voice-off and voiceover include: flashback (in which a temporal dislocation is followed by the voice's return to the body); interior monologue (in which voice expresses what is inaccessible to image); disembodied documentary voice (which represents the voice of the Other).

synchronization nor voice-off, due to the body's double presence or fragmented existence where the de-spirited body is seen on the screen while the imageless voice is heard off screen from virtual cyberspace. We see Kusanagi's image on the screen, and yet that body is disowned by the voice; meanwhile, her virtual presence is unseen but acoustically imagined. This complication of the voice-off convention expresses not only a radical alienation between body and voice but also the unbounded desire of the body to extend beyond the screen space. Thus, the usual conformation of sound to image is violated as the sonic cancels out the optical, without a final resolution between the two. In contrast to the filmic body, as phantasmatically reorganized by audio-visual conformity, the anime body exemplified by Oshii's animation is distributed to multiple dimensions. Therefore the audio-visual split in the cybernetic dialogue scenes is Oshii's formalistic revolution, a technological breakthrough for both Japanese limited animation's minimalism and cinema's voice-off convention.

### **Anime Eye and Spectral Gaze**

The voice echo coming out of Kusanagi's lifeless body is the aural sign of her cyber presence registered as a belated effect of the virtual. Rather than the on-screen image, the off-screen voice makes Kusanagi an identical character for the audience to recognize and enables them to invest emotions in her. This section of the essay will discuss the film's visual encoding of the distributed gaze and virtual subjectivity in tandem with its acoustic simulation of a life analyzed in the previous section. Oshii's challenge to Cartesian optics in *Ghost in the Shell* is two-fold. First, as the previous section has shown, by overturning the usual audio-visual hierarchy, it undoes the vision's dominion over the other senses. Second, the film's visual array of manga, cinema, and superflat image envisions alternative spatiotemporal relations to those of

the Renaissance perspectival system which postulates a geometric three-dimensional space established by a single viewpoint.

In his *Optics*, using the trope of a blind man's stick and a wine vat, René Descartes explains that we perceive objects and feel their luminous bodies "not only by means of the action in them which is directed toward our eyes, but also by the action in our eyes which is directed towards them" (59). Privileging sight as the foremost sense, he posits the location of true objective sensory awareness not in the body but in the soul; the soul conceives the object's image as it is transmitted to the brain by optic nerve-fibers. Maurice Merleau-Ponty, in denial of Descartes's rationalism and being's transparency, restores the central role of the body, which senses itself both seeing and being seen, and which is woven into the texture of the visible world (162-5). While acknowledging a third dimension as opened up by Renaissance perspective techniques, he locates "a third eye" in the body; vision, unlike thought, does not try to assimilate the object into itself but opens the seer up to the world. For Merleau-Ponty, seeing provides us with the presence of the world, in accordance with our perspective but essentially independent from ourselves (187).

Regarding the phenomenological experience of film, in which vision is entwined with existence, Sobchack holds that discontinuous time and heterogeneous spaces are recomposed into coherent spatiotemporal units by the cinematic apparatus. Electronic media, in contrast, dissolves the viewer's sensory coherence by frequently dissecting, rewinding, replaying, and flipping images ("Toward," 56-7). Sobchack asserts that electronic media, structured by simulation of saturated information, renders "homogeneous experience of [temporal] discontinuity" and spatial dispersal, resulting in a lack of physical and moral gravity. Reworking Sobchack's media paradigm, Bolton draws attention to anime's oscillation between cinematic

and electronic vision (“The Mecha’s Blind Spot,” 141-3). For instance, Oshii’s 1993 film *Patlabor 2* (*Kidō keisatsu patoreibā 2*) expresses diffused electronic presence as demonstrated by “media’s eyes” shots. On the other hand, the film’s simulation of cinematic embodiment in a “virtual aliasing,” which is neither cinematic nor electronic, afflicts a self-criticism on the electronic perceptual regime and allows a certain level of aesthetical embodiment.<sup>13</sup> Bolton, alluding to Merleau-Ponty’s concept, further proposes a concept of “the otaku’s third eye, an eye that ...allows the spectator to watch him or herself watching the [anime] text” (“Anime Horror,” 68). The opening of this third eye enables spectators, who are fully aware the artificiality of anime puppetry, to experience nonetheless emotional arousal even through highly mediated and stylized art forms such as anime.

In contrast, the Japanese critic Azuma Hiroki’s investigation of otaku postmodern culture sheds light on anime’s non-perspectival spatial relations and the virtual gazes disseminated through its visual plane.<sup>14</sup> Instead of a perspective shot assuming the subjective position of a central character, a superflat shot gazing from above draws equal attention to foreground and background in distributing visual information across the picture, thus disseminating the viewer’s subjectivity. Azuma makes a similar claim of dispersed subjectivity that replaces a single gaze of

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<sup>13</sup> Bolton’s example of “the media’s eyes” shot in *Patlabor 2* is found in the looping sequence of multiple reruns of the Yokohama Bay Bridge attack on a TV screen. Spectators lose a sense of reality due to the effects as in instant replay and channel flipping. Another example of the distributed electronic presence places spectators in the position of the screen monitor, forcing them to take the machine’s perspective—whose reasoning mechanisms are incompatible with those of humans. On the other hand, Oshii evokes the older cinematic medium through the “virtual aliasing,” in which animation simulates the cinematic effect of TV screen’s flicker as in live action.

<sup>14</sup> Otaku is a Japanese term referring to people who obsessively consume media products such as anime, manga, video games, and figurines. William Gibson says, “The otaku, the passionate obsessive, the information age’s embodiment of the connoisseur, more concerned with the accumulation of data than of objects, seems a natural crossover figure in today’s interface of British and Japanese cultures... Understanding otaku-hood, I think, is one of the keys to understanding the culture of the web. There is something profoundly post-national about it, extra-geographic” (“Modern Boys,” 8). Azuma views otaku consumerism as the hybrid condition of Western influences combined with the reemergence of “amodern Edo Japan.” The definition of otaku as “database animals” is derived from Alexandre Kojève’s “animalization” of the post-historical world divided between American “animality” and Japanese “snobbery” (*Otaku*, xvi-xvii).

the camera-eye. His reference to Lacan's analysis of Hans Holbein the Younger's "The Ambassadors," vis-à-vis Murakami Takashi's anime eyes, is particularly significant, as Azuma sees Holbein's painting as a precursor of the superflat image (*Superflat*, 143). "The Ambassadors" exhibits the co-existence of two different spaces and gazes: a three-dimensional single space registered by the straight gaze of two Renaissance male figures, and a separate topological space via the sidelong gaze represented by the oblique figure of a skull in the foreground. Compared to Holbein, Murakami's otaku painting is the cultural product of "postal" condition whereby neither the symbolic castration insinuated by the eyeless skull nor the perspectival visual order constituted by excluding other possible gazes is valid. Murakami's anime eye implies the lack of an authorial gaze, a "world without the camera eye," and the subsequent proliferation of diffuse eyes to supplement the void. According to Azuma, "Super Flat, then, means not so much a physical flatness as a worldview lacking gaze, where linear perspective is unrealized and castration dysfunctional" (149). He concludes that the otaku postmodern subject can only project their emotions onto the "spectral" eyes of manga and anime characters. Spectral eyes are neither alive nor dead; instead of a mutual gaze between the viewer and the viewed, they endow the spectator with a kind of empathy and generate affective response despite a lack of completed human interaction. Azuma writes, "[It is an] eye that prevents the interaction of gaze, a mysterious gaze disrupting the spatial continuity between viewer and viewed: Derrida would probably call this 'spectral' (since ghosts shift between visibility and invisibility), and In the Deep DOB [Murakami's painting] 'images' just such a ghost" (149).

*Ghost in the Shell* offers a testing ground for both Bolton's otaku third eye and Azuma's superflat theory. The alleged absence of the body in electronic media makes anime seem devoid of the subjective embodiment and psychological realism of cinema. Oshii anime, however, by

simulating cinematic perspective and spatial depth, renders an experience neither electronic nor cinematic, as Bolton asserts. There is a dual movement in anime's remediation of cinema: animation's longing for cinematic realism; and the self-critique of electronic media and otaku image culture. The use of multi-plane cameras in driving or flying scenes combined with Dolby digital surround-sound system provides audiences with the cinematic experience of ballistic depth. Yet Oshii's signature remedial shots appropriating cinematic techniques are also paradoxical reminders of the sorry state of a humanity highly mediated by image media and stripped of human substance, memory, family, or identity (which is characteristic of otaku as defined by Azuma).<sup>15</sup> Superflat theory also revisits the postmodern condition of the flattening affect. The emergent subjectivity and database otaku identity that Azuma associates with digital media herald not the disappearance but the proliferation of the body. Superflat does not mean the lack of a gaze but its multiplication, revealed by virtual gazes and affective stacks of on-screen visual layers.

The question then is how issues of representation, embodied vision, self-mediation, and subjective spatiotemporal relationships are once dissolved and reinscribed in anime, which is neither simply flat nor three-dimensional. If the networked self and the database animal bring humanity into a new dimension, what are the discursive limits of the superflat and otaku identity suggested by Oshii's film? Does the looping temporality in electronic and digital media expose the traumatic solipsism criticized by Thomas Looser or show recognition of their own blind spots, as Christopher Bolton maintains? Two sequences from *Ghost in the Shell* offer useful

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<sup>15</sup>In the scene where a de-spirited sanitary worker finds out that his family life is a fiction manipulated by photographs and memory distortion, Oshii creates cinematic effects through "virtual aliasing" of a TV screen and adopting a fish-eye lens shot for a photo of the man with his basset hound (Chapter 6). Whereas image's fabrication of reality and its manipulation of human memory are condemned here, the viewer feels sympathetic toward the de-spirited man's crying face, which is in itself an animated image. The affective face effectively evokes the spectators' emotional response.

spaces in which to explore these questions. One scene revolves around a de-spirited villain who represents modernist amnesia; the other centers on Kusanagi's mental transformation. These two sequences reveal contrasting visions of humanity. In opposition to the traumatic blindness of the ghost-hacked man, Kusanagi's waterway cruise sequence highlights her affective response to the surrounding city and her recognition of herself as a being in the world. The visual trope of her participatory gaze upon the cityscape symbolizes an opening up of the space between subject and object and the creation of a mind's landscape. The two sequences, through an oscillation between flatness and depth of both visuals and characters' psychology, also engage with the dual movement of negation and legitimization due to anime's potential for representing reality and emotion. In contrast to flat shots capturing the ghost-hacked man's de-spirited state in the chase sequence, the cruise sequence demonstrates digital animation's appropriation of non-perspectival sensory systems, used to forge ocular depth and psychological intensity in a different fashion than that of perspectival realism. This waterway sequence also visualizes the subject's dissemination, graphically illustrated by Kusanagi's ripple image, while providing the viewer with a corresponding emotional experience by distributing the gaze across the screen surface.

The earlier chase sequence takes place in a traditional street market and rundown slums where Kusanagi and Batou hunt down a ghost-hacked villain; the setting calls out the postmodern, postcolonial metropolis (Chapter 4). The hybrid urban space on the screen, saturated with street signs and wall posters, vendors and customers, and human and mechanical noises, is ambiguously Eastern and Western, past and futuristic, overcrowded and unmanned, and deteriorating and regenerating. Connecting Hong Kong's disorderly fractal geography and Kusanagi's fragmentary cyborg identity, Wong Kin Yuen juxtaposes the fractal aesthetics of a "large scale of global cultural flows (particularly of technoscape, mediascape, and ideoscape)"

with that of the micro-level “idea of the fractured body of the humanoid hybrid” (15).<sup>16</sup> Wong specifically points out that water imagery is used as a symbol for the data streams and informational flood propagating the image of the metropolis, which in turn emphasizes the cinema of urban dwelling. This chase sequence is also a complex amalgam of mediascape, serially invoking manga-like flatness, simulated depth of cinema, and flickering digital virtuality. Just as Wong reads a hint of historicity in the architectural pastiches and spatiotemporal hybridity, I regard this remediation of “old” media as Oshii’s re-remembering of (media) history rather than complete oblivion.

The ghost-hacked man’s traumatic forgetfulness in this scene seems to insinuate what Jameson indicates as the postmodern condition—flattening of affect, schizophrenic temporality, historical amnesia, and dehumanization. Yet the scene is not so much total condemnation of postmodernism as a critique of man’s particular blindness, symbolized by the black sunglasses which also block the viewer’s emotional investment. In contrast to the dialogue chastising the villain’s mental limbo, the scene’s visual display of a media palimpsest indicates the haunting presence of chaotic pasts and nonlinear histories. The man’s “lost” sense of identity and forgotten familial roots, as conveyed by the dialogue, are displaced within the film’s visual layers to evoke a variety of spatiotemporal relations in past media genres. Oshii alternates a 2-d flat shot of the man standing against street signs, alluding to non-perspectival visual arts such as manga and Japanese landscape painting, and a 3-d perspective shot of the smoky downtown, imitating cinematic realism. Meanwhile, Kusanagi’s ripple images and her flickering presence

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<sup>16</sup> Wong’s notion of “fractal geography” is indebted to Scott Bukatman’s study on *Blade Runner* and Arjun Appadurai’s on the global cultural economy.

are digitally-morphed into 4-d virtual shots processed by the TIMA Software.<sup>17</sup> This sequence's alternation between depth and flatness, vertical falls and gliding movement, illustrates multiple visions of a history. By writing anime's own genealogy as a serial invocation of past and present media that influence anime's stylistic development, the sequence delivers a sense of fractal history relying on recursive temporalities. Thus the scene of flattened affect is not entirely flat.

The chase sequence is haunted by the ghost of history as conjured up by digital remediation of analog media; in contrast, the cruise scene (Chapter 8), the film's eloquent turning point articulating the theme of evolution, manifests new media aesthetics and digital poetics. As perhaps the most slow-paced and meditative sequence, it illuminates the city's labyrinthine grids and multifarious facades captured either from Kusanagi's viewpoint or in occasional objective shots. The water imagery of data streams and informational flows visualizes the constant movement of the city, which is neither focalized nor completely chaotic. Oshii uses many reflective shots of things mirroring one another to capture the excessive energy of life or *chi*, which cannot be contained within the boundaries of the organic and inorganic, subject and object. This energy, broken out from its agents, creates an image of the living landscape. Further, the varying directions and different velocities of flow and movement of the screen objects in this scene distribute and proliferate the viewer's gaze to the entire visual plane, rather than zooming in on a single vanishing point. In this sense, digital media's articulation of the sensory experience outside of a single gaze and perceptual organization echoes the film's theme of environmental convergence of man and machine.

In analyzing the film's depiction of the city and bringing together the Shintoist notion of *kami* (spirit) and Spinoza's ontology, Giorgio Curti posits that *Ghost in the Shell* suggests a new

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<sup>17</sup> See Livia Monnet's "Toward the Feminine Sublime, or the Story of 'a Twinkling Monad, Shape-Shifting across the Dimension,'" for a detailed discussion of digital morphing in *Ghost in the Shell*.

meaning of life which does not have any organizational principles. This defies not only the traditional biological definition but also the dualist separation of nature and technology, as humans and the earth are equally “relational modes with ‘a common origin’” in Shintoism similar to the single substance of God and Nature in Spinoza (93).<sup>18</sup> Extrapolating from Curti’s description of the “acting landscape” as “a relational living and endeavoring thing” (87), I argue that the movement, broken free from the distinctions between human and nonhuman, organic and inorganic, is the very centerpiece of this sequence, which circles back to the protagonist’s ontological state of being as a cyborg. What is most striking in this panoramic sequence— assembling the city’s various facades, sky, waterways, streets and highways busily travelled by an airplane, boats, cars, passers-by, and even discarded waste—is the different layers of directions and speeds of the travelers, as well as the variety in scale and color caught by shifting foci and angles. Although the whole sequence forms a kind of montage, each shot has its own tiers of speeds and movements, embodying what Wong calls fractal geography. Many shots have a zigzagged visual structure, with the screen space divided by multiple diagonal lines. A series of the oblique screen space makes spectators dizzy and mesmerized yet retains some semblance of order.

The movement discharged from the agent found here echoes Eisenstein’s notion of plasmaticness, which points to animation’s postlogical turn to (infantile) action instead of (adult) character. Also of considerable significance is the absence of speech (except for the diegetic music score).<sup>19</sup> Seeing is central to Kusanagi’s transformation. Her evolution has already been

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<sup>18</sup>As Shirow, the original manga creator, asserts, the Puppet Master is also a life form: the self can be defined as “an integration of information that has reached a specific level of complexity, shifted, and created a phase called ‘life’ ” (author’s note, page 271).

<sup>19</sup>Kawai Kenji’s score sings of the descent of a Shinto god. The lyrics written in the ancient Japanese language read: “When you are dancing, a beautiful lady becomes drunken. When you are dancing, a shining moon rings. A god

foreshadowed by a close-up of her startled face when she hears the Puppet Master's voice: "For now we see through a glass, darkly, but then face to face." As this quote from 1 Corinthians 13:12 (The Holy Bible: King James Version) suggests, Kusanagi's transformation into the being in the world significantly involves seeing, while viewers also experience an ecstatic transport in observing her change. The mirror image of the world and the self implied in this sequence is indicative of the continual change and growth, simultaneous birth and death, of a life within an all-inclusive landscape. Accordingly, we also see a number of reflection shots and images of water and windows in which layers of imagery intersect with one another in varying speeds, directions, and densities. These shots convey the mode of mutual reflection, in the sense of both mirroring and contemplation, between Kusanagi and her surroundings, between and the viewer and the screen world, in endless extension by image's association. The city's facades and the walkers' movement visually reverberate on the water, just as the mannequins, passers-by, and neon signs, combined with another layer of boat-riders and the sky, are reflected in the transparent window glass.

If the pivotal cruise sequence legitimizes digital media logic, the mirror shots can be regarded as examples of superflat imagery. First, recalling Azuma's remarks on otaku image culture, the scene's priority is not character but surface movement and the flow of information from which meaning emerges and disappears. Second, these mirror shots create an unconventional sense of depth or flattened layers—what Thomas Lamarre calls "superplanar" images. All the visual elements in the picture are densely packed and hypertextually hover upon one another. According to Lamarre, the superplanar image flattens the gap or distance between

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descends for a wedding, and dawn approaches while the night bird sings. God bless you, God bless you, God bless you, God bless you."

the layers of background objects that the multi-planar composition creates; however, this is accomplished while retaining a lingering depth, as if the potentiality of depth was introduced by layers and then crushed.<sup>20</sup> Linking Azuma's superflat theory to the visual logic of digital media, Lamarre claims, "Here you might think of 'super' literally as 'over' and 'above'. For, as you connect elements, there emerges a pattern that is not given directly in the image, which hovers above it, as it were—a set of shifting connections" ("The Multiplanar Image," 137). If the superplanar image transforms the screen into an informational space, the most obvious and literal example in *Ghost in the Shell* is the image of the computer monitor screen delivering an electronic vision with grids, numbers, and moving dots on a pure green background. Similarly, in the cruise sequence a viewer can visualize the constant information flow and data stream travel not only in cyberspace but also on the level of streets and channels of the metropolis; therefore the superflatness of the reflection shots underscore the theme of haunting connections and virtual associations among people, nature, inanimate things, and the landscape.

Kusanagi's evolution and her openness to the world as manifested in the cruise sequence resonate with digital media's non-perspectival projection of a nonhuman vision without the camera-eye. The spectral gazes hover across the organic and inorganic fields of vision, and the depth created by digital software is neither simply flat nor perspectival. The "affective stacks" of superplanar image educing emotion in a series of flat frames relate neither the modernist

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<sup>20</sup> The multiplane camera was invented by Walt Disney Studios in the 1930s. It produced an illusory three dimensional effect by moving a stack of drawing cels or sheets of backgrounds at varying speeds, the further away from the camera, the slower the speed. In defining the superplanar as a kind of multiplanar but non-perspectival image, Lamarre classifies the superplanar into two groups. The first is created by "open compositing," emphasizing the gap between layers as well as the lateral view of crossways speed instead of motion in depth; this is illustrated by Miyazaki's manga films. The other is the superflat image, created by flat compositing and seen in Kanada Yoshinori's *Galaxy Express 999* and Anno Hideaki's *Neon Genesis Evangelion*. The flat composition inducing "pure animetism" is found in a scene of school children with umbrellas from *Ghost in the Shell* (Chapter 8). Oshii pushes the boundaries of flattening aesthetics of limited animation toward pure animetism by evoking cartoonist impression of movement in lieu of human-like motion.

psychological depth nor the postmodern flattening affect. Azuma illustrates the otaku subject's animalistic behavior through their affective response to favored manga and anime characters, digital simulacra from the invisible database. Likewise, in *Ghost in the Shell*, affect flows on the image's surface and over the screen space, forming virtual spatiotemporal relations between the spectator and the cyborg character (itself a fabricated image). Oshii's visual experiment with non-perspectival superflat images thus pushes the limits of mimetic representation to the point where a unified viewer's position becomes dysfunctional. This inorganic sight echoes the film's motif of the cyborg as allegory of mankind's ontological opening up to the environment.

### **Digital Media Logic and the Limits of Superflat**

Lev Manovich's *The Language of New Media* and Jay David Bolter and Richard Grusin's *Remediation*, two ground-breaking books on new media, equally maintain that the newness of digital technologies originate precisely from its refashioning and simulation of earlier art forms such as perspective paintings, photography, cinema, and television. Thomas Lamarre and Livia Monnet bring this logic of remediation into the field of digital animation. Lamarre notes that the dilemma of new media is unresolvable because the "end" of the old media simultaneously signifies the demise and fulfillment of its predecessor ("The First Time," 176). Conversely, Monnet finds digital animation's obsessive simulation of cinematic animism in works such as Sakaguchi's anime *Final Fantasy*, where the phantom persistently returns as uncanny life-effects ("Invasion," 206). The idea of "phantom" recalls the audio-visual inscription of spectral gazes and the reverberation of bodiless voice-echo in *Ghost in the Shell*. While the film's acoustic and optical registers attempt to represent multiple spatiotemporal relations and virtual subjectivity, they write their own digital media logic of simulation and spectrality within

themselves. The ghost can also be the phantom presence of old analog media that haunt digital new media, for remediation or citation of earlier media to create new media is possible only by conjuring up the ghost of the parent medium, endowing a life to the posterior while anticipating the predecessor's persistent return.

On the other hand, by endorsing temporal recursivity and ghostly remediation, a certain aspect of digital media theories and Azuma's superflat theory pose the problem of legitimating postmodern cultural logic. Thomas Looser's discussion of superflat and postmodern media relations is useful in this regard.<sup>21</sup> According to Looser, contrary to modernism's representational technologies—preoccupied with analogic correspondence between reality and appearance—postmodernism, characterized by the loss of a point of origin or dimension, has brought forth non-mimetic technologies to create a complexity emerging from surface configurations and equal relationships among elements (308). The simulation with no reference to reality liberates the viewer from the dialectics of real and fiction, copy and original, representation and Idea. Conversely, the blurred distinction between reality and fiction may lend itself to a total aestheticization of reality, foreclosing on any vital discussion of the history and politics of the “real” world. This would lead to the “traumatic solipsism” Looser witnesses in the post-Karatani debate on impossible postmodernism in Japan.<sup>22</sup> Ironically, even as a critique of postmodernity, Karatani Kojn's notion of amodern Edo and multiple origins of Japanese modernity can fall into a trap of cultural narcissism, where a looping temporality undoes any

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<sup>21</sup> Looser takes examples of superflatness from *Ghost in the Shell*, *Serial Experiments Lain* and *Nausicaa of the Valley of Wind*. In combined use of analog cels and digital technologies, these works display an array of photographic, filmic, and anime-ic visual effects that lend themselves to disparate spatiotemporal orientations of a viewing subject.

<sup>22</sup> See *Origins of Modern Japanese Literature* (ed. Brett de Barry) and *Impacts of Modernities* (ed. Thomas Lamarre and Nae-hui Kang) for debates on the impact of modernity in East Asia.

temporal borders and spatial limits. Azuma's superflat theory inherits this tendency from Karatani.

Having analyzed *Ghost in the Shell*, I assert that Oshii offers a kind of self-criticism about digital media's solipsism and sets up a negative horizon by revealing its own limitations and failures. The film's image palimpsests, invoking manga-like flatness, cinematic depth, and digital virtuality, relate multiple registers for a being to be constructed in animation. The production of a disharmonized audio-visual relationship not only recalibrates the conventions of both cinema and limited animation but also exposes what it fails to achieve. The film challenges the cinematic mode of unified perspective and coherent body experience by showing how subject boundaries constantly shift according to media transitions, from cinematic to electronic to digital. The emerging order of digital media—a non-figurative simulation of the world as information—pushes the mimetic boundaries of the medium to contest the very concept of mimesis. In this sense, *Ghost in the Shell* interrogates not only the limits of what is human but also the conditions of anime's simulation of life. Just as the cyborg is an uncanny sign troubling the distinction between human and nonhuman, animation's ambivalent relationship with reality explores the condition wherein artistic representation creates the impression of life.

Eisenstein sees the potential of life's plasmaticity leaping up and down the evolutionary ladder in both Disney cartoons and La Fontaine's fables in regards to their anthropomorphization of animals. Oshii's *Ghost in the Shell*, a turn-of-the-century dream of erotic boundary-crossing, is a narrative not only of the animalization of humans but also the informatization of both animal and human ethos, matter and life.

### Bibliography

- Aarseth, Espen. *Cybertext: Perspectives on Ergodic Literature*. Baltimore: Johns Hopkins UP, 1997.
- Abel, Jonathan E., and Shion Kono. Introduction. *Otaku: Japan's Database Animal*. Minneapolis: U of Minnesota P, 2009. xv-xxix.
- Aristotle. *Poetics*. Trans. Malcolm Heath. New York: Penguin, 1996.
- Abrams, M. H. "Structure and Style of the Greater Romantic Lyric." *From Sensibility to Romanticism: Essays Presented to Frederick A. Pottle*. Ed. Frederick W. Hilles and Harold Bloom. New York: Oxford UP, 1965. 527-60.
- Adorno, Theodor. *Aesthetic Theory*. New York: Routledge, 1984.
- Agamben, Giorgio. *Homo Sacer: Sovereign Power and Bare Life*. Palo Alto: Stanford UP, 1998.
- Akira*. Dir. Otomo Katsuhiro. Perf. Iwata Mitsuo, Sasaki Nozomu. TMS Entertainment, 1988.
- Anderson, Benedict. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. New York: Verso, 2006.
- Auerbach, Erich. *Mimesis: The Representation of Reality in Western Literature*. Trans. Willard Trask. Princeton: Princeton UP, 2003.
- Avalon*. Dir. Oshii Mamoru. Perf. Margorzata Foremniak, Wladslaw Kowalski. Miramax, 2001. DVD.
- Azuma, Hiroki. *Otaku: Japan's Database Animal*. Minneapolis: U of Minnesota P, 2009.
- . "Superflat Speculation." *Superflat*. Ed. Murakami Takashi. Tokyo: Madora Shuppan, 2000. 138-51.
- Bakhtin, M. M. *The Dialogic Imagination: Four Essays*. Ed. Michael Holquist. Austin: U of

- Texas P, 1982.
- Barthes, Roland. *S/Z: An Essay*. New York: Hill and Wang, 1974.
- Baudrillard, Jean. *Selected Writings*. Ed. Mark Poster. Palo Alto: Stanford UP, 1988.
- Bendner, Bert. "Moby-Dick, an American Lyrical Novel." *Studies in the Novel* 10 (1978): 346-56.
- Benjamin, Walter. *Illuminations: Essays and Reflections*. Ed. Hannah Arendt. Trans Harry Zohn. New York: Schocken, 1999.
- . *The Work of Art in the Age of Its Reproducibility and Other Writings on Media*. Ed. Michael Jennings, Bridget Doherty, and Thomas Levin. Cambridge, MA: Belknap Press of Harvard UP, 2008.
- Bishop, Ryan, and John Philips. "Among the Blind." *Cultural Politics: An International Journal* 4.3 (2008): 269-87.
- Blade Runner*. Dir. Ridley Scott. Perf. Harrison Ford, Sean Young, Rutger Hauer. Warner Bros., 1982. DVD.
- Bolter, Jay David. *Writing Space: Computers, Hypertext, and the Remediation of Print*. New York: Routledge, 2001.
- Bolter, Jay David, and Richard Grusin. *Remediation: Understanding New Media*. Cambridge, MA: MIT Press, 1999.
- Bolton, Christopher. "Anime Horror and Its Audience: 3×3 Eyes and Vampire Princess Miyu." *Japanese Horror Cinema*. Ed. Jay Mcroy. Honolulu: University of Hawaii Press, 2005. 66-75.
- . "From Wooden Cyborgs to Celluloid Souls: Mechanical Bodies in Anime and Japanese Puppet Theater." *Positions: East Asia Cultures Critique* 10.3 (Winter 2002): 729-71.

- . "The Mecha's Blind Spot: *Patlabor 2* and the Phenomenology of Anime." *Robot Ghosts and Wired Dreams: Japanese Science Fiction from Origins to Anime*. Ed. Christopher Bolton, Istvan Csicsery-Ronay, and Takayuki Tatsumi. Minneapolis: U of Minnesota P, 2007. 123-47.
- Borges, Jorge Luis. "The Garden of Forking Paths." *Labyrinths*. New York: New Directions, 2007. 19-29.
- Braidotti, Rosi. *Metamorphoses: Towards a Materialist Theory of Becoming*. Cambridge, UK: Polity, 2002.
- Broadfoot, Keith, and Rex Butler. "The Illusion of Illusion." Cholodenko 263-97.
- Brophy, Philip. "The Animation of Sound." Cholodenko 67-112.
- . "Sonic—Atomic—Neumonic." *The Illusion of Life II: More Essays on Animation*. Ed. Alan Cholodenko. Sydney: Power Publications, 2006. 191-209.
- Bukatman, Scott. *Terminal Identity: the Virtual Subject in Postmodern Science Fiction*. Durham: Duke UP, 1993.
- . *Matters of Gravity: Special Effects and Supermen in the 20<sup>th</sup> Century*. Durham: Duke UP, 2003.
- Burn, Stephen J., and Peter Dempsey. *Intersections: Essays on Richard Powers*. Champaign: Dalkey Archive Press, 2008.
- Calvino, Italo. *If on a Winter's Night a Traveler*. New York: Everyman's Library, 1993.
- Carazo, Carolina and Miguel Jimenez. "Gathering the Limbs of the Text in Shelley Jackson's *Patchwork Girl*. *Atlantis* (June 2006): 115-29. Web. 19 July 2011.  
<[http://www.atlantisjournal.org/ARCHIVE/28.1/2006Sanchez-PalenciaCarazo\\_AlmagroJimenez.pdf](http://www.atlantisjournal.org/ARCHIVE/28.1/2006Sanchez-PalenciaCarazo_AlmagroJimenez.pdf)>.

- Chaouli, Michel. "How Interactive Can Fiction Be?" *Critical Inquiry* 31.3 (Spring 2005): 599-617.
- Cholodenko, Alan, ed. *The Illusion of Life: Essays on Animation*. Sydney, Australia: U of Sydney P, 1991.
- Chun, Wendy Hui Kyong. "Introduction: Did Somebody Say New Media?" *New Media, Old Media: A History and Theory Reader*. Ed. Wendy Hui Kyong Chun and Thomas Keenan. New York: Routledge, 2005. 1-13.
- Cixous, Hélène. "The Laughter of Medusa." *New French Feminisms: An Anthology*. Ed. Elaine Marks and Isabelle de Courtivron. New York: Schocken, 1981. 245-64.
- Clancy, Keith. "T(r)opology of Pyromania." Cholodenko 243-61.
- Coover, Robert. "The End of Books." *The New York Times* 21 June 1992. Web. 19 July 2011. <<http://www.nytimes.com/books/98/09/27/specials/coover-end.html>>.
- . "Literary Hypertext: The Passing of the Golden Age." Digital Arts and Culture Conference. Atlanta, GA. 29 October 1999. Keynote Address. Web. 19 July 2011. <[http://nickm.com/vox/golden\\_age.html](http://nickm.com/vox/golden_age.html)>.
- Coupland, Douglas. *Microserfs*. New York: Harper Perennial, 2008.
- Crary, Jonathan. *Techniques of the Observer: On Vision and Modernity in the 19<sup>th</sup> Century*. Cambridge, MA: MIT Press, 1992.
- Curti, Giorgio. "The Ghost in the City and a Landscape of life: A Reading of Difference in Shirow and Oshii's *Ghost in the Shell*." *Environment and Planning D* 26 (2008): 87-106.
- Danielewski, Mark. *House of Leaves*. New York: Pantheon, 2000.
- de Bary, Brett, ed. *Origins of Modern Japanese Literature*. Durham: Duke UP, 1993.

Delany, Samuel. *Silent Interviews: on Language, Race, Sex, Science Fiction and Some Comics—*

*A Collection of Written Interviews*. Middletown: Wesleyan UP, 1994.

Deleuze, Gilles. *Cinema 2: The Time-Image*. Minneapolis: U of Minnesota P, 1989.

---. *Difference and Repetition*. New York: Columbia UP, 1994.

Deleuze, Gilles, and Félix Guattari. *Anti-Oedipus: Capitalism and Schizophrenia*. Minneapolis: U of Minnesota P, 1983.

---. *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis: U of Minnesota Press, 1987.

Deleuze, Gilles, and Claire Parnet. *Dialogues*. New York: Continuum, 1987.

DeLillo, Don. *White Noise*. New York: Penguin, 1999.

---. *Underworld*. New York: Scribner, 1997.

de Man, Paul. *Aesthetic Ideology*. Ed. Andrzej Warminski. Minneapolis: U of Minnesota P, 1996.

Derrida, Jacques. *The Truth in Painting*. Chicago: U of Chicago P, 1987.

Descartes, Rene. *Selected Philosophical Writings*. Cambridge, UK: Cambridge UP, 1988.

Dewey, Joseph. *Understanding Richard Powers*. Columbia, SC: University of South Carolina Press, 2008.

Dick, Philip K. *Do Androids Dream of Electric Sheep?* New York: A Del Rey Books, 1968.

Doane, Mary Ann. "The Voice in the Cinema." *Film Theory and Criticism*. Ed. Leo Braudy and Marshall Cohen. New York: Oxford UP, 2004. 373-94.

Douglas, Jane Yellowlees. "'How Do I Stop This Thing?': Closure and Indeterminacy in Interactive Narratives." *Hyper/Text/Theory*. Ed. George Landow. Baltimore: Johns

- Hopkins UP, 1994. 159-88.
- Doyle, Richard. *Wetwares: Experiments in Postvital Living*. Minneapolis: U of Minnesota P, 2003.
- Dowling, William. *The Epistolary Moment: The Poetics of the Eighteenth-Century Verse Epistle*. Princeton: Princeton UP, 1991.
- Driscoll, Mark. "From Kino-eye to Anime-eye/ai: the Filmed and the Animated in Imamura Taihei's Media Theory." *Japan Forum* 14.2 (September 2002): 269-96.
- Eco, Umberto. *The Open Work*. Trans. Anna Cancogni. Intro. David Robey. Cambridge, MA: Harvard UP, 1989.
- Eisenstein, Sergei. *Eisenstein on Disney*. Calcutta: Seagull Books, 1986.
- Ensslin, Astrid. "Women in Wasteland – Gendered Deserts in T.S. Eliot and Shelley Jackson." *Journal of Gender Studies* 14.3 (November 2005): 205-16.
- Favret, Mary. *Romantic Correspondence: Women, Politics, and the Fiction of Letters*. Cambridge, MA: Cambridge UP, 2005.
- Freedman, Ralph. *The Lyrical Novel: Studies in Hermann Hesse, André Gide, and Virginia Woolf*. Princeton: Princeton UP, 1963.
- Freud, Sigmund. "Beyond the Pleasure Principle." *The Complete Psychological Works of Sigmund Freud*. Vol. 18. New York: Vintage, 2001.
- . "The Uncanny." *The Uncanny*. New York: Penguin, 2003. 121-62.
- Friedberg, Anne. *The Virtual Window: From Alberti to Microsoft*. Cambridge, MA: MIT Press, 2009.
- Galloway, Alexander. *Protocol: How Control Exists after Decentralization*. Cambridge, MA: MIT Press, 2004.

- Galloway, Alexander, and Eugene Thacker. *The Exploit: A Theory of Networks*. Minneapolis: U of Minnesota P, 2007.
- Ghost in the Shell*. Dir. Oshii Mamoru. Perf. Tanaka Atsuko, Otsuka Akio. Manga Entertainment, 1995. DVD.
- Ghost in the Shell 2: Innocence* Dir. Oshii Mamoru. Perf. Tanaka Atsuko, Otsuka Akio. Go Fish Pictures, 2004. DVD.
- Gibson, Andrew. *Toward a Postmodern Theory of Narrative*. Edinburgh, UK: Edinburgh UP, 1997.
- Gibson, William. "Modern Boys and Mobile Girls." *The Observer* 01 April 2001.
- . *Neuromancer*. New York: Ace, 1984.
- . *Pattern Recognition*. New York: Berkeley, 2003.
- Gitelman, Lisa. *Always Already New: Media, History, and the Data of Culture*. Cambridge, MA: MIT Press, 2006.
- Goodheart, Eugene. "Thomas Hardy and the Lyrical Novel." *Nineteenth-Century Fiction* 12.3 (December 1957): 215-25.
- Graham, Elaine. *Representations of the Post/Human: Monsters, Aliens, and Others in Popular Culture*. New Brunswick, NJ: Rutgers UP, 2002.
- Grenville, Bruce, ed. *The Uncanny: Experiments in Cyborg Culture*. Vancouver: Arsenal Pulp Press, 2002.
- Groundhog Day*. Dir. Harold Ramis. Perf. Bill Murray, Andie MacDowell. Sony Pictures, 1993. DVD.
- Guillory, John. "Genesis of the Media Concept." *Critical Inquiry* 36.2 (January 2010): 321-62.
- Guyer, Caroline, and Martha Petry. Preface to "Izme Pass." *Izme Pass*. Davis, CA: U of

California P, 1991. Disk.

Guyer, Sara. "Testimony and Trope in *Frankenstein*." *Studies in Romanticism* 45.1(Spring 2006): 77-115.

Hansen, Mark. *New Philosophy for New Media*. Cambridge, MA: MIT Press, 2006.

---. "'Not Thus, after All, Would Life Be Given': Technesis, Technology and the Parody of Romantic Poetics in *Frankenstein*." *Studies in Romanticism* 36.4 (Winter 1997): 575-609.

Hara, Makiko. "Others in the Third Millennium. Grenville 237-48.

Haraway, Donna. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century." *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge, 1990. 149-82.

---. "Ecce Homo, Ain't (Ar'n't) I a Woman and Inappropriate/d Others: The Human in a Posthumanist Landscape." *Feminists Theorize the Political*. Ed. Judith Butler and Joan W. Scott. New York: Routledge, 1992. 86-100.

---. *Modest\_Witness@Second\_Millennium.FemaleMan\_Meets\_OncoMouse: Feminism and Technoscience*. New York: Routledge, 1997.

---. *When Species Meet*. Minneapolis: U of Minnesota P, 2007.

Harootunian, Harry. "Ghostly Comparisons." *Impacts of Modernities*. Ed. Thomas Lamarre and Kang Nae-hui. Seattle: U of Washington P, 2004. 39-52.

Harris, Charles. "Technoromanticism and the Limits of Representationalism: Richard Powers's *Plowing the Dark*." *The Holodeck in the Garden: Science and Technology in Contemporary American Fiction*. Ed. Peter Freese and Charles Harris. Champaign: Dalkey Archive Press, 2004. 110-25.

Harvey, David. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. New York: Wiley-Blackwell, 1991.

Hayles, N. Katherine. *Electronic Literature: New Horizons for the Literary*. Notre Dame: U of Notre Dame P, 2008.

---. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*. Chicago: U of Chicago P, 1999.

---. *My Mother Was a Computer: Digital Subjects and Literary Texts*. Chicago: U of Chicago P, 2005.

---. "Unfinished Work: From Cyborg to Cognisphere." *Theory, Culture & Society* 23. 7-8 (December 2006): 159-66.

Hayles, N. Katherine, and Anne Burdick. *Writing Machines*. Cambridge, MA: MIT Press, 2002.

Heidegger, Martin. "'...Poetically Man Dwells...'" *Poetry, Language, Thought*. Trans. Albert Hofstadter. New York: Perennial Classics, 2001. 209-27.

---. "The Origin of the Work of Art." *Basic Writings*. Ed. David Farrell Krell. New York: HarperCollins, 1994. 139-212.

---. *The Question Concerning Technology and Other Essays*. New York: Harper Torch Books, 1982.

Heise, Ursula. "Virtual Travelers: Cyberspace and Global Networks." *Writing Travel: The Poetics and Politics of the Modern Journey*. Ed. John Zilcoski. Toronto: U of Toronto P, 2008. 211-36.

Jackson, Shelley. *Incredible Stain: Skin Project*. Web. 19 July 2011.

<<http://ineradicablestain.com/skindex.html>>.

---. *Patchwork Girl*. Watertown, MA: Eastgate Systems Inc., 1995. CD-ROM.

- . "Stitch Bitch: The Patchwork Girl." *MIT Communications Forum*. Web. 19 July 2011.  
 <<http://web.mit.edu/comm-forum/papers/jackson.html>>.
- . *The Melancholy of Anatomy: Stories*. New York: Anchor Books, 2002.
- Jackson, Tony. *The Technology of the Novel: Writing and Narrative in British Fiction*.  
 Baltimore: Johns Hopkins UP, 2009.
- Jameson, Fredric. *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions*. New York: Verso, 2007.
- . *The Political Unconscious: Narrative as a Socially Symbolic Act*. New York: Routledge, 2002.
- . *Postmodernism or, The Cultural Logic of Late Capitalism*. Durham: Duke UP, 1991.
- Jenkins, Henry. *Convergence Culture: Where Old and New Media Collide*. New York: NYU Press, 2008.
- Johnson, Barbara. "My Monster/ My Self." *Diacritics* 12.2 (Summer 1982): 2-10.
- Johnston, John. *Information Multiplicity: American Fiction in the Age of Media Saturation*.  
 Baltimore: Johns Hopkins UP, 1998.
- Joyce, Michael. *Afternoon: A Story*. Watertown, MA: Eastgate Systems Inc., 1999. CD-ROM.
- . *Othermindedness: The Emergence of Network Culture*. Ann Arbor, MI: U of Michigan P, 2001.
- Kakutani, Michiko. "Imaginary Lives, Built in Empty Rooms." *New York Times* 20 June 2008.  
 Web. 19 July 2011. <<http://www.nytimes.com/2000/06/20/books/books-of-the-times-imaginary-lives-built-in-empty-rooms.html>>.
- Karatani, Kojin. "One Spirit, Two Nineteenth Centuries." *Postmodernism and Japan*. Ed. Masao Miyoshi and Harry Harootunian. Durham: Duke UP, 1989. 259-72.

---. *Origins of Modern Japanese Literature*. Durham: Duke UP, 1993.

Keep, Christopher. "Growing Intimate with the Monsters: Shelley Jackson's *Patchwork Girl* and the Gothic Nature of Hypertext." *Romanticism on the Net* 41-42 (Feb-May 2006). Web. 19 July 2011. <<http://www.erudit.org/revue/ron/2006/v/n41-42/013156ar.html/>>.

Kirschenbaum, Matthew. *Mechanisms: New Media and the Forensic Imagination*. Cambridge, MA: MIT Press, 2008.

Kittler, Friedrich. *Discourse Networks, 1800/1900*. Palo Alto: Stanford UP, 1992.

---. *Gramophone, Film, Typewriter*. Trans. Geoffrey Winthrop-Young and Michael Wutz. Palo Alto: Stanford UP, 1999.

---. *Literature, Media, Information Systems*. New York: Routledge, 1997.

Kittler, Friedrich, Dorothea von Mücke, and Philippe L. Simolon. "Gramophone, Film, Typewriter." *October* 41 (Summer 1987): 101-18.

Koelb, Clayton. *The Revivifying Word: Literature, Philosophy, and the Theory of Life in Europe's Romantic Age*. Rochester: Camden House, 2008.

Koskimaa, Rain. *Digital Literature*. Web. 1 November 2010  
<<http://users.jyu.fi/~koskimaa/thesis/chapter1.htm/>>.

Lacan, Jacques. *The Psychoses 1955-1956: The Seminar of Jacques Lacan III*. Ed. Jacques-Alain Miller. Trans. Russell Grigg. New York: Norton, 1993.

Lamarre, Thomas. "From Animation to Anime: Drawing Movements and Moving Drawings." *Japan Forum* 14.2 (2002): 329-67.

---. "The First Time as a Farce: Digital Animation and the Repetition of Cinema." *Anime: Critical Engagements with Japanese Animation*. Ed. Steven Brown. New York: Palgrave, 2006. 161-88.

- . "The Multiplanar Image." *Mechademia 1*. Ed. Frenchy Lunning. Minneapolis: U of Minnesota P, 2006. 120-43.
- Lamarre, Thomas, and Nae Hui Kang. *Impacts of Modernities*. Seattle: U of Washington P, 2004.
- Landow, George. *Hypertext 3.0: Critical Theory and New Media in an Era of Globalization*. Baltimore: Johns Hopkins UP, 2006.
- Latour, Bruno. "Powers of the Facsimile: A Turing Test on Literature and Science." Burn and Dempsey 263-91.
- . *Reassembling the Social: An Introduction to Actor-Network-Theory*. New York: Oxford UP, 2007.
- . *We Have Never Been Modern*. Cambridge, MA: Harvard UP, 2007.
- LeClair, Tom. *In the Loop: Don DeLillo and the Systems Novel*. Urbana-Champaign: U of Illinois P, 1988.
- . "The Prodigious Fiction of Richard Powers, William Vollmann, and David Foster Wallace." *Critique* 38.1 (Fall 1996): 12-37.
- Lee, Sue-Im. *A Body of Individuals: The Paradox of Community in Contemporary Fiction*. Columbus: Ohio State UP, 2009.
- Lennon, Brian. "New Media Critical Homologies." *Postmodern Culture* 19.2 (January 2009). Web. 19 July 2011.  
<[http://muse.jhu.edu/journals/postmodern\\_culture/v019/19.2.lennon.html](http://muse.jhu.edu/journals/postmodern_culture/v019/19.2.lennon.html)>.
- Looser, Thomas. "From Edogawa to Miyazaki: Cinematic and Anime-ic Architectures of Early and Late Twentieth-Century Japan." *Japan Forum* 14.2 (2002): 297-327.
- . "Superflat and the Layers of Image and History in 1990s Japan." *Mechademia 1*.

- Minneapolis: U of Minnesota P, 2006. 92-109.
- Luhmann, Niklas. "Why Does Society Describe Itself as Postmodern?" *Observing Complexity*.  
Ed. William Rasch and Cary Wolfe. Minneapolis: U of Minnesota P, 2000. 35-49.
- Lukács, Georg. *The Theory of the Novel*. Cambridge, MA: MIT Press, 1974.
- Lyotard, Jean François. *The Postmodern Condition: A Report on Knowledge*. Minneapolis: U of  
Minnesota P, 1984.
- Manovich, Lev. *The Language of New Media*. Cambridge: MIT Press, 2002.
- Massumi, Brian. *Parables for the Virtual: Movement, Affect, and Sensation*. Durham: Duke UP,  
2002.
- Malmgren, Carl. "The Languages of Science Fiction: Samuel Delany's *Babel-17*." *Extrapolation*  
34.1(1993): 5-17.
- McCaffery, Larry. *Storming the Reality Studio: A Casebook of Cyberpunk and Postmodern  
Science Fiction*. Durham: Duke UP, 1991.
- McClellan, Ann. "Of Mouse and (Wo)man?: Decoding the Masculine and Encoding the  
Feminine in Hypertext Theory." *Eureka* 9.1 (Fall 2008): 99-117.
- McHale, Brian. *Constructing Postmodernism*. New York: Routledge, 1993.
- . "Elements of a Poetics of Cyberpunk." *Critique* 33.3 (1992): 149-75.
- . *Postmodernist Fiction*. New York: Methuen, 1987.
- McLuhan, Marshall. *Understanding Media: The Extensions of Man*. Cambridge, MA: MIT  
Press, 1994.
- Mellor, Anne. *Mary Shelley: Her Life, Her Fiction, Her Monsters*. New York: Routledge, 1989.
- Mendelson, Edward. "Encyclopedic Narrative: From Dante to Pynchon." *MNL* 91 (1976): 1267-  
75.

- Merleau-Ponty, Maurice. "Eye and Mind." *The Primacy of Perception: And Other Essays on Phenomenological Psychology, the Philosophy of Art, History and Politics*. Ed. James M. Edie. Evanston: Northwestern UP, 1964. 159-90.
- Miyao, Daisuke. "Before Anime: Animation and the Pure Film Movement in Pre-war Japan." *Japan Forum* 14.2 (September 2002): 191-209.
- Mitchell, W. J. T., and Mark Hansen. *Critical Terms for Media Studies*. Chicago: U of Chicago P, 2010.
- Monnet, Livia. "Invasion of the Women Snatchers: The Problem of A-Life and the Uncanny in *Final Fantasy: The Spirits Within*." *Ghosts and Wired Dreams: Japanese Science Fiction from Origins to Anime*. Ed. Christopher Bolton, Istvan Csicsery-Ronay, and Takayuki Tatsumi. Minneapolis: U of Minnesota P, 2007. 193-221.
- . "Toward the Feminine Sublime, or the Story of 'a Twinkling Monad, Shape-Shifting across Dimension.'" *Japan Forum* 14.2 (2002): 225-68.
- Morris, Adalaide, and Thomas Swiss. *New Media Poetics: Contexts, Technotexts, and Theories*. Cambridge, MA: MIT Press, 2009.
- Moulthrop, Stuart. *Victory Garden*. Watertown, MA: Eastgate Systems Inc., 1992. CD-ROM.
- Murray, Janet. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. Cambridge, MA: MIT Press, 1998.
- Nakamura, Lisa. *Digitizing Race: Visual Cultures in the Internet*. Minneapolis: University of Minnesota Press, 2008.
- Napier, Susan. *Anime from Akira to Howl's Moving Castle*. New York: Palgrave, 2005.
- Nelson, Theodore. *Literary Machines*. Sausalito: Mindful Press, 1981.
- Ong, Walter. *Orality and Literacy: The Technologizing of the Word*. New York: Routledge,

2002.

O'Pray, Michael. "Eisenstein and Stokes on Disney." Pilling 195-202.

Orbaugh, Sharalyn. "Emotional Infectivity: Cyborg Affect and the Limits of the Human."

*Mechademia 3*. Ed. Frenchy Lunning. Minneapolis: U of Minnesota Press, 2008. 150-72.

---. "Sex and the Single Cyborg: Japanese Popular Culture Experiments in Subjectivity."

*Science Fiction Studies* 29.3 (2002): 436-52.

Oshii, Mamoru. "Oshii Talks Softly, But Carries a Big Script." Interview by Mark Schilling. *The*

*Japan Times*. 17 March 2004. Web. 19 July 2011. <<http://search.japantimes.co.jp/cgi-bin/ff20040317a2.html>>.

Panofsky, Erwin. *Perspective as Symbolic Form*. Trans. Christopher Wood. New York: Zone, 1996.

Parker, Jo Alyson. "'Ejected from the Present and Its Certainties': The Indeterminate

Temporality in Hypertext." *Study of Time* 11 (2004): 39-57.

*Patlabor 2 – The Movie*. Dir. Oshii Mamoru. Perf. Tominaga Mina, Furukawa Toshio. Image Entertainment/Bandai Visual, 1993. DVD.

Pavic, Milorad. *Dictionary of the Khazars: The Lexicon Novel in 100, 000 Words*. New York: Vintage, 1989.

Pilling, Jayne, ed. *A Reader in Animation Studies*. London: John Libbey, 1997.

Pisters, Patricia. "From Mouse to Mouse—Overcoming Information." *Enculturation* 2.1 (1998).

Web. 19 July 2011. <[http://enculturation.gmu.edu/2\\_1/pisters.html](http://enculturation.gmu.edu/2_1/pisters.html)>.

Pon, Cynthia. "'Passages' in Mary Shelley's *Frankenstein*." *Modern Language Studies* 30.2 (Fall 2000): 33-50.

- Poovey, Mary. *The Proper Lady and the Woman Writer: Ideology as Style in the Writings of Mary Wollstonecraft, Mary Shelley, and Jane Austen*. Chicago: University of Chicago Press, 1985.
- Powers, Richard. "Being and Seeming: The Technology of Representation." *Context* 3. Champaign: Dalkey Archive Press. Web. 19 July 2011.  
<[http://www.dalkeyarchive.com/book/?GCOI=15647100450430&fa=customcontent&ext\\_rasfile=A12625B0-B0D0-B086-B62636486FF5F375.html/](http://www.dalkeyarchive.com/book/?GCOI=15647100450430&fa=customcontent&ext_rasfile=A12625B0-B0D0-B086-B62636486FF5F375.html/)>.
- . *Galatea 2.2*. New York: Picador, 2004.
- . *The Gold Bug Variations*. New York: Harper Perennial, 1992.
- . "Making the Rounds." Burn and Dempsey 305-10.
- . *Plowing the Dark*. New York: Picador, 2001.
- Pynchon, Thomas. *Vineland*. Boston: Little Brown, 1990.
- Raffaelli, Luca. "Disney, Warner Bros. and Japanese Animation." Pilling 112-36.
- Raley, Rita. *Tactical Media*. Minneapolis: U of Minnesota P, 2009.
- Ranci re, Jacques. *Politics of Aesthetics*. Trans. Gabriel Rockhill. New York: Continuum, 2006.
- Ronell, Avital. *The Telephone Book: Technology, Schizophrenia, and Electric Speech*. Lincoln: U of Nebraska P, 1991.
- Ruh, Brian. *Stray Dog of Anime: The Films of Mamoru Oshii*. New York: Palgrave Macmillan, 2004.
- Ryan, Marie Laure. *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*. Baltimore: Johns Hopkins UP, 2003.
- . *Avatars of Story*. Minneapolis: U of Minnesota P, 2006.
- Scarry, Elaine. *The Body in Pain: The Making and Unmaking of the World*. New York:

- Oxford UP, 1985.
- Schackelford, Laura. "Subject to Change: The Monstrosity of Media in Shelley Jackson's *Patchwork Girl*; or a Modern Monster and Other Posthumanist Critiques of the Instrumental." *Camera Obscura* 21.3 63 (2006): 62-100.
- Scholz, Carter. "Narrating Technology." *Burn and Dempsey* 292-304.
- Shelley, Mary. *Frankenstein*. Chicago: U of Chicago P, 1982.
- Shirow, Masamune. *Ghost in the Shell*. Milwaukie, OR: Dark Horse, 2004.
- Silvio, Carl. "Refiguring the Radical Cyborg in Mamoru Oshii's *Ghost in the Shell*." *Science Fiction Studies* 26.1 (1999): 54-72.
- Smith, Bradley. "On Reality and Virtuality: A Study of Time-Spaces in *Plowing the Dark*." *Mosaic* 42.3 (September 2009): 95-108.
- Sobchack, Vivian, ed. *Meta-Morphing: Visual Transformation and the Culture of Quick-Change*. Minneapolis: U of Minnesota P, 1999.
- . "The Line and the Animorph or 'Travel Is More than Just A to B.'" *Animation* 3.3 (2008): 251-65.
- . "Toward a Phenomenology of Cinematic and Electronic Presence." *Post Script* 10 (1990): 50-9.
- . "When the Ear Dreams: Dolby Digital and the Imagination of Sound." *Film Quarterly* 58.4 (Summer 2005): 2-15.
- Solomon, Charles. "Animation: Notes on a Definition." *The Art of the Animated Image: An Anthology*. Los Angeles: AFI, 1987.
- Southerland, John. "Paper or Plastic?" *London Review of Books* 10 Aug 2000: 20-1. Web. 19 July 2011. <<http://www.lrb.co.uk/v22/n15/john-sutherland/paper-or-plastic/>>.

*Spirited Away*. Dir. Miyazaki Hayao. Perf. Hiragi Rumi, Irino Miyu. Studio Ghibli, 2001. DVD.

Spielmann, Yvonne. "Expanding Film into Digital Media." *Screen: The Journal of the Society for Education in Film and Television* 40.2 (1999): 131-45.

---. *Video: The Reflexive Medium*. Cambridge, MA: MIT Press, 2010.

Starr, Gabrielle. *Lyric Generations: Poetry and the Novel in the Long Eighteenth Century*. Baltimore: Johns Hopkins UP, 2004.

Steinberg, Marc. "Immobile Sections and Trans-series Movement: *Astroboy* and the Emergence of Anime." *Animation* 1.2 (2006): 190-206.

Stephenson, Neil. *Snow Crash*. New York: Bantom Books, 1992.

Stewart, Garret. "Bookwork as Demediation." *Critical Inquiry* 36.3 (March 2010): 410-57.

Strecker, Trey. "Ecologies of Knowledge: The Encyclopedic Narrative of Richard Powers and His Contemporaries." *The Review of Contemporary Fiction* 18.3 (1998): 67-71.

---. "Powers World: Refuge and Reentry in *Plowing the Dark*." *Burn and Dempsey* 187-97.

---. "Self-Organization and Selection in Richard Powers's *The Gold Bug Variations*." *Critique* 45.3 (Spring 2004): 227-45.

Suvin, Darko. *Metamorphoses of Science Fiction*. New Haven: Yale UP, 1979.

Tabbi, Joseph. *Cognitive Fictions*. Minneapolis: U of Minnesota P, 2002.

---. *Postmodern Sublime: Technology and American Writing from Mailer to Cyberpunk*. Ithaca: Cornell UP, 1996.

Tatsumi, Takayuki. *Full Metal Apache*. Durham: Duke UP, 2006.

Telotte, J. P. *Science Fiction Film*. Cambridge, UK: Cambridge UP, 2001.

Thacker, Eugene. *Biomedica*. Minneapolis: U of Minnesota P, 2004.

---. "What is Biomedica?" *Configurations* 11.1 (2003): 47-79.

- Todorov, Tzvetan. *The Fantastic: A Structural Approach to a Literary Genre*. Ithaca: Cornell UP, 1975.
- Turkle, Sherry. *Life on the Screen: Identity in the Age of the Internet*. New York: Simon and Shuster, 1997.
- Ueno, Toshiya. "Japanimation and Techno-Orientalism." *The Uncanny: Experiments in Cyborg Culture*. Ed. Bruce Grenville. Vancouver: Vancouver Art Gallery, 2001. 223-31.
- Urotsukidōji*. Dir. Takayashi Hideki. Perf. Nishimura Tomohiro, Suzuoki Hiroataka. West Cape/Team Mu, 1987-95. DVD.
- Vint, Sherryl. *Bodies of Tomorrow: Technology, Subjectivity, and Science Fiction*. Toronto: U of Toronto P, 2007.
- Virilio, Paul. *War and Cinema: The Logistics of Perception*. New York: Verso, 1989.
- Wardrip-Fruin, Noah, Pat Harrigan, and Michael Crumpton, eds. *First Person: New Media as Story, Performance, and Game*. Cambridge, MA: MIT Press, 2006.
- Watt, Ian. *The Rise of the Novel: Studies in Defoe, Richardson, and Fielding*. Berkeley: U of California P, 2001.
- Williams, Raymond. "From Medium to Social Practice." *Marxism and Literature*. New York: Oxford UP, 1978. 158-64.
- Wood, James. "Human, All Too Human." *New Republic* 24 July 2000: 41-5.
- Wong, Kin Yuen. "On the Edge of Spaces: *Blade Runner*, *Ghost in the Shell*, and Hong Kong's Cityscape." *Science Fiction Studies* 27.1 (2000): 1-21.
- Wolfe, Cary. *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory*. Chicago: U of Chicago P, 2003.
- Zalewski, Daniel. "Actual Reality." *The New York Times*. 18 June 2000. Web. 19 July 2011.

<<http://www.nytimes.com/books/00/06/18/reviews/000618.18zalewst.html>>.

Zielinski, Siegfried. *Deep Time of the Media: Toward an Archaeology of Hearing and Seeing by Technical Means*. Trans. Gloria Custance. Cambridge, MA: MIT Press, 2006.