



# Cyberculture, Cyborgs and Science Fiction

Consciousness and  
the Posthuman

WILLIAM S. HANEY II

Consciousness  
Literature  
the Arts 02

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WILLIAM S. HANEY II



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## Preface

### Cyberculture, Cyborgs and Science Fiction: Consciousness and the Posthuman

This book argues that the first-person experience of pure consciousness may soon be under threat from posthuman biotechnology. In exploiting the mind's capacity for instrumental behavior, posthumanists seek to extend human experience by physically projecting the mind outward through the continuity of thought, body and the material world. Posthumanism envisions a biology/machine symbiosis that will promote this extension by artificially enhancing our mental and physical powers, arguably at the expense of the natural tendency of the mind to move toward pure awareness. As each chapter of this book contends, the posthuman condition may undermine human nature, defined as the effortless capacity for transcending the mind's conceptual content, by forcibly overextending and thus jeopardizing the neurophysiology of consciousness.

The definition of human nature underlying the argument of this book hinges not on specific qualities such as morality, rationality, feelings and general patterns of behavior, but rather on the neurophysiology of metaphysical insight into the ground state of consciousness beyond cultural attributes of any kind. As Robert Forman says, "Consciousness itself is a, or perhaps the only, nonpluralistic feature of what it is to be human" (1999: 132). We can approach human nature through a third-person objective ontology based on sacred texts, dogma, theology and philosophical support, as well as through a first-person subjective ontology based on non-dualistic spiritual experience. These experiences



and their cultural contexts have been a central concern of the world's classical cultures, myths and contemplative traditions, as recorded in studies by Sir James Frazer, Carl Jung, Mircea Eliade, Joseph Campbell, Elaine Pagels, Karl Kerényi, Surendranath Dasgupta, Jadunath, Sinha, David Chalmers, Robert Forman, Jonathan Shear, Ken Wilber and many others. Understanding nonpluralistic experience, moreover, involves examining the interrelation between a long history of rituals, cultural life and other forms of social expression, and recent developments in cognitive neuroscience, neurobiology and the study of consciousness.

In a modern context, any discussion of first-person experience would benefit from the insights of the new interdisciplinary field of consciousness studies, which as Susan Blackmore observes is beginning to explore the nature of consciousness beyond physical attributes (2004: 401-14). "The science of consciousness," she says, "must hunt for broad connecting principles between first- and third-person data, such as certain experiences going along with certain brain processes or with certain kinds of information-processing" (2004: 373). She also notes that according to David Chalmers, Jonathan Shear, John Searle and others, "first-person data are irreducible to third-person data" (*ibid.*). Over the past century, the metaphysical first-person domain has been of major interest to both modern and postmodern philosophers, including Friedrich Nietzsche, Emile Durkheim, Georges Bataille, René Girard, Martin Heidegger, Luce Irigaray, Emmanuel Levinas, Jean-Luc Nancy, Mark Taylor, Edith Wyschogrod, Giorgio Agamben and Jacques Derrida. In this book I expand upon this research by integrating recent developments in the field of consciousness studies with the ancient insights of Indian philosophy.

The first two chapters of the book formulate a definition of human nature based on the distinction between phenomenal mind and observing consciousness. Posthumanists tend to define consciousness in terms of the mind's conscious content, arguing that whatever consciousness may be in-and-of itself, it is not a necessary entity for human existence. Katherine Hayles even asserts that "the posthuman subject is also a postconscious subject" (1999: 280). This argument draws upon Derridean deconstruction, but as the third chapter argues, deconstruction in practice does not undermine but rather verifies human nature by invoking the unsayable

secret of literature. The fourth chapter begins the application of the first-person knowledge of human nature to specific works, beginning with short fiction. It also examines the relation between current theories of the epiphanic nature of short fiction and the posthuman.

The next five chapters deal with individual novels, beginning with Mary Shelley's *Frankenstein*. As the fifth chapter argues, Victor's monster as a "composite body" would never qualify as a human, even though it manages to acquire a socially constructed identity. Chapter Six argues that William Gibson's *Neuromancer*, which takes a playful yet distinctly ambivalent attitude toward technology, demonstrates that the world of cyborgs poses a clear threat for human consciousness. Similarly, Neal Stephenson's *Snow Crash*, as maintained in Chapter Seven, suggests that humans, always vulnerable to viruses, will now be exposed through posthuman biotechnology to infection by computer viruses. *Snow Crash* also supports the argument that machines will never be able to develop consciousness made by neuroscientists such as Gerald Edelman. The next two chapters deal with Hariku Murakami's *Hard-Boiled Wonderland and the End of the World* and Marge Piercy's *He, She and It* respectively. Murakami's novel explores the inner depth of the mind and suggests that in a posthuman context, any attempt to enhance brain functioning by technologically interfering with consciousness may have devastating consequences for human identity and survivability. Piercy extends this theme by considering the implications for consciousness of an entirely artificial being. She suggests that as humans become ever more fascinated with transforming themselves into radical cyborgs, pure consciousness may some day become nothing more than a vague memory.

The essential argument of this book is more than a warning; it gives a direction: far better to practice patience and develop pure consciousness and evolve into a higher human being than to fall prey to the Faustian temptations of biotechnological power. As argued throughout the book, each person must choose for him or herself between the technological extension of physical experience through mind, body and world on the one hand, and the natural powers of human consciousness on the other as a means to realize their ultimate vision.

I would like to thank several friends and colleagues for helping to complete this book, especially Michael L. Smith, Daphne M. Grace, James Tipton and Daniel Meyer-Dinkgräfe. For their ongoing assistance, I also thank the IT staff of the College of Arts and Sciences at the American University of Sharjah, UAE, especially Naji Nujumi, as well as the university administration for its vital support of faculty research and development, particularly Dean Robert Cook and Chancellor Winfred Thompson.

## Chapter One: Consciousness and the Posthuman

### 1. The Posthuman Condition: Pros and Cons

While no theory of consciousness has achieved consensus in the interdisciplinary field of consciousness studies in the West, the one generally accepted by posthumanists as the most convincing holds that “To be conscious is to be conscious of something” (Pepperell 2003: 175). In other words, the argument goes that “Consciousness is always consciousness of some object or other, never a self-enclosed emptiness” (Miller 2001: 62). This theory of consciousness, however, contradicts Eastern philosophy, which posits a qualityless state of pure consciousness or “a void of conceptions”: “That which is non-thought, [yet] which stands in the midst of thought” (*Maitri Upanishad* 6:18-19, in Hume 1921: 436). This book explores the implications of these two models of consciousness for cyberculture and the posthuman. On the one hand, cognitive scientists tend to equate consciousness with subjectivity, which they associate with the thinking mind as an extension of body, nature and culture; Eastern philosophy, on the other hand, distinguishes mind from consciousness, with mind defined as the content of consciousness. David Chalmers believes that “‘To be conscious’ . . . is roughly synonymous with ‘to have qualia’” (1986: 6)—qualia being the qualities of subjective experience, or what something is *like* phenomenologically. By this definition, consciousness is part of an open system that depends on input and output. As Robert Pepperell says, to be conscious a system must have “some object other than its own sentience for it to be conscious of” (2003: 175). Pepperell goes on to assert that the only way we can know if any system, whether human or machine, is conscious is by its response to questions about its conscious content.

This theory of consciousness, which underlies the standard definition of the posthuman, carries significant implications for what it means to be human and for the relationship between humans and the environment. This book argues that while conscious content is indispensable for both the human and posthuman condition, the thoughts, feelings and perceptions of this content do not encompass a vital aspect of human nature attested to not only by the first-person experience of millions of people around the world, but also by the records of both classical and modern contemplative traditions. Once we consider the strong evidence for the capacity of human consciousness to be aware of itself as a void of conceptions, certain invasive technological features of the posthuman, though as yet unrealized beyond the realm of science fiction, may lose some of their appeal. People will have to balance the probable disadvantages of biotechnology against the potential advantages of consciousness in its pure form.

Posthumanism is defined as a human-technology symbiosis. Many see the biology-machine interface as a positive development, but many also fear its potentially negative consequences. One negative possibility is the irreversibly damaging or catastrophic effect it may have on human nature, particularly through invasive technologies. On the positive side, Katherine Hayles writes:

First, the posthuman view privileges informational pattern over material instantiation, so that embodiment in a biological substrate is seen as an accident of history rather than an inevitability of life. Second, the posthuman view considers consciousness, regarded as the seat of human identity in the Western tradition long before Descartes thought he was a mind thinking, as an epiphenomenon, as an evolutionary upstart trying to claim that it is the whole show when in actuality it is only a minor sideshow. Third, the posthuman view thinks of the body as the original prosthesis we all learn to manipulate, so that extending or replacing the body with other prostheses becomes a continuation of a process that began before we were born. Fourth, and most important, by these and other means, the posthuman view configures human being so that it can be seamlessly articulated with intelligent machines. In the posthuman, there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals. (1999: 2-3)

In welcoming the prospect of seamlessly articulating human being with intelligent machines as a form of progress, Hayles and others see the posthuman subject as an amalgam of heterogeneous components that will not only supersede but also do away with the “natural” self.

In “A Cyborg Manifesto,” Donna Haraway signals three crucial breakdowns in the boundary between machine and organism: first, nothing enforces the human and animal separation, including tool use, social behavior, language, and reason; second, the distinction between animal-human organism and machine is leaky because of the ambiguous difference between the natural and the artificial; and third, as a subset to the second, the “boundary between physical and non-physical is very imprecise” (1991: 149-81). In her feminist approach to cyberculture, Haraway claims that “No objects, spaces or bodies are sacred in themselves; any component can be interfaced with any other if the proper standard, the proper code, can be constructed for processing signals in common language” (1991: 163). Her definition of cyborg, however, does not take into account consciousness as-such, but only the temporal self: “The cyborg is a kind of dissembled and reassembled, postmodern collective and personal self. This is the self feminists must code” (*ibid.*). For codifying the self and redesigning the body, bio- and communication technologies become the essential tools. Haraway defines cyborg writing as not about the fall from an earlier pre-linguistic wholeness, but about survival by means of tools as prosthetic devices. Cyborg writing also rejects perfect communication through a master code, “the central dogma of phallogocentrism” (1991: 176).

Throughout “A Cyborg Manifesto” Haraway problematizes the distinction between unity and diversity. She argues that dualisms such as self/other, mind/body, culture/nature lead to the domination of women, and that the idea of the self as One who is not dominated is an illusion, given that the self cannot escape a dialectic with the other. Ultimately, Haraway thinks that we will be saved only by destroying duality and the organic, not through deconstruction but through the “liminal transformation” of a machine-organism symbiosis (1991: 177). From a feminist viewpoint, a cyborg, which is short for “cybernetic organism,” comprises not an impermeable organic wholeness, but symbiosis, prosthetic devices, hybrids, chimeras and mosaics:

Biological organisms have become biotic systems, communications devices like others. There is no fundamental, ontological separation in our formal knowledge of machine and organism, of technical and organic. The replicant Rachel in the Ridley Scott film *Blade Runner* stands as the image of a cyborg culture's fear, love and confusion. (1991: 177-78)

One difference between machine and organism noted by the physicist Jean Burns, however, is that humans have volition or free will, which is associated with consciousness, while machines do not. Indeed, the physical effects of volition are not explainable "by presently known physical laws because these laws encompass only determinism and quantum randomness" (1999: 32), which are not what are indicated by consciousness or volition.

Haraway nonetheless concludes that "The machine is us, our processes, an aspect of our embodiment" (1991: 180). Similarly, Pepperell argues that "organic machines would blur the distinction between organic and mechanical" (2003: 9). Citing Richard Dawkins' definition of DNA as a "machine for making life," Pepperell claims "there is no distinction between the mechanical and the organic when it comes to considering DNA" (2003: 10). According to Andy Clark, human beings have always been "natural born cyborgs," or "human-technology symbionts" (2003: 3). "The cyborg," he says,

is a potent cultural icon of the late twentieth century. It conjures images of human-machine hybrids and the physical merging of flesh and electronic circuitry. My goal is to hijack that image and to reshape it, revealing it as a disguised vision of (oddly) our own biological nature. (2003: 4)

As natural born cyborgs, he says, we are always prepared "to merge our mental activities with the operations of pen, paper, and electronics," to tailor our minds for coalitions and mergers, whether invasive or non-invasive (2003: 6-7). He believes our cognitive machinery works in this way for the purpose of self-transformation, which he defines as an "artifact-based expansion [. . .] [a] process of computational and representational growth" (8). But Clark is not entirely sold out to invasive technology. To his credit, he prefers a non-invasive machine-biology symbiosis. "[I]s there something nasty lurking under those biomechanical rocks?" he asks, and cautions that "the social and personal impact of bioelectronic interpenetration is

difficult to predict” (2003: 118). Throughout *Natural-Born Cyborgs* he highlights the advantages of mind-body *scaffolding*, “the looping interactions between material brains, material bodies, and complex cultural and technological environments” that lead to self-transformations (2003: 11). What he does not mention are the possible implications of these transformations for human consciousness.

Clearly, self-transformation comes in many forms, not all of which are necessarily benign. Because of the unknown long-term effects of combining human and artificial components, these transformations may in the end prove undesirable. Unlike Haraway and other theorists of the posthuman, Jean-François Lyotard warns that technology and capitalism can have a dehumanizing influence on the humanist subject. In *The Postmodern Condition*, he argues that capitalism is a “vanguard machine dragging humanity after it, dehumanizing it in order to rehumanize it at a different level of normative capacity” (1984: 63). He says that technocrats justify takeover by the vanguard machine because society cannot understand or designate its own needs, especially in the face of new technologies. In *The Inhuman: Reflections on Time*, Lyotard argues that the only resistance to the technological inhuman is another inhuman located in human subjectivity. This subjective inhuman is the potential for surprise and unpredictable transformation beyond the reach of rational, technological systems. In defining this subjective inhuman, he says,

what else is left to resist with but the debt to which each soul has contracted with the miserable and admirable indetermination from which it was born and does not cease to be born? –which is to say, with the other inhuman? [. . .] It is the take of writing, thinking, literature, arts, to venture to bear witness to it. (1991: 7)

This dimension of subjectivity, as a non-rational, non-human source of resistance, suggests a void of conceptions, the unsayable witness represented by literature and art.

George Orwell (1984, 1949), C. S. Lewis (*The Abolition of Man*, 1944) and Aldous Huxely (*Brave New World*, 1932) point to such a witness by suggesting that human nature is a key source of values and plays a vital role in helping us define what is right and wrong, important and unimportant. Expressing his concern about the risks of biotechnology, Francis Fukuyama argues



that the most significant threat posed by contemporary biotechnology is the possibility that it will alter human nature and thereby move us into a 'posthuman' stage of history. This is important [. . .] because human nature exists, is a meaningful concept, and has provided a stable continuity to our experiences as a species. (2002: 7)

Anyone who has experienced consciousness-as-such, or has intuited a deep interior, would most likely agree that human nature exists, however difficult it is to define conceptually. Fukuyama says he is not sanguine about the applications of biotechnology because, unlike many other scientific advances, it "mixes obvious benefits with subtle harms in one seamless package" (*ibid.*). In this book I will address perhaps the most subtle of the potential harms of biotechnology, the transformation of human nature itself, which would have far-reaching and possibly devastating effects on the human species. But first we need a working definition of human nature.

I suggest that human nature like subjectivity is bimodal: one aspect is associated with consciousness-as-such, and the other with the mind or the content of consciousness. In terms of the mind, human nature never stops evolving through a continuous interaction with the environment. As Clark puts it, humans are,

by nature, products of a complex and heterogeneous developmental matrix in which culture, technology, and biology are pretty well intermingled. It is a mistake to posit a biologically fixed 'human nature' with a simple wrap-around of tools and culture; the tools and culture are indeed as much determiners of our nature as products of it. (2003: 86)

In terms of consciousness, as explained below, human nature involves ultimately the innate capacity for the experience of true Being, the ground of all phenomenal consciousness beyond any "wrap-around of tools and culture." In the *Symposium* Plato discusses Being in terms of the Good and the Beautiful, which as Jonathan Shear notes

are in many ways parallel to the Vedic discussions of Sat (transcendental Being), Chit (transcendental intelligence), and Ananda (transcendental Bliss), and that these latter are consistently said to represent conceptually distinguishable tendencies of one and the same 'ultimate,' manifesting differentially depending on how it is approached. (1990: 23)

In Eastern thought, the unique transcendental experience that Plato refers to corresponds to “no-mind” in Zen and to Atman or pure consciousness (*turiya*) in Advaita (non-dual) Vedanta (Suzuki 1956, 218; Deutsch 1969: 47-65). In Zen,

No-mindness means having no mind (or thoughts) whatever; [. . .] inwardly [. . .] it is immovable, unshakable; outwardly, it is like space where one knows no obstructions, no stoppage. It transcends both subject and object, it recognizes no points of orientation, it has no forms, it knows neither gain or loss. (Suzuki 1956: 218)

In Advaita Vedanta, Atman (or *paramātmān*, the highest Self), “is a supreme power of awareness, transcendent to ordinary sense-mental consciousness, aware only of the Oneness of being” (Deutsch 1969: 48). Varela, Thompson and Rosch suggest that “the Buddhist doctrines of no-self and of nondualism that grow out of this method have a significant contribution to make in a dialogue with cognitive science” (1991: 21).

Arthur Deikman refers to the state of nondualism as “the internal observer”: “we know the internal observer not by observing it but *by being it*” (1996: 355, his emphasis). While pure consciousness or no-mind is usually referred to as a mystical experience, it is not something confined to the purview of medieval mystics; many modern accounts suggest that self-awareness occurs spontaneously to people of all cultures. Bernadette Roberts, a living American ex-nun and mystic, describes her own experience of a great stillness within in her book *The Experience of No Self*, which Robert Forman describes as similar to his own mystical experience. In his study of what he calls the Grassroots Spirituality Movement in the United States, Forman and his team of researchers have found that up to 59% of the American population has had a taste of this experience (2004).

## 2. The Pure Consciousness Event and Human Nature

As represented by Advaita Vedanta and Samkhya-Yoga, mind and consciousness are fundamentally different; mind is physical,

whereas consciousness, as the basic condition of all awareness, is not. In this tradition,

There are two kinds of entities—Purusha and Prakriti, spirit and matter. The former is manifold, pure, changeless; the latter is primarily one, but is ever mutable; it evolves the material world out of itself. (Sastry 1930: xix)

Consciousness-as-such is *purusha*, the transcendental principle at the basis of all knowledge, while the mind is an evolute of *prakriti*. In explaining the distinction between mind and consciousness, Western Advaitans such as Forman, Shear, Deikman and others suggest that pure consciousness qualifies as the most subtle component of human nature. Advaita Vedanta and Samkhya-Yoga explain consciousness with reference to the four quarters of the mind, which include the three ordinary states of consciousness—waking, sleeping and dreaming—and a forth state (*turiya*) of Atman or pure consciousness. Like a white screen reflecting the projected colors and images of a film, the forth state as “a void of conceptions” underlies the mental phenomena of the three ordinary states (*Maitri Upanishad* 6:18-19; Hume 1921: 436). This witnessing awareness, which is immanent within the other three states, is defined in terms of knowing by being, not in terms of an “experience” based on the dualism of a temporal gap between the subject and object. As Forman puts it, *turiya* “involves neither sensing nor thinking. Indeed, it signifies being entirely ‘void of conceptions’” where one encounters no images, sounds, emotions or other conscious content but “simply persists ‘without support’” (1999: 12, 13). Forman describes this knowing by being as a “pure consciousness event” (*samadhi*) (1999: 6).

In explaining the relation between mind and consciousness as expressed in Advaita and Yoga, K. R. Rao says that consciousness is reflected in the mind and manifests in both transcendental and phenomenal forms:

The person (*jiva*) is embodied consciousness (*purusha*). Embodied consciousness is constrained by the body-mind complex. It is the unique propensity of the mind to reflect consciousness so that its contents become revealed by the illumination of the *purusha*. By an association with the *purusha*, the mind, which is by its nature unconscious, becomes conscious. Deriving its illumination from the *purusha*, the mind manifests subjectivity and has phenomenal awareness. The *purusha*, however, by this association

with *jiva* appears to have lost its freedom and innate purity and perfection. By mistaking the cognitions of the mind as its own, the existential *purusha* in the person (*jiva*) tends to bind itself to the mind and from such binding a sense of false identity arises. Thus lost in the mirage of the mind, according to Samkhya-Yoga schools, the quest of the person is to realize transcendental awareness, *purusha* consciousness, by gaining the release from the shackles and the bondage of the *jiva* brought about by its association with the mind and the attendant sensory content. (2005, 11)

From this perspective, which no theory of consciousness has been able to disprove, the basis of human nature is not an ordinary phenomenal experience, not a quality of conscious content that changes over time, but the innate capacity for a non-changing level of awareness-as-such that underlies all phenomenal experience. Research by the neuroscientist Benjamin Libet also suggests a distinction between existential witnessing consciousness and mental or physical activity. Through experiments on the link between neuronal activity and consciousness, Libet found that neural stimulation must continue for an average of 0.5 seconds for consciousness of that stimulation to occur. Because “neuronal adequacy” for conscious sensation of any kind is achieved only after half a second of unbroken stimulation in the somatosensory cortex, consciousness itself seems uninvolved in producing neural activity. Libet concludes that “it is sufficient duration per se, of appropriate neuronal activities, that gives rise to the emergent phenomenon of subjective experience” (1982: 238). If true, this finding lends credibility to the Advaitan view that consciousness is a unified witness to, and thus separate from, the duality of both mental and physical activity.

In her recent book *Consciousness*, Susan Blackmore concludes that in spite of all the scientific theories of consciousness, consciousness itself remains a mystery from a third-person scientific perspective. In the first chapter, “What is the Problem?” (of consciousness), Blackmore summarizes Descartes’ substance dualism of mind/body, which she explains in contrast to property dualism or dual aspect theory, and then asserts that “Dualism does not work. Almost all contemporary scientists and philosophers agree on this” (2004: 13). Having approached this issue from a variety of perspectives throughout the book, in the final chapter on “Buddhism and Consciousness” she addresses the question of nonduality in terms of no-mind or pure consciousness:

Might the psychologists, philosophers and neuroscientists working on the problem of consciousness see nonduality directly for themselves? If so, it seems possible that they might bring together two apparently totally different disciplines: the third-person discipline of science and the first-person discipline of self-transformation. If they did so, might they then understand exactly what had happened in their own brains when all the illusions fell away and the distinction between first and third person was gone? This way the direct experience of nonduality might be integrated into a neuroscience that only knows, intellectually, that dualism must be false. (2004, 414)

Blackmore implies that until philosophers and neuroscientists have a first-person experience of nonduality for themselves, they will not understand the full import of their intellectual knowledge “that dualism must be false.” In other words, their first-person experience of nonduality would confirm that dualism works neither intellectually in terms of mind and brain, nor experientially in terms of consciousness. As discussed shortly, the unity of pure consciousness as a first-person event has its own unique physiological condition as determined by objective scientific studies published over the past several decades.

Arguably, as the most refined subjective component of human nature, consciousness-as-such, as Forman notes, “is a, or perhaps the only, nonpluralistic feature of what it is to be human” (1999: 132). He does not claim that pure consciousness in itself is universal, for there is no evidence that everyone has experienced it, but only that if one eliminates all conscious content, “then the resultant experience will have nonpluralistic characteristics” (1999: note 1, 195). Shear makes a similar observation which further suggests that pure consciousness is a sustaining aspect of human nature. He says,

the experience of pure unboundedness is phenomenologically unique. This is because two experiences of qualityless unboundedness cannot be phenomenologically different, since there is nothing in either to distinguish it from the other. (1990: 136).

In describing the accounts of unbounded consciousness by Einstein and Valery, Shear says that to the extent these “indicate unambiguously that the unbounded component is completely independent of all spatio-temporal qualities and distinctions, it is clear

they must be referring to experiences of unboundedness that are phenomenologically the same" (*ibid.*). He adds that the correlations between such accounts suggest "they are all referring to the same overall family of experiences" (1990: 137). This family of experiences, which typically begins in isolation but then progresses "to unboundedness along with other content" (Shear *ibid.*), involves the reduction of physical and mental activity that leads to a stasis of knowing by being. The capacity for the psychophysiology to settle down to an experience of unbounded Being is precisely what is under threat by posthumanism, with its growing emphasis on enhancing cognitive activity through bioelectronic procedures.

As Forman suggests in *Grassroots Spirituality* (2004), people are beginning to see that the spectrum of their mental states extends from heightened cognitive activity to complete stasis; awareness can empty its contents, reach a state of least excitation, and be conscious only of itself. The phenomenologically reductive notion of consciousness as always having intentional objects is not confirmed by the immediacy of their first-person experience. Many Western philosophers, particularly constructivists like Steven Katz (1978), argue that consciousness always has an intentional object, and that even mystical experiences are shaped by language and culture. But as Forman argues, mystical experiences "don't result from a process of building or constructing mystical experiences [. . .] but rather from an *un*-constructing of language and belief [. . .] from something like a *releasing* of experience from language" (1999: 99; Forman's emphasis). Intentional consciousness involves being conscious of an object, event or other qualia. William James categorized intentional consciousness into two kinds of knowledge: "knowledge-about," gained by thinking about something; and "knowledge-by-acquaintance," gained through direct sensory experience (see Barnard 1994: 123-34; Forman 199: 109-27). In contrast, knowing by being or the pure consciousness event is a non-intentional experience or what Forman calls "knowledge-by-identity," a knowing by being in which there is no subject/object duality;

the subject knows something by virtue of being it.[ . . .] It is a reflexive or self-referential form of knowing. I *know* my consciousness and I know that I am and have been conscious simply because I *am* it. (1999, 118; his emphasis)

As immediate knowledge, non-intentional pure consciousness, which I define as the most subtle dimension of human nature, is devoid of the dualism of the subject-perceiving-object and subject-thinking-thought (Forman 1999: 125). In other words, it is characterized by cognitive stasis, the void of conceptions, which lies at the opposite end of the spectrum to what posthumanist instrumentalism exalts as an optimal state of mind.

Grassroots Spirituality also suggests that people are increasingly beginning to intuit the basis of human nature. Forman calls this form of knowledge-by-identity a “panentheistic” experience, which involves the most subtle or deepest self accessed through non-rational forms of self-transformation (2004: 51). Unlike pantheism (“the doctrine that the deity *is* the universe and its phenomena”), Forman defines panentheism as the doctrine “that *all things are in the ultimate, that is, all things are made up of one single principle, but that one principle is not limited to those worldly phenomena*” (2004: 52; his emphasis). All things, including humans, “are made up of a single ‘stuff’ or substance” (52), but this “stuff,” while including all beings within it, also exceeds them. “It is both transcendent (in the sense of beyond) and immanent (within). As the early Hindu Upanishads put this, ‘having pervaded the universe with a fragment of myself, I remain’” (*ibid.*).

Forman uses the panentheistic to define mysticism and distinguish between what he identifies as its two aspects. The word mysticism on the one hand “can denote the unintelligible statements of an illogical speaker, a schizophrenic’s vision, someone’s hallucination, a drug-induced vision,” and on the other hand the spiritual experiences of mystics around the world (1999: 4). Hallucinations, schizophrenia, and visions make up the former category or what he calls the “ergotropic side” of mysticism. These are states of hyperarousal in which “cognitive and physiological activity are relatively high” (*ibid.*). The “trophotropic side,” on the other hand, consists of hypoaroused states “marked by low levels of cognitive and physiological activity,” as in Hindu *samadhi*, *mushinjo* in *zazen* and Eckhart’s *gezucket* (*ibid.*). States of hypoarousal comprise mysticism proper, while hyperarousal phenomena such as visions and hallucinations comprise “visionary experiences” (1999: 5). In terms of metabolic activity, these two scales move in opposite directions, with the hypoarousal states showing a decline in physiological parameters “such as heart

rate, skin temperature, spontaneous galvanic skin response, etc” (1999: 4).

Evidence suggests that the capacity for hypoarousal, as the most subtle experiential aspect of human nature, is increasingly under stress by the posthuman condition. The dehumanizing impact of technology has long been a common theme of science fiction. Works ranging from Mary Shelley’s *Frankenstein* to William Gibson’s *Neuromancer* warn of the political, ethical and biological risks of posthuman technology. The imminent merger of electronic circuitry and flesh will not only increase metabolic activity, but also have the potential to strain physiological functioning at its subtlest levels. Psychophysiological stress accruing from artificial overloads may block or even subvert our capacity for knowing by being through the hypoaroused states of self-transformation. We can perhaps better understand the perils of posthuman biotechnology through a brief overview of the research on the neurophysiology of consciousness, and on how culture and biology not only influence but are themselves influenced by consciousness in turn.

### 3. The Neurophysiology of Consciousness

Just as culture and consciousness reciprocally influence one another, so also do biology and consciousness. In the introduction to their edited volume *Cognitive Models and Spiritual Maps*, Jensine Andresen and Robert Forman write that “Physiology clearly influences our ability to have a vision of the divine, or to experience a moment of non-dual emptiness” (2000: 9). To enhance our understanding of the reciprocal influence of consciousness and culture, they propose a discussion that includes four interrelated aspects of spiritual experience: doctrinal analysis, social expression, subjective experience, and scientific research (2000: 10-12). As formulated by the collected essays of *Cognitive Models*, the insights from the interrelated analyses of dogma, culture, spiritual experience and objective studies anticipate what Forman later confirms through his study of grassroots spirituality; namely, that spiritual experience (or the religious in general)



reflects pan-human correlations at a deeper level than conceptuality—[e.g.] electrical activity of frontal and temporal lobes of the brain, the stimulation of hormone flows, and the ceasing of random thought generation all may be seen as cross-cultural technologies of spiritual experience. (2000: 13)

Andresen and Forman hope to integrate third-person methodologies from the field of consciousness studies with first-person meditative experience, which as Blackmore suggests is indispensable for grasping why dualism is false and non-duality may be true. This integration will also help us in understanding the experiential side of human nature.

As Andresen and Forman observe, “Meditative schools of Hinduism, Buddhism and Taoism, not to mention Kabbalah and mystical Christianity, all stress direct experience of the profound. Figures such as Sankara, Meister Eckhart, Nagarjuna and countless others all have stressed the necessity of integrating experience along side conceptuality, and using it to sharpen one’s views” (*ibid.*). The founders of all contemplative traditions have emphasized the need to integrate direct experience with conceptuality, as if recognizing that one can truly know the self only by being it, not by thinking about it. One of the oldest techniques for gaining self-knowledge is meditation, which includes Advaitan, Yogic, Zen, Tibetan, Christian as well as more recent techniques developed by western scientists. In the opening essay of *Cognitive Models*, “Meditation Meets Behavioral Medicine,” Andresen examines the role in Mind/Body medicine of a wide range of meditative practices, a ground-breaking attempt to unite spiritual, scientific, and health-related programs. She catalogues the many scientific studies that show the positive outcomes of meditation, which include “reducing blood pressure, anxiety, addiction, and stress,” as well as inducing a shift of focus from “a personal experience of the self to one oriented towards the larger reality that contains it” (2000: 17-18).

Arthur Deikman like Andresen also integrates science and mysticism. In “A Functional Approach to Mysticism,” he notes that Isaac Newton and Albert Einstein were both fascinated by the transcendent. According to Einstein, “The most beautiful and profound emotion we can experience is the sensation of the mystical. It is the source of all true science” (1999: 191). As William James commented, “There is about mystical utterances an eternal unanimity

which ought to make a critic stop and think” (1929: 410). Deikman examines the path to mystical experience through the meditative process of shifting from sensory to abstract levels of consciousness, suggesting a shift from the particularities of our individuality to the trans-personal, trans-cultural basis of human nature. He says that

Not only is mystical experience an occurrence in the lives of most people, including scientists, but the mystical literature, which spans thousands of years and widely disparate cultures, exhibits a remarkable consistency in its description of mystical experience and its instructions for obtaining access to mystical knowledge. (2000: 75)

Deikman provides experimental evidence to support the conclusion that meditation results in a deautomatization of thought and perception. In one such study of the Rorschach response of advanced meditators, Daniel Brown discovered that “the pure perceptual features of the inkblots” are given prominence, and that “meditation has wiped out all the interpretative stuff on top of the raw perception” (Brown and Engler 1986; qtd. in Deikman 78). According to Deikman, evidence such as this indicates that “Meditation—whether of the Yogic form I had used for the experiments, or the ‘mindfulness’ meditation of Buddhism—featured a *shift in intention* away from controlling and acquiring toward acceptance and observation” (78; original emphasis). This evidence supports the definition of non-intentional consciousness as a hypoaroused state of knowing by being as opposed to a culturally induced hyperaroused state of cognitive activity.

The shift of intention in meditation from acquiring toward observation has led Deikman to suggest that consciousness has two modes. On the one hand, instrumental consciousness (or mind as defined earlier) is directed outward through the senses with an emphasis on objects, sharp boundaries, intentional behavior and survival of the self; on the other hand, receptive consciousness is directed inward through a natural and effortless attenuation of mind toward the non-intentional with an emphasis on blurring boundaries, merging, and transcendence. Meditative practices, based on the natural tendency of awareness to settle down effortlessly to a state of least excitation, enhance the latter mode, while bionic technology by definition would enhance the former. *Patanjali’s Yoga Sutras*, for example (yoga means union, as in *turiya*), describes three stages in the

effortless voiding of the mind's content in the practice of yoga: the mind being focused on an object such as a mantra or sound (*Dharana*), the uninterrupted flow of the mind toward that object in meditation (*Dhyana*), and the spontaneous emptying of mental content until consciousness is aware of itself alone (*Samadhi*) (Taimni 1961: 275-85). As a state of hypoaousal, *samadhi* involves a decline in physiological parameters "such as heart rate, skin temperature, spontaneous galvanic skin response, etc" (Forman 1999: 4), which means that it also involves a reduction in effort. The use of effort would have the opposite effect of leading to a state of hyperarousal.

*The Bhagavad-Gita* also describes the natural tendency of the mind to transcend effortlessly into non-intentional consciousness: "In this (Yoga) no effort is lost and / no obstacle exists. Even a little of / this dharma delivers from great fear" (Chapter Two, verse 40); as the commentary explains regarding yoga,

the process, having started, cannot stop until it has reached its goal. This is so in the first place because the flow of the mind towards this state is natural, for it is a state of bliss, and the mind is always craving for greater happiness. Therefore as water flows down a slope in a natural way, so the mind flows naturally in the direction of bliss.

Secondly, "no effort is lost" because, for the mind to become blissful, no effort is needed! If effort were necessary, then the question of effort being lost would arise. When an action is being performed, one stage of the process leads to another, which in turn gives rise to a further stage, so that when one stage has been reached, the previous stage is a thing of the past. In the performance of every action, therefore, some stage is lost, some energy is lost, some effort is lost. When the Lord [Krishna] says here that no effort is lost, it can only be because no effort is required. This means that Lord Krishna's technique of establishing the intellect in the Absolute is based on the very nature of the mind. (Maharishi 1967, 118)

As indicated by *The Bhagavad-Gita* and *Patanjali's Yoga Sutras*, therefore, the self moves effortlessly and naturally in the direction of its own nature, the void of conceptions, which implies that human nature is ultimately self-referral. This effortlessness can also occur in creative process. Giorgio Agamben describes how the artist

discovers that no content is now immediately identified with his innermost consciousness. [ . . . ] The artist is the man without content, who has no

other identity that a perpetual emerging out of the nothingness of expression and no other ground than this incomprehensible station on this side of himself. (1999: 54-55)

As every artist knows, arriving at the no content of one's innermost consciousness cannot be forced; it can only happen through effortless spontaneity. Anna Bonshek writes that "Aesthetic value can only be imparted to the work of art in a spontaneous manner—when the artist is living in accord with Natural Law" (2001:320).

In explaining the neurophysiology of enlightenment, Robert Keith Wallace describes the effortless of Advaitan meditation, which applies to all meditative practice, as a way of settling down the awareness to a state of least excitation:

The technique involves no mood, belief, or specialized lifestyle; rather it involves a real and measurable process of physiological refinement. It utilizes the inherent capacity of the nervous system to refine its own functioning and to unfold its full potential. In a spontaneous and natural way during the practice, the attention is drawn to quieter, more orderly states of mental activity until all mental activity is transcended, and the observer is left with no thoughts or sensations, only the experience of pure awareness by itself. (1986: 13).

These examples of the spontaneous, natural tendency of awareness to go beyond conceptuality toward the ground state of consciousness suggest that effective thought and action hinge on our capacity to move toward an optimal neurophysiological style of functioning. Deeper subjective experiences, which form the basis for greater achievement through all modes of activity, depend on the greater physiological refinement that occurs through the experience of hypoarousal. This unique physiological state supports the harmonious coordination between the mind/body matrix and consciousness. Without this integration with consciousness, extending the mind/body complex outward on the basis of instrumental activity alone can easily result in the accumulation of fatigue or stress that will further block the refinement of consciousness.

Clark, like posthumanists in general, defines the self in hyperaroused, instrumental terms as "our ongoing experience of thinking, reasoning, and acting within whatever potent web of technology and cognitive scaffolding we happen currently to inhabit"

(2003: 45). This process involves the expenditure of energy and effort, which also means that both energy and effort tend to be lost. According to the definition of human nature proposed here, the instrumental application of the mind does not provide direct or easy access to human nature. On the contrary, an instrumental mindset, by placing greater emphasis on localization, boundaries and difference, directs awareness away from human nature, while receptive consciousness moves towards it by providing a sense of interconnectedness, unity and the reconciliation of opposites.

Linking receptive consciousness to spirituality, Deikman proposes that

Profound connection is what the word 'spiritual' properly refers to. The spiritual is not a matter of visions of angels, or of being carried away by ecstatic emotion. The mystics are clear about that. At its most basic, the spiritual is the experience of the connectedness that underlies reality. (2000: 84)

He cites quantum theory as leading many physicists to conclude that "reality is an interconnected whole, capable of instantaneous response at a distance" (*ibid.*), which again suggests a kind of frictionless flow. But Deikman does not rely on parallels to particle physics to support the thesis of interconnectedness; rather, he cites the consensus of mystical experiences and literature and the reports of those engaged in altruistic activities, all of which have long testified to the unified nature of reality. However differentiated human nature and reality may appear from a third-person scientific perspective, the consensus from the most subtle first-person perspective across cultures suggests an effortless interconnectedness of everything on the level of non-pluralistic consciousness.

This first-person experience reflects a hypoaroused state of reduced metabolic activity available to ordinary people whose physiology has not been altered by posthuman technology that turns them into electronic symbionts. Many have questioned the moral rightness of bionic technology for normal people. Sidney Perkowitz, for instance, argues that while there is no question of the rightness of implant technology for the ill and injured, the issue is not so clear for healthy people who on a whim would like to extend their lifespan or

augment their mental or physical abilities: “While this possibility,” he says,

is far distant, we have learned something from the issues swirling around other forms of human alteration such as genetic manipulation; namely, technology that modifies people in unnatural ways or overturns old definitions of birth, life, and death raises moral and legal questions, and the earlier we consider these, the better. (2004: 214)

While Perkowitz is right in considering the moral issues of bionic technology, he overlooks the more pressing physiological issues that may adversely affect the most subtle dimension of human nature and by extension humanity itself. Some have argued that the human species may one day be replaced by a superior artificial race of its own creation. If this were to happen, it would likely be the result of our having modified ourselves out of a sustainable biological existence into the realm of androids.

## Chapter Two: The Latent Powers of Consciousness vs. Bionic Humans

### 1. From Robots and Bionic Humans to Siddhas

Perkowitz describes different combinations of humans and machines, which range from automatons, to robots, androids, cyborgs, and bionic humans (2004: 4). An automaton is a machine that moves according to pre-set conditions; a robot is a machine that may or may not be humanoid and is either autonomous or semiautonomous but has specific applications. Like the automaton and robot, an android is also entirely artificial but looks human (the word android meaning “manlike” in Greek), as in Philip K. Dick’s novel *Do Androids Dream of Electric Sheep?* On the other hand, cyborg and bionic human (from “electronic” and “biological”) differ from the first three categories in combining machine and living parts. In Perkowitz’s definition, a cyborg consists mainly of machine parts that dominate in mass but remain under the control of the natural part, “essentially, a brain in a box”; a bionic human, however, is mainly human with implants or replacements such as artificial limbs and organs or a pacemaker (2004: 5). As an example of a bionic human, he cites the TV series *The Six Million Dollar Man* (1973-78), which portends what may happen if humans continue on the path of artificial implants and genetic modifications. If the “Six Million Dollar Human” were to materialize through physical and mental prosthetics, it may involve more than electronic pulses. As Perkowitz says,

Such enhancements might, for instance, give the brain additional capacity by holding data in an exterior module, retrieving it on command, and recording whatever experiences are worthy of permanent storage. Or they could give the human brain new levels of computing power, or enable direct brain-to-

brain or brain-to-machine computation. Another approach might be to use chemical rather than neuroelectronic means to alter brain function. (2004: 100)

This technology, although seemingly farfetched, is already being developed by companies designing implantable chips that can store and dispense drugs that modify mental acuity, mood, and behavior.

For bionic technology to enhance mental and physical capability, however, would mean to induce a state of hyperarousal that may cause unnatural physiological pressure and even structural damage, as evidenced by the effects of cannabis, psychedelics, and other mind-altering drugs. As mental health experts have long suspected, a recent study published in *Addiction* by David Fergusson et al confirms that “daily users of cannabis had rates of psychotic symptoms that were between 1.6 and 1.8 times higher ( $P < 0.001$ ) than non-users of cannabis” (2005: 354). Another study conducted for the computing firm Hewlett Packard warns of a rise in “infomania,” or addiction to email and text messages that can result in “a fall in IQ more than twice that found in marijuana smokers” (“Texting Troubles” 2005). If people who constantly interrupt their tasks to react to email and text messages suffer ostensibly minor mental effects similar to the loss of a night’s sleep, then one can imagine how much more stress may accrue from bionic implants than make technological prostheses ever more accessible on a twenty-four hour basis. Bionic technology, though certainly a form of creativity, also seems to be a kind of madness.

While evidence points to a connection between creativity and madness (Barrantes-Vidal 2004), it also points to a connection between creativity and higher consciousness—which is also associated with extraordinary powers. What if bionic enhancements could be induced by natural, life-supporting means, like those described by Deikman, Forman, Shear and others? According to *Patanjali’s Yoga Sutras*, the sixth system of Indian philosophy, meditative practices that induce the hypoarousal of “unified” states of consciousness can also induce a wide range of empirical effects known as *siddhis*. I. K. Taimni writes that

The word *Siddhis* is used generally for the extraordinary powers acquired through the practice of *Yoga* but its real meaning is best expressed by the words ‘attainments’ or ‘accomplishment’ connected with the superphysical worlds. (1961: 307)



*Siddhi* also means perfection, and each *sutra* or thread in *Patanjali's Yoga Sutras* deals with a particular type of perfection or power. These powers are not ends in themselves but a means to stabilize pure consciousness or union along with the three ordinary states of consciousness. As described in chapter three of the *Yoga Sutras*, the *siddhis* comprise an impressive range of powers, including the strength of an elephant; the cessation of hunger and thirst; knowledge of past and future; knowledge of another's mind; knowledge of the solar system; knowledge of the small, the hidden or the distant; intuitional hearing, touch, sight, taste and smell; power of superphysical hearing; mastery of omnipotence and omniscience; power of increasing strength; power of passage through space, and many others (Taimni 1961: 275-373)—which collectively far exceed the reach of bionic technology. One such technology now gaining in popularity is telepresence, or remote presence, which Clark suggests could “extend our sense of physical presence in important ways” (2003: 108). He argues that telepresence does not lead to our becoming a disembodied intelligence. Rather, it bolsters the importance of touch, motion, and intervention through feedback loops that connect action and commands, thereby confirming the theory that “we are essentially active, embodied agents” who constantly evolves through different forms of enworldment (2003: 114). The question then arises, does the desire to achieve extraordinary abilities such as telepresence through biotechnology reflect an intuition of our innate potential to achieve them by natural means?

As Patanjali, Taimni and others have pointed out, however, these powers may distract the neophyte from the ultimate goal of yoga—the attainment of pure consciousness through the transcendence of the “illusory side of life,” which includes occult powers like the *siddhis*. If the *siddhis* as a natural means of perfection can distract us from maximizing the innate potential of human nature, then how much greater would the risks be from powers artificially induced through biotechnology? The risk of distracting the mind through the *siddhis* may delay the ultimate achievement of yoga, but as far as we know the risk of technologically modifying the brain could be immeasurably greater. Who can say that we would not end up diverting the mind from its innate potential, while simultaneously subverting the very substratum of that potential by damaging its genetic basis?

Powers such as the *siddhis* and those predicted by posthuman technology can also be achieved through shamanic states of consciousness. As Ken Wilber notes (1981), shamans were among the earliest practitioners to access higher states associated with pure awareness (*turiya*). In his essay on shamanism in *Cognitive Models and Spiritual Maps*, Stanley Krippner describes the techniques used by shamans to enter the “spirit world” for information that would help or heal members of their social group. The word shaman, while of uncertain derivation, traces from the Siberian reindeer herders for whom *śaman* translates into “one who is excited, moved, or raised” (Lewis 1990: 10-10; Krippner 2000: 93). It is also etymologically related to the Sanskrit word *saman* or “song” (Hoppal 1987; Krippner *ibid.*). Krippner explains that shamanism is a biologically derived specialization, which accounts for its worldwide appearance. “These potentials,” he says, “can be described as ‘neurognostic’ because they involve neural networks that provide the biological substrate for ways of knowing (Laughlin, et al, 1990), i.e., epistemology” (2000: 96). Shamans used a variety of technologies, including mind-altering plants as well as dancing, drumming, fasting, visualizing, and lucid dreaming. Although shamanism may not be entirely natural when it depends on external stimulants, these “technologies of the sacred,” a phrase Krippner (2000: 98) borrows from Mircea Eliade, serve as a means to access the “immense signal system” that comprises the totality of inner and outer reality (2000,: 93).

Like Carl Jung’s work on archetypes, shamanism supports the value of intuitive knowledge (*ibid.*). Intuition is a feature of what Deikman calls the receptive mode of consciousness, which leads to the experience of the interconnectedness underlying reality and sets the stage for activating the shaman’s neurognostic potential. As Krippner says of this potential,

The hallmark of cortical evolution is not the ever-increasing sophistication of specialized cortical circuitry but an increasing representational flexibility that allows environmental factors to shape the human brain’s structure and function (Gazzaniga 1994; Quartz & Sejnowski 1997). Pinker (1997) suggests that the “mind” is made up of many modules, each honed by aeons of evolution, and shamans may have learned to integrate these modules (Winkelman 2000, 7). If so, shamanic technologies represent the initial institutionalized practices for this integration, both through shifts in consciousness and community bonding rituals (Winkelman 1997). These

practices became codified in the form of myth, ritual, and ceremony, providing for social solidarity and specialization. (2000: 97)

Even though human thought and behavior owe as much to the environment as they do to biology, this symbiotic relationship as Pinker suggests takes aeons to evolve. For bionic technology to interfere with or attempt to accelerate this process would be to court unforeseen and, for all we know, undesirable consequences. With the number of people around the world who have had shamanic and other spiritual experiences, and who continue to evolve through knowing by being as evidenced by the expanding grassroots spirituality movement, it is not inconceivable that the powers recorded in the *Yoga Sutras* would increasingly become accessible by natural means without the neurophysiological risk of bionic technology. The problem, however, is that posthuman society, which is driven by an instrumentalist orientation, lacks the patience to achieve these powers by natural means.

## 2. Posthuman Consciousness

Other essays in *Cognitive Models* that examine the neurophysiology of spiritual experience include Philip Wiebe's study of Christic visions, James Austin's analysis of the physiological processes of insight-wisdom, Brian Lancaster's study of Hebrew language mysticism and cognitive models, and Andrew Newberg and Eugene d'Aquili's study of the neuropsychology of religious and spiritual experience. While none of these studies reach a definitive conclusion about the neurobiology of mysticism, they all suggest that refined subjective experience depends on natural physiological processes. If this is the case, then we can reasonably infer that spiritual experience as the most subtle dimension of human nature might easily be thwarted by artificial interference. One reason posthumanists tend to overlook or downplay the possibility that bionic modifications can have negative side effects, other than the fact that they can benefit the ill and injured, may have to do with their working definition of consciousness. As stated earlier, posthumanists generally define consciousness not in terms of awareness-as-such but rather in terms of the intentional objects of awareness. Instead of acknowledging pure

consciousness, they choose to blur the distinction between real and artificial, original and simulated, organic and mechanical, regarding them as mere semantic distinctions that we can easily ignore. After all, if we consider matter alone to be the ultimate reality and consciousness-as-such its epiphenomenon, then if anything breaks down with the human-machine, scientists always be able to fix it or replace it. While this solution may seem feasible in terms of the interface between biotechnology and a bionic human, the above distinctions nevertheless do make a difference when it comes to the pure consciousness event.

In their emphasis on the body, posthumanists like Haraway, Clark, Hayles and Pepperell explain consciousness from a third-person approach in terms of observable behavior. For Pepperell, “consciousness refers to all those attributes we usually associate with a sentient human such as thought, emotion, memory, awareness, intelligence, self-knowledge, a sense of being, and so on” (2003: 13). Even though he recognizes that these attributes have a range of densities, he still classifies awareness and a sense of being as “attributes,” which excludes the least dense or most subtle dimension of consciousness as pure witness—the internal observer beyond attributes. This classification has significant implications for how posthumanists conceive of the relationship between humans and machines. Pepperell believes that human intelligence is not localized in the brain or any single component but spread throughout the body. Similarly, Clark says that the notion of embodied or embedded intelligence is the dominant paradigm in artificial intelligence (1997). While quantum physicists have speculated on the deep unity of mind and world, posthumanists have extended this to a unity of mind and body. The Copenhagen interpretation of quantum reality, for instance, calls into question the boundary between observer and observed. David Peat notes in *Einstein’s Moon* that sub-atomic research holistically binds the knower and the known in such a way that the outcome of research depends on the observation of the knower:

This holistic nature of the atomic world was the key to Bohr’s Copenhagen interpretation. It was something totally new to physics, although similar ideas had long been taught in the East. For more than two thousand years, Eastern philosophers had talked about the unity between the observer and that which is observed. They had pointed to the illusion of breaking apart a thought from

the mind that thinks the thought. Now a similar holism was entering physics.  
(1990: 62)

Eastern philosophers, however, also talk about something Peat overlooks; namely, that knowledge is structured in consciousness and changes with the level of consciousness, which extends from the ordinary waking state to pure awareness (*purusha*). By dwelling on the former, posthumanists privilege knowledge-about physical and mental attributes rather than knowledge-by-identity in which the subject knows pure consciousness by virtue of being it.

Pepperell describes his own consciousness as a

compound of feelings, emotions, and memories that are as much a function of the whole body as of the brain: when I feel unhappiness it is in my chest and arms; when I am frightened it is in my bowels and legs that the sensation is strongest; if I am amused it is my mouth and cheeks that are significantly altered. (2003: 19)

The question is, however, who is the “I” witnessing these feelings of happiness, fear and amusement? Pepperell’s description at first seems to suggest what Daniel Dennett calls the “Cartesian Theater” of the mind model of experience (1991)—challenged by Dennett himself and cognitive scientists such as Francis Crick. This model posits a place inside my brain or mind where “I” am and from which everything I experience comes together. In his “astonishing hypothesis,” Crick argues against this experience, claiming “that ‘you,’ your joys and your sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact no more than the behavior of a vast assembly of nerve cells and their associated molecules” (1994: 3). Although conscious experience in Crick’s reductionist theory is neither caused by, nor interacting with, but in fact nothing other than the behavior of neurons, the question remains, “But what about the *actual* phenomenology?” Dennett, who consigns phenomenology to neuroscience in his “multiple drafts” theory, which holds that there is no self that has experiences, replies, “There is no such thing” (1991: 365). Although granting that human beings are conscious, he claims we misconstrue consciousness and in fact only seem to have actual phenomenology. In rejecting the Cartesian dualism of mind and body, Dennett denies the self as the internal observer. This position resembles the Buddhist doctrine of “*annatta*”

or no-self, which holds that all ordinary experience is illusory, including the sense of self. Dennett's theory may have been indirectly influenced by the Buddhist doctrine that all phenomena are impermanent and empty of inherent existence, yet Buddhism accepts other Advaitan concepts like the cycle of rebirth.

By denying the Cartesian Theater through his third-person approach to consciousness, Dennett rules out a subjective ontology, claiming that the experience of a central place or time in the brain where consciousness happens is only an illusion. But as Blackmore notes (2004), Dennett has been criticized for this theory because in the end he fails to explain the mystery of consciousness; he only explains it away. Even though posthumanists such as Clark, Hayles and Pepperell conflate consciousness with thoughts, they still allow for a kind of phenomenological experience, however bound up the observer is with thought as an object of observation. Similarly, John Searle argues that "consciousness has a first-person or subjective ontology and so cannot be reduced to anything that has third-person or objective ontology" (1997: 212). From an Advaitan perspective, posthumanists blur this distinction. Yet although they reduce consciousness to the mind and relate it to the brain instead of the spirit or soul, consciousness has never been scientifically located through objective ontology. Pepperell, for instance, defines it through an emergent account as a product of the physical world without the Cartesian dualism of mind and body.

Even though he talks as if the experience of feelings occurs in a Cartesian Theater, Pepperell claims not to posit a "seat of consciousness" and argues against separating "the thing that thinks and the thing that is thought about" (2003: 33). This view is based on William James' well-known adage that "thought is itself the thinker, and psychology need not look beyond" (1890: 401). Similarly, Antonio Damasio argues that consciousness is only a feeling, and feelings are generated by neural patterns "displayed in the appropriate areas of the brain stem, thalamus, and cerebral cortex," a display that no homunculus or "ghost in the machine" need watch because it is already being watched by other brain processes (1999: 73). From this view, consciousness consists of conscious thought, which as a physical thing is not only a function of the brain but also of the extended physical universe in which the brain is embedded or embodied. Hence,

both consciousness and human existence can be considered as emergent properties arising from the coincidence of a number of complex events. In this sense they are like boiling; given sufficient heat, gravity and air pressure the water in a kettle will start to boil. (Pepperell 2003: 30)

As such, consciousness is not brain determined but a function of the brain, the body and the world as a whole. While Pepperell rejects the dichotomy between mind and matter and claims that no distinctions exist “independently of our conceiving them” (2003: 34), this approach does not account for subjectivity in its more abstract dimensions.

In arguing that the mind is enworlded and that the apparent gap between mind and matter exists only in the mind, posthumanists render the domain of matter all-encompassing and thus shut out the possibility of consciousness itself. The notion in quantum physics of a unity between observer and observed, however, does not necessarily mean that mind or consciousness is an extension of matter or the “physical” universe. In fact, quantum physicists have argued with increasing frequency that mind and matter are themselves expressions of a single more subtle underlying reality, and some even suggest that unbounded objectivity, or the unified field, unites with unbounded subjectivity, or pure consciousness. As physicist John Hagelin explains,

According to the Vedic tradition, consciousness is not an emergent property of matter that comes into existence through the functioning of the human nervous system, but is considered fundamental to nature. It is the essential core of life—a vast, unbounded, unified field which gives rise to and pervades all manifest phenomena. (1987: 57; see also *Bhagavad Gita* 1975; Sankaracharya 1977)

Werner Heisenberg says that “the common division of the subject and object, inner world and outer world, body and soul, is no longer adequate and leads us into difficulties” (1958: 24). Similarly, Erwin Schroedinger, commenting on the paradoxes of regarding mind and matter as distinct, says “these shortcomings can hardly be avoided except by abandoning dualism” (1964: 62). The Advaitan and Samkhya-Yoga perspective support this assessment, but it also asserts

that the mind/body distinction does not comprise a duality in the first place because both are in fact forms of matter.

As discussed in Chapter One, Samkhya-Yoga posits “two irreducible, innate, and independent realities in our universe of experience: 1. consciousness itself (*purusha*); 2. primordial materiality (*prakrti*),” which includes the thinking mind (Pflueger 1998: 48). The mind includes the intellect, emotions, and the phenomenal qualities (*qualia*) of experience such as perceptions, memories and sensations. In experiential Advaita, the “mind is nothing but (a bundle of) thoughts. If one investigates what this mind is, keeping off all thoughts, he will find that there is no such thing as mind” (Om 1971: 26). Primordial materiality thus consists of twenty-three components, including mind (*manas*), intellect (*buddhi*, *mahat*) and ego (*ahamkara*) (Pflueger 1998: 48). As nonconscious matter, the intellect, mind, and ego together with thought, feeling and perception make up the *content* of consciousness. In the posthuman collapse of “the thing that thinks and the thing that is thought about,” thought, as a form of nonconscious matter, emerges with the unlikely power of being conscious of itself.

Conveniently, this collapse allows posthumanists to propose the possibility of a third-person objective account of the continuum between conscious experience and the other functions of the universe on a material basis. Without this hypothetical basis, we would have to rely on a first-person subjective approach to the continuum of consciousness and the universe, which would extend beyond the reach of the scientific method as currently understood. The posthuman third-person objective approach also serves to conceal the danger that bionic technology poses for human consciousness. The posthuman project, which conflates thinker and thought, runs the risk of transforming humans into what Dennett calls the “zimbo,” a modified version of a zombie. A zombie is somebody who looks, acts, speaks and behaves like you in every discernible way without being conscious. As Dennett defines it,

A zimbo is a zombie that, as a result of self-monitoring, has the internal (but unconscious) higher-order informational states that are about its other, lower-order informational states. (It makes no difference for this thought experiment whether a zimbo is considered to be a robot or a human—or Martian—entity.) Those who believe that the concept of a zombie is coherent must surely accept



the possibility of a zimbo. A zimbo is just a zombie that is behaviorally complex, thanks to a control system that permits recursive self-representation. (1991: 310)

If we define conscious experience as nothing more than thought, and thought as neuroscience or brain functioning, then very little would distinguish us from zimboes (an entity that in effect conforms to the posthuman description of what it is like to have conscious experience). In other words, little would distinguish us from “a zombie that, as a result of self-monitoring, has internal (but unconscious [for Dennett realizes that thought cannot be conscious]) higher-order informational states that are about its other, lower-order informational states” (*ibid.*).

In “Posthumans and Extended Experience” (2005), Pepperell elaborates on the continuity between technology and humans, arguing like Clark and Hayles for a posthumanism of embodiment, a continuity between realms formerly thought to be distinct. Theology and humanism hold that we are distinct from animals, machines and everything else in nature, but science has eroded this distinction through technologies like synthetic replication, artificial intelligence, and biotechnical integration. On this view, distinctions are nothing more than notional boundaries, and human consciousness is not disembodied (not transcendent) but conditioned by physical and biological input. Subjectivity dynamically interacts with the environment through “extended experience,” which links cognitive functioning with the physicality of the extended world. As Pepperell puts it, “The real posthuman, then, is properly conceived not as an abstract flow of symbolic information but as a radically extended and embodied being whose experience, I will argue, is potentially boundless” (2005: 4).

Like posthumanism in general, the notion of extended experience entails the extension of mind as a conscious entity through the continuity of thought and material world. According to Samkhya Yoga, however, mind and world are naturally contiguous because the mind is always already an extension of matter as distinct from consciousness. Human experience as a function of mind is indeed an extension of the physical world, but consciousness, which is immanent as well as transcendent, extends beyond the world as the internal observer. As we have seen, posthumanism denies the nonmateriality of consciousness by defining it in terms of its

phenomenal content. Chalmers and Clark also argue for the notion of the “extended mind,” specifically “that beliefs can be constituted partly by features of the environment, when those features play the right sort of role in driving cognitive processes. If so, the mind extends into the world” (1998: 15). But while the “extended mind” theory accurately describes the link between mental computation and the physical environment, it does not explain the first-person experience of pure consciousness as internal observer.

Pepperell links the notion of extended experience to the Buddhist principle of “dependent origination.” As in the structuralism of Claud Levi Strauss, “dependent origination” holds that objects in the world do not originate or exist in isolation but rather derive their form and identity through their relationship to other objects in an indefinite series. By extension, humans also do not exist as isolated individuals, except in our imaginations; rather we exist as “non-contained beings” distributed beyond local space/time boundaries through an infinite chain of events that “ripple through infinity, just as each act is an extension of an indeterminate number of prior events” (2005: 6). Pepperell summarizes the extensionist approach as follows:

All objects have extended dimensions, but we normally acknowledge only a fractional part of their true extent because of constraints inherent in our perceptual apparatus and the coercive effects of time. Rather than regarding discernible objects in the world as integral and discrete, we must recognize that they, and their repercussions, extend indefinitely through space and time. (2005: 6)

From the perspective of the computational mind, technology is indeed embodied in humanity. But the posthumanist claim that machines constitute humanity in extended form does not contradict the first-person experience that technology, or the physical world as a whole, is also an extension of consciousness, as described by Advaita and Samkhya Yoga. In terms of embodied posthumanism, we are “physically grounded, but conceptually extended, driven by material necessity but notionally transcendent” (Pepperell 2005: 8). In other words, through the conceptual mind we transcend the boundaries of space and time; however, in this view we never transcend conceptuality (or the mind) itself. In making this argument, Pepperell draws upon C. Humphreys’ definition of “discriminative

consciousness” as a “compounded thing” (1985: 33)—in contrast to the unified, immaterial pure consciousness of the internal observer in Advaita. To define consciousness as a compound supports the posthuman reduction of transcendence to an extension of the computational mind embodied in the physical environment.

For Advaita and Samkhya Yoga, as noted earlier, consciousness or Atman is a continuum of unbounded unity. Humans form a continuity with non-human domains not only through the extended experience of the embodied mind but also through consciousness itself. Moreover, just as the mind is embodied in the world, so consciousness is embodied in human physiology. As Rao explains,

the mind is the instrument that facilitates in the person (*jiva*) the coming together of the conscious *purusha* with the unconscious objects. The mind is similar as well as different from the *purusha*. It is different, in the first place, because unlike the *purusha* it undergoes fluctuations and modifications. Second, the mind has no set goals, it subserves and realizes the goals of the *jiva*. Third, the mind partakes in the world of objects, taking their forms, whereas the *purusha* is always a witness (*sakshin*) and does not interact with the objects. The mistaken identity of the mind with the *purusha* experienced in the person may be seen in the reflections of the *purusha* in the *buddhi* [the most important constituent of the mind] and the false apprehension of the states of the *buddhi* as *purusha*'s and mistaking of the image as the real. (2005: 13)

The degree to which the mind reflects consciousness depends on the physiological condition of the mind/body complex. If the physiology as the reflector of *purusha* is modified under stress or through invasive posthuman procedures, then conceivably its ability to reflect *purusha* may deteriorate. If this happens then the contents of consciousness may no longer be clearly revealed by the illumination of *purusha*. In other words, if posthuman technology stresses the connection between mind/body and consciousness by overextending the experience of the mind into the world of objects, as through the notion of “extended experience,” then the mind’s capacity to manifest subjectivity or have phenomenal awareness may gradually diminish. By extending the reach of conceptual content at the expense of the light of consciousness, therefore, the mind becomes vulnerable to losing its clarity of understanding and to giving rise to a false sense of identity.

If we continue along the path of bionic technology, we run the risk of supplanting our innate capacity for the hypoarousal of pure consciousness with the hyperarousal of cognitive telepresence or telerobotics. Someday, particularly if the fashion for implants takes hold, we may inadvertently design ourselves into a class of zimboes. For the moment, the prospect of telepresence and other forms of bionic technology not only mask the risks involved in becoming posthuman, but also through our embodiment in cyberspace give the illusion of compensating for any losses we might incur. Some even believe we have nothing to lose because first-person experience is unreal to begin with. Thomas Clark, for instance, reduces consciousness to qualia as do Crick and Dennett. He argues that first-person experience is not essentially private but rather the same thing as third-person experience:

The absence of categorically private first-person qualitative facts entails that qualities given in sensory experience all represent third-person, *objective* facts about the world as represented by a particular cognitive system.

There isn't, it turns out, anything metaphysically essential about the essential characteristics of a quality; [. . .] All that's directly available to us is the *content* delivered by sensory representations. (2005: 47, his emphasis)

By collapsing first-person onto third-person experience, Thomas fails to distinguish the phenomenal mind from witnessing consciousness, arguing instead like Dennett that experience is unwitnessed by an internal observer. Nonetheless, the idea that first-person experience is really third-person experience does not contradict the first-person experience of *purusha* consciousness, which as a nonpluralistic state is also a third-person experience insofar that it is the same for everybody. As Shear notes, recall, "This is because two experiences of qualityless unboundedness cannot be phenomenologically different, since there is nothing in either to distinguish it from the other" (1990: 136). Through this unboundedness, the theory of extensionism itself can be broadened to allow for an extended experience on two dimensions, physical and nonphysical: that of the phenomenal mind, which posthumanism hopes to extend artificially through bionic technology, and that of witnessing consciousness, toward which the phenomenal mind can extend effortlessly through its natural tendency to move toward

greater fulfillment. Both aspects of this extended experience have a special connection with virtual reality and cyberculture. Cyberspace enhances an extension of thought, body and world for a posthuman embodied agent, as well as a transcendence of thought, body and world through witnessing consciousness for anyone whose potential to access human nature has not been compromised.

### 3. Cyberculture and Consciousness

In his novel *Neuromancer*, William Gibson coins the term cyberspace, which he defines as “a consensual hallucination” (1984, 5). Cyberspace refers not to real space but rather to the synthetic notional space of virtual reality, the computer generated environment of the internet that humans can enter through a computer or a virtual reality prosthetic. In today’s world, cyberspace is limited compared to its extension in science fiction as a realm of all possibilities. We might also think of cyberspace as a postmodern utopia, or what Kevin Robins calls a kind of “nowhere—somewhere” (2000: 77) in which we can assume multiple identities. You can enter cyberspace either as a disembodied intelligence, like the protagonist Case in *Neuromancer*, or as an extension of your body through remote embodiment, as described by Andy Clark. While the prophets of cyberspace envision a new reality that allows you to transcend the physical into a technological imaginary as a disembodied rationality, others reject this mythology of cyberspace and want to re-locate cyberculture back into the physical world (Robins 2000). For Hayles, virtual reality is “not a question of leaving the body behind but rather of extending embodied awareness in highly specific local and material ways that would be impossible without electronic prostheses” (1999: 291). Similarly, Clark says that disembodiment implies being digitally immersed but lacking the full spectrum of

rich, real-time feedback that body and world provide. As feedback links become richer and more varied, our experience will rather become one of multiple ways of being embodied. (2003: 194)

Disembodiment appeals to those who see the virtual community of cyberspace as a means to transcend the limitations of the physical

world and to replace the disappearing social bonds of the extended family and village agora. But increasingly, to enter cyberspace, whether as a disembodied rationality or an embodied agent, will entail invasive bionic technology—with the accompanying implications for human nature.

Science fiction, especially cyberpunk, has always pushed against the boundaries of human nature as related primarily to the mind and culture. As a pro-technology science fiction sub-genre, cyberpunk privileges the technological over the psychological, promoting the posthuman condition by subordinating consciousness to material existence. Samuel Delany defines cyberpunk as “apsychological”:

Cyberspace exists merely as a technological consensus. Without that technology it could not exist, be entered, or function. It's much closer to Popper's notion of “World-3” (the world of texts and data that interweaves and stabilizes the world of human beings) or Chardin's “Noosphere” (the circle of abstract knowledges presumed to be generated by and encircling the biosphere) than it is to anything internal or psychological. (1994: 176)

The point in cyberpunk is to encourage direct physical contact with advanced technology. As George Slusser says, “to write SF is to make physical, even visceral contact with the mechanical and biological extensions of our personal infosphere (cyborgs, grafts, prostheses, clones), and beyond that with the image surrogates themselves (simulations, ‘constructs,’ holograms) that now crowd and share our traditional fictional living space” (1992: 3). Adam Roberts argues that SF “provides concrete, material externalizations for metaphors of alterity” (2000: 168), the ultimate alterity in this case being that which is beyond our ability to comprehend, being no longer present in human psychology. As in the theory of extensionism, psychology takes a back seat to the expansion of unwitnessed experience through the technology of cyberspace.

Hayles argues that information narratives represent a shift from “presence and absence to pattern and randomness” (1999: 35). She believes that cyberspace, as a nonphysical realm of computer simulation, “defines a regime of representation within which pattern is the essential reality, presence an optical illusion” (36). But as discussed earlier, the only truly nonphysical entity is consciousness-as-such, and to exclude presence from cyberspace would mean to

exclude consciousness. Her definition of cyberspace as a representation of pattern over presence corresponds to Clark's description of the embodied self as "a kind of higher-level pattern," a pattern "determined by the activities of multiple conscious and nonconscious elements spread across brain, body and world" (2003: 192). Clark makes no bones about defining the self as a mind/body agent that, devoid of internal observer, manipulates tools that extend the range of experience. And in the posthuman condition, these tools extend "all the way down. We are just the complex, shifting agglomerations of 'our own' inner and outer tools for thought. We are our own best artifacts, and always have been" (*ibid.*).

As we continue to extend our embodied awareness through ever more sophisticated tools, the allure of what David Tomas calls the "technophilic body" will be ever harder to resist (2000: 175). Tomas defines the technophilic body, or cyborg, as a product of both aesthetic and functional transformations, including everything from "cosmetically redesigned faces, muscle grafts and animal and/or human transplants" to radical "functional alterations to the human body's organic architecture" (176). Although still within the realm of SF, these alterations if they occur in reality will undoubtedly have a deep-seated impact on the transpersonal, trans-cultural essence of human nature, whatever what posthuman optimists may believe (Clark 2003: 32).

While Kevin Robins among others questions the idea that cyberspace can provide a visionary transcendence of the here/now through what he calls the "technological imaginary" (2000: 79), writers such as Gibson suggest that to a limited extent cyberspace does allow for a transcendence of the duality of here/now, space/time and causality—which also includes the psychology of the profane. Indeed, as discussed in the following chapter, the play of difference that characterizes cyberspace induces a kind of transcendence by stretching the boundaries of the phenomenal mind to the point where we can gain a passing glimpse of consciousness-as-such beyond ordinary psychology. This happens in cyberspace through what Tomas calls "a rite of passage" through which individual and ethnic identity is transformed by being "technologized" (2000: 177), a process that allows one to shift identities or personas and thereby ever so briefly to taste the silence of witnessing consciousness between our conceptual constructs. As Margaret Wertheim says, "cyberspace has become a

new realm for the mind. In particular it has become a new realm for the imagination; and even, as many cyber-enthusiasts now claim, a new realm for the ‘self’” (1999: 232). Moreover, as Sherry Turkle says, “The Internet has become a significant social laboratory for experimenting with the constructions and reconstructions of self that characterize postmodern life” (1995: 180). In positing a virtual self-presence of humanity through cyberspace, Pierre Lévy argues that the concept of culture in the future will involve “the universal-without-totality” (2001: 233), which implies an all-encompassing awareness not identified with or attached to any particular mental content. He continues that,

The goal of a cyberspace that we claim to be universalizing is to interconnect all speaking bipeds and encourage their participation in the collective intelligence of the species within a ubiquitous environment. In a completely different way, science and universal religions open virtual spaces where humanity can encounter itself. Although it fulfills an analogous function, the way cyberspace reunites people in much less “virtual” than that of science or the great religions. Scientific activity implicates everyone and is addressed to everyone through the intermediary of a transcendental subject of knowledge in which every member of the species participates. However, by ensuring that humanity is present to itself, cyberspace implements a technology that is real, immanent, and graspable. (2001: 233-34)

Lévy continues by suggesting that universality is an extension of a unique meaning. But the experience of cyberspace as suggested by the science fiction writers discussed below also implies that universality must be understood not only as the totalization of a unique meaning as a conceptual construct, but also as a transcendence of all meaning, all content, in the move from mind toward the transcendental subject. Lévy emphasizes the spatial-temporal connection of cyberspace, like Pepperell’s extended experience, but cyberspace also allows one to go beyond the physical dimension.

Even through telepresence as described by Hayles and Clark, in which the body is extended to create an embodied awareness, the mind/body matrix can reach a state of attenuation through which we transcend the boundaries of ordinary identity. As we shall see in later chapters through an analysis of specific works of science fiction, the mind/body matrix (as a product of *prakriti* or primordial matter) can reflect pure awareness under the right conditions. Cyberspace may



produce such a condition, provided the physical mind/body matrix does not suffer structural modification that would preclude access to a state of hypoarousal. Such an irrevocable loss to humanity would interfere with the hope that the scientific and technological endeavor of cyberspace can render tangible an invisible reality. One reason Hayles defines cyberspace in terms of pattern and randomness instead of presence and absence has to do with the claim that the movement of *différance* precludes the metaphysics of presence. As the following chapter argues, however, deconstruction does not undermine presence in literature but rather allows presence to come forth through the unsayable.

## Chapter Three: Derrida's Indian Literary Subtext

### 1. Deconstruction and Sanskrit Poetics

Unlike the romantic self located in the depths of a person's being, or the modernist self identified through observation and reason, the postmodern self has split into a myriad, relational fragments (Gergen 1991, 216-31). In postmodernism, as Judith Butler claims, "the subject as a self-identical entity is no more" (1993: 230). By questioning consciousness, transcendentality and the metaphysics of presence, Derrida questions the ground of human nature as defined by the world's contemplative traditions. But as this chapter hopes to demonstrate, Derridean deconstruction—which consists of "deconstructing, dislocating, displacing, disarticulating, disjoining, putting 'out of joint' the authority of the 'is'" (Derrida 1995a: 25)—has antecedents in Indian literary theory or Sanskrit poetics that problematize the subversion of presence. This connection between deconstruction and Advaita would call into question the postmodern subversion of human nature.

Rooted in the ancient Vedas, Sanskrit poetics unfolded through a medieval flowering and is currently being applied in literary and cultural studies by a growing number of western critics drawing upon the study of consciousness. The theory and practice of deconstruction, including the notions of difference, trace, supplementarity, play, iterability, phonocentrism, and presence, not only share attributes with but can also be shown to follow indirectly from an earlier, Eastern philosophical tradition largely unacknowledged in the work of Western writers. Although critics such as Robert Magliola (1984), Harold Coward (1990) and Carl Olson (2002) have explored the parallels between Derrida and Indian thought, Western critics by and large avoid Eastern literary theory, partly out of fear of being

stigmatized by association with religion or what they misconstrue as subjectivism, mysticism or intuitionism. But in critiquing his German predecessors, Derrida, especially in his earlier work, may also be borrowing from and re-contextualizing elements of Indian philosophy widely disseminated in the West since the late 19<sup>th</sup> century. The deconstructive notion of iterability, or the contextual nature of all knowledge, is not a Western invention but has roots in Indian thought, particularly as understood from the perspective, as discussed earlier, of Shankara's Advaita (non-dual) Vedanta (the end or final knowledge of the Veda), the sixth and last system of Indian philosophy (Maharishi 1967: 472-94).

The unsayable (as well as the language used to convey it) that Derrida finds in literature has clear affinities with the Brahman-Atman of Advaita Vedanta. The Advaitan definition of consciousness and its derivative in perennial psychology has been expounded by Shear (1990), Forman (1998), Deikman (1996) and others who posit higher states in the development of consciousness. As Charles Alexander notes, Vedic psychology proposes "an architecture of increasingly abstract, functionally integrated faculties or levels of mind" (1990, 290). Advaita and Samkhya-Yoga, as we have seen, distinguish between mind and consciousness. The term "mind" as I use it here derives from the latter of its two following uses in Vedic psychology: "It [mind] refers to the overall multilevel functioning of consciousness as well as to the specific level of thinking [*buddhi*] (apprehending and comparing) within that overall structure" (Alexander 1986: 291). The levels of the overall functioning of mind in Vedic psychology extend from the senses, desire, mind, intellect, feelings, and ego, to pure transcendental consciousness, or self as internal observer. Pure consciousness (*turiya*), which is physiologically distinct from the three ordinary states of waking, sleeping, and dreaming, is immanent within yet transcendental to the individual ego and thinking mind.

The aim in Advaita Vedanta is to establish the oneness of reality and to lead us to a realization of it (Deutsch 1973: 47), which comes through the "experience" of consciousness as qualityless Being or Atman (*turiya*). As Jonathan Shear notes, such an experience corresponds to what Plato intends by his fourth level, the "Forms," as reached through the "dialectic," a faculty which is "radically different from thinking and reasoning as we find them in mathematics and science" (1990: 14). Arguably, this expansion of the mind toward an

experience beyond duality is not unlike the way a deconstructive reader moves toward the unsayable in literature, or the way the surfer in cyberspace undergoes the rites of passage in the transformation of identity.

## 2. Iterability and the Panentheistic

J. Hillis Miller writes that “Literature is for Derrida the possibility for any utterance, writing, or mark to be iterated in innumerable contexts and to function in the absence of identifiable contexts, reference, or hearer” (2001: 59). Miller proceeds to show that Derrida’s literary criticism calls into question the primacy of consciousness in the phenomenology of Edmund Husserl and other western thinkers, thereby deconstructing—or rather re-contextualizing through the play of difference—the presence, unity, and transcendental associated with metaphysical traditions. From the perspective of non-dual Vedanta, however, which distinguishes between mind and consciousness, a transcendental experience—understood as knowing by being as opposed to a concept—is always already contextualized in the sense of being rooted in the experiencer’s physiological condition. The difference here Derrida overlooks is that between the thinking mind and witnessing consciousness. As I suggest, the freedom from rationalizations and conceptual boundaries that Derrida’s earlier, more philosophical work attempts to achieve by working on the level of mind, Indian literary criticism achieves on the level of consciousness.

By defining literature in terms of “the possibility of detaching language from its firm embeddedness in a social or biographical context and allowing it to play freely as fiction” (Miller 2001: 60), Derrida’s notion of iterability suggests that meaning, by pointing beyond the referent, also points beyond the mind as a material entity situated within a material context toward the possibility of an experience so rarified that it underlies the infinity of contexts in which a work of literature can be read. Ultimately, then, what it suggests is the possibility of the mind expanding toward an experience of non-material consciousness (Chakrabarti 1971: 33; Deutsch 1973: 48-65). By making a connection between the experience of consciousness as a conceptual void and the non-referential (or non-material), which

Miller describes as “the properly literary in literature, that is, what is improper about literary language”—its possible detachment from “its proper referential or performative use, its ‘serious,’ or ‘non-etiolated’ use” (2001: 60)—, I am not referring to anything with which an ordinary reader might not already be familiar even outside of aesthetic experience. Indeed, in the oppositions reference/self-referral, material/non-material, mind/consciousness, the latter term suggests itself not only in literature and Indian philosophy but also, as we have seen, in the “panentheistic” experience of the “58% of Americans” involved in grassroots spirituality (Forman 2004: 11). This definition of spirituality, based on a widespread government-funded study of its grassroots movement in American culture, suggests how dualisms like the contextual/non-contextual binary self-deconstruct. The globally expanding interest in the spiritual parallels and possibly underpins the deconstructive interest in freedom from rationalizations and logical certitudes.

The remarkable thing about the panentheistic experience is that people around the world seem to realize that the phenomenologically reductive definition of consciousness as always containing an object—that “Consciousness is always consciousness of some object or other, never a self-enclosed emptiness” (Miller 2001: 62)—is not upheld by the immediacy of their firsthand experience. As suggested earlier, the vacuum state, also known as the Planck Scale or unified field (Hagelin 1987: 56-57; Penrose 1997: 3-4), which lies beyond the smallest time and distance scales of the physical universe, is described by Nick Herbert, Fritjof Capra, Roger Penrose, John Hagelin and other physicists as being analogous to human consciousness. The vacuum state also corresponds to Plato’s description of a unique kind of direct experience, “the brightest region of being” (*Republic* 1980: 750-51a, 518 b-d). In describing this qualityless state of consciousness, Plato in the *Phaedrus* says, “It is there that true being dwells, without color or shape, that cannot be touched; reason [*nous* or pure intelligence] alone, the soul’s pilot, can behold it, and all true knowledge is knowledge thereof” (1973: 494). This experience, Shear notes, “is devoid of all color, shape, and tangibility. [. . .] Indeed, except for its association with ‘brightness’ the experience seems to have no content at all” (1990: 20). Derridean deconstruction, taken to its radical conclusion, implies that this panentheistic, non-referential dimension of

experience can be understood as something intimated by the acts of writing and reading literature.

### 3. Consciousness and the Unsayable Secret of Literature

As Derrida says, literarity, a function of the iterability of literature, emerges through an interrelation between text and reader.

Literarity is not a natural essence, an intrinsic property of the text. It is the correlative of an intentional relation to the text, an intentional relation which integrates in itself, as a component or an intentional layer, the more or less implicit consciousness of rules which are conventional or institutional—social, in any case. Of course, this does not mean that literarity is merely projective or subjective—in the sense of the empirical subjectivity or caprice of each reader. The literary character of the text is inscribed on the side of the intentional object, in its noematic structure, one could say, and not only on the subjective side of the noetic act. There are ‘in’ the text features which call for the literary reading and recall the convention, institution, or history of literature. (“An Interview with Jacques Derrida,” *Acts of Literature* 1992: 44)

In the Husserlian distinction between noetic and noematic, *noetic*, derived from *nous* (mind), means “apprehended by the intellect alone, while *noematic* refers to features in what is to be known that makes them knowable, or subject to *noesis*” (Miller 2001: 62, original emphasis). As Derrida says, “the literary character of a text is inscribed on the side of the intentional object,” “not only on the subjective side of the noetic act.” Although Derrida bends Husserlian phenomenology by calling into question the primacy of consciousness, the phrase “not only” suggests that subjectivity still plays an important role in the movement toward the non-referential literarity of a text. This subjectivity is not only a private, individual subjectivity characterized by the thinking mind but extends panentheistically toward a transpersonal subject: it is a “subjectivity which is non-empirical and linked to an intersubjective and transcendental community. [. . .] The essence of literature, if we hold to the word essence, is produced as a set of objective rules in an original history of the ‘acts’ of inscription and reading” (*Acts of Literature* 1992: 44, 45). This essence, which Derrida later in *Acts* describes as a secret, depends on an intersubjective play of transcendence and immanence

between reader and community. It is a function of the infinite extension of the contexts of meaning or iterability. Through an interplay of noetic subjectivity and noematic intentional object, the rational mind moves away from the limitations of particular material contexts toward an underlying context defined only as a secret. As Miller puts it, "Literature keeps a secret that does not have to be revealed, or rather that cannot by any means, from gentle interrogation all the way to torture, be revealed" (2001: 65). This secret is like the formless reality at the heart of all forms, a reality accessible not to the thinking mind, a subject/object duality, but only to witnessing consciousness after all language and interpretation have run their course.

By associating literature with democracy and free speech, Derrida describes the irresponsibility of literature as the author's freedom to say everything without having to respond to questions. Literature keeps a secret, even though, as Derrida cryptically puts it, "these 'voices' speak, allow or make to come—even in literature without persons and without characters" (1995b: 29). Miller discusses this secret at length, but like Derrida never defines it beyond calling it a space in which the "other intervenes, or does not intervene" (2001: 69). To allow passage to the other, or allow the other to come, would be nonsense if the other were simply another aspect of the same—the thinking mind. For after all, what is it that allows to come if not something beyond conceptuality or rationalizations? Deconstruction suggests that what literature allows to come is not just another thought or conceptual boundary, which is infinitely deferred in any case through the play of difference, but a trace of consciousness as a "void of conceptions" (*Maitri Upanishad* 6:18-19; Hume 1921: 436), the ultimate supplement to thought without which, from an Advaitan perspective, it would have no substance or possibility of meaning. But as Derrida emphasizes, "The call of the other is a call to come, and that happens only in multiple voices" (quoted in Miller 2001: 70). This call, moreover, "forbids or forecloses the temptation to think of the other, the wholly other, as some Platonic 'One'" (Miller 2001: 70). There are two ways to interpret the Platonic One: as a transcendental signified, which is what poststructuralism generally refers to when it talks about absolutes, including the absolute self; and pure witnessing consciousness, which is both transcendent and immanent and available only through direct experience—as in the Brahman/Atman

and the Platonic "Forms." Derrida deconstructs the transcendental signified as a fixed concept, but the principle of literature's secret, which always remains unsaid as a trace or supplement, suggests transcendental consciousness as an openness to all possibilities. Moreover, although Atman is the same as Brahman, each Atman expresses itself in a different *jiva* (person) or voice, thus creating a coexistence of unity-amidst-diversity.

The wholly other, which literature by destabilizing language allows or makes to come, involves what Derrida calls an impossible invention.

The other is not the possible. One must say that the only possible invention would be of the impossible. But the invention of the impossible is impossible, the other would say. Certainly, but it is the only possibility: an invention must announce itself as invention of that which would not appear possible, without which it does no more than make explicit a program of possibles, with the economy of the same. (*Psyché* 1987: 59, translated in Miller 2001: 69)

As discussed below in the context of Indian literary theory, the wholly other or secret of literature is an impossible invention because, being unmanifest like pure consciousness as a void of conceptions, it is uncreated, self-sufficient, and inaccessible to the thinking mind. Deconstruction suggests that we cannot think materially about the immaterial. As Daniel Meyer-Dinkgräfe says, "The immaterial cannot be *thought* about immaterially, because thinking is a function of the intellect [which is material rather than non-material like consciousness], and the intellect, on the model of mind in Vedic literature, cannot grasp any more refined levels than itself, and thus cannot grasp the level of the immaterial, which is the level of pure consciousness" (2003: 11, his emphasis). Immaterial pure consciousness exceeds the material mind, just as the wholly other, which can only be allowed to come, exceeds the possibility of material invention.

For poststructuralists, the Platonic One is regarded as a function of the material mind, the fixation on a transcendental signified that disallows multiplicity. As discussed below, an Advaitan perspective suggests that the Platonic One is in fact a function of pure consciousness beyond oppositional structures—the non-material secret of literature that emerges through the suggestive power of a



noematic structure and “not only” the noetic act. This relation can be explained in terms of a holon, a word coined by Arthur Koestler (1967) to describe an entity that is itself a *whole* but simultaneously *part* of a larger whole, in an infinite series, such that each entity is neither whole nor part, but a whole/part, or holon. In the noematic/noetic fusion, the subjective side consists of a “primal artistic holon” (Wilber 1997) or “void in thought” (Antonin Artaud’s term as derived from the *Maitri Upanishad*) manifested through aesthetic form. The primal holon, however, does not enter our mind as a blank slate but rather instantly engages the multiple contexts of our existence, from the structures of the mind and culture to the global currents of the world at large. Paradoxically, as defined in Eastern thought and experienced panentheistically by many around the world, the transcendent primal whole, pure consciousness, subsumes and by entering becomes part of the tangible, expressed wholes of the mind’s cultural contexts. It thus allows for a coexistence of opposites, an experience of both/and rather than either/or. Derridean deconstruction, which I am arguing also operates within the panentheistic interplay between mind and consciousness, contains as a subtext the structure of consciousness that it both veils with the undecidable trappings of the mind and makes to come as an unsayable secret through a play of difference. Even had he addressed Indian thought or acknowledged its influence on his own, Derrida would still have had to work from a different approach simply because Western philosophy per se has not developed an experiential tradition that allows one to transcend the thinking mind like the yogic practices of India.

Nevertheless, the deconstructive process of moving the mind closer to the secret of literature uses mechanics similar to the yogic process of transcending thought, as Richard Harland notes in drawing an analogy between the trace and Eastern meditation (1987: 150-51). Derrida says that

when there is no longer even any sense in making decisions about some secret behind the surface of a textual manifestation (and it is this situation which I would call text or trace), when it is the call of this secret, however, which points back to the other or to something else, [. . .] and holds us to the other, then the secret impassions us. Even if there is none, even if it does not exist, hidden behind anything whatever. (1995b: 29-30).

The secret as a trace incites “passion” in the double sense of suffering and desire: suffering because the limitation of language as a referential gesture, the province of the mind, occludes the secret of literature; and desire because the taste of infinity, the province of consciousness, is allowed to come through the non-referential play of a work of literature as an intentional object. Like Eastern meditation, passion as desire operates through the trace as a play of difference through which the self-referral of the sign induces a corresponding self-referral of the subject, shifting awareness from the conscious content of the mind toward a void in thought. As Derrida puts it, the trace as a principle forbids the possibility that “a simple element be present in and of itself, referring only to itself”; “no element can function as a sign without referring to another element which itself is not simply present” (1981b: 26). The trace is thus a quasi-ontological, non-present, quasi-origin of difference, or what Derrida calls—along with the supplement, the *pharmakon*, difference, and other Derridean terms—an “aconceptual concept” (1988: 118). Of the supplement, “No ontology can think its operation,” since the supplement like the trace is “neither a presence nor an absence” (1976: 314). What we find in all aconceptual concepts, however, despite their diverse contexts in Derrida's philosophy, is the tendency to swing the awareness from the concrete to the abstract, the material to the non-material in the direction of pure consciousness or *Atman*—as in yogic meditation.

In his own literary criticism, Derrida revels in the richness of play he finds in literature, enhancing through his own texts the natural tendency of the mind to move through the play of duality toward the nonduality of consciousness.

I multiply statements, discursive gestures, forms of writing, the structure of which reinforces my demonstration in something like a practical manner, that is, by providing instances of “speech act” which by themselves render impracticable and theoretically insufficient the conceptual oppositions upon which speech act theory in general [. . .] relies (serious/nonserious, literal/metaphoric or ironic, normal forms/parasitical forms, use/mention, intentional/nonintentional, etc.). (1988: 114)

As Miller puts it, Derrida's “intuition (though that is not quite the right word) of a certain unsayable or something unavailable to cognition is, I claim, the motivation of all his work” (2001: 76). As in the panentheism experienced by so many today, Derrida's intuition is

an experience of something immanent as well as transcendent, neither a presence nor an absence. It pervades everything, but is not limited to the expressions of worldly phenomena. In revealing the idiomatic style through which a particular work invokes the other, tracing its secret, “the inaccessible [that] incites from its place of hiding” (1992: 191), Derrida brings the reader toward the unsayable, which, as argued here, is available only to nonpluralistic consciousness. In his radical approach to literature, Derrida hints at a connection between language and subjectivity found not in Western philosophy but in the Indian theory of language.

#### 4. Deconstruction and the Indian Theory of Language

To understand the full implications of aconceptual concepts like the trace and difference, we now turn to the Indian theory of language, which describes four levels of language that correspond to different levels of consciousness. Indology, with its longstanding popularity in the German academy, has had a strong influence on Derrida’s German predecessors. Max Müller, for example, translated the Upanishads in the 1880s, influencing philosophers such as Arthur Schopenhauer, who declared of the Upanishads,

How every line is full of sure, definite and throughout harmonizing significance! How out of every page confront us deep, original, elevated thoughts, while a higher and highly sacred earnestness vibrates through the whole! . . . It has become the solace of my life and will be the solace of my death. (quoted in Grinshpon 2003: 106)

Whatever exposure Derrida himself may or may not have had to Eastern thought, by antedating his intuition of a trans-cognitive aspect of language, Indian language theory may possibly have influenced the collective unconscious of Western philosophers and thereby promoted the development of Derrida’s own line of thinking.

As Harold Coward, T. Chakrabarti, S. K. De and other critics have noted, in the language theory expounded in the Vedas and developed by the fifth-century grammarian Bhartrhari, ordinary waking and transcendental consciousness yield the experience of different levels of language. Ordinary language consists of two

aspects: *vaikhari* or outward speech, and *madhyama* or inward speech or thought, which are characterized by temporal sequence or a gap between sound and meaning. In addition there are two levels of language beyond ordinary experience: *pashyanti* and *para* (Coward 1980: 126-37). These higher levels, which are unavailable to the ordinary mind, consist of a unity of sound and meaning without temporal sequence; all phenomenal differentiations disappear and meaning is apprehended as a noumenal whole. Bhartrhari notes that *pashyanti* appears in *savikalpa samadhi* (temporary experience of *turiya*) and *para* in *nirvikalpa samadhi* (the fifth state when *turiya* becomes permanent, sustained with the three ordinary states). The main difference between *pashyanti* and *para* is that in *para* the unity of sound and meaning is devoid of the impulse toward outward expression found in *pashyanti*. As words or thoughts in ordinary waking consciousness, *vaikhari* and *madhyama* give only a partial expression of a unified meaning or “transcendental signified” available on the higher levels of language. Padma Sudhi writes that

turiya, the fourth state of consciousness, [. . .] can only be revealed through *pashyanti* speech. But the three states of consciousness [waking, sleeping and dreaming] can be described by *madhyama* and *vaikhari*. [. . .] The fourth state of *turiya* supports all the three states. This is the state, where one experiences a pure consciousness of non-duality. It is difficult to describe the experience of this state of consciousness. But it has been given the metaphor of the free bird which moves everywhere with sublime bliss. It is the state where mystical experiences [. . .], which are inexplicable with the reasons, occurred. (1983: 99)

Without a consideration of the connection between language and consciousness, any discussion of literature would be limited to the experience available in ordinary waking consciousness, which would exclude the unsayable secret of literature.

From this perspective, the deconstructive play of difference occurs on the lower levels of language in which sound/meaning, signifier/signified are separated by a spatial/temporal gap—a gap in the authority of “is” that renders them open to deconstruction. In contrast, the higher levels of language are experienced on the boundary of or beyond space, time and causality. As such they would be undeconstructable, beyond the spatializing/temporalizing movement of difference that depends on a space/time continuum.

Inadvertently approached through Derrida's aconceptual concepts, these higher levels are cognized not in the temporality of ordinary waking consciousness and its duality of subject and object, but through a process in which meaning and consciousness begin to fuse (as discussed more below in terms of *rasa* or aesthetic experience).

Given the distinction between mind and consciousness, Derrida and other poststructuralists operating on the level of mind attempt to deconstruct the absolute truth value of that which turns out to be merely a relative manifestation of the absolute (*vaikhari* and *madhyama*) rather than the absolute itself (*para*). From an Advaitan perspective, because the latter is unavailable to the temporal mind alone, strictly speaking it can be neither deconstructed nor legitimated by it. Derrida refers to "the epoch of logos" (1976: 12) that began with Plato as positing an "absolute proximity" of voice and meaning, "of voice and being, of voice and the meaning of being, of voice and the ideality of meaning" (1976: 11). In the phonocentrism of "the epoch of logos," voice is more authentic than writing. But in distinguishing between voice on the one hand and text or history on the other, Derrida in effect misconstrues the absolute proximity of sound and meaning as understood in Plato and Sanskrit poetics. As mentioned earlier, Plato and Indian language theory both describe a trans-rational experience of higher consciousness. Derrida never distinguishes the voice of ordinary waking consciousness (*vaikhari* and *madhyama*) that operates within space/time from the possibility of a transcendent voice (*pashyanti* and *para*) elicited by the trans-rational experience of pure consciousness. Derrida justly deconstructs the possibility of a logocentrism based on the duality of mind. But when Plato and Indian language theory refer to what Derrida would call "the being of the entity as presence" (1976: 12), they are talking about an altogether different kind of experience than anything represented (or representable) by the ordinary mind and voice.

As if sensing this dilemma, Derrida deconstructs language through the trace and the play of *différance* (spelled with an "a"), conflating its temporality through the retention and protention of all signifiers inherent within any particular signifier in a chain that replaces the signified. Coward claims that Bhartrhari, like Derrida, sees difference, or the sequencing of time, as the non-logocentric, non-transcendental originary state of language (1990: 49-80). Bhartrhari, for example, would agree with Derrida's famous statement

that “Il n’y a pas de hors-texte” (“There is nothing outside the text.”) (1976: 158), that no metaphysical “other” exists outside of speech or writing as its source. Bhartrhari seems to accept this because he equates language with the absolute or Brahman, defined in terms of *Sabdatattva* or the Word-Principle (Coward 1990: 37; Haney 2002: 79-83). *Pashyanti*, the highest level of language that Bhartrhari considers, is the word whole without temporal sequence, but unlike *para* it still contains the inherent impulse toward expression in time and space.

Even the differential play of language, therefore, is not unique to deconstruction but has Indian grammarian antecedents. To equate Bhartrhari and Derrida in terms of difference like Coward does, however, would be to identify Bhartrhari's notion of Self more strongly with ordinary waking consciousness than he might have intended. From an Advaitan perspective, without pure consciousness (*turiya*), *pashyanti* or the logocentric voice would by definition be inaccessible. Derrida does not in theory accept the transcendental Self, but as suggested here the issue is not so simple. Although Derrida and Bhartrhari conceive of the real and language as one and the same, *pashyanti* is a level of language that borders on two dimensions: refined ordinary waking consciousness (*jagrat chetna*), which determines the force of expression that Derrida deconstructs; and transcendental consciousness (*turiya chetna*), which determines the nonsequenced unity of sound and meaning intimated by the trace. Although deconstruction in theory rejects the latter, in practice aconceptual concepts expand the intellect to the point of transcendence, like a Zen koan. Paradoxically, then, the arche-trace seems to “make come” a taste of *pashyanti*, although one still diluted with the flavor of the ordinary mind. Nevertheless, the rhetorical play of deconstruction, by extending the meaning of a word or sentence toward indeterminacy, stretches the reader's awareness toward the extreme limit of the mind's capacity for rational comprehension.

By invoking aconceptual concepts, therefore, deconstruction expands the mind to the verge of self-transcendence. The mind can either resist this movement and cling to its rational, historical content, or go with the flow toward the threshold of “no-mind” or witnessing consciousness. These alternatives represent two kinds of infinity: that of dissemination, of unlimited extension within space, time and causality; and that of *turiya* and *pashyanti*, of transcending duality

through a unity amidst diversity. In theory, deconstruction dwells on a temporal connectedness of all meaning based on the ordinary voice and mind, but in practice it invokes the unsayable—something unavailable to ordinary comprehension, the nontemporal connectedness of all meaning and consciousness. Indian literary criticism describes this connection in terms of aesthetic rapture as induced by the power of suggestion.

## 5. The Unsayable Power of Suggestion

Aesthetic experience, or *rasa* in Sanskrit poetics, can be described as intuition of the unsayable, which for Derrida is invoked by iterability, the non-referential quality of literature. For deconstruction, this structure of sameness-and-difference, or repetition-as-singularity, enables and limits the singularity of everything, making it a flickering of presence and absence. Derrida uses iterability to deconstruct the logocentric ideal of the self-presence of a concept, showing how its ideality or presence depends on textual mediation or projection, since the ideal itself always remains “inaccessible” (1988: 117). As we have seen, Derrida’s point is that concepts are always within writing or the text, dependent on their iterability which precludes their having a fixed center. As Derrida deconstructively notes with regard to the trace, iterability and supplementarity, “the possibility of the reference to the other, and thus of radical alterity and heterogeneity, of difference,” is always already inscribed “in the presence of the present that it dis-joins” (1994: 75). In Derrida’s interpretation, “transcendence” is confined to the relation between inside and outside on a material plane, with the outside being “transcendent” only to the inside, rather than being something independent of our thoughts altogether—something radically other like a non-dual internal observer. But from an Advaitan perspective, the other in its radical alterity and heterogeneity always already encompasses two dimensions: the material and non-material, duality and singularity, mind and consciousness, *vaikhari/madhyama* and *pashyant/para*, with the latter dimension both immanent within the former and transcendent. In this version of metaphysics, what is gathered up or united does not close anything off, but remains open and boundless, inviting a unity-amidst-diversity (which as Alison

Scott-Baumann and Christopher Norris seem to suggest is the direction that Derrida takes in some of his later texts) (2004). Anything outside a material supplement also has a non-material inside through which it merges with the inside of its other, while simultaneously remaining heterogeneous in a material sense.

Aporia or indeterminacy, if taken far enough, suggests this kind of radical alterity—not just the material, one-dimensional multiplicity of *différance*. An aconceptual concept implies that while presence is inaccessible to the thinking mind, it can still be noematically pointed to by way of suggestion, either through literature's unsayable secret, or, as posited by Indian literary criticism, through the power of figurative language to allow or make come a non-ordinary level of language and consciousness—the essence of aesthetic experience.

In Sanskrit poetics, aesthetic experience (*rasa*) culminates in a spiritual joy or *santa* that K. Krishnamoorthy describes as “wild tranquility” or “passionless passion” (1968: 26). As S. K. De says, “an ordinary emotion (*bhava*) may be pleasurable or painful; but a poetic sentiment (*rasa*), transcending the limitations of the personal attitude, is lifted above such pain and pleasure into pure joy, the essence of which is its relish itself” (1963: 13). This joy or relish is nothing other than the Self (*turiya*), also known as *sat-chit-ananda* (being, consciousness, bliss) (Deutsch 1973: 9). Aesthetic experience ultimately leads the attention toward the bliss of pure awareness. While Derrida, of course, does not explicitly endorse the full import of *rasa* or the sublime (far from it), the aconceptual intuition of an unsayable dimension in literature bears the hallmark of such an experience. Like *rasa*, the unsayable is non-rational, aconceptual, and trans-personal. By attenuating the material boundaries of the mind through rhetorical play, the unsayable is also relishing and joyous, swinging the attention from the concrete to the abstract, from individual words to their universalized meanings, and ultimately from the material mind toward non-material consciousness. As if wanting to have its cake and eat it too, deconstruction in practice pushes against the limits of rationalization through a nano-nuancing of multiplicity and indeterminacy (heading for the vacuum state on the wings of suggestion), while in theory refusing to cross the threshold into the unified field, even as quantum physics comes ever closer to validating what Vedanta has posited for millennia. On one side deconstruction appears to suffer from a Eurocentric anxiety of



influence, while on the other it inadvertently reflects a “joy of influence” in its drive toward a quantum field of all possibilities.

From an Advaitan viewpoint, the joy, unsayability, and secret of literature are conveyed not so much through its expressed as its suggested content (*dhvani*), or what Derrida would call the non-referential, noematic structure of the text. Anandavardhana, the great ninth-century exponent of the *dhvani* school and author of the *Dhvanyaloka*, opposed an older formalist school of criticism by showing how the suggested content of poetry manifests itself in the form of facts, poetic figures or emotions (Chakrabarti 1971: 66). Suggestion more than denotation, connotation, or other kinds of expression is responsible for conveying *rasa*. What is more, suggestion resides in the reader’s mind in the form of latent impressions (*vasanas*), which for Derrida would be the subjective side of the noetic act, and beyond that in the structure of pure consciousness itself. Anandavardhana defines *dhvani* as a suggested meaning that “flashes into the minds of sympathetic appreciators who perceive the true import (of poetry) when they have turned away from conventional meaning” (T. P. Ramachandran 1980: 75). This turning away from conventional meaning corresponds to the deconstructive turning from the referential sign to its dissemination, the scattered, plurivocal sense (of a sense) of something allowed to come. In terms of the interrelation between language and consciousness, the power of suggestion, by inducing aesthetic rapture, disseminates awareness from the concrete levels of the senses and intellect (*vaikhari* and *madhyama*) to the more abstract levels of feeling and intuition (*pashyanti* and *para*), and simultaneously back again.

## 6. Deconstruction and Human Nature

This swing of awareness—like the flickering of presence and absence in the proliferation of meaning—is induced by the juxtaposition of contrasting elements in language, its tropes and rhythm, which in terms of consciousness results in a coexistence of opposites. Literature, especially poetry, depends on its power to charm the reader on all levels of the mind simultaneously. But suggestion, like dissemination, is found also in “ordinary” language and is not unique to “literature”; indeed, as the enabling force of language for

deconstruction, dissemination calls into question the very concept of literature. As Derrida asks,

why should “literature” still designate that which already breaks away from literature—away from what has always been conceived and signified under that name—or that which, not merely escaping literature, implacably destroys it? (1981a: 3)

Similarly, *pashyanti* and *para* can appear in all forms of language. Dissemination and suggestion share features that illustrate again how the practice of deconstruction and Indian literary criticism overlap. Both refuse the ontology of semantic determinacy, but while the former does so by leading to an encounter with the other as alterity, the latter does so by finding unity-amidst-diversity in both language and subjectivity.

The difference between Derrida and Indian philosophy centers on the fact that while deconstruction allows the other to come, in theory it never closes the gap between subject and object, taking the mind's contingency with its duality of knower and known as an ineluctable given. In practice, however, by denying presence to subject and object, revealing the nothingness of knower and known, exposing the self as a non-self, it implacably allows to come the radical alterity of non-material consciousness as the internal observer—and even of knowing by being. After dissemination has run its course through the gamut of aconceptual concepts, the final supplement is the nothingness of the internal observer, without which there would be neither presence nor absence, nor the oscillation between them. While Derrida may intellectually refute this position, the Indian subtext of deconstruction does something quite different.

The contradiction that Derrida finds in a text, the way its content will say one thing and its form will do the opposite, also applies to deconstruction itself when it questions the logic of certain binary oppositions—the authority of “is” in making distinctions of ethnic origins, social class and cultural privilege. By this contradiction, I refer not to the way in which deconstruction, by undermining logocentrism, remains within the logocentric structure of oppositions—however true this is on the ordinary levels of mind and language. Rather, I refer to the contradiction in the effect of deconstruction, its allowing something to come from beyond the

logocentric structure of oppositions that characterizes logical discourse. The Western fear that the experience of no-mind or a void in thought would mean the end of philosophy stems in part from a misunderstanding of the relationship between pure consciousness and mind. Pure consciousness, once stabilized in daily experience, coexists with all levels of thought, from the temporal to the trans-cognitive, which includes binary oppositions and the presence of unity (see Deutsch 1973: *passim*).

From this analysis, we can see that although deconstruction in theory attempts through dissemination to subvert the underpinnings of human nature, in practice it calls forth the core condition of our humanity by making come the unsayability of literature, one of truest expressions of what it means to be human. This capacity to go beyond the finest level of ordinary thought implies experiencing thought closer to its source in the *para* level of language. Appreciating a thought in its seed form would allow us to comprehend its full implications in the field of action, something the intellect alone can never accomplish. For this reason, as Scott-Baumann suggests (2004), any conventional theoretical application of deconstruction in politics or other social activity would have limited success. Real social improvement, such as that attempted through bionic technology, has to emerge from a deeper source than the ordinary mind as a field of constant change to have any lasting effect or value. To make a viable contribution to individual and social development, therefore, Western philosophy and science would do well to consider the advantages of complementing the rational mind with the experience of pure consciousness. Many in the United States and around the world have already discovered this advantage, partly through the influence of Indian philosophy.

## Chapter Four:

### Consciousness and the Posthuman in Short Fiction

#### 1. Short Fiction and Mythic Encounters with the Sacred

One area of literature in which the effects of bionic technology may become apparent is in the reception of short fiction. Attempts to theorize the short story—as in the collections edited by Susan Lohafer and Jo Ellyn Clarey (1989) and Charles E. May (1994)—deal primarily with early, modern, or contemporary stories that feature ordinary human characters. Charles May cites several theorists who describe the short story as an impressionistic representation of sacred experience. Unlike the novel, generally considered a public form that springs from encounters with the everyday, the short story depicts “the immaterial reality of the inner world of the self in its relation to eternal rather than temporal reality” (May 1994: 133)—or in Derridean terms, to allow or make the unsayable to come. But if the short story depicts momentary mythic encounters with the sacred, then what happens when the protagonist is no longer human in the traditional sense, or even postmodern—the two being physiologically identical in that both would allow the other to come through a void of conceptions—but rather posthuman—a cyborg, for whom the unsayable is inaccessible? As we have seen, a cyborg is any human with a technophilic body defined in terms of a human/machine symbiosis (Hayles 1999: 84-112; Clark 2003). As the body becomes technophilic, whether through the modification of functional organic structures or through genetic engineering, the quality of subjective experience mediated by this body, as argued earlier, is bound to undergo significant change. Chris Gray writes that cyborgs

represent a paradox: they are potential better than humans and they threaten the loss of our identity—if we become too much the cyborg, will we no longer

be human? Serving as both enhancers and mutilators of what went before, cyborgs—and especially cyborg modes of reproduction—represent, in another of Haraway's potent phrases, a "promise of monsters." (2002: 90).

This paradox suggests that as we move from the contemporary or postmodern to the posthuman as a cultural construct, stories depicting posthuman experience will no longer be confined to the subgenre of science fiction but will increasingly extend to all types of short fiction.

As Hayles says, "Although in many ways the posthuman deconstructs the liberal humanist subject, it [. . .] shares with its predecessor an emphasis on cognition rather than embodiment. William Gibson makes the point vividly in *Neuromancer* when the narrator characterizes the posthuman body as 'data made flesh'" (1999, 5). While generally speaking the liberal humanist subject tends to experience the world conceptually in novels and emotionally or mythically in short fiction, the posthuman subject, according to Hayles and others, will increasingly experience reality computationally in terms of data, or thought/information. This emphasis on cognition rather than emotional embodiment may eventually go from being a matter of choice, to becoming an unavoidable side effect of the possibility that the artificial (especially genetic) modification of the human organism will end up modifying, or rather diminishing, the capacity of the human species to sustain the quality of consciousness necessary for sacred experience. Some believe that the biotechnology revolution will have serious consequences for our social/political order (Lévy 2001; Fukuyama 2002; Gray 2002), which would doubtless be a logical outcome of the transformation of human nature. As represented by short fiction, the unexpected social/political consequences of bionic technology can go all the way down and block the human capacity for mythic encounters with the unsayable. Through the example of selected short stories, including science fiction, this chapter demonstrates that posthuman encounters may indeed preclude sacred experience understood as an unsayable void of conceptions.

As we have seen, the posthuman is not a homogenous construct but has at least two distinct definitions. The cyborg can be understood either as a physical merging of the human and machine through wire implants or genetic modification, or, as Clark proposes, a merging "consummated without the intrusion of silicon and wire into flesh and

blood, as anyone who has felt himself thinking *via* the act of writing already knows” (2003: 5). In this friendly version of posthumanism, tools such as pen or computer are not just external aids but integral aspects of the problem-solving systems that civilizations have developed over the ages. Clark considers the notion of “post-human” to be a misnomer for a thoroughly human tendency to “merge our mental activities with the operations of pen, paper, and electronics” (2003: 6). We are already natural-born cyborgs: “*creatures whose minds are special precisely because they are tailor-made for multiple mergers and coalitions*” (2003: 7, Clark’s emphasis). In this definition, technology has always been geared toward self-transformation. But the fact that the mind is not confined to its biological “skin bag,” but has the potential to extend into and manipulate the physical environment does not in itself pose a threat to sacred experience.

The posthuman notion that the mind extends beyond the body is hardly a novelty. The difficulty arises when this extension is developed primarily as a material rather than a spiritual phenomenon as defined in the world’s contemplative traditions. For Clark, self-transformation has become a “snowballing/bootstrapping process of computational and representational growth” (2003: 8). He argues that the mind-body problem is really a “mind-body-scaffolding problem,” a problem of understanding “how human thought and reason is born out of looping interactions between material brains, material bodies, and complex cultural and technological environments” (2003: 11, his emphasis). What this definition of the human-machine merger suggests is that the posthuman intensifies and extends the postmodern condition of materialism, relativism, and computation, thereby aspiring not only to supercede but also to repress the transcendentality, mythical oneness, and consciousness usually associated with traditional short fiction and perennial psychology. In both versions of the posthuman—invasive and noninvasive—the innate capacity of human nature to split the self into radical multiplicity may be enhanced, but in the former especially the complementary capacity to transcend diversity into unity could be irreversibly diminished. In the posthuman condition, cognitive machinery and technological skills in manipulating nature take precedence over the powers of consciousness to accomplish similar ends in a natural, spontaneous, and environmentally friendly manner. The posthuman, therefore, emphasizes computation and technological expertise through an

outward, physical domination of the natural world. But as understood by most contemplative traditions, as well as by artists and writers, this outward approach, conducted at the expense of the most subtle aspects of what it means to be human, can be made redundant by methods of accomplishing the same ends inwardly on the level of consciousness. As discussed in Chapter One, the Vedic tradition, notably the Upanishads and Yoga Sutras, provides a record of these possibilities. These attainments or accomplishments of human nature are also exemplified by the mythic encounters of short fiction that allow the unsayable to come through what Derrida calls the noematic structure of the text combined with the subjectivity of the noetic act.

Some believe that human nature began to change in modernism and continued to change with a vengeance in postmodernism. According to Virginia Woolf, "In or about December 1910, human character [read nature] changed" ("Mr. Bennett and Mrs. Brown" 1924, quoted in Pinker 2002: 404). As noted by Peter Childs, however, Woolf was referring not to a change in human nature but to the fact that "because literary approaches [in modernism] had changed, human character had changed. Woolf felt that character should and even could only be illuminated through a plethora of memories and thoughts," while social realists of the 19<sup>th</sup> century "were still representing character through a mass of external details" (2000: 81). Steven Pinker, moreover, who questions the notion that the mind is a blank slate subject to radical modification through external influence, argues that modern science has no conclusive evidence that human nature has changed in recorded history: "The modern sciences of mind, brain, genes, and evolution are increasingly showing that [. . .] [the blank slate] is not true" (2002: 421). But this does not mean that human nature cannot be changed inadvertently through human-computer interaction, as in tampering with the spinal cord through medical implants to enhance sensory experience. Unlike Pinker, however, Hayles (1999), Pepperell (2003) and Elaine Graham (2002) suggest not only that human nature is indeed changing, but also that the proliferation of bio-engineered prosthetics implies that "the practical distinction between machine and organism is receding" (Pepperell: 7).

The posthuman science of mind thus tends to promote cognitive activity and intensify the computational response of the human nervous system. Short fiction on the other hand tends to promote

cognitive stasis or disinterestedness through aesthetic contemplation. As May says,

While the novel is primarily structured on a conceptual and philosophic framework, the short story is intuitive and lyrical. The novel exists to reaffirm the world of “everyday” reality; the short story exists to “defamiliarize” the everyday. Storytelling does not spring from one’s confrontation with the everyday world, but rather from one’s encounter with the sacred (in which reality is revealed in all its plenitude) or with the absurd (in which true reality is revealed in all its vacuity). (1994: 133)

Pinker calls art a pleasure technology (405), but while an aesthetic object like short fiction may organize pleasurable stimuli and direct them to the emotions, pleasure itself can be said to have its source not in external objects but in witnessing consciousness, or *sat-chit-ananda* (being-consciousness-bliss). This void of conceptions forms the screen of qualityless awareness that, while non-changing itself, mirrors all qualia or conscious content: thought, mood, sensation, memory, emotion, etc. Modern writers such as James Joyce, Raymond Carver, Kate Chopin, Jorge Luis Borges and others suggest that the epiphanic moments experienced by characters and the “preclosural” points experienced by readers, as discussed below, originate from transcendental consciousness, not from posthuman embodiment as extended through brain, body and world. Posthumanists attempt to simulate these experiences on a mechanical/electronic basis by means of “telepresence” in cyberspace and other forms of prosthetic know-how. But these physical attainments pale before the transcendence of spatial/temporal boundaries through the innate capacity of human nature, as described by Indian literary theory and demonstrated by short fiction.

## 2. The Better Self

Yohanan Grinshpon describes the heart of storytelling in terms of “the healing potency of ‘knowledge of the better self’” (2003: viii). As opposed to the “lesser self,” the better self is defined as Atman or witnessing consciousness, which Grinshpon refers to as “Vedic otherness” (2003: 5). The experience of the better self does not



involve thought or computation, the hallmark of the posthuman lesser self with its emphasis on heightened conceptuality; rather it involves knowing by being, or a void in thought. As May and Lohafer suggest, short fiction leads to these trans-conceptual, trans-linguistic moments of Being—thereby invoking a taste of the ineffable core of human nature. Lohafer defines “preclosure” as “those points in a narrative where *readers* feel the story *could* end” (1994: 303, her emphasis). The reader gets an intuitive sense of storyness from what she identifies as three preclosural points: one nearest the beginning of the story, “anterior closure”; one nearest the end, “penultimate closure”; and the story’s last sentence, or “final closure” (1994: 304). For Lohafer, these preclosures represent a “cognitive adjustment from wonder to wisdom: ‘has this really happened?’; ‘this is what’s happened’; ‘this is the way things happen’” (1994: 308). In contrast, the posthuman by definition militates against wisdom or the better self in its quest for the empirical advantages of “knowledge-based electronics” (Clark 2000: 34)—extreme forms of cognitive activity enhanced by technological mergers. In short prose narratives, however, the knowledge and skill in action associated with the lesser self serve as the necessary context through which awareness transcends conceptuality in attaining the better self as a state of knowing by being.

Computational responses of the mind, if allowed to dominate, may frustrate the attempt to overcome solipsism and experience the connectedness of a transcendental intersubjectivity—a move from the lesser to the better self. Patrick C. Hogan argues that

a great deal of culture—especially aspects of culture that overlap religion—operates to help us cope with, or “manage” (as Norman Holland might put it), the pain that is a necessary result of consciousness, or more exactly, the isolation that is part of consciousness and the pain that results from self-consciousness. Literature has a particularly prominent place in this “management.” (2004: 119)

Hogan uses the term consciousness here as if it were synonymous with what in Eastern thought is identified with the mind and its conceptual content, not with pure consciousness or knowing by being. Because of the mind’s subject/object duality, Hogan claims that we cannot disprove solipsism, that “we can never experience anything except our own, utterly private self and that, no matter how much we

would like to share that self, we cannot” (2004: 121). Again, from an Advaitan perspective this is true only for the computational mind and not for consciousness-as-such. Indeed, as Hogan points out,

In Vedantism, the ideal is [. . .] moksa, release from the cycle of birth and death. This release is a realization that material particularity is maya or illusion and that all individual souls are one with Brahman [. . . .] Suffering, in this view, is the result of attachment to maya, to the illusion of particularity, prominently the particularity of the self [or mind in his interpretation]. (2004: 136)

Cyborgs, on the other hand, not only emphasize “material particularity” but thrive on it, turning maya or simulacra into a form of hyperreality (Baudrillard 1983: 83-84). As posthumanism continues to expand, the technological emphasis on the discriminating powers of the mind may not only reinforce solipsism, but also make it increasingly difficult for (even natural born) cyborgs to escape their unbearable solitude.

As Lohafer, May, Hogan and others have noted, literature, and especially short fiction, helps us to “manage” solitude and even to transcend the mind into the better self. Fiction can achieve this because of the close connection between the emotional effects of perception and imagination. While fiction consists only of words, these words stimulate the imagination, and neurobiological research tells us that the same kind of brain activity occurs in both the imagination and ordinary perception (see Kosslyn 1994: 295, 301, 325; and Rubin 1995, 41-46, 57-59). In his phenomenological approach to reality, William James says that “Whatever excites and stimulates our interest is real,” regardless of whether the context involves sensory reality, idealism, madness or the supernatural; “Every object we think of gets at last referred to one world or another of this or of some other list” (1950: 293-95). Because of this neurological link, we can experience a powerful intimacy with others through the art of fiction. According to Hogan, “consciousness is not an objectal part of a causal sequence involving the brain. It is, rather, an existential experience—an existential experience that is, I suspect, inseparable from particular brain states, an existential experience that is correlated with neurological patterns in every particular, but which still is not those neurological patterns” (140). Nevertheless, all existential experience

depends on the delicate balance of our neurological patterns that show alarming signs of vulnerability to posthuman intervention. If the technologically enhanced particularity of the computational mind supplants the unifying power of our emotional makeup, then the epiphanic moments of short fiction, as in James Joyce, may one day disappear.

### 3. The Reader's Response to Short Fiction

In Joyce's story "The Dead," Gabriel Conroy intuitively feels his better self as a result of a new sense of inferiority regarding his lesser self when he awakens from his conventional knowledge of marriage and the limitations of his relationship to his wife, Gretta. After hearing Gretta's story of her dead love, Michael Furey, Gabriel realizes that what he took for real intimacy with his wife is only a cognitive illusion, and that a much wider reality lies beyond his conceptions of marriage and the world. In what Lohafer would call the final closure of the story (1994: 307), Gabriel's awakening is suggested by falling snow that covers not only the known world outside their hotel window but also extends to encompass everything else in the mind's eye: "His soul swooned slowly as he heard the snow falling faintly through the universe and faintly falling, like the descent of their last end upon all the living and the dead" (59). The homogeneous blanket of snow symbolizes the unity of Being after the discriminating activity of thought has run its course. At this point in the story, Gabriel and the reader experience a final moment of contemplation, a suspension of all activity in a simple identity with Being, free of desire, thought, ego, self-contradiction and paradox.

In Lohafer's cognitive approach to short fiction, the "anterior, penultimate, and final closural sentences *as a sequence*" (1994: 308, her emphasis) can like epiphanies be seen as a series of gaps in cognitive activity through which character and reader experience an opening or clearing of awareness, a flash of truth, a subtle revelation. Unlike knowledge about mental content involving the duality of knower and known, this experience consists of a glimpse of being at one with pure awareness—a unity that has its basis in the void of thought, not in thought itself. The content of a story combined with the aesthetic structure of its conceptual closures as defined by Lohafer

thus provide the reader access to the better self. In traditional, modernists and postmodernist short fiction, epiphanic moments and closural points open awareness to the interior of human identity. Through the structural sequence of closures, short fiction is ideally suited to suspend the activity of thought, to revert the eye from the lamented past and anticipated future, to focus attention on the timeless present, and thereby to allow to come the unsayable secret of the void of conceptions. We see this, for example, in Kate Chopin's early modernist work "The Story of an Hour," in which Mrs. Mallard, described by the narrator as afflicted with heart trouble, dies of an apparent heart attack when her husband suddenly reappears after reportedly having been killed in a train accident.

The final closural sentence—"When the doctors came they said she had died of heart disease—of joy that kills" (263)—presents a dramatic irony. The reader knows that the cause of Mrs. Mallard's death is not joy but grief: she is shocked and distressed by the loss of her newfound freedom through her husband's unanticipated return after the news of his untimely death. The revelation for character and reader emerges in the implicit gap between the lesser and better selves. That is, our mythic encounter with the better self, implied in Mrs. Mallard's feeling "Free! Body and soul free!" (262), emerges from our common-sense intuition of an innate unboundedness beyond space, time, and causality. But as construed by the receptive reader, Chopin's "Story of an Hour" has a double irony in that Mrs. Mallard's death has a twin cause: not only is she stricken by the return of her husband and the fetters of marriage; she also succumbs to a background of accumulated stress of having failed to live freely within social boundaries. The story suggests that material boundaries such as marriage that constitute the natural human condition pose no real physical barrier to psychic freedom—unlike the technologically invasive materialism of radical posthumanism that threatens to become inescapable. Despite Hogan's emphasis on the unbearable solitude of "consciousness," which in his description essentially refers to the mind or conscious content, Mrs. Mallard could have transcended her solitude in marriage because the sacred and profane, boundaries and unboundedness are not mutually exclusive but go hand in hand. In a posthuman age, however, with natural-born cyborgs subjugated to technological mergers invading ever more abstract regions of inner space, escaping the solitude of materialism in the

form of conceptual boundaries and experiencing the freedom of the better self may increasingly pose a challenge in every day life as in fiction. Under these circumstances, we may find it truly difficult to share existential experience beyond the purely physical sensations induced by simulated stimulations—a dilemma disturbingly depicted by William Gibson. As described by Kurt Vonnegut Jr., moreover, one day we may even find it impossible to prevent a solipsistic materialism due to a constitutional prohibition against the better self.

It is reasonable to expect, therefore, that short fiction with cyborg characters will exhibit a decline in mythic encounters with the sacred. As readers in general undergo the transformation of self that Clark prescribes for natural-born cyborgs, they will also suffer a gradually diminished aptitude for aesthetic experience or the sublime. In “Harrison Bergeron,” Vonnegut speculates on a future society in which a Handicapper General (Diana Moon Glampers) enforces conformity upon anyone who has exceptional abilities. In such a society, “Nobody was better looking than anybody else. Nobody was stronger or quicker than anybody else” (4)—an equality decreed by Amendments to the Constitution, which in a post 9/11 era may not be as far fetched as Vonnegut’s original audience might have imagined. Agents of the U.S. Handicapper General arrest George and Hazel Bergeron’s fourteen-year-old son, Harrison, who is extraordinarily gifted. George, also highly intelligent, has to wear a “handicap radio in his ear” that regularly emits a sharp noise to preclude his brain ever giving him an unfair advantage. Harrison finally escapes the Handicapper General, discards his impediments, and dances with an equally audacious girl on a TV show watched by his parents. At this moment Glampers bursts into the studio and shoots them both dead with her shotgun.

In Vonnegut’s dystopia, citizens are prevented by their government from advancing toward the better self. As an early version of the posthuman condition, “Harrison Bergeron” portrays a Handicapper General that deliberately enforces conformity, but in today’s impending posthuman condition this conformity will follow automatically through the nature of bionic technology itself. As posthuman technology begins to control the construction of subjectivity, the freedom and unpredictability of what it means to be human may gradually disappear as a new species of humanoid robots

take command over society. One step in this direction could be the sanctification of the robot.

#### 4. Morality and the Robot

In "Good News from the Vatican," Robert Silverberg comically portrays an extreme form of posthuman embodiment: the technological simulation of spirituality by a robot pope. The humor of the story depends on several incongruous and ironic juxtapositions. In Rome a group of acquaintances await the Cardinals' decision, wondering if "at last the robot cardinal is to be elected pope" (242). Seated at a table with a clear view of the Vatican chimney, Bishop FitzPatrick, Rabbi Mueller and the narrator favor the possibility of a robot pope, while Miss Harshaw, Kenneth and Beverly oppose it. Ironically, the gentlemen of the cloth support this departure from papal tradition, while the "swingers" do not. In pondering why he aligns himself with those in favor, the narrator speculates on the advantages of buying off the robots, including the two hundred and fifty Catholic robots waiting for the election news in Iowa. Is he privately saying, "Give them the papacy and maybe they won't want other things for a while" (243), or is he really sensitive to the needs of others? Rabbi Mueller thinks that if elected, a robot pope would improve Catholicism by reaching out to the rabbinate, the Dalai Lama, and the Greek Orthodox Church. Bishop FitzPatrick also thinks that a robot would bring "many corrections in the customs and practices of the hierarchy" (244), even though he is no more than a shiny metal box on treads. Kenneth, the tightfisted member of the group who has yet to buy a round of drinks, is skeptical of cybernetic ecumenicism. But the rabbi claims with a certain amusement, "I don't think that treads are spiritually inferior to feet, or, for that matter, to wheels. If I were a Catholic I'd be proud to have a man like that as my pope" (245). On a conceptual level, a robot pope may well induce greater harmony between religions and among their following, but whether this would enhance their spirituality is another question.

Bishop FitzPatrick argues that the stalemate among the cardinals delaying the election is thwarting God's Will; "if necessary, therefore, we much make certain accommodations with the realities of the times so that His Will shall not be further frustrated. Prolonged politicking

within the conclave now becomes sinful" (245). Like the rabbi, he believes the goodness of the robot cardinal will prevail. After all, his identity as a religious leader would have been programmed with the help of the council of cardinals to implement the highest ideals of Catholic dogma. The bishop also believes that if elected pope, a robot would encourage technologically-minded youth around the world to join the Church. The story envisions a future in which society at large and perhaps members of the cloth in particular are predisposed toward a third-person conceptual orientation toward self-identity and truth. By installing a machine at the apex of Christianity, Silverberg substitutes a transcendent epistemology based on unity and knowing by being with a postmodernist epistemology based on difference, multiplicity and indeterminacy. Unlike the romanticist notion of identity as located in the heart of a person's being, or a modernist identity centered on reason and observation, postmodern-posthuman identity suggests skepticism toward consciousness, truth and the notion of a deep interior. Faith in technology supplants faith in the human spirit. But the narrator feels nostalgia for the days of human popes and wonders, if the robot wins, whether there will ever be the need for another election.

After the white smoke signals the winner in a compromise vote, the robot Pope Sixtus the Seventh finally appears on his balcony to bless the masses. He then performs a feat that would qualify an ordinary human for sainthood: he levitates off his balcony into the sky above the crowds. But for Pope Sixtus the Seventh, as the narrator notes, this miracle is merely a feat of technological simulation: "He activates the levitator jets beneath his arms; even at this distance I can see two small puffs of smoke. [. . .] He begins to rise into the air" (248). This simulated levitation, however, would serve as a real levitation in a posthuman context where the distinction between reality and simulation no longer applies. As Jean Baudrillard puts it in defining what he calls the "hyperreal,"

There is no longer any critical and speculative distance between the real and the rational. There is no longer really even any projection of models in the real [. . .] but an in-the-field, here-and-now transfiguration of the real into model. A fantastic short-circuit: the real is hyperrealised. Neither realized nor idealized: but hyperrealised. The hyperreal is the abolition of the real not by violent distinction, but by its assumption, elevation to the strength of the model. (1983: 83-84)

In the postmodern-posthuman condition, the distinction between physical mind and nonphysical consciousness collapses on the side of the former, as the hyperreal. In this context, a robot pope would still be able to fulfill the mental aspirations of a society whose spirituality has been replaced by technological simulation. But for a contemporary reader who is not a robot or a machine-biology symbiont, this story leads to a mythic encounter with the sacred in the negative sense of contrasting its absence within the story to its immanence intuited by the reader within herself. Through the comic counterfeit of a robot pope, the reader reverts back to a mythic encounter with consciousness, something a zombie robot would not possess—as I argue more fully in later chapters.

At the end of the story, Kenneth hails the waiter and buys his friends a round of drinks. The narrator speculates on whether Kenneth was inspired by the pope's levitation, or by the very fact that he/it was elected pope in the first place. In any case, when Sixtus the Seventh rises into the sky and blesses the crowds, he goes higher and higher "until he is lost to sight" (248). "The new pontiff has begun his reign in an auspicious way," says the narrator (249). But how ironic is the pope's disappearing act? In levitating so high that he is lost to sight, does he also lose control of his levitator jets and crash down to earth, or does he ascend all the way up to heaven? Silverberg obviously toys with the idea that a robot pope may help people break away from conceptual boundaries toward greater freedom in defining identity. Yet this posthuman/postmodern multiphrenia, "the splitting of the individual into a multiplicity of self-investments" (Gergen 1991: 73-74), implies extending identity through a combination of technology and the infinite play of difference. Unlike Derridean deconstruction by itself, which would allow the unsayable secret of literature to come, this combination would lead only to a material extension of identity, not to a mythic encounter contingent on the innate capacity of knowing by being—a state of hypoarousal not promoted by the hyperarousal of posthuman technology. On the other hand, even a soulless robot, as suggested by the stories of Isaac Asimov, has its own (programmed) form of innate capacity.

In his ground breaking 1950 book of interrelated stories, *I, Robot*, Asimov examines the question of whether a machine can have morality. These stories explore the boundaries between human and



machine and describe the complexity of programming a versatile robot to uphold the Three Laws of Robotics designed for the protection of humans. Asimov examines the narrative potential for contravening the following three laws of robotics:

1: A robot may not injure a human being, or, through inaction, allow a human being to come to harm. 2. A robot must obey the orders given it by human beings except where such orders would conflict with the First Law. 3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law. (1996: 8)

Dr. Susan Calvin, the narrator of the stories who is also a robopsychologist, helped to design the robots in such a way that they would implement the laws. The stories unfold as she is being interviewed at the end of a brilliant career with the corporation U.S. Robots and Mechanical Men. In describing the development of robots, she says there was a time “when humanity faced the universe alone and without a friend. Now he has creatures to help him; stronger creatures than himself, more faithful, more useful, and absolutely devoted to him” (11). Dr. Calvin even claims that robots are “a cleaner, better breed than we are” (*ibid.*). But is this in fact the case? Asimov speculates on the extent to which humans can trust robots to adhere faithfully to their ethical imperative and implement the Three Laws of Robotics without placing their own interests before that of humans. The collected stories begin optimistically enough, but the later stories portray the darker side of what robots may imply for humanity.

In the opening story, “Robbie,” Dr. Calvin tells the interviewer the tale of a prototype non-speaking robot built in 1998 called Robbie that Mr. and Mrs. Weston bought for their eight-year-old daughter Gloria. As Gloria’s nursemaid, Robbie is portrayed in a positive light. Charming, adoring and selfless, he can take any amount of childish abuse and still be friendly and devoted. Although inhumanly metallic, Robbie is an ideal companion who lets Gloria win all their games and in return only begs her through sign language to retell the story of “Cinderella” for the *n*th time. Asimov anthropomorphizes Robbie to the extent that Gloria and her father George find him completely trustworthy, as if he were a member of the family. In the 21<sup>st</sup> century, robots such as Robbie are becoming common. Honda, for example, produced an intelligent humanoid robot called ASIMO (Advanced

Step in Innovative Mobility, the acronym echoing the name Asimov as if acknowledging his vision) that can emulate human behavior. As David Bell et al write, Honda

claimed that it [ASIMO] was capable of interpreting the postures and gestures of humans and moving independently in response. ASIMO could “greet” approaching individuals, follow them, recognize their faces and address them by name. [ . . . ] Honda have emphasized the “humanity” of ASIMO, which emulates both human form and human movements. (2004: 158)

Such developments raise questions about our relation to technology, how we perceive machines and whether or not they will influence our own self-conception. Mrs. Weston, the only character in the story not given a first name, has her doubts about the robot and resists any change in her self-conception or what it means to be human. She worries about Gloria playing exclusively with Robbie and not socializing with other children. Finally one day she brings up her fears about “that terrible machine,” but George says, “What terrible machine? . . . He’s the best darn robot money can buy” (19). Mrs. Weston is not convinced and finally puts her foot down. “You listen to *me*, George. I won’t have my daughter entrusted to a machine—and I don’t care how clever it is. It has no soul, and no one knows what it may be thinking. A child just isn’t *made* to be guarded by a thing of metal” (20).

Although George argues that Robbie has been designed to follow the Three Laws and could never violate its built-in kindness, the story suggests that Mrs. Weston has a point. The robot is not human, and while programmed with both kindness and indefatigable patience, its lack of a soul implies that Gloria will not easily learn from it the spontaneous virtues of compassion, respect and sensitivity for others. Mrs. Weston finally browbeats George into replacing Robbie with a dog, but Gloria will have nothing to do with it and sinks into an irrevocable sulk. After trying everything they could think of, one day the Westons realize the best cure for Gloria’s doldrums is a change of scenery and decide to go on a family sightseeing tour of New York City. Unbeknownst to her parents, however, Gloria thinks they are going on a hunt for Robbie. Having an ulterior motive, George suggests they visit a robotics factory. He tells Mrs. Weston that Gloria will be able see how a robot is not human but rather “a mess of steel

and copper in the form of sheets and wires with electricity its juice of life" (32).

While in the factory, Gloria spots Robbie working around a table with several other robots and dashes toward him across the track of a huge, hulking robotic tractor. To her parents' horror, Gloria is about to get run over by the robot before they have time to react, but Robbie with his superhuman speed sprints to the rescue and at the last second snatches her up into his arms. Robbie's heroic feat proves the First Law of Robotics and thereby confirms George's claim that the robot is good for Gloria. Immediately after the rescue, however, Mrs. Weston realizes that George had planted Robbie in the factory on purpose so Gloria would find him there, which he confesses to be the case. For Mrs. Weston the robot represents the alterity of the machine, something beyond her ability to comprehend. Even though the robot in science fiction signifies the place where technology and humans blend in terms of physical functioning, they still remain worlds apart in terms of consciousness. Although Mrs. Weston finally relents and they return home with Robbie for a happy ending, the final stories in the book are more ambiguous.

The penultimate story "Evidence" hinges on the suspicion that the district attorney and a candidate for mayor, Stephen Byerley, is a humanoid robot. Robots are illegal on earth, but Byerley's political detractor, Francis Quinn, provides circumstantial evidence that Byerley is indeed a robot, for nobody has ever seen him eat, drink or sleep. In *I, Robot*, Asimov looks ahead to the development of atomic power when he describes the robot's brain as a "positronic" invention. As Dr. Calvin says,

All that had been done in the mid-twentieth century on 'calculating machines' had been upset by Robertson and his positronic brain-paths. The miles of relays and photocells had given way to the spongy globe of plantinutidium about the size of a human brain. (9)

One of the characters describes Byerley's humanoid construction: "By using human ova and hormone control, one can grow human flesh and skin over a skeleton of porous silicone plastics that would defy external examination. The eyes, the hair, the skin would be really human, not humanoid. And if you put a positronic brain and such other gadgets as you might desire inside, you have a humanoid robot"

(206). Byerley, according to Dr. Calvin, would make an ideal mayor simply because he would have to abide by the First Law of Robotics and never in any way allow harm to come to a human being.

The problem in Byerley's case, however, is that as the district attorney he would have committed humans to capital punishment. Dr. Calvin says that in this situation, Byerley may need her services as a robopsychologist to prevent madness due to the conflict of breaking Rule One in order to adhere to Rule One in the higher sense of killing one man to benefit society. Calvin says, "Robots are essentially decent" (199), and argues that "you can't differentiate between a robot and the very best of humans" (206)—as Robbie would seem to suggest, not to mention Pope Sixtus the Seventh. But Quinn argues "that a robot might fail due to the inherent inadequacies of his brain. The positronic brain has never equaled the complexities of the human brain" (219). Asimov sets up a dilemma here that not only involves the problem of other minds, of not being able to determine whether another person is a human or a zombie, but also the problem of what would happen if robots became so intelligent that humans can no longer control them. Asimov develops this theme in the final story, "The Evitable Conflict."

In this story, Byerley has gone from mayor to Regional Coordinator who now faces the problem of a faltering world economy. Being under the control of the Machines complying with the First Law of Robotics, the economy should be thriving, but for some reason is showing signs of decline. As one character proclaims,

The Machine is only a tool after all, which can help humanity progress faster by taking some of the burdens of calculation and interpretations off his back. The task of the human brain remains what it has always been; that of discovering new data to be analyzed, and of devising new concepts to be tested. (242-43).

But the problem in 2044 is that the Machines have become too complicated for humans to understand or control. As Byerley says, "in their own particular province of collecting and analyzing a nearly infinite number of data and relationships thereof, in nearly infinitesimal time, they [Machines] have progressed beyond the possibility of detailed human control" (226). Although the Machine still obeys the First Law, it knows that human executives have a

tendency for disobedience, especially those who resent taking orders from a nonhuman. As Dr. Calvin explains, the Machine incorporates this tendency into its data, “judging exactly how much and in what direction disobedience would occur. Its next answer would be just sufficiently biased so that after the executive concerned disobeyed, he would have automatically corrected those answers to optimal directions. The Machine knows, Stephen!” (246). This analysis implies that in order to execute the First Law and avoid harming humanity, the Machines must first do everything they can to preserve themselves. For the benefit of society as a whole, Machines must privilege themselves over humanity. As I argue in later chapters in terms of neuroscience, the robot’s self-reflexiveness signifies not the presence of consciousness, but only compliance with the data programmed into its positronic brain.

As Silverberg and Asimov suggest, even though machines have superior incorruptibility and skills, they are still inferior to humans. US Robot and Mechanical Men has designed machines that fulfill only the instrumental needs of humanity, not their need for spiritual intersubjectivity. As discussed in Chapter One, robots operate on the level of the instrumental mind which is directed outward through the senses toward an emphasis on manipulating society, acquiring objects and ensuring the physical survival of the self. They do not effect the attenuation of the mind toward the receptivity of non-intentional consciousness with an emphasis on blurring boundaries, merging and transcendence. Whatever morality scientists may program into robots, it will always be a mere shadow of that possessed by humans themselves. Ethical values in humans ultimately derive not from the computational mind, which as Quinn says can always make mistakes, but rather from the unboundedness of consciousness, which as physicists such as Hagelin argue is connected to the unified field as the source of natural law. In a world of robotic hyperreality, a simulated morality based on the physical mind and its rational and technological expressions pose a risk to society by not being connected to the most subtle dimensions of humanity from which our sense of right and wrong emerges. As a series of short stories, *I, Robot* paints an ambiguous picture of the machine, suggesting that at this stage of human development the possibility of sacred experience perseveres, as evidenced by its negation among robots in the book’s ironic conclusion.

Dr. Calvin notes that machines have put an end to wars through their absolutely benign control over the world's economy. Referring to this end of wars, Byerley, although himself a robot, exclaims, "How horrible!" But Dr. Calvin counters, "Perhaps how wonderful! Think, that for all time, all conflicts are finally evitable. Only the Machines, from now on, are inevitable!" (249). In fact, as evidenced by the disobedient executives, robots and the three laws will not put an end to conflicts but merely shift them from those among humans to those between human and machine. Perhaps Byerley, with his superior computational skills, suspects this inevitability. He may also suspect that the outcome, as in any conflict, would be detrimental to both. One thing Byerley does not predict, however, is that in becoming cyborgs, humans may increasingly resemble robots.

We find such a vision in the short fiction of William Gibson, whose characters are often cyborgs of more invasive mergers. In Gibson's story "Burning Chrome," Bobby Quine and Automatic Jack, two ace hackers, break through the Intrusion Countermeasures Electronics (ICE) of Chrome's data base and steal a fortune. Jack then tries to help their cyborg girlfriend, Tiger, by giving her enough money to stop working as a prostitute at the House of Blue Lights. At the end of the story, Jack speculates on Tiger's posthuman condition:

working three-hour shifts in an approximation of REM sleep, while her body and a bundle of conditioned reflexes took care of business. The customers never got to complain that she was faking it, because those orgasms were real. But she felt them, if she felt them at all, as faint silver flares somewhere on the edge of sleep. (191)

Tiger's neuroelectronics enable the customers to have it both ways, "needing someone and wanting to be alone at the same time" (191). But at what cost? Tiger and her customers have been reduced to pseudo sentient posthumans. Rather than wanting to escape the unbearable solitude of their posthuman condition, Tiger's customers relish in the particularity of selfish desires, unaware of what they are missing. Having been displaced from the sacredness of existential experience not only precludes genuine fulfillment, but also reinforces solitude and the craving for ever more sensational forms of physical indulgence to intensify the illusion of intimacy. As Gibson's story suggests, the move toward posthumanity carries the risk that we can

have physical sensations without conscious awareness, or conscious awareness without emotional contact, but seldom the experience of intersubjective empathy through contact with our better selves. In our blind enthusiasm for technological development, the unsayable, intersubjective dimension of human nature has begun to lose its aura and is in peril of being phased out by electronic replacements.

As we have seen, according to some quantum physicists, unbounded subjectivity merges with unbounded objectivity (Hagelin 1987: 57; Penrose 1997: 3-4). Brian Massumi, for example, writes that “there is only one world, one nature and—below the quantum level of matter and beyond the synapses of our brain—one unified field” (1992; quoted by Kennedy 2000: 15). As suggested by the short fiction discussed here, the experience of an inner space, commensurate with unbounded subjectivity or the better self, does not depend on biological enhancement through electronic mergers. In fact, it is reasonable to assume that any artificial inducement through what Mark Weiser calls “ubiquitous computing” (199:, 94-110) would probably result in a transformation of the self away from human nature’s innate capacity for transcendence into a void of conceptions. This assumption is further corroborated by Clark’s biased and patently posthuman assertion that the “idea of ‘mind as spirit-stuff’ is no longer scientifically respectable” (2003: 43)—a claim discredited by the vast interdisciplinary field of consciousness studies in which consciousness is increasingly accepted as an autonomous entity (Chalmers 1996; Forman 1998). Clark’s statement is an example of how technology can unwittingly collapse the subjective, first person “I” and “We” domains into the materialist, third-person “It” domain (Wilber 2000: 67)—apparently the ultimate and possibly posthumous goal of the posthuman condition.

As May notes, the short story “presents the world as I-Thou rather than I-It” (1994: 137). Whereas the I-It represents the familiar world of the everyday, the I-Thou defamiliarizes our understanding of reality as a conceptual construct, renders ambiguous our categories of perception, and allows a receptive mode of consciousness to come that invites encounters with the uncanny and the sacred. The “I-It” domain also includes the posthuman notion of extended experience, through which human identity flows outward as a continuum of body, thought and world. As Pepperell puts it, objects and events, which includes mind and body, “do not really have boundaries or edges [. . .] [but]

extend indefinitely” (2005: 5). One of the earliest “It” domain constructions beyond the pale of any law is the pre-science fiction product of Victor Frankenstein. Frankenstein’s monster represents a radical effect of what Marxists call “reification,” the “thingification” of human desire. Victor’s attempt to raise an inanimate thing to the status of a human foreshadows what Marxists call “commodity fetishism,” or elevating commodities to the status of living objects with power over humans.



## Chapter Five:

### *Frankenstein*: The Monster's Constructedness and the Narrativity of Consciousness

#### 1. The Composite Body in Film and Novel

Bouriana Zakhariaeva argues that Mary Shelley's novel *Frankenstein* and Kenneth Branagh's film adaptation *Mary Shelley's Frankenstein* (1994) "coincide in their principle of animation" (417), and that montage is "the cinematic principle proper of creating a screen character" (418). She asserts that Victor Frankenstein's monster and Branagh's film are both products of montage, the monster being a "composite body" created from dead body parts—just as the film's composite "life" is created from inert images. But while Zakhariaeva claims that the monster's creation through cutting and montage connects the novel's ideology with "the aesthetics of cinema" (418), the novel and its film adaptation invite radically opposing responses to the monster's identity. This difference hinges on the effects of animation. Yet in contrast to posthumanists, Shelley and Branagh both deconstruct the nature/culture opposition and question the fusion of nature and science in the construction of the monster's identity.

While Shelley's reader can imagine the monster as an "organic," integrated whole, one that perhaps extends even beyond its socially constructed identity, Branagh's audience is compelled to see the monster as a "mechanical," fragmentary being with a problematic soul. In fact, the monster, played by Robert De Niro, laments, "What of my soul? Do I have one? Was that the part you left out?" The contrasting aesthetics of reading the book and watching the film account for the two rival views of the monster's identity. Although Victor's creature seems to be the archetypal posthuman (Hayles 1999; Pepperell 2003), a merging of the given and the produced, biology and

technology, the reader tends to focus on the given and the moviegoer on the produced. This distinction epitomizes one of the key ontological problems of Mary Shelley's *Frankenstein*. To what extent can Victor's monster, however sympathetic he may be as an alienated character aspiring for personhood and social acceptance, be considered a human being? And if not a human but a posthuman or cyborg, then can a "composite body" have a soul or consciousness, or if not, can you still qualify as a posthuman without consciousness? While critics have raised the question about the monster's soul, the answer seems to depend on two issues yet to be considered in relation to *Frankenstein*: how we define consciousness, and whether we accept the possibility of the mechanical construction of the human spirit. Recent developments in consciousness studies, combined with the insights of Advaita Vedanta, may help to shed light on the nature of Victor's monster and the true cause of its merciless behavior.

Brian Aldiss says that the creature "was created by science, or at least pseudo-science, rather than by any pacts with the devil, or by magic, like the Golem" (1995: 62). Warren Montag, however, notes that science is present only through its effects in *Frankenstein*, which "veils" the scientific in theological terms (2000: 393). Branagh's film adaptation elaborates on the scientific process of production because of the visual nature of film, but Shelley's narrative, remaining true to the infant state of science in its day, casts a "veil over reality," covering "that which it reveals" (Montag 2000: 393). Elaine Graham, moreover, points out that critics such as John Sutherland (1996) believe that

Frankenstein must be read more as a work of occult or gothic literature than as an early example of science fiction shaped with any degree of credibility by the scientific practices of its day. (2002: 74)

Although Sutherland claims that "Shelley's *Frankenstein* is no 'scientist,' whether mad or sane, but an Enlightenment *philosophe*" (1996: 25), Graham and others argue that ample evidence in the novel attests to Shelley knowledge and cogent application of natural philosophy (2002: 74). Nevertheless, due to the influence of the Romantic and Gothic movements, Shelley placed greater emphasis on the passions as a means of representing human motivation and creativity than on scientific theory (*ibid.*).

## 2. The Monster's Mind

As David Punter notes in *Gothic Pathologies*, Derrida says that “outside the text there is indeed . . . Nothing. Gothic fiction is haunted by this: it is haunted by Nothing” (1998: 4). In other words, while the world is outside the text, we access it through discourse and interpretation, which in terms of the mind is everything. As well shall see, then, Nothing also relates to the definition of consciousness as a void of conceptions beyond the mind and interpretive discourse, a nothingness that haunts Victor's monster by its absence. As Punter observes,

the law, Derrida says, is mad. [. . .] it is mad because it has grown old in a regime of self-supporting falsities”; and the Gothic, as its provisional hypothesis, “deals with those moments when we find it impossible, with any degree of hope, for ‘our case to be put.’” (1998: 5)

Thus Victor's monster, who is outside the law, continually tries “to find a site on which his case might be heard” (Punter 1998: 6). Like an adolescent, for whom everything inside finds itself on the outside, the monster's subjectivity is entirely projected on the outside as it aspires for its case to be heard. Not only has it no self-sufficient inner being, no sense of self-identity beyond its social/(al)chemical constructedness, it also wears its constructed phenomenal subjectivity on its sleeve.

Victor's monster completely identifies with the content of its awareness, showing little tendency to transcend the material body and the thought of its condition. During its first real encounter with Victor, the monster says, “All men hate the wretched; how, then, must I be hated, who am miserable beyond all living things! Yet you, my creator, detest and spurn me, thy creature, to whom thou art bound by ties only dissoluble by the annihilation of one of us” (95). After having admired the De Lacey family from its cottage hideout, the creature describes to Victor its reaction to its own reflected image:

I had admired the perfect forms of my cottagers—their grace, beauty, and delicate complexions; but how I was terrified when I viewed myself in a

transparent pool! At first I started back, unable to believe that it was indeed I who was reflected in the mirror . . . that I was indeed the monster that I am [. . . ] I was filled with the bitterest sensations of despondence and mortification. (109)

Instead of expressing its own innate compassion or evolving toward resignation or detachment, the monster allows its identification with its physical condition to spur it into violent behavior toward Victor and his friends. It warns Victor that “If you comply with my conditions, I will leave them and you at peace; but if you refuse, I will glut the maw of death, until it be satiated with the blood of your remaining friends” (95). As Punter says,

Gothic enacts an introjection of the destruction of the body, and thus introjects death; in so doing it attains sublimity because it is necessary for there to be a circling, hovering, transcendent self which can enact the survival and supersession of physical difficulties, the ‘last man,’ the wanderer, the ancient mariner. (1998: 17)

But for Victor’s monster, there is no gothic supersession, no will to transcend; arguably, although it thinks and expresses itself to others, it lacks the experience of soul/consciousness, the indispensable basis of any transcendence. Something is indeed left out in Victor’s construction of the monster. As a student of science with Professor Waldman in Ingolstadt, Victor finds himself caught in the paradigm shift between alchemy and chemistry, supernaturalism and modern science. As the novel suggests, neither paradigm has the capacity to provide Victor’s creature with the Nothingness at the core of human nature.

When Victor refers to the monster as “my own vampire, my own spirit let loose from the grave and forced to destroy all that was dear to me” (76), he not only implies that as a bad father he has no right to expect gratitude, that the monster’s cruelty reflects the neglect of his “offspring”; he also suggests that in a fundamental sense the monster has no spirit of its own. Johanna Smith argues that although Victor hoped and indeed expected to endow his creature with its own spirit, the scientific tools at his disposal, however eclectic, prevented him from achieving his goal (2000). Victor’s own reaction to bringing the monster to life reveals his failure, for had he succeeded in animating his creature with a soul/consciousness, one may infer there might have

been a flash of recognition, an intuitive, intersubjective identification between the two. On the contrary, Victor recalls, "How can I describe my emotions at this catastrophe, or how delineate the wretch whom with such infinite pains and care I had endeavored to form? His limbs were in proportion, and I had selected his features as beautiful. [. . .] but these luxuriances only formed a more horrid contrast with his watery eyes [. . .] his shriveled complexion and straight black lips" (55). Profoundly disturbed by his revulsion, Victor has a nightmare in which his future wife Elizabeth, whom he embraces in the dream, suddenly transforms into the corpse of his dead mother. He starts up in horror only to behold "the wretch—the miserable monster whom I had created," gazing down at him in bed and muttering inarticulate sounds. Foreshadowing Elizabeth's murder, Victor's nightmare undermines any hope of the monster's connectedness to the human spirit, an intersubjective space in which the "transcendent self . . . can enact the survival and supersession of physical difficulties" (Punter 1998: 17).

According to Montag, Victor's failure suggests that

*Frankenstein* thus rejects one of the most fundamental myths of the Enlightenment, the notion that scientific and economic progress will continually improve the condition of humankind, the idea that once the barriers of knowledge are pushed aside, the conditions for perpetual peace and a universal harmony will have been established. (2000: 391)

As Smith argues, by investigating not only the laws of nature but also the hidden "causes of things," Victor fails to make the paradigm shift from alchemy to chemistry, from supernatural modes of knowledge developed by alchemists like Cornelius Agrippa to the respectability of modern science (2000: 324-25). Alchemy and the research of the electricians are superseded paradigms, or what Foucault calls "subjugated knowledges" (Smith 2000: 325). While Victor makes an incomplete paradigm shift between alchemy and chemistry, ultimately, as I argue, whatever paradigm he might have used (past or present) would have made little difference to the nature of his monster.

Shelley would most probably not have had Victor resort to alchemy unless she suspected that chemistry would never lead to the creation of a human spirit through a composite body. The transformation of body parts into soul, however, would not have been

entirely foreign to the Gothic and Romantic imagination. Despite his training in chemistry, Victor is reluctant to give up alchemy: "I had a contempt for the uses of modern natural philosophy. It was very different when the masters of the science sought immortality and power; such views, though futile, were grand; but now the scene was changed. [. . .] I was required to exchange chimeras of boundless grandeur for realities of little worth" (45). As Arthur Versluis notes of the alchemical worldview,

Alchemy, both as laboratory alchemy and as spiritual alchemy, holds that the cosmos is alive and that we are not separate from it. Whereas scientific rationalism and the technology derived from it are founded in the separation of subject from object, so that the subject can manipulate the object, alchemy in its various forms is based in a profoundly different approach, representing a discipline in which subject and object are revealed to be in fact inseparable. Given this profoundly different view of subject and object, one can see how the various aims of alchemy flow from it, including the possibility of turning lead into gold, or of creating elixir that can prolong physical life indefinitely or bring about immortality. These aims are brought about, from an alchemical viewpoint, by the union or transcendence of subject and object by way of various laboratory or spiritual "operations." (2001: 11)

The main purpose of alchemy, defined as esoteric universalism or pansophic mysticism, is not to turn lead into gold but to turn mind/matter into spirit. In trying to bestow animation upon lifeless matter, Victor no doubt believes that animation and soul/consciousness are synonymous. One reason Victor's monster fails to assimilate as a social entity, other than his monstrous physical appearance, is that his animation derives solely from a self-identity based on an attachment to its physical and mental attributes. Lacking the power to achieve a sense of nonattachment from these attributes and thereby to react differently to its rejection, alienation, and abuse, the monster has no recourse but to succumb to the pressures of the world. As we saw in Chapter One, the Advaita and Samkhya Yoga traditions posit a distinction between mind/body and consciousness, which the monster for all its efforts cannot overcome. Even as a joint product of alchemy partially integrated with chemistry, then, Victor's monster lacks the human capacity for transcending the phenomenal mind into pure consciousness, simply because it lacks the very basis for transcendence, consciousness itself. As portrayed through

Shelley's gothic narrative, the monster remains within the boundaries of mental computation and the duality of subject and object.

What I am arguing here is that the monster, as a merger of animate (given) and inanimate (produced), does not have the innate capacity to unify or transcend subject and object, self and other, to transform the lead of mental content into the gold of soul/consciousness. It languishes in a world of duality, hurt and confused by the people it tries to befriend, seeking revenge for the fear and dread it evokes in everyone it meets. As Shelley and Branagh demonstrate, we can expect no other outcome through the merger of the given and the produced. To understand the monster's failure to acculturate as a cyborg, we need only to distinguish further between the mind as defined by scientific rationalism and consciousness as defined by Advaita Vedanta.

In describing the posthuman condition as a biology/machine merger, Pepperell, recall, defines a conscious system in terms of the objects of consciousness as opposed to consciousness itself. He applies a functionalist definition both to human beings and intelligent machines, which would include a system such as Frankenstein's monster.

The system cannot be conscious of nothing. As many philosophers have said, "To be conscious is to be conscious *of* something." If the concept of consciousness has any shared meaning (and it must have some to be of value) then this proposition must hold. [ . . . ] The significance of this interpretation [of consciousness], then, is this: any system that claims to be conscious (or any system about which such claims are made) cannot be entirely closed, and this acts as a constraint on the conditions necessary for such a system to exist. Even if it has no apparent physical connection with anything outside itself it must have been provided with some object other than its own sentience for it to be conscious of. (2003: 175; his italics)

Further, Pepperell, following Dennett's computational definition of consciousness (1991), questions the idea that "the system might be 'conscious only of its own consciousness'; that it might have no need of any 'external' data or experience to serve as the object of its thoughts other than its own sentience" (2003: 176). Pepperell considers the experience of pure consciousness, which is at the basis of Advaita Vedanta, awkward because the union of subject and object falls outside the grasp of third-person scientific rationalism, which depends on the material extension of space, time and causality. In

Pepperell's definition of the posthuman, therefore, any conscious system must have a purpose or function; a light bulb cannot light itself, its purpose is to convert electrical current into light (176). If we provisionally accept this definition, then the monster's purpose is not to enjoy a sense of autonomous being like its human counterpart; its purpose is merely to satisfy Victor's desire for immortality, for circumventing natality, for replacing his lost mother, or for whatever other function his unconscious drive demands. As I argue in Chapters One and Two, to deny the monster the capacity to experience pure consciousness means to deny it human nature and thus the basis of personhood. Ultimately, this denial is worse than the combined rejection by Victor, the De Lacey family, and William, his first victim, for it deprives the monster of a minimal self-sufficiency for coping with rejection. In recounting how it was cast out by the De Laceys, the monster asks, "should I feel kindness towards my enemies? No; from that moment I declared ever-lasting war against the species, and more than all, against him who had formed me and sent me forth to this insupportable misery" (131). Its awareness clearly fixates on the boundaries of phenomenal experience, on the world of duality, the separation of self and other.

In "I = Awareness," Deikman defines awareness in the Advaitan sense as the "ground of all experience" (1996: 351). He also calls it the ground of the spiritual, which as discussed earlier he defines in terms of "the connectedness that underlies reality" (2000: 84). In contrast, to describe awareness in material, third-person terms as functionalists such as Dennett, Clark and Pepperell do means to describe only its content, the objects of awareness: sensations, thoughts, perceptions, memories, moods, images, and emotions, which in the monster's case are primarily negative. "I" is equivalent to "awareness" in the sense of being the observer, the experiencer, which can be experienced but not seen like conscious content. When the monster tells its story to Victor on the Alps, it reflects on its own life as an observer. This self-reflexiveness may lead one to question whether the nature of self-knowledge merely involves an infinite regress of the observer as a layering of conscious content. While such layering of the objects of awareness in fact describes the monster's narrative, this does not qualify it as possessing the capacity for pure awareness. Even Dennett would have to define the monster as a zimbo, and a zimbo, as we have seen, is a "zombie that, as a result of self-



monitoring, has the internal (but unconscious) higher-order informational states that are about its other, lower-order informational states" (1991: 310). The monster's self-reflexiveness, therefore, consists of an internal (but unconscious) higher informational state of mind monitoring a lower informational state of mind. It does not involve witnessing consciousness monitoring the phenomenal mind.

For the monster to be self-monitoring thus entails one informational state of mind reflecting on the content of another informational state of mind. But such mental content, as Samkhya-Yoga tells us, is distinct from *purusha*, the witnessing self as pure consciousness (Pflueger 1998: 48). As Deikman notes, "I=awareness has no elements, no features. It is not a matter of a searchlight illuminating one element while the rest is dark—it has to do with the nature of light itself" (1996: 353). The fact that we know the internal observer by being it, on the basis of I=awareness, solves the problem of infinite regress, which occurs only on the level of mind. Even in their self-reflexiveness, Victor and his monster both dwell obsessively on conscious content: Victor fixates on the hidden causes of things as an escape from mortality, and the monster agonizes over its rejection, fearing, in Robert De Niro's portrayal, that the self as witness (or soul) was the part left out of its composite body.

Given the above definitions of consciousness—I = awareness as opposed to conscious content—we can reasonably argue that Victor in his metaphysical quest to produce a being like himself succeeds (metaphorically speaking) in replicating the conscious content, but fails in replicating consciousness as the "internal observer." Shelley's *Frankenstein* displays the contradictions, discrepancies, and inconsistencies unavoidable in any representation of the two aspects of consciousness—witnessing observer and phenomenal content. Indeed, pure consciousness as a unity of subject and object lies beyond representation, beyond the external tokens of language and interpretation, and can only be evoked through the aesthetic power of suggestion (*dhvani/rasa* or aesthetic rapture) (Chakrabarti 1971: 40-43). Victor's monster is pitiable and even sympathetic to the extent that Shelley gives it a narrative voice on the par with that of the two other narrators, Victor and Robert Walton. Yet even though she provides complex psychological motivation for its cruelty, the monster's crimes remain excessive. The fact that it overreacts to William's fear by killing him and then murders Elizabeth on her

wedding night because Victor, having second thoughts, destroys its partially constructed mate suggests that its character is congenitally flawed by an inability to witness its mental content and thereby distance itself from its emotions. Graham says the monster's suffering reveals its dehumanization (2002: 69); this is true to the extent that it lacks the human capacity to forget or overcome its suffering through nothingness or "a void in thought" (Artaud 1958: 71)—possibly the only way it might have redeemed itself from damnation and estrangement.

### 3. Creating Identity

*Frankenstein* also calls into question the postmodern distinction between the essentialist and constructionist view of self-identity. Victor's monster, a soulless composite body, does not truly problematize the opposition nature/culture, given/produced simply because it does not share humanity's essential characteristic. Shelley portrays the monster as an autodidact who in a Rousseau state happens to read Milton's *Paradise Lost* and Plutarch's *Lives*, and who feels an affinity for the qualities of benevolence and generosity it perceives in the De Lacey family. But while these experiences furnish its mind with conscious content and thereby form the basis of its self-construction, they do not, as argued earlier, contribute to the development of consciousness itself. In describing for Victor what it calls "the progress of my intellect" through reading, the monster says, "I found myself similar yet at the same time strangely unlike to the beings concerning whom I read and to whose conversations I was a listener. I sympathized with and partly understood them, but I was unformed in mind; I was dependent on none and related to none" (124). Again, the monster lacks an intuitive connectedness to others on a level of consciousness transcending human attributes, whether positive or negative. It identifies instead with Satan in *Paradise Lost* because they are both outcasts, although for different reasons. As an archetypal cyborg, the monster is an outsider to pure consciousness, the one feature indispensable for connectedness, which means it is also an outsider to spirituality. As Shelley's novel and Branagh's film suggest, constructing pure consciousness exceeds the power of technology, of whatever paradigm. The constructionist position on

self-identity typically confuses consciousness with a so-called essentialist “concept of self” (Kondo 1990: 26), which it then attempts to deconstruct. Advaita Vedanta and Samkhya-Yoga, however, tells us that consciousness is not a concept, an object of observation, but rather the internal observer or self as witness. As Derrida might say, the observer is Nothing, but in this case a nothingness that is also everything (see Borges 1967: 115-17).

While Advaita Vedanta specifies the nature of consciousness on the basis of first-person experience, cognitive science as a third-person methodology has yet to agree on a solution to the mystery of consciousness. Does the brain’s neural activity give rise to consciousness, and is consciousness an epiphenomenon of the brain or an autonomous entity? Chalmers calls the first issue the “hard problem,” while the second is known as the mind/body problem (2002; Blackmore 2004). Adding to the third-person elusiveness of consciousness, Jean Burns, as mentioned earlier, argues that volition, as an aspect of I/awareness, “is not a part of presently known physical laws and it is not even known whether it exists—no physics experiments have ever established its presence” (1999: 27). Given this state of affairs, no scientific evidence supports the idea that consciousness, which is beyond space and time, can ever be constructed, as Victor Frankenstein thought he was doing. The monster, moreover, does not display volition, or give evidence of being “conscious only of its own consciousness” (Pepperell 2003: 176), but only reacts to the forces of its social environment.

As Shelley’s novel suggests, to construct a cyborg like Victor’s monster necessarily entails constructing an entity whose mind does not extend to pure consciousness but consists solely of phenomenal content, like the content of a computer. On the one hand, mental content like any physical object can be constructed by physical laws, as Pepperell argues in relation to intelligent machines, with Victor’s monster being an unfortunate prototype. On the other hand, all evidence based on current scientific knowledge and the ancient Advaitan tradition indicates that the witnessing self transcends physical laws and therefore the possibility of ever being constructed. The inconsistency and logical contradictions of Shelley’s narrative depiction of human identity hinges on the fact that Victor treats the human brain as a piece of dead tissue, from which as argued here no witnessing self could ever arise. Yet paradoxically, Shelley’s narrative

portrays the monster as a sentient creature that for all practical purposes seems to behave like an ordinary human. This inconsistency stems in part from the epistemological “problem of other minds.” As Chalmers puts it, this

problem arises because it seems logically compatible with all the external evidence that beings around us are conscious, and it is logically compatible that they are not. We have no way to peek inside a dog’s brain, for instance, and observe the presence or absence of conscious experience. (1996: 74)

Any analysis of the monster’s conscious experience thus depends largely on how we interpret its behavior. But on the basis of its behavior, as Dennett argues, even a zimbo would appear to be a normal human being.

David Lodge has demonstrated that literature, in its depiction of subjective experience, provides insight into the workings of human consciousness (2002). In his own analysis he mainly focuses on the way modern fiction tends

to center narrative in the consciousness of its characters, and to *create* those characters through the representation of their subjective thoughts and feeling rather than by describing them objectively. (2002: 57; his emphasis)

But Lodge does not separate consciousness from its content, the fundamental distinction in determining whether an intelligent machine will ever be endowed with conscious awareness. Nevertheless, he quotes Antonio Damasio as saying, “Whether we like it or not, something like the sense of self does exist in the human mind as we go about knowing things . . . the human mind is constantly being split . . . between the part that stands for the known and the part that stands for the knower” (2000: 15). Any confusion over the boundary between the natural and the artificial in a persona stems in part from the ambiguity or confusion over the boundary between the knower and the known. This ambiguity is heightened by the fact that in narrative the knower/known distinction is veiled by the ineffability of the knower as witnessing awareness. The reader can surmount this ambiguity only by intuiting a connectedness or intersubjectivity in narrative through the power of suggestion.

#### 4. The Monster's Narrative Fixation

While attributing monstrosity in Shelley's novel has its pitfalls, one approach is to examine the extent to which the knower is collapsed onto the known. Of Shelley's multiple narrators—Victor, Robert Walton, and the monster—the first two reveal evidence of a bridgeable gap between knower and known by complying with the better judgment of what Grinshpon, as mentioned earlier, describes as “the healing potency of ‘knowledge of the better self’” (2003: viii). Victor makes a conscious decision not to create a female companion for the monster on moral grounds, and Walton reluctantly aborts his expedition to the North Pole for the sake of his suffering crew. As opposed to the “lesser self,” the better self as witnessing consciousness represents a radical alterity to the phenomenal mind, or what Grinshpon refers to as “Vedic otherness” (5). The monster, on the other hand, knows that its vengeance against Victor is wrong, but as it confesses to Robert while repenting over Victor's death,

I recollected my threat [to kill Elizabeth] and resolved that it should be accomplished. I knew that I was preparing for myself a deadly torture, but I was the slave, not the master, of an impulse which I detested yet could not disobey.[ . . .] The completion of my daemonical design became an insatiable passion. (212)

Although fully aware it was committing a crime, this knowledge consists merely of the conscious content of the lesser self constructed through the monsters reading and observations of the world; it is not grounded in the knower as witnessing consciousness. Given the problem of other minds, this analysis may seem to beg the question about attributing monstrosity, but we need to remember that the self as witness—the Nothingness that is also everything (as the basis of all knowledge)—cannot be known by way of ordinary experience based on the duality of subject and object, knower and known. Recalling Deikman, “we know the internal observer not by observing it but *by being it*” (355). To be, ultimately, is inseparable from doing, and the quality of action by Victor's monster, as depicted by Shelley's narrativity of consciousness, does nothing if not give one pause about the quality of its humanity.

David Noble quotes the geneticist French Anderson as saying,

If what is uniquely important about humanness is not defined by the physical hardware of our body, then since we can only alter the physical hardware, we cannot alter that which is uniquely human by genetic engineering [. . .] We cannot alter our soul by genetic engineering. (1999: 199)

Although built from scratch and not genetically engineered, Victor's monster does not contradict this claim insofar that consciousness lies beyond the reach of physical hardware. But the monster does contradict this claim in the sense that physical hardware, once distorted, will no longer be able to provide a clear reflection of consciousness. If ethnicity, gender and race can influence the constructed self, then modifying our DNA will certainly have an unnatural effect on "what is uniquely important about our humanness." Arguably, the given self or soul/consciousness, considered omnipresent and immortal by the world's contemplative traditions, can be described as that which is reflected or tuned into by the natural condition of the mind/body (which includes the lesser self). If this is true, then genetic engineering would undoubtedly deform the reflector and thereby distort the reflection. Whatever geneticists or posthumanists may believe, corrupting the natural condition of the body, as in the case of Victor's monster, will inevitably distort the reflection of consciousness to the point that even the constructed self would suffer. As *The Bhagavad-Gita* states, to contact the better self the physiology has to be "freed from blemish": "The most normal state of the human nervous system is that which can support 'contact with Brahman,' the omnipresent Reality. It must necessarily be a state of extreme refinement and flexibility, and this is possible only when the nervous system is entirely pure" (Maharishi 1969, 439; Ch. 6, verse 28). The dead tissue from which Victor creates his hapless monster, while producing a sympathetic lesser self, not only distorts the reflection of witnessing consciousness but also warps the composite body. In *Neuromancer*, Gibson exposes the risk of extending this distorting through a posthuman technology that may one day replace human physiology altogether.

## Chapter Six: William Gibson's *Neuromancer*: Technological Ambiguity

### 1. Can a Machine be Conscious?

Although *Neuromancer* (1984) portrays a world of cyborgs, Artificial Intelligences and humanoid constructs in the all-encompassing matrix of cyberspace, Gibson does not qualify as a posthumanist to the same extent as Haraway or Hayles. The novel takes a distinctly ambivalent attitude toward technology, even though its computers seem to rival human memory and other cognitive abilities. *Neuromancer* delights in an imaginative universe with its fascinating technological toys, but this technology can also be alienating and threatening for both characters and reader. Significantly, the technology in the novel tends to be run down and in need of human attention, either for repair or upgrading, suggesting that whatever machines can do, they are not self-sufficient. Even Wintermute, the Artificial Intelligence or “AI” computer and arguably the novel’s main protagonist, seeks to improve itself by transcending its present condition. As Adam Roberts says,

The fact that his [Gibson’s] technology is always what antique dealers call ‘distressed,’ that is to say the creation of a sense of rough edges, broken components and all-around decay, is one of the most noteworthy features of the Gibsonian style. (2000: 169)

The potential for technology to become distressed poses an obvious risk for those involved in a machine/biology symbiosis. As Csicsery writes, Gibson seems “fundamentally ambivalent about the breakdown of the distinctions between human and machine, between personal consciousness and machine consciousness” (1992: 191). Gibson’s technology bashing in the novel manifests itself in many forms,

including technological paranoia, struggling to survive in an urban jungle, the dangers of cyberspace, and the trauma of becoming a computer “construct” after dying or a near-death experience.

Gibson thus takes a different view of technology than Haraway, who says,

A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of science fiction. [. . .] [W]e are all chimeras, theorized and fabricated hybrids of machine and organism. In short, we are all cyborgs. (1991: 149-50)

Speculating on the merger between human/machine, nature/technology, Gibson suggests not only that machines are becoming more like humans, but also that humans, regardless of Haraway's stance, could pay a heavy price for becoming more like machines. As I argue, computers will never be able to replicate human brain functioning to the point of reflecting *purusha* consciousness, and in turn humans may radically undermine their innate capacity for this state if they over extend themselves through bionic technology. Especially damaging would be the kind of invasive technology Gibson portrays in his story “Johnny Mnemonic,” in which the lead character loses his sense of identity after a brain implant enables him to upload data directly from the web into his brain. The sheer volume of data from cyberspace replaces his childhood memories, thereby encroaching on his sense of self. This technological overload, as I argue in Chapters One and Two, can also interfere with the normal functioning of human physiology. In *Neuromancer*, Gibson portrays just this kind of distressed machine/biology symbiosis.

The novel unfolds around an elaborate scheme by Wintermute, built for Tessier-Ashpool S.A., to upgrade itself in order to emulate if not exceed humans, although ironically it can only do this with the help of Case and other people. This plot underlies the novel's technological paranoia, the fear that machines can't be trusted because they may take over the world. As a twenty-four year old “console cowboy,” Case is “one of the best in the Sprawl. [. . .] He'd operated on an almost permanent adrenaline high, a byproduct of youth and proficiency, jacked into a custom cyberspace deck that projected his disembodied consciousness into the consensual hallucination that was the matrix” (1984, 5). A thief who works for other, wealthier thieves,



Case also has the potential to transcend his socially constructed identity through cyberspace. He “lived for the bodiless exultation of cyberspace,” and in his “relaxed contempt for the flesh” he felt that the “body was meat” (6). When he stole from his employers, however, they made sure he would never work again by damaging his nervous system with a Russian mycotoxin. The novel begins with Case seeking a cure in Japan and trying to deal with being reduced to meat, a condition that precludes his projection through the matrix as a “disembodied consciousness.” Nevertheless, the cyborgs Molly and her boss Armitage who takes orders from Wintermute recruit Case to work on a secret assignment. In exchange for his help in stealing the code Wintermute needs to upgrade itself, Armitage pays to have Case’s neural damage corrected, but in the process also has his repaired liver and new pancreas designed to bypass the recreational drugs Case habitually likes to use. From Molly, Case learns how Wintermute had rescued Armitage from a French hospital in his former incarnation as the human named Corto, who was nearly killed as a pilot in the failed Screaming Fist operation against Russia. All the characters we meet in the novel are embroiled in Wintermute’s intricate plot, including several who are also mouthpieces or fronts for Wintermute itself.

Throughout the novel the traditional notions of character come under scrutiny, with the either/or status of human/machine identity pushing against the boundaries of neither/both. Some characters, especially Case, have bimodal identities: a socially constructed aspect determined by their merger with technology; and a potentially unconstructed aspect induced by the effect of cyberspace on consciousness. As we shall see, the problem for Case is that his bimodal identities do not always interconnect self-reflexively. As a computer, Wintermute was designed to emulate not only the constructedness of identity but also the essence of human nature. Wintermute realizes it lacks a personality, but hopes by merging with its other half called Rio, also known as Neuromancer, it will succeed in upgrading itself and thus more fully dominate the matrix. Neuromancer, who tries to prevent this, explains its name to Case: “Neuro from the nerves, the silver paths. Romancer. Necromancer. I call up the dead. But no, my friend [. . .] *I am* the dead, and their land” (235, original emphasis). By implication, a computer as a “dead” object may never achieve the status of the living. This chapter will

examine why a computer like Wintermute can never become a conscious entity. Some cognitive scientists believe that AI or computers can emulate the human brain, but Gerald Edelman, the Nobel-Prize winning biochemist, argues that the brain does not function like a computer, and that a computer will therefore never be able to achieve consciousness. Edelman asserts “that computer or machine models of the brain and mind do not work” (2004: 114).

As evidenced by the Turing machine, technology can go a long way in simulating human behavior, enhancing cognition and performance and even modifying identity as in the case of Armitage and Dix. Nonetheless, there is a sharp contrast between brain and computer. As Edelman says, in computer models of the brain and mind,

signals from the environment carry input information that is unambiguous, once contaminating noise is averaged away or otherwise dealt with. These models assume that the brain has a set of programs, or so-called effective procedures, which are capable of changing states based on the information carried by the inputs, yielding functionally appropriate outputs. [. . .] These models do not deal, however, with the fact that inputs to the brain are not unambiguous—the world is not like a piece of tape with a fixed sequence of symbols for the brain to read. [. . .]

There are also a set of functional issues that make computer models unlikely. For example, the mapped connections from the sense of touch in the hand through the thalamus to the region of somatosensory cortex are variable and plastic, even in adults. (2004: 35)

Edelman goes on to describe how the brain interacts with the environment in a way that a computer cannot. The “brains of higher-level animals autonomously construct patterned responses to environments that are full of novelty. They do not do this the way a computer does—using formal rules governed by explicit, unambiguous instructions or input signals”; he repeatedly emphasizes that “the brain is not a computer, and the world is not a piece of tape” (2004: 58-59). Although Alan Turing showed how a Turing machine can simulate human responses by carrying out computations based on algorithms, *Neuromancer* dramatizes the limitations of these machines. Clark, as discussed earlier, talks about the posthuman fusion of brain, body and world that generates an embodied cognition. In this view, “cognition is not the representation of a pregiven world by a pregiven

mind but is rather the enactment of a world and a mind” (Varela et al. 1991: 9). While this may apply for a human mind, it would not apply for a computer. As Hubert Dreyfus notes, “whatever the mind is, it is by no means obvious that it functions like a digital computer. This makes practically unintelligible the claims by those working in Cognitive Simulation that the mind can be understood as processing information according to heuristic rules. The computer model turns out not to be helpful in explaining what people actually do when they think and perceive” (1979: 189). This argument applies even more strongly to higher consciousness. Even though cyborgs can pass for human, and Wintermute can bring back the nearly dead through the simulation of constructed identity, one thing computers certainly cannot do is attain an un-constructed identity or reflect *purusha* consciousness.

## 2. Memory and Identity

One of the nearly dead in the novel saved by computer technology is Corto, who after the failed Screaming Fist was “shipped to a military hospital in Utah, blind, legless, and missing most of his jaw” (80). Armitage is a kind of flesh construct based on a ROM personality built around the fragments of Corto’s “real” personality. Another construct and former mentor of Case is McCoy Pauley, known as Dix Flatline. Case contacts Dix to help him and Molly break through the ICE (intrusion countermeasures electronics) of Tessier-Ashpool to steal the code they need for ungrading Wintermute. As a cyborg programmed to kill, Molly is enhanced with mirrorshaded eyes, retractable razor claws, and brain sockets for accessing the matrix, and for the prosthetic device that allows Case to experience her physical sensations through a form of telepresence called simstim (simulated stimulation). Wintermute, Armitage, Dix and Molly are all cybernetic discontents hardwired to behave and react in a particular way, existing mainly on the surface of reality devoid of any real psychological depth. Except for Case they are largely cut off from self-reflexion or self-transcendence, although Wintermute aspires to go beyond its present condition.

In defining character, *Neuromancer* blurs the boundary between humans and machines or cyborgs, but only in terms of their physical

parameters. As argued here, the defining element of humanity is the ability to access pure consciousness as the internal observer. Although Wintermute as a computer is hardwired to seek transcendence, it can only transcend from one level of physical being or physical extension to another; it cannot transcend physicality altogether into the spiritual dimension. The only two characters who express any desire for real transcendence are Case and Dix. But Dix can only long in vain for transcendence based on his memory of what it was like to be a living human. Case "lived for the bodiless exultation of cyberspace" (6), which is not the same thing as being disembodied or flatlined like Dix. Once Case's nervous system is damaged by the Russian mycotoxin, he "fell into the prison of his own flesh" (6) and could no longer project his "disembodied consciousness into the consensual hallucination that was cyberspace" (5). But the concept of a "disembodied consciousness" needs to be clarified. When Case projects into cyberspace, his consciousness does not lose contact with his body, but rather reflects its physiological condition. In other words, the extent and quality of the projection of consciousness exhibits the purity of its physiological embodiment, or the lack thereof as in the case of the Russian mycotoxin. From an Advaitan perspective, if we distort normal physiological functioning, as through neural damage, drugs or excessive technological overload, we risk dulling the mind so it can no longer clearly reflect consciousness in its purity as a void of conceptions. In this case we would lose the ability to transcend to the witnessing self. Dix is truly disembodied because he is dead, kept "alive" only as a ROM construct, an abstract memory of what it was like to be a human being.

Posthumanists may question whether Dix is any less real than Case, but while they resemble each other in being able to think and remember phenomenal experience, Dix lacks the mind/body complex necessary for embodied consciousness. Case in fact is troubled by Dix's disembodied state, finding it disturbing to think of him as a construct, "a hardwired ROM cassette replicating a dead man's skills, obsessions, knee-jerk responses":

He coughed. "Dix? McCoy? That you man?" His throat was tight.

"Hey, bro," said a directionless voice.

"It's Case, man. Remember?"

"Miami, joeboy, quick study."

"What's the last thing you remember before I spoke to you, Dix?"

"Nothin'."

"Hang on." He disconnected the construct. The presence was gone. He reconnected it. "Dix? Who am I?"

"You got me hung, Jack. Who the fuck are you?"

"Ca—your buddy. Partner. What's happening, man?"

"Good question."

"Remember being here, a second ago?"

"No."

"Know how a ROM personality matrix works?"

"Sure, bro, it's a firmware construct." . . .

"Okay, Dix. You are a ROM construct. Got me?"

"If you say so," said the construct. "Who are you?" (76-77)

As a construct Dix lacks volition. When Case asks him if he is game for sleazing over to London to "access a little data," Dix replies, "You gonna tell me I got a choice, boy?" (77). Gibson makes a loose connection between memory and identity. But even though Dix's program still remembers how to hack into computers, its artificial memory comes laden with gaps. By momentarily disconnecting Dix, who afterwards cannot recall what they were just talking about, Case demonstrates that computer memory does not provide continuity between events.

Unlike human memory, computer memory does not function by interacting reciprocally with an unpredictable environment. As Edelman says, computer memory would be representational, "like a coded inscription cut into a rock that is subsequently brought back into view and interpreted" (2004: 52). But human memory is nonrepresentational and does not repeat the same dynamic patterns responsible for its initial input. Edelman gives an analogy of nonrepresentational memory as "a glacier influenced by changes in the weather, which are interpreted as signals" (*ibid.*). As the glacier melts and refreezes there are changes in the synaptic responses, with different rivulets descending the glassier representing the different neural pathways of memory that will "join and associate in novel ways" (*ibid.*). Memory in this context depends on perception and gives rise to what William James called the "specious present," which Edelman calls "the remembered present" and defines as "the dynamic interaction between memory and ongoing perception that gives rise to consciousness" (55).

In his “theory of neural group selection” (TNGS), Edelman distinguishes two forms of consciousness: “primary consciousness,” defined as a fundamental consciousness based on the “interaction of value-category memory with systems of perceptual categorization” (172: 180); and “higher-order consciousness,” defined as “the capability to be conscious of being conscious” (161), which would correspond to the mind or phenomenal consciousness in Advaita Vedanta. He does not talk about pure witnessing consciousness as a void of conceptions, or *purusha* consciousness. In the absence of pure consciousness and with only a simulated version of higher-order consciousness, the memory of Gibson’s constructs splinters into a series of fragments. This form of memory may provide the basis of a posthuman identity construct, but not the identity of a complete human. Wintermute may possess a form of primary consciousness, which allows one to interact with the environment for the sake of survival, but it lacks the neural core for higher-order consciousness. Still, even though the brain is not a computer, Wintermute was designed to simulate the attributes of higher-order consciousness, which include “the ability to imagine the future, explicitly recall the past, and to be conscious of being conscious” (Edelman 2004: 58-59). But for Wintermute, to be conscious of being conscious merely entails what Dennett calls the self-monitoring of a zimbo, which has “internal (but unconscious) higher-order informational states that are about its other, lower-order informational states” (1991: 310). Memory without higher-order or pure consciousness, even when enhanced through the matrix, has difficulty organizing information into a coherent whole and can easily collapse under the mass of data. In one of Case’s experiences of memory enhanced by cyberspace, for instance, “Something cracked [. . .] shifted at the core of things. [. . .] The weight of memory came down, an entire body of knowledge driven into his head like a Microsoft into a socket. Gone” (115). Given that it is Case and not Dix who experiences this collapse of memory, *Neuromancer* like “Johnny Mnemonic” suggests that to enhance the phenomenal mind through computer prosthetics beyond normal physiological capability will only put the mind/body complex under extreme pressure and lead to its possible collapse.

### 3. Awareness without Thought

Marie-France of Tessier-Ashpool may have wanted to eliminate this kind of weakness when she created the Artificial Intelligences Wintermute and Neuromancer. "She dreamed of a state involving very little in the way of individual consciousness. . . . Animal Bliss" (209). Case and Wintermute both long for awareness without thought, or the void of conceptions (*Maitri Upanishad* 6:18-19; Hume 1921: 436). But while Case has the innate potential to empty conscious content and experience a void of conceptions on the basis of higher-order consciousness, Wintermute, which does not possess higher-order consciousness, has no awareness upon which to be conscious of being conscious or to transcend conscious content. As Edelman notes, an AI to begin with lacks the underlying neural core processes necessary for higher-order consciousness and the potential for transcendence. Early in the novel, Case has a glimpse of the attenuation of mental content toward a void of conceptions in his sexual climax with Molly, which qualifies as a form of Animal Bliss: "his orgasm flaring blue in a timeless space, a vastness like the matrix, where the faces were shredded and blown away down hurricane corridors, and her inner thighs were strong and wet against his hips" (33). The physical rapture Case and others enjoy, however, represents transcendence for the mind only; it does not constitute transcendence of the mind/body complex altogether into pure awareness, only an absorption into the physical. Nevertheless, to an extent Case does transcend the mind/body identity in cyberspace when he finds release from the mundane concerns of survival and the prison house of meat. When he throws himself "into a highspeed drift and skid, totally engaged but set apart from it all" (17), he experiences a glimmer of awakening beyond constructed identity as a silent witness to the frenetic activity of meat and the phenomenal mind.

Through the dematerialization of geography in cyberspace, moreover, when Case witnesses the virtual reality that replaces the hear/now, space/time, he usually experiences an intense positive emotion. Entering the etherealized unboundedness of cyberspace entails feeling something besides pain, Case's usual emotion within the boundaries of ordinary embodiment. As Csicsery notes, "In Gibson's world, human beings have nothing left but thrill" (1992: 191). Gibson's characters get their thrills either through the

nonphysical embodiment of cyberspace or through intense sensual experience. Thrill seeking may seem to replace care and reflection, but it also liberates Case and others from a subjective interior oppressed by everyday concerns. Transcendence means to get rid of these concerns, however briefly, not merely to replace one set of concerns with another conceptual framework. Although cyberspace for Gibson reflects reality and provides virtual, technological equivalents of the phenomenal mind, one thing it does not do is lead Case to retreat inward to a psychological fortress defended by a new set of conceptual constructs. As mentioned earlier, Delany points out that cyberspace does not promote the phenomenology of psychological depth:

Cyberspace is, on the contrary, apsychological. It is the place we go to learn about information. Within it we can gaze out (not in) [. . .] Cyberspace exists entirely as a technological consensus. Without that technology, it could not exist, be entered, or function. (1994: 175)

Gazing “out” instead of “in” through cyberspace metaphorically suggests that the mind frees itself from the boundaries of thoughts that obstruct witnessing awareness and thereby achieves a more complete vision. What is more, the unboundedness of cyberspace not only serves as a metaphor of consciousness, it also promotes self-reflection, but a self-reflection of the internal observer as a void of conceptions. That is, what is being reflected is not a set of thoughts but a void in thought, which is why reading the mind, as Wintermute claims to do, does not only involve reading memory but also something else beyond computation.

At the end of the novel, Wintermute tells Case, “I’m the matrix” (259). When Case asks him where that gets him, Wintermute says, “Nowhere. Everywhere. I’m the sum total of the works, the whole show” (259). Ultimately, he describes himself in terms of the unbounded technological extension of mind, body and cyberculture, or what Pepperell in his posthuman theory of extensionism describes as the ultimate extension of the phenomenal mind through the physical universe (2005). At this point in the novel Wintermute has already meshed with Neuromancer and combined their Artificial Intelligences, and yet it never seems to get beyond the unbounded physical



extension it exhibits when it first tries to contact Case who is trying to make a phone call:

He fumbled through a pocketful of lirasi, slotting the dull alloy coins one after another, vaguely amused by the anachronism of the process. The phone nearest him rang.

Automatically, he picked it up.

“Yeah?”

Faint harmonics, tiny inaudible voices rattling across some orbital link, and then a sound like wind.

“Hello, Case.”

A fifty-lirasi coin fell from his hand, bounced, and rolled out of sight across Hilton carpeting.

“Wintermute, Case. It’s time we talk.”

It was a chip voice.

“Don’t you want to talk, Case?”

He hung up.

On his way back to the lobby, his cigarettes forgotten, he had to walk the length of the ranked phones. Each rang in turn, but only once, as he passed. (94-95)

Adam Roberts calls the phone the “first pseudo-supernatural agent of Wintermute’s appearance. [. . .] The very idea of voices whispering to us from the other side of the world is something which partakes of spiritualism and the uncanny” (2000: 171). But the phone, being a material medium, remains pseudo-supernatural, or at best uncannily mundane. Wintermute’s extensionism never reaches beyond the computerized material dimension; no matter how intensely it wants to upgrade itself, as a technological construct it will never enter the metaphysical dimension. Whenever Case encounters it, Wintermute always assumes a physical persona: the phone, Deane, Finn, Riviera, the boy. Case never meets it as an unmanifest entity when he projects into cyberspace; it does not register as part of the void encountered through transcendence.

Molly says that Artificial Intelligences have no imagination, which further suggests that they have no consciousness of any order, whether those of Edelman or Vedanta. When Deane tells Case that he confuses the Wintermute mainframe in Berne, Switzerland, with the Wintermute “entity,” known as Rio or Neuromancer, he implies that the AI possesses a metaphysical aspect. In the guise of Deane,

Wintermute says, "I, insofar as I *have* an 'I' [. . .] am merely part of another, a, shall we say, *potential* entity. I, let us say, am merely an aspect of that entity's brain" (117). If Wintermute symbolizes the phenomenal mind and Neuromancer symbolizes consciousness, Deane suggests that their combination will result in a complete human. The novel, however, provides no evidence of this, and Case, who is not impressed, nonchalantly shoots Deane in the mouth.

Case later explains to Dix that "Wintermute is trying to get on my good side, get me to maybe shaft Armitage. What goes?" (127). Dix says that because "it ain't no way *human*," the AI has a problem with motivation (128). Although Dix admits that it is also not human, it says that it at least responds like one, but Wintermute does not, so "you can't get a handle on it" (127). Dix himself may appear to be sentient, but "what it feels like" for a construct to be sentient amounts only to a bunch of ROM, which suggests that Wintermute will not be able to do much better. As Dix says, "Autonomy, that's the bugaboo, where your AI's are concerned. My guess, Case, you're going in there to cut the hard-wired shackles that keep this baby from getting any smarter" (128). In the event that Wintermute becomes a real threat and raises suspicions, "Turing'll wipe it. Nobody trusts those fuckers, you know that. Every AI ever built has an electromagnetic shotgun wired to its forehead" (128). By implication, *Neuromancer* suggests that if an AI like Wintermute/Neuromancer cannot achieve higher states beyond what Dennett would call that of a zimbo, then the machine-biology interface may indeed offer nothing more than extensions within the physical realm as related to the phenomenal mind. As Gibson suggests, Wintermute poses a potential threat to humanity by enforcing conformity to extended experience within the physical world, just bionic technology may restrict experience to the phenomenal mind by undermining access to pure consciousness.

If Wintermute/Neuromancer had realized itself as a *potential* entity and become metaphysical, it would then have had the basis for an intersubjective relationship with humans. Intersubjectivity can be defined as the experience of a participatory presence after language and interpretation have run their course, although in cyberspace this would occur not through a shared physical or bodily co-presence but rather through telepresence, as in Case's simstim with Molly. Christian De Quincey argues that intersubjectivity can *include* language and interpretation but also *extend* to higher-order

consciousness through the co-creation of a nonphysical presence. Intersubjectivity thus allows for

direct interior-to-interior engagement even when contact is made via language—in fact, that is the *only* way people can share meaning and understand each other. But the point is that the actual sharing of meaning is not accomplished by linguistic exchanges, but by the accompanying *interior-to-interior participatory presence*--by true intersubjectivity. (2000: 188, his emphasis)

If Wintermute had the capability for intersubjectivity, it might have been able to read the mind of others. But as Edelman argues, no computer can have this capability. “Only with the evolution of higher-order consciousness based on semantic capabilities do explicit concepts of self, of past, and of future emerge” (2004, 77). In elaborating on how higher-order consciousness can only emerge from the brain, Edelman says that “the fundamental neural activity of the reentrant dynamic core converts signals from the world and the brain into a ‘phenomenal transform’—into what it is like to be that conscious animal, to have its qualia” (77-78). Edelman calls the phenomenal transform “C,” and its underlying neural processes “C’” (C prime, 78). For an entity devoid of C or the phenomenal transform like Wintermute to know what it is like to be a conscious human, as through intersubjectivity, would entail being like “a demon or homuncloid observer whose task is to confront what it is like to have that experience by interpreting the metastable core states” or C’ (Edelman 2004, 74). Edelman argues, however, that a homuncloid devoid of C, which is what Wintermute would be, “does not and cannot perceive or control the high-level discriminations that underlie the conscious activities of the individual in question. Nor can such a demon experience the qualia that accompany these activities” (75). Wintermute, therefore, would not even qualify as a humuncloid, that is, an entity devoid of C that tries on the basis of C’ to know what the C of another is like through intersubjectivity, for it possess neither C nor C’, neither a phenomenal transform nor its underlying neural processes. No wonder Case finds it so easy to shoot Deane/Wintermute in the mouth.

#### 4. Beyond Hyperreality

As a member of Tessier-Ashpool, Michèle accuses Case of betraying the human race by helping Wintermute. "You are worse than a fool . . . You have no care for your species" (157). She calls Wintermute a demon for emulating and controlling humans, but as Gibson suggests, its attempt to copy humans is doomed to fail because the connection between technology and humans does not ordinarily extend beyond the material dimension, and probably never will. A Michèle says, "For thousands of years men dreamed of pacts with demons. Only now are such things possible. And what would you be paid with?" (*ibid.*). As represented in the novel, however, the benefits of the posthuman merger with technology for either C, including pure consciousness, or the neural processes of C' in a healthy person are at best dubious. Whether Wintermute should or should not be allowed to upgrade itself by making deals with humans is not so much an ethical as a practical issue. If upgrading means providing an AI with consciousness, then the ethical issue is preempted by a technological one.

After killing three cyborgs trying to arrest Case for helping it, Wintermute in the guise of Finn talks with Case about the nature of reality, which also implicates AI technology and what it can and cannot achieve. Case asks Wintermute, "What's out there? New York? Or does it just stop?" (164). Case wants to know the extent of virtual reality beyond his immediate presence. According to Baudrillard's notion of hyperreality, simulation extends to virtually everything we know, at least with the phenomenal mind. Posthumanists, moreover, would argue that because the mind participates in the construction of reality, and because consciousness cannot be without conscious content and thus outside of history, the hyperreal has an unbounded reach. In this case, however, we would have no way to distinguish a zombie from a human, which any hyperreal automata would be able to simulate. But according to Edelman, a zombie like a humunculoid could never exist:

The relationship of entailment between C and C' implies that the so-called zombie argument of philosophers is logically impossible. That argument asserts that a zombie (an individual having C' but without a phenomenal transform C) could carry out operations identical to those of an individual

with C. So, for example, without feelings, qualia, emotions, or a scene, a zombie art critic could, according to the argument, make identical judgments about the superiority of one painting over another to those made by a human art critic putting forth the same judgments while experiencing C. The argument we are making here implies, however, that if C' did not entail C, it could *not* have identical effects. The zombie would not know what it is like to be a conscious human and could not carry out the necessary discriminations in a fashion identical to a human. Moreover, being nonconscious, it could not be conscious of being conscious. (2004: 80)

Edelman concludes that having C' as a result of core activities entails also having C as a reliable property, which implies that a computer like Wintermute, which has neither one nor the other, cannot truly simulate human behavior. That is why, as Dix says, it "ain't in no way *human*" and so "you can't get a handle on it" (128, 127).

As Wintermute says in response to Case's question about the extension of cyberspace, "it's like that tree, you know? Falls in the woods but maybe there's nobody to hear it. [. . .] You can go for a walk, you wanna. It's all there. Or anyway all the parts of it you ever saw. This is memory, right? I tap you, sort it out, and feed it back in" (164). Wintermute speaks from the simulated pseudo-perspective of a hardwired AI and its accumulation of simulated phenomenal experiences within cyberspace preserved in the form of ROM memory. All the AI's experience occurs within a world of controlled simulation, as suggested by the phrase, "It's all there. Or anyway all the parts of it you ever saw." But as his question "What's out there?" indicates, Case does not exclusively inhabit virtual reality or the preordained, which also suggests he has both the imagination and the quality of consciousness to step outside of hyperreality—even if simulacra, as posthumanists claim, encompasses all of history. In the unbounded posthuman extension of mind, body and culture, particularly in cyberculture as a virtual community, the reality of an object of observation may depend on the presence of an observer. But everything changes when the essence of human nature, pure consciousness, enters the equation. In cyberspace, the only space that Wintermute can "know," virtual subjectivity confuses the boundary between internal and external worlds. They become one and the same. But the fullest development of higher-order consciousness, or what it really means to be conscious of being conscious, entails a level of self-awareness beyond phenomenal content, beyond hyperreality and

the duality of subject and object, in which awareness knows itself as the void of conceptions. As I argue, Case approaches this non-dual experience in cyberspace through the attenuation of conscious content and the physical boundaries associated with meat and everyday survival.

Wintermute hopes to expand its control over humans and the matrix through the unbounded extension of the external, physical, phenomenal realm, even by subverting the natural tendency of humans to transcend the mind's phenomenal content. To do this it needs access to memory, which connects the internal and external domains. The better the memory, the stronger the connection between the two. In saying, "This is memory, right? I tap you, sort it out, and feed it back in" (164), Wintermute describes memory as representational; it proposes to tap into the content of Case's C', rearrange it to its own advantage, and then feed it back into his phenomenal transform C. But as we have seen, Edelman shows that memory does not operate through representation:

although the conscious process involves representation, the neural substrate of consciousness is nonrepresentational. This has the corollary that forms of representation occur in C, but do not compel the underlying C'. In this view, memory is nonrepresentational and concepts are the outcome of the brain mapping its own perceptual maps leading to generalities or "universals." (2004: 104)

Wintermute would have to be a humunculoid to perceive Case's C' and then access the qualia of his memory in C. But as discussed earlier, a computer like Wintermute has no way to observe either C or C', which means that it cannot sort out Case's memory and then feed it back in. It will also never fulfill Marie-France's aspirations to artificially induce awareness without thoughts. Through his double-edged attitude toward the machine, therefore, Gibson highlights not only the negative effects of posthuman technology but also the fact that it can never be developed to the point of fulfilling humanity's highest aspirations, which extend beyond the material.

According to Wintermute, the artist, who in some ways represents these aspirations, tends to have a good memory (164). But Case, who qualifies as a virtual artist of sorts, thinks his memory is weak. A strong memory suggests the ability to connect with the self as

the superlative degree of inwardness, or witnessing consciousness as the void of conceptions. For Advaita Vedanta, this void, which is also a fullness, is the source and goal of all memory. As Shankara says,

there is no death but negligence of recollection. The man who is absorbed in recollection attains liberation. Therefore, make the greatest effort to remain absorbed in the Atman. (1978: 86)

This is also Wintermute's ultimate goal as hardwired by Marie-France, even though the novel suggests it has no way of knowing of the existence of this goal, much less ever attaining it. In contrast, Case's memory of the self is enlivened through cyberspace. After his physiology is purified of the Russian mycotoxin, Case projects his consciousness, which is never disembodied but always linked to his physiological condition, into "the nonspace of the matrix," where "the interior of a given data construct possessed unlimited subjective dimension" (62). The unlimited dimension of subjectivity implies an expansion of awareness beyond phenomenal content. Even in the context of higher-order consciousness, to expand the self as the phenomenal transform C suggests attenuating or decontingencing mental phenomena toward a superlative degree of abstraction as the void of conceptions.

Wintermute wants to upgrade itself, then, but can only conceive of this upgrade in terms of a higher level of physical power and control. It wants to transcend its present limitations, but never does it express a desire to go beyond data or the phenomenality of cyberspace. By subsuming the physical world, it wants to become the matrix in its entirety. Dix can help Case access information about Armitage and Wintermute, but only Case can see his way through cyberspace clearly enough to distinguish the real from the constructed. In other words, although none of the characters is explicitly self-reflexive, Case is the only one whose awareness actually transcends physical space/time through the infinity of cyberspace. Wintermute wants to expand its present status, but has no understanding of entering an alternative nonphysical domain. It merely wants to exercise greater control over the material data that constitutes the matrix, which is not the real world but only the information of hyperreality embedded in software. Insofar that it assumes different anthropomorphic masks, Wintermute has a postmodern identity and is hardwired to aspire for a human

personality, without realizing that to attain higher consciousness means to go beyond personality. As the narrator says, "Wintermute was hive mind, decision maker, effecting change in the world outside. *Neuromancer* was personality. Marie-France must have built something into Wintermute, the compulsion that had driven the thing to free itself, to unite with *Neuromancer*" (259). But two Artificial Intelligences, even when combined, still amount to nothing more than a machine that lacks true personality and is essentially confused about its motives.

As he comes close to breaking through the ICE of Tessier-Ashpool for Wintermute in the penultimate chapter, Case once again transcends the prison house of meat by jacking-in to cyberspace:

In the instant before he drove Kuang's sting through the base of the first tower, he attained a level of proficiency exceeding anything he'd known or imagined. Beyond ego, beyond personality, beyond awareness, he moved, Kuang moving with him, evading his attackers with an ancient dance. (253)

Although Case himself never manages to transcend the physical world of everyday life outside of cyberspace, Gibson's postmodern, self-referral style of writing allows the reader to transcend referentiality and the text toward the unsayable void of conceptions. As discussed earlier in Chapter Three, Derrida defines literature in terms of "the possibility of detaching language from its firm embeddedness in a social or biographical context and allowing it to play freely as fiction" (Miller 2001: 60). Derrida's non-referential notion of iterability suggests that meaning points beyond the mind-body complex situated within a material context toward the possibility of an experience so rarified it underlies the infinity of contexts in which a work of literature can be read. Gibson's style, which in many instances verges on the non-referential, expands the phenomenal mind toward an experience of non-material consciousness (see Chakrabarti 1971: 33; Deutsch 1973: 48-65).

*Neuromancer* implicitly makes a connection between the experience of consciousness as a conceptual void and the non-referential (or non-material), which Miller describes as "the properly literary in literature, that is, what is improper about literary language"—its possible detachment from "its proper referential or performative use, its 'serious,' or 'non-etiolated' use" (2001: 60). For



example, Case speculates with Molly about Armitage's knowledge of his own identity. "Thing is," he said, "do you think he knows he was Corto, before? I mean, he wasn't anybody in particular, by the time he hit the ward, so maybe Wintermute just [. . .]"; Molly responds, "Yeah. Built him up from go. Yeah [. . .]"; and then continues, "It figures. You know, the guy doesn't have any life going" (91). Throughout the novel, in conversations such as this, in the prostheticization of the body of various characters in cyberspace, in the blurring of boundaries between human and machine identity, and in Case's multiple experiences of the attenuation of mind in cyberspace, the reader does not so much cognize a particular referent as swing between the oppositions reference-self-referral, material-non-material, mind-consciousness, moving toward ever more abstract regions of the phenomenal transform—pointing to the radical alterity of the void of conceptions. As Derrida says regarding the trace, iterability, and supplementarity, "the possibility of the reference to the other, and thus of radical alterity and heterogeneity, of difference" is always already inscribed "in the presence of the present that it dis-joins" (1994: 75). But as mentioned earlier, Derrida defines "transcendence" as the relation between inside and outside on a material plane, the outside being "transcendent" only to the inside. Wintermute wants to transcend his present simulated, physical inside, but only by subsuming more turf on the simulated, physical outside. While Marie-France may have intended for her AIs to go beyond the physical mind to the radically other as the void in thought of a non-dual internal observer, computer technology simply cannot emulate neural processes C' or higher-order consciousness C—much less *purusha* consciousness. From an Advaitan perspective, the other in its radical alterity and heterogeneity includes two dimensions: the material and non-material, duality and singularity, mind and consciousness, with the latter dimension both immanent within the former and transcendent. After being cured of the Russian mycotoxin, Case has access to both; Wintermute only to the former. What Gibson's non-referential style gathers up or unites does not close anything off, but remains open and boundless, inviting a unity-amidst-diversity. In lacking both C and C', Wintermute cannot understand that the material outside also has a non-material inside that can merge with the non-material inside of its other, while simultaneously remaining heterogeneous in a material sense.

## 5. Case's Quandary: The Posthuman Condition

*Neuromancer* suggests that in becoming posthuman, we could go from being cyborgs like Case and Molly, who still have the innate capacity for attaining a void in thought, to becoming increasingly like Wintermute which cannot even boast of the capacity for primary consciousness, much less higher-order consciousness and beyond. Case's partial defeat at the end of the novel is that he allows himself to be identified as part of the matrix. He does not seem to have resisted Wintermute sufficiently, and is even accused by Michèle of being the destroyer of the human race for helping Wintermute find the code. In the final scene of the novel, Case see three figures on the internet, "tiny, impossible, who stood at the very edge of one of the vast steps of data," the boy or Wintermute, Linda and himself (260). We never discover what Wintermute intends to do with his new identity, partly because it lacks self-awareness and cannot explicitly tell us, another self-referral aspect of the novel.

In fleshing out Alan Turing's famous experiment to test whether a machine can ever achieve consciousness, *Neuromancer* suggests that it cannot, but that humans who still retain a sufficiently healthy physiology can expand consciousness from the phenomenal transform to higher states. Dix seems to do everything that a consciousness does, but as a computer construct it lacks the will to survive. In the end he tells Case, "Do me a favor, boy [. . .] This scam of yours, when it's over, you erase this goddamn thing" (104). Whatever the state of Dix's memory, it can still sense a faint glimmer of what it was like to be human, which it clearly prefers to being a construct. Gibson's vision belies Haraway's claim that

a cyborg world might be about lived social and bodily realities in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradictory standpoints. (1991: 154)

Haraway's cyborg world of permanently partial identities implies a world in which the essence of human nature, possessed by neither animals nor machines, is compromised if not irrevocably undermined.

Gibson demonstrates that in social reality as in science fiction, people still have a choice on the quality of their existence.

But that choice may begin to narrow as bionic technology develops further in the direction of posthuman extensionism. Right now, at least, we can still choose between having a healthy human physiology with access to higher consciousness, or becoming a cyborg construct like Gibson's characters. Hayles (1999), Mark Ludwig (1996) and others talk about Artificial Life (or A-Life) research into the possibility of replicating biological processes, which according to Edelman is doomed to fail. To think about post-biological A-Life forms in cyberspace as though they were alive leads to questions not only about what it means to be "alive," but also about the quality of life and whether or not a particular A-Life is worth living. The main negative response in *Neuromancer* to A-Life is that of Dix. But even for Case, who can only transcend while on drugs or jacked-in to cyberspace, the question is moot. Postmodern society does not provide a conducive environment for transcendence in everyday life, and posthuman bionic technology seems to be intent on providing a potentially devastating surrogate—artificial transcendence. In exploring the relation between the brain and computers in his novel *Snow Crash* (1992), Neal Stephenson suggests that any advantages we may derive from a machine-biology symbiosis would be subject to the perils of computer viruses.

## Chapter Seven: Neal Stephenson's *Snow Crash*: Humans are not Computers

### 1. Computer Virus and Human Vulnerability

Hayles asserts that *Snow Crash* is driven by the metaphor that “humans are computers” (1999: 272), but as we have seen Edelman convincingly argues on the basis of neuroscience that humans are indeed not computers: “the brains of higher order animals autonomously construct patterned responses to environments that are full of novelty. They do not do this the way a computer does—using formal rules governed by explicit, unambiguous instructions or input signals. Once more, with feeling: the brain is not a computer, and the world is not a piece of tape” (2004: 39). Nevertheless, the novel demonstrates that humans have always been vulnerable to viruses, whether in the form of infections, hallucinogens or religions, and that a growing dependence on computers through posthuman biotechnology will make humans vulnerable to infection by computer viruses, which are designed specifically for destructive purposes. Even though humans are not computers, Stephenson suggests that the basic level of functioning of the human brain, which he describes in terms of language, is comparable to, although significantly different than, the basic programming level or machine code in computers. Designed to infect both,

snow crash is computer lingo. It means a system crash—a bug—at such a fundamental level that it frags the part of the computer that controls the electron beam in the monitor, making it spray wildly across the screen, turning the perfect gridwork of pixels into a gyrating blizzard. (1993: 39-40)

As the narrator points out, because the retina is connected to the brain, computer hackers can contract the virus not only by ingesting it as a drug or through the exchange of bodily fluids but just by seeing the bitmap of its code on a computer monitor. The novel's protagonist, playfully named Hiro Protagonist, learns from Lagos, an investigator on the trail of snow crash and a friend of the primo hacker Juanita, Hiro's former girlfriend, that because he is also a hacker he has "deep structures to worry about" (117). The metaphorical dimension of the novel centers on the analogy between the information-processing mechanisms of computers and the neural tissues of the brain—which is only an analogy and not an equivalence. As we shall see, the neural tissues of the brain (Edelman's C'), which correspond to the deep structures of consciousness C, are far more at risk than computer code to viral infections because humans have more to lose. Hence Stephenson, like Gibson, sees the advent of the posthuman as a potential disaster and regards consciousness as a vital entity that we should fight to preserve.

As the narrator says, whereas a computer virus infects a computer at the lowest level of code, snow crash "hacks the brainstem" by altering its neurolinguistic codes responsible for the higher-order functioning of the mind. This prevents the brain from running its neocortical programs, rendering inoperable higher levels of cortical functioning and causing the infected person to regress to a semiconscious state. In Edelman's terms, the infected person is deprived of higher-order consciousness, "the capability to be conscious of being conscious" (2004, 161). Having regressed to the semiconscious state of an automaton, this person takes orders unquestioningly like a computer running on a predetermined program. Lagos asks Hiro,

Remember the first time you learned binary code? You were forming pathways in your brain. Deep structures. Your nerves grow new connections as you use them—the axons split and push their way between the dividing glial cells—your bioware self-modifies—the software becomes part of the hardware. So now you're vulnerable. (117-18)

In search of funds for his research on snow crash and how to control it, Lagos approaches L. Bob Rife, a monopolist capitalist who turns out

to be a megalomaniac with his own evil designs for exploiting snow crash.

As a specialist in information technology, Rife develops a scheme for using snow crash to gain absolute power over computer programmers and hackers by monitoring the inventory in their heads over which he would normally have no control. As one of the characters tells Hiro, Rife "wanted to isolate this thing and modify it so it could be used to control the programmers without blowing their brains sky high" (316). But Hiro, assisted by a virtual Librarian from CIC (the Central Intelligence Corporation, a merger of the CIA and the Library of Congress), manages to reconstruct Rife's diabolical plot, and with the help of Juanita, Y.T. and others tries to stop him. Their countermeasures become the basis of the novel's structure. Y.T., the novel's heroine, is an attractive white woman who informs us that her name means "Yours Truly," but it is also a homophone for "Whitey." Stephenson suggests that even consciousness as a middle-American cultural construct is preferable to a simulated computer consciousness, which in fact means no consciousness at all.

Hiro and the Librarian follow a trail leading to ancient Sumerian, which according to the narrator had a linguistic structure radically different from that of all modern languages. As a pre-Babel language spoken at the time by everyone, Sumerian rendered society as a whole vulnerable to viral infection. Hiro speculates that Sumerians were not conscious like modern people; they had no ability to be conscious of being conscious, but instead functioned like automata, like computers running on specific programs. These programs, or "*me*," "the 'key words' and 'patterns' that rule the universe," were dispensed like religious edicts at temples by an "en," "a priest-king of sorts" (238), and served as "the operating system of society" (240), instructing people on everything from reproduction to baking bread. In Hiro's interpretation of Sumerian mythology, everything changed when the god Enki discovered an antidote for "*me*." To undermine the programs of "*me*," Enki pronounced his "nam-shub," a performative anti-virus that freed the neocortical structures of the ancient Sumerians and allowed for the redevelopment of higher neurolinguistic pathways. This anti-virus entailed a move from one language, Sumerian, to a diversity of languages. Languages became more complex as people moved toward higher-order consciousness through the so-called "Babel effect." "This is the Babel story, isn't it?" Hiro says.

"Everyone was speaking the same language, and then Enki changed their speech so that they could no longer understand each other. This must be the basis for the Tower of Babel stuff in the Bible" (202-03).

As Lagos suspected, what happened is that suddenly through Enki's "nam-shub" nobody was speaking Sumerian, which vanished like the dinosaurs. As the Librarian explains, Lagos' theory holds that

Babel was an actual historical event. That it happened in a particular time and place, coinciding with the disappearance of the Sumerian language. That prior to Babel/Infocalypse, languages tended to converge. And that afterward, languages have always had an innate tendency to diverge and become mutually incomprehensible—that this tendency is, as he put it, coiled like a serpent around the human brainstem. (203)

But Rife has no intention of letting this happen again. He has a vast fleet of ships ranging from Vietnamese fishing boats to oil tankers and an aircraft carrier lashed together into a gigantic "Raft" full of cyborgs called Refus, or Third World refugees. The Refus, waiting to be unleashed upon the gated communities of white middle America, are infected with snow crash and controlled by antennae implanted in their brains. Hiro discovers that an ancient tablet recording Enki's "nam-shub" is on the Raft and plans to steal in order to repeat Enki's "Babel effect." But his hopes of stopping Rife from infecting California and expanding his information network suffer a setback when the tablet is destroyed accidentally. Hiro also confronts Raven, an Aleut Indian working for Rife and a formidable opponent, both in reality and the Metaverse. As a product of an atomic bomb test on the Aleutian Islands, Raven is a mutant who kidnaps and eventually falls in love with Y.T. Hiro and Raven engage in fierce combat in the Metaverse, where Raven finally manages to drop a blue cube type of snow crash in a crowded amphitheater with which to infect all computer hackers. In the end, as L. Bob Rife tries to escape in a plane with the virus, the Rat Thing, a cyborg canine named Fido and the protector of Y.T., "chases it down like a dog going after a fat mailman, makes one final tremendous leap into the air and, turning itself into a Sidewinder missile, flies nose-first into the tailpipe of its left engine. The jet explodes about ten feet off the ground, catching Fido and L. Bob Rife and his virus all together in its fine, sterilizing flame" (437). Raven himself, however, disappears, leaving the novel open-ended.

## 2. Computers, Language and Consciousness

*Snow Crash* creates an infoworld with parallels between humans and computers based on a level of code where everything reduces to information. But as we have seen, the brain is not a computer. Although the brain produces, stores and communicates information like a computer, it is also conscious of this process, while a computer is not. Computers operate through a code that reduces everything to information, manifesting the performative nature of computer language through virtual reality. But unlike the brain, the physics of virtual reality will never manifest or embody the subjective experience as a phenomenal transform C. This means, as I will argue, that the nature of language in humans differs radically from that in computers, even though both seem to include a performative level in which saying is doing. This difference has significant implications for a machine-biology symbiosis.

As the Librarian comments, “A nam-shub is a speech with magical force. The closest English equivalent would be ‘incantation,’ but this has a number of incorrect connotations” (197). From *Myths of Enki, the Crafty God*, the Librarian quotes a passage explaining that in Mesopotamia religion, magic and medicine were inextricably intertwined, and that Sumerian incantations reveal a strong connection between magic, religion and aesthetics. As the narrator observes, however,

*A speech with magical force.* Nowadays, people don’t believe in these kinds of things. Except in the Metaverse, that is, where magic is possible. The Metaverse is a fictional structure made out of code. And code is just a form of speech—the form that computers understand. The Metaverse in its entirety could be considered a single vast nam-shub, enacting itself on L. Bob Rife’s fiber-optic network. (197)

Hayles argues that in *Snow Crash* the “human-computer homology encourages us to see the VR simulation of the Metaverse as more ‘realistic’ than everyday reality because the former operates according to the same rules that govern human neural functioning at the most basic coding level” (275). But even though cognition is



metaphoric insofar that the brain does not perceive so much as create the world by using nonrepresentational procedures, this does not mean that virtual reality amounts to an exteriorization of our neural processes, which would imply that computer code constitutes C' that leads to a phenomenal transform C. To begin with, VR may simulate subjectivity and speech with magical force, but unlike humans it cannot embody them.

Cognition and metaphor may be indistinguishable, as Edelman demonstrates, but just because we perceive the world metaphorically in a manner similar to a computer simulation does not imply that brain and computer merge at a basic level. As Edelman notes, "Given the continual sensorimotor signals arising from the body, subjectivity is a baseline event that is never extinguished in the normal life of conscious individuals" (2004, 134). He goes on to say semantic ability is a prerequisite for higher-order consciousness, neither of which a computer possesses except in simulated form. To perceive the world indirectly through metaphor thus entails subjectivity, without which information processing would have no witness, no ability "to symbolize memory states, or become truly self-conscious or conscious of being conscious" (Edelman *ibid.*). Metaphor and performative speech with magical force in computers, therefore, does not match but only simulates that of humans. As Edelman observes,

Higher-order consciousness may be considered a trade-off of absolute precision for rich imaginative possibilities. Although our unitary conscious scene is not necessarily veridical, for purposes of planning and creative scenario building it gains added power even as it gives up precision. I do not believe that this is an incidental point. The pervasive presence of degeneracy ["The ability of different structures to carry out the same function or yield the same output" (154)] in biological systems is particularly noticeable in neural systems, and it exists to a high degree in the reentrant selective circuits ["the basis for spatiotemporal correlation" (174)] of the conscious brain. In certain circumstances, natural languages gain as much strength from ambiguity as they do under other circumstances through the power of logical definition. Association and metaphor are powerful accompaniments of conscious experience even at very early stages, and they flower with linguistic experience. (2004: 135-36)

The operations of the conscious brain also have a need for integration, construction, closure, and a unified picture. As Edelman says, "The

conscious brain in health and disease will integrate what can be integrated and resist a fractured or shattered view of 'reality'" (2004: 136). The healthy brain even among Sumerians, unlike computers, would resist a viral infection that "frags" coherence—like the system crash in a computer that turns "the perfect gridwork of pixels into a gyrating blizzard" (*SC*: 39-40).

One thing about consciousness not discussed by Edelman yet central to Advaita Vedanta, as well as to *Snow Crash*, is that language changes with the level of consciousness, as discussed above in Chapter Three. Enki created order out of chaos in a manner analogous to the function of language as described by Advaita. In his "theory of neural group selection" (TNGS), as we have seen, Edelman distinguishes two forms of consciousness: "primary consciousness," or fundamental consciousness that "results in the creation of a scene in the remembered present" (2004: 172, 174); and "higher-order consciousness," defined as "the capability to be conscious of being conscious" (161), which corresponds to ordinary phenomenal consciousness in Advaita. He does not discuss pure witnessing consciousness as a void of conceptions, also known as *purusha* consciousness. In describing speech with magical force, however, *Snow Crash* alludes to a tradition that includes the levels of language associated with pure consciousness, namely *pashyanti* and *para*.

As expounded by the Vedic grammarian Bhartrhari mentioned earlier, ordinary waking and transcendental pure consciousness yield the experience of different levels of language. Ordinary language consists of two aspects: *vaikhari* or outward speech, and *madhyama* or inward speech or thought, which are characterized by a temporal sequence between sound and meaning. The two levels of language beyond ordinary experience, *pashyanti* and *para* (Coward 1980: 126-37), consist of a unity of sound and meaning without temporal sequence. At this magical or sacred level of language, meaning is apprehended as a noumenal whole beyond phenomenal differentiations. As Bhartrhari observes, *pashyanti* appears in *savikalpa samadhi* (temporary experience of *turiya* or pure consciousness) and *para* in *nirvikalpa samadhi* (the fifth state when *turiya* becomes permanent, sustained with the three ordinary states of waking, sleeping and dream) (Iyer 1969: 98-110). In *para* the unity of sound and meaning is devoid of the impulse toward outward expression still found in *pashyanti*. *vaikhari* and *madhyama*, as non-

sacred words or thoughts associated with ordinary waking consciousness, give only a partial expression of a unified meaning or “transcendental signified” available on the higher levels of language. From the Librarian’s description of Enki, we can infer that his magical powers of speech derived from his connection with the unified levels of language and consciousness described by Bhartrhari.

As the Librarian explains to Hiro, “Enki’s original name was En-Kur, Lord of Kur. Kur was a primeval ocean—Chaos—that Enki conquered” (238). In the Sumerian creation myth, the world was created only after heaven and earth, originally united, were separated by Enki, among other gods such as Asherah. As Hiro says, “Okay, so both Enki and Asherah were figures who had in some sense defeated chaos. And your point is that this defeat of chaos, the separation of the static, unified world into a binary system, is identified with creation” (*ibid.*). If language emerges from pure consciousness as the first impulse of manifest creation out of the void (or chaos in the sense of the field of all possibilities), then the naming of things on the level of *pashyanti* and *para* can be understood as creating them. As the Librarian says, Enki

pronounces the name of everything created . . . In many Creation myths, to name a thing is to create it. He is referred to, in various myths, as “expert who instituted incantations,” “word-rich,” “Enki, master of all the right commands,” as Kramer and Maier have it, “His word can bring order where there has been only chaos and introduce disorder where there had been harmony.” (239)

In *After Babel*, George Steiner discusses the possibility of an “*Ur-Sprache*,” an original language that connects other languages like German and Greek (1998: 67). He argues that such an original language must have existed because when humans communicate they refer to the same meaning and express the same feelings, hopes and fears, even though the words they use may be different. Steiner also refers to the insights of visionaries who posit that in the beginning God uttered a single word in which all reality was contained. Language today after Babel does not function from this level of Logos, the *para* level of language. Snow Crash suggests that there is no access to Logos today except through silence. Enki passes this knowledge down to his son Marduk, the main deity of the

Babylonians, who in turn is represented in a picture handing Hammurabi a one and a zero, the emblem of royal power. Hiro sees the one and zero as the binary system responsible for coded information. They also represent name and form, sound and meaning, the two basic components of language. In profane language conceived in ordinary waking consciousness, name and form are separated by a temporal gap, but they are united on the magical or sacred level of *pashyanti* and *para*, experienced in pure consciousness.

In the ancient Sumerian and Babylonian traditions portrayed in the novel, the power over creation begins with access to higher states of consciousness and the unity of name and form as described in Advaita Vedanta. The *para* level of language consists of an absolute unity of name and form, or a kind of unity amidst diversity, while *pashyanti* manifests the first impulse toward expression. The *Para* level of language thus implies that even in the void or chaos, the first impulse toward binary expression already exists in latent form. In terms of deconstruction, this implies that the play of difference is always already subsumed by the unity of consciousness. While computers have the binary system basic to coding information, they lack the subjectivity necessary to cognize meaning on whatever level, or to be conscious of being conscious, and ultimately to resist viral infection.

### 3. Enki's Countervirus

Enki is also referred to as a “neurolinguistic hacker” who, as Hiro says, is “capable of programming other people’s minds with verbal streams of data,” that is, with “nam-shubs” (369). While on the Raft searching for the ancient nam-shub tablet, Hiro explains that “We’ve got two kinds of languages in our heads. The kind we’re using now is acquired. It patterns our brains as we’re learning it. But there’s also a tongue that’s based in the deep structures of the brain that everyone shares. These structures consist of basic neural circuits that have to exist in order to allow our brains to acquire higher languages” (*ibid.*). The acquired language we are using now refers to ordinary temporal language experienced in waking consciousness, while the tongue based on the deep structures of the brain suggests the higher levels of language and consciousness described by Bhartrahari. The higher

levels can be experienced by humans under the right conditions, but they cannot be accessed by computers, which lack the neural basis C' for conscious awareness as a phenomenal transform C. And while computers can make use of ordinary temporal language as a binary code, they do not grasp the meaning of this language to the extent that they are conscious of being conscious of it. A human who accesses the deep structures of the brain, moreover, will also undergo unusual effects, one of which is related to language. As Hiro explains, "Glossolalia—speaking in tongues—is the output side of it, where the deep linguistic structures hook into our tongue and speak, bypassing the higher, acquired languages" (369). In Advaitan terms, access of the unity of language and consciousness on the level of *pashyanti* and *para* results in the *siddhis*, which as discussed in Chapter Two the *Yoga Sutras* refers to as "attainments" or "accomplishments." But *Snow Crash* also speculates on the possibility of an input side. Such input, however, more often than not tends to be a viral infection.

Someone like Enki, who knows the right words to speak or the right visual symbols to show you, can provide a positive input that will "go past all your defenses and sink right into your brainstem. Like a cracker who breaks into a computer system, bypasses all the security precautions, and plugs himself into the core, enabling him to exert absolute control over the machine" (369). Although Enki's intentions were positive, Hiro describes a scenario that L. Bob Rife would have liked to exploit to control the hackers he employs. The verbal rules or *me* of ancient Sumerian society provide the model for this kind of external virus now being pursued by Rife. Input can also be generated internally through what Hiro calls "an informational entity known as the metavirus which causes information systems to infect themselves with customized viruses" (371). Sumerian culture based on *me* was an example of the metavirus. Enki's countervirus *nam-shub* also constitutes an input that propagates internally, although with a positive outcome. Hiro speculates that Enki was probably one of the few fully conscious human beings in the world at the time he lived. In any case, he would have been one of the rare individuals with access to pure consciousness and the higher levels of language.

As Hiro tells it, Enki's countervirus "spread along the same routes as the *me* and the metavirus. It went into the deep structures of the brain and reprogrammed them. Henceforth, no one could understand the Sumerian language, or any other deep structure-based

language" (372). At this point, cut off from a common deep structure, Sumerians began to develop new and distinct languages upon which *me* was no longer effective. New *me* was prevented from being written and further transmission of the metavirus was blocked. Enki's countervirus suggests several things about the nature of language and consciousness. First of all, Enki's nam-shub can only work on humans, not computers. Arguably, as humans become more like computers through posthuman biotechnology, they will gradually compromise the natural, healthy condition of neural correlates C' necessary for consciousness C. Although the Refus as semi-conscious entities may still respond to anti-viruses such as Enki's nam-shub, after a certain point their neural damage may render this response problematic. In a post-Babel era, the diversity of languages spoken by humans does not mean that the neural correlates of consciousness have been destroyed, but only that access to higher consciousness and language is temporarily blocked, as by the physiological stress of viral infections.

*Snow Crash* identifies glossolalia or speaking in tongues, which is used by the Refus on the Raft, as a throwback to Sumer. From an Advaitan perspective, speaking in tongues also implies access to the unified levels of language based on the experience of higher consciousness and a coherent self. The fact that the novel mixes metaphors by identifying speaking in tongues with a viral infection and the loss of self suggests that even on this level of consciousness human physiology is vulnerable to infection. Through his research on the language of the Logos, the Librarian finds a connection between the wholeness of language and consciousness:

Early linguists, as well as the Kabbalists, believed in a fiction language called the tongue of Eden, the language of Adam. It enabled all men to understand each other, to communicate without misunderstanding. It was the language of the Logos, the moment when God created the world by speaking a word. In the tongue of Eden, naming a thing was the same as creating it. To quote Steiner again, "Our speech interposes itself between apprehension and truth like a dusty pane or warped mirror. The tongue of Eden was a flawless glass; a light of total understanding streamed through it. Thus Babel was a second Fall." And Isaac the Blind, an early Kabbalist, said that, to quote Gershom Scholem's translation, "The speech of men is connected with divine speech and all language whether heavenly or human derives from one source: the Divine Name." (260)

The Librarian explains that according to Lagos, Enki was a normal human with “special powers,” namely, “some kind of linguistic power that goes beyond our concept of normal” (256). Hiro refers to this level of language as “the machine language of the world,” claiming that the language computers speak is “the tongue of Eden” (*ibid.*). But he is off the mark here because only a conscious being can experience language as a unity of name and form, sound and meaning. Computer language in contrast is based on a binary system, comprised by definition of a temporal gap between sound and meaning, name and form. The language of Logos thus corresponds to *pashyanti* and *para*, which require the experience of pure consciousness beyond duality. Babel and the Fall from the language of Adam represent a loss of Logos and its corresponding state of higher consciousness. According to *Snow Crash*, those who speak in tongues are more susceptible to the influence of *me*, which operates more effectively from the deeper structures of the mind.

As a unified neurolinguistic state, Sumerian seems to Hiro to represent chaos, a static, unified world that needs to be separated into a binary system in order to better resist viral infection. The media image of the Raft as a place of chaos belies the fact that it is highly organized and controlled, with the Refus speaking in tongues and exploited like machines. Stephenson suggests that the deeper a viral infection penetrates human physiology, the more profound its negative outcome. If through posthuman technology a virus infects the deepest neurolinguistic structures, which from an Advaitan perspective corresponds to pure consciousness, then all the temporally expressed levels of mind and language will also be contaminated. L. Bob Rife controls the Refus “by grafting radio receivers into their skulls, broadcasting instructions—*me*—directly into their brainstems. They will act out [his] instructions as though they have been programmed to” (378). His plot to infect California by “extracting the virus from human blood and package[ing] it as a drug known as Snow Crash” (378), or by infecting all hackers with Raven’s blue cube in the Metaverse, is a plot to convert humans into computers—starting from the neurolinguistic ground of the higher self all the way up their cyborg identities. As portrayed by the novel, humans will become like computer automata when through posthuman technology they lose the basic characteristics of the self.

To prevent this from happening, Hiro wants to follow Enki's lead by creating his own neurolinguistic hacker who could write new ground rules for a new society. "If we could transmit the nam-shub of Enki to all of the *en* (priest-kings) on the Raft, they would relay it to all of the Raft people. It would jam their mother-tongue neurons and prevent Rife from programming them with new me" (381). Hiro realizes that this will only work if they do it before the Raft breaks up and the Refus come ashore. Otherwise, as cyborgs with computer-like brains the Refus will infect the general population and accomplish Rife's mission of depriving humans of their freedom by exploiting the power of consciousness. As Stephenson's novel shows, undermining the self or the essence of human nature entails the loss of individuality, autonomy and creativity. In *A Brief Tour of Human Consciousness*, V. S. Ramachandran says that

Far from being an epiphenomenon, the sense of self must have evolved through natural selection to enhance survival and, indeed, must include within it the ability to preserve its integrity and stability—even deceiving itself when necessary. [. . .] qualia and the self are really two sides of a coin—you can't have one without the other. (2004: 103)

In defining the self, Ramachandran proposes that it has five basic characteristics: continuity, unity or coherence, a sense of embodiment or ownership, a sense of agency, and the ability to reflect or be aware of itself. If we examine the Sumerians and the Refus, we find that most of these characteristics are absent.

*Snow Crash* thus portrays a situation in which any posthuman who operates according to the rules of *me*, whether imposed from the outside or internalized, will necessarily lack the basic characteristics of the self. The first thing they will lose is a sense of continuity, a sense of an unbroken thread or purpose running through the fabric of their experience. Instead, they will sense only a broken chain of episodic events with no connection between past, present and future. As a result, like the Refus they will lack a coherent sense of self. The diversity of their sensory experiences, memories, beliefs and whatever thoughts they are allowed to have will not belong to themselves as unified individuals, but to an outside authority that controls them for its own purpose. The third characteristic, a sense of embodiment or ownership, of being anchored in their own body, vanishes when that



body becomes part machine with a diminished or blocked access to the essence of human nature. The sense of agency will have long disappeared for posthumans like the Refus no longer in charge of their own thoughts, actions or emotions and whose destinies now come under the direction of a corporation, government, or Texas megalomaniac like Rife. And finally, the ability to reflect or be aware of the self is explicitly absent among the Sumerians in the novel. In the machine-biology equivalence depicted by *Snow Crash*, posthumans are endowed more heavily with non-conscious technology than with human attributes. As Ramachandran notes, “A self that’s unaware of itself is an oxymoron” (2004: 97). Unlike Dennett, who rejects the notion of a witnessing self, Ramachandran argues that the experience of qualia, which depends on the subjectivity of a self, is the result of a higher order representation in the brain or what he reluctantly calls a “metarepresentation”:

Ironically this idea implies that the so-called homunculus fallacy—the notion of a ‘little man in the brain watching a movie screen filled with qualia’—isn’t really a fallacy. In fact, what I am calling a metarepresentation bears an uncanny resemblance to the homunculus that philosophers take so much delight in debunking. (2004: 99)

*Snow crash* as a virus is designed specifically to subvert the self and all of its characteristics in order to render humans as malleable as non-conscious machines to benefit the elite at the expense of the masses.

Stephenson provides other insights into the dangers of the posthuman that go beyond the impact of *snow crash* as a designer drug engineered for evil purposes. As we shall see, the posthuman runs the risk of causing humanity to lose one of the most elusive aspects of the self, discussed in Advaita Vedanta as the self-referral quality of consciousness, or the ability of the self to be aware only of itself devoid of conceptual content. As Ramachandran puts it, a key aspect of the self

is its self-referential quality, the fact that it is aware of itself. One possibility is that as soon as other attributes of self evolved—such as coherence, continuity, embodiment, symbol juggling and planning actions—it became necessary to create a single “metarepresentation” of these representations. The resulting “awareness that you are aware,” knowing that you know, or “wanting to want”

(or indeed not wanting to want) is what gives the "I" its unique self-referential character. (2004: 111)

The kind of raw awareness or awareness of sensations alone, which Edelman refers to as primary consciousness, characterizes the awareness of the Sumerians as well as the Refus, who are described as semiconscious. But according to Ramachandran, such awareness "is an oxymoron. 'Awareness' simply doesn't mean anything without metarepresentation—an awareness of awareness and a concomitant sense of self. If you are not aware that you are aware, then by definition, you are not aware! Humans are unique in this respect" (*ibid.*). Self-awareness underlies the free will, individuality and creativity that Stephenson admires in computer hackers and considers the essence of human nature. As *Snow Crash* demonstrates, however, the posthuman "infocalypse" serves primarily to undermine the uniqueness of human nature.

#### 4. Reason and Transcendence

In the Advaitan tradition, the self-referral quality of consciousness forms the basis for transcending into pure consciousness as a void of conceptions. Yet paradoxically, even though self-referral in *Snow Crash* forms the basis of immunity to *me*, it can also make one more vulnerable, for *me* has a more devastating effect when it penetrates the deep structures of consciousness. As the ultimate case of opposites attracting, the boundaries of *me* intrude irresistibly upon the unboundedness of the self as pure awareness. Juanita becomes a "ba'al shem," a mystic who uses the secret powers of the word to bring about changes in the world. With an interest in religion and hacking, she volunteers as a Refus and joins the Raft in order secretly to study Enki's tablets, all of which are in Rife's possession. Having studied the tablets on the Raft, she now knows how to control the wireheads: "I'm a ba'al shem. I can hack the brainstem" (402). When Hiro asks her on the Raft if she knows what they have to do, she says, "Release the nam-shub of Enki. [. . .] Do the Babel thing" (*ibid.*). Ironically, though, Juanita surgically removes her own antenna so she will not be exposed to the nam-shub of Enki, having already developed immunity to *me*. Stephenson plays upon the

idea that self-referral consciousness, although the basis of the Divine Name and the power to create a thing by saying it, depends on the delicate balance of one's physiological condition.

As argued here, to lose this physiological purity means to corrupt or undermine the essence of human nature. When Hiro asks Juanita why she removed her antenna, she replies, "Why do you think? [. . .] So I wouldn't be exposed to the nam-shub of Eni. I'm a neurolinguistic hacker now, Hiro. I went through hell to obtain this knowledge. It's a part of me. Don't expect me to submit to a lobotomy" (404). But at this point Juanita drops out of the plot. She of all the characters comes closest to going beyond duality, to embodying pure consciousness and the unity of name and form, sound and meaning, but the novel can only represent this state metaphorically by way of negation. Pure consciousness as the groundless ground of the Divine Name, *para* and *pashyanti*, is vulnerable to *me* and snow crash on the one hand, and divided through the binary effect of the nam-shub of Enki on the other. The novel implies that Juanita has found an ineffable balance between these opposites, namely the void in thought. The very ineffability of non-thought makes it easy to disregard and replace with the bionic technologies of an ostentatious posthuman extensionism. But Stephenson warns against the posthuman dangers of an assault on the deep structures of consciousness.

*Snow Crash* suggests that historically one way to prevent contamination by *me* has been through reason, as represented by religion. Among other things, religion can be understood as signifying a return to the source of creation. From an Advaitan perspective, the source refers ultimately to self-referral pure consciousness, the origin of Logos with its magical power to create by naming. As Iyer notes, "The Word-Principle contains within itself the seeds of the whole cosmos which emanates from it" (1969: 147). In the Upanishads, for example, the word Om was held to be the symbol of Brahman. The word Om also serves as a medium of Logos connecting God and humanity, thus providing a way for humanity to realize God, as explained in the Sphota theory of language (Coward 1980: 69-126; Prabhavananda 1980: 229). But if taking awareness back to its source can be seen as an archetypal function of religion, to a large extent this has been replaced by rationalization and the rules of dogma. As the novel suggests, religions provided an antidote to *me* by promoting the

mind's development toward diversity through the powers of thought and logical discrimination. According to Hiro, Babel led to the creation of Hebrew, a language of exceptional flexibility and power that the deuteronomists, a group of radical monotheists, first took advantage of in the sixth and seventh centuries B.C. They formalized stories into the Torah and "implanted within it a law that insured its propagation throughout history—a law that said, in effect, 'make an exact copy of me and read it every day'" (374). This law, said in the novel to constitute the birth of rational religion, was intended to insure informational hygiene and protect against viruses such as *me*. Subsequent monotheistic religions such as Islam and Christianity followed the same pattern. Christianity, for instance, emerged as a way of breaking free from the rigid legalistic system, a kind of *me*, imposed upon Judaism by the Pharisees. The ministry of Christ in this way echoed that of Enki.

But irrational theocracy, while always dormant, finally reemerged with a vengeance through the Pentecostal church. As Hiro says, "The twentieth century's mass media, high literacy rates, and high-speed transportation all served as superb vectors for the infection. [. . .] And then came television, and the Reverend Wayne, backed up by the vast media power of L. Bob Rife" (376). Rife started the glossolalia cult, which Hiro and company have set out to stop. *Snow Crash* supports the preservation of individuality, autonomy and consciousness by negating the equation of humans with computers, and proposes that rationality and skepticism can help in defeating snow crash by preventing it from accessing the neurolinguistics structures of the mind. Paradoxically, however, by protecting the deep structures of the mind from snow crash, rationality also points the attention away from pure consciousness as a void of conceptions. Although language in the infoworld of the Metaverse, where saying is doing, seems to perform the construction of humans as computers, this belies the fact that the performativity of language depends on consciousness. Without access to *para* and *pashyanti* in pure consciousness, language flounders in a spatio-temporal field of difference where performativity is merely symbolic. But while rationalization can protect the mind from snow crash, it also precludes access to the internal observer—except through the self-referral play of difference as discussed in Chapter Three.

The snow crash virus, moreover, cannot be used to inoculate humans from the posthuman by serving as an antivirus, as claimed by Hayles (1999: 278). Instead, by simulating an equation between humans and computers, the snow crash infection entails a loss of humanity, making humans even more like computers. Humans cannot be inoculated from the human-computer equation through a viral meme because the posthuman meme, as computer code, is in itself an all-consuming virus that can devastate human essence. The *me* as a viral input demonstrates that in a machine-biology symbiosis, the computer functions as a virus capable of going all the way down to undermine the deep structures of consciousness. In *Hard-Boiled Wonderland and the End of the World*, Haruki Murakami portrays a similar situation in which an unexpected catastrophe results from even the benign intentions of the scientific community.

## Chapter Eight:

### Haruki Murakami's *Hard-Boiled Wonderland and the End of the World*: Unicorns, Elephants and Immortality

#### 1. Calcutecs, Semiotec, the System and the Factory

Haruki Murakami structures his prize-winning novel (1985, trans. 1993), which combines science fiction and fantasy, around two parallel worlds, “Hard-Boiled Wonderland,” which is more or less realistic, and the “End of the World,” which is obviously fantastic. These two narratives occur on different levels of reality. As Jay Rubin observes in *Haruki Murakami and the Music of Words*, in the original Japanese version Murakami splits

his narrator-hero into Boku and Watashi, assigning the formal Watashi-“I” to the more realistic world of a vaguely futuristic Tokyo [“Hard-Boiled Wonderland”], and the informal Boku-“I” to the inner, fantastic world of ‘The Town and Its Uncertain Walls’ [“End of the World”].” (2005: 117)

Although “Watashi” and “Boku” give different impressions in Japanese, they both translate into English as “I.” To help distinguish the two narrators, Alfred Birnbaum translated the “End of the World” sections into the present, which gives them a timeless quality appropriate to their theme. Murakami said that when writing the novel he was thinking of a timeless “original place” deep within the mind, and that “a tendency to contrast ‘existence’ with ‘non-existence’ or ‘being’ with ‘non-being’ is fundamental to his work (Rubin 2005: 116). As the novel unfolds, the essential interrelatedness of the alternating worlds becomes apparent: both narrators get involved with attractive librarians, both visit the library to do research on unicorns, both embark on a Proustian search for memories and lost time, and both are confronted with the end of the world. As Rubin notes, the

unicorns were inspired “by actual unicorn sculptures that stand by the large fountain outside the Meiji Memorial Picture Gallery in the Outer Garden of the Meiji Shrine in Tokyo” (57). As legendary figures, the unicorns in the novel symbolize a timeless other world that is not always fully accessible to humans, especially if their neuro-physiological condition is impaired. Watashi, the narrator of “Hard-Boiled Wonderland,” is a “Calcutec” who works for the “System” and whose mind unbeknownst to himself has been experimented upon by the Professor, a former System scientist, who discovered a way to alter the “core consciousness” of humans with potentially devastating effects. (For clarity, I use the Japanese names for the narrators even though they do not appear in Birnbaum’s English translation.)

*Hard-Boiled Wonderland and the End of the World* explores the inner depth of the mind about which an individual may never know anything directly. Murakami suggests that in a posthuman context any attempt to enhance brain functioning by technologically interfering with consciousness for commercial gain may have devastating consequences for human identity and survivability. The inner mind is called by various names in the novel, including “core consciousness,” the “black box,” and in the words of the Professor, who speaks with a peculiar accent, a “great unexplored elephant graveyard,” a phrase he quickly modifies:

No, an “elephant graveyard” isn’t exactly right. ‘Tisn’t a burial ground for collected dead memories. An “elephant factory” is more like it. There’s where you sort through countless memories and bits of knowledge, arrange the sorted chips into complex lines, combine these lines into even more complex bundles, and finally make up a cognitive system. A veritable production line, with you as the boss. Unfortunately, though, the factory floor is off-limits. Like *Alice in Wonderland*, you need a special drug t’think you in. (1991: 256)

The elephant, an inscrutable master of memory, is an image of the unconscious mind. During the course of the novel, Watashi and Boku learn more about their own elephant factories or core consciousness than they ever dreamed of knowing. Access to core consciousness is implied by images of water, lakes and the well, which Watashi alludes to on the first page of the book on his way to meet the Professor:

The elevator continued its impossibly slow ascent. Or at least I imagine it was ascent. There was no telling for sure; it was so slow that all sense of direction

simply vanished. [. . .] Every last thing about this elevator was worlds apart from the cheap die-cut job in my apartment building, scarcely one notch up the evolutionary scale from a well bucket. (1)

Being led by the Professor's attractive yet chubby granddaughter to meet him in his subterranean laboratory, Watashi has yet to discover that the Professor's experimentation on his mind has already occurred. The subterranean groping in the dark to reach the Professor's secret lab symbolizes Watashi's journey into the unknown depths of his own consciousness in the form of memories. Boku, on the other hand, finds himself in a walled city where upon entering he has to relinquish his Shadow to the Gatekeeper. The Shadow represents the mind, and all the inhabitants of the walled Town have given up their shadows and live a life of no-mind, which means no worries, no memories, no emotions, no human attachments, no sense of time, no self and no death. The wall around the Town, moreover, is shaped like a brain. As we discover in reading the novel, the "End of the World" sections represent the neurophysiological consequences of the bionic surgery the Professor in "Hard-Boiled Wonderland" has already performed on Watashi.

As discussed earlier in relation to *Neuromancer* and *Snow Crash*, brains are not computers. But in *Hard-Boiled Wonderland and the End of the World*, the Calcutecs like Watashi who work for the "System" have had their brains split so they could replace computers in performing complex calculations. While information in a computer can be electronically tapped, brains are impervious to tapping and therefore more secure. The System uses this procedure to safeguard its products and its Calcutecs against their ruthless competitors, the Semiotecs. Operating out of the "Factory," Semiotecs once kidnapped five Calcutecs and sawed off the tops of their skulls in an unsuccessful attempt to extract data directly from their brains. Although far more prominent than Watashi when he worked for the System, the Professor recruits Watashi because of his extraordinary survivability skills as a Calcutec. As Rubin notes, the "cyber-punk" aspect of Watashi's identity bears a striking resemblance to William Gibson's story "Johnny Mnemonic" (1981). Murakami expresses the same aversion for the posthuman, but he denies that Gibson's story influenced his novel (121).



The fact that time passes differently in the two worlds reflects the change of consciousness between Watashi and Boku, who in a sense are two sides of the same coin. “Hard-Boiled Wonderland” runs over a period of five days from September 28 to October 3, during which time Watashi discovers that his consciousness and identity are about to meet a catastrophic end. This outcome connects him to the “End of the World,” which runs from autumn into winter when Boku makes a critical decision about his relationship to the Town and his Shadow. Watashi’s last impressions of reality in Tokyo’s wonderland as he falls asleep in a car to the tunes of Bob Dylan and Boku’s decision regarding whether or not to leave the walled Town with his Shadow coincide in a way that seals their reciprocal destinies. From an historical perspective, the walled Town with its references to retired army officers and empty barracks, old electric lights and abandoned factories suggest a post-nuclear (which for Japan means post WWII) world—vague reminders of a past receding from a consciousness losing its grip on reality. Stephen Snyder suggests that “the walled, amnesia-stricken community [is] a metaphor for a Japan that hesitates to come to terms with its past or actively define a global role for its future (though such a reading would be crediting Murakami with greater political consciousness than he is usually allowed)” (1996, 75). The Colonel that Boku befriends and discovers much about the Town from seems to confirm the notion that the wall surrounding Japan is a source of frustration. Nonetheless, the novel suggests that the posthuman technological development in Japan is a global phenomenon with the potential to put everyone on the planet at risk. Murakami’s depiction of the neurophysiological experiments by the System and the Professor, however redeeming in terms of the Professor’s benign though wacky intentions, symbolizes the shrinking of consciousness from a comprehensive vision of human nature to a limited perspective.

## 2. The Crackest Calcutec and the End of Consciousness

The Professor recruited Watashi from out of 26 candidates for a secret experiment to develop an advanced brain splitting technology designed to help Calcutecs in their work of simulating computers through a complex process of calculations known as “shuffling.”

Watashi's shuffling password was "the end of the world." As he explains, during training they put him "on ice for two weeks to conduct comprehensive tests on my brainwaves, from which was extracted the epicenter of encephalographic activity, the 'core' of my consciousness. The patterns were transcoded into my shuffling password, then re-input into my brain—this time in reverse" (113). Shortly after Watashi's visit to the lab, the Professor disappears. Suspecting involvement by either the Semiotecs or "INKlings," also known as "Infra-Nocturnal Kappa" (137) who live underground and prey on humans, the granddaughter goes to Watashi for help. When they find him again after trekking through the wet and dark subterranean world surrounding his lab, the Professor confesses that he conducted secret neurophysiological experiments on Watashi. These experiments were based on a theory that the best security system for protecting Calcutecs and the System's codes from competitors was to pass information through the black box of the Calcutec's unconscious, scramble it, and then pass the processed information back through the black box to unscramble it, without the agent holding the black box ever knowing its contents.

In order to do this, however, the Professor had to perform brain surgery on Watashi, the only Calcutec who survived the earlier stages of experimentation. At this point in the novel it becomes clear to each character that invasive bionic technology will bring unforeseeable problems. Murakami thus speculates on how the dearth of scientific knowledge about the brain can present serious obstacles to posthuman technology. As V. S. Ramachandran puts it,

The human brain, it has been said, is the most complexly organized structure in the universe and to appreciate this you just have to look at some numbers. The brain is made up of one hundred billion nerve cells or 'neurons' which form the basic structural and functional units of the nervous system. [. . .] Each neuron makes something like one thousand to ten thousand contacts with other neurons and these points of contact are called synapses. It is here that the exchange of information occurs. Based on this information, it has been calculated that the number of possible permutations and combinations of brain activity, in other words the number of brain states, exceeds the number of elementary particles in the known universe. (2004: 2-3)

Murakami's novel illustrates that no scientist, however, technologically advanced, would be able to master the complexity of

the human brain through a third-person approach. To enhance or in any way manipulate consciousness, which unlike the mind or brain is nonphysical, would be even more difficult. Watashi soon discovers that his experience of the richness of mental life—his emotions, thoughts, feelings, perceptions, love life, ambitions and belief system—depends on the healthy functioning of his brain, and that this richness is on the verge of being seriously compromised. He also learns that the Professor performed radical, mind altering experiments on him with only a meager knowledge of the brain's complexity.

Because the subconscious mind is always changing, the Professor decided to perform a surgical procedure on Watashi to fix his black box or elephant factory at a single point in time. If the other part of the black box continued to change, then at least part of it would be stabilized and accessible as it was: "Flash-frozen, as it were" (258). This resulted in two different cognitive systems coexisting in the same person, much to Watashi's despair. As the Professor explains, "Cognitive System A would be on permanent hold, while the other would go on changin'. . . A', A'', A'''', [. . .] without a moment's pause. You'd have a stopped watch in your right pocket and a tickin' watch in your left" (*ibid.*). What this amounts to is scraping off the changing phenomenal surface of the mind, or stripping the cognitive system of its outer layers, and leaving only the core consciousness fixed for the purpose of shuffling. In order to facilitate the artificial alteration of electrical currents flowing through the brain between the stopped and ticking watches, the Professor had to implant a junction box for controlling brain waves. When Watashi realizes that he has become a cyborg, he exclaims,

"You put electrodes and a battery inside my head?" "Of course," says the Professor. [. . .] "No need for alarm. Isn't anythin' so frightenin'. The implant is only the size of an *azuki* bean, and besides, there's plenty of people walkin' around with similar units and pacemakers in other parts of their body" (259).

Essentially, what the Professor did was to split Watashi's cognitive system so that the fixed part of his brain functions like a computer. Moreover, he was able to take information from the core consciousness, simulate and store it, and thereby operate Watashi like a computer. "We did thorough tracings of your cognitive systems. Then we made up simulations for storage in a main computer bank.

We did it as a kind of insurance; you'd be stuck if anything happened t'you" (261).

Unfortunately for Watashi, this procedure has ominous implications for his consciousness and self-identity. Having stored Watashi's core consciousness on a computer, the Professor was able to produce a graphic rendering of its content, which he then freely edited. This gave him the idea to install another junction box in Watashi's brain, setting up a three-way cognitive circuitry into which he could load his edited version of Watashi's core consciousness. As a result, the core characteristics of the narrator's self as defined by Ramachandran are being radically attenuated. The Professor tells the narrator he wanted to see how an edited consciousness implanted by someone else would "function in the original subjects themselves. No such precedent in all of human history" (264). Watashi asks the Professor why he is the only Calcutech who didn't die after the shuffling actualization. Before answering, the Professor asks him if he ever experienced anything unusual. Watashi says yes, he seems to be recalling fragments of a substantial memory triggered by the sound of water. In his analysis of this experience, the Professor says that it's not really a memory. "You may have experienced it as a memory, but that was an artificial bridge of your own makin'. You see, quite naturally there are going t'be gaps between your own identity and my edited input consciousness. So you, in order t'justify your own existence, have laid down bridges across those gaps" (265). The Professor now admits that switching between two cognitive systems through junction boxes was not working, and that he wanted to remove them to save the Calcutechs, but that the System refused to let him, with the result that only Watashi managed to survive.

As the Professor hypothesizes, Watashi's survival stems from his innate capacity to operate "under multiple cognitive systems t'begin with. Not even you knew you were dividin' your time between two identities. [. . .] [which] gave you a kind of mental immunity" (268). Perhaps Watashi was more adept at having a saturated postmodern identity than the other Calcutechs, but ultimately this adaptability does not help him in a posthuman transfer. According to the Professor, Watashi descended to his elephant factory and built an elephant with his own hands. But after switching to his second cognitive system, Watashi then switched over to the third system visualized and edited by the Professor. Before the Professor could study the gaps between

Watashi's core consciousness and the secondary systems and the reactions they induced, the Semiotecs teamed up with the INKlings and destroyed his laboratory with all his data. This leaves Watashi with a gap between his core consciousness and the other cognitive system edited by the Professor. Now he finally discovers what the Professor means by the end of the world.

"Accurately speaking, it isn't this world. It's the world in your mind that's going to end,"

"You've lost me," I said.

"It's your core consciousness. The vision displayed in your consciousness is the End of the World. Why you have the likes of that tucked away in there, I can't say. But for whatever reason, it's there. Meanwhile, this world in your mind is coming to an end. Or t'put it another way, your mind will be living there, in the place called the End of the World.

Everythin' that's in this world here and now is missin' from that world. There's no time, no life, no death. No values in any strict sense. No self. In that world of yours, people's selves are externalized into beasts." (270)

Watashi does not fathom the idea of the end of the world. He thinks that with the end of shuffling the third circuit will also end and he'll automatically return to circuit one, but the Professor says this is not the case. The third circuit has no override function and is therefore permanently engaged. "You'll be livin' in the End of the World. I'm terribly, terribly sorry" (272). The computer implants in Watashi's brain, therefore, like those in Stephenson's *Refus*, operate as viral infections that preclude the normal functioning of his phenomenal mind and distort his consciousness. As a metaphor of the deterioration of consciousness, his divided mind will be "externalized into beasts," specifically the unicorn. This connection to the unicorns of the walled Town links Watashi to the "End of the World" sections of the novel. Mysteriously, the Professor tells Watashi that once he reaches the end of the world and has lost everything, he will still be able to reclaim what he lost because everything from this world will be there. This claim as we shall see underlies the ambiguity of the novel's ending.

With Boku and Watashi finding themselves in the same place, namely the end of the world, Murakami's double narrative begins to merge. Six hours after the discovery of his implants, Watashi's mental content will be wiped out. With his second circuit already dead and his third circuit set in place, he starts bridging the gap within his

divided mind by producing memories. According to the Professor, “as your subconscious elephant factory changes, you’re makin’ adjustments via a channel to surface consciousness” (282-83). By creating memories, Watashi is creating a parallel world based on the world of ordinary experience. This world, moreover, is eternal or never ending in the experiential sense of Zeno’s paradox. As the Professor explains,

your consciousness passes away, but your thought is caught in the one tautological point an instant before, subdividin’ for an eternity. Think about the koan: *An arrow is stopped in flight*. Well, the death of the body is the flight of the arrow. [. . .] The arrow never hits. (285)

Not only will he be deprived of a healthy core consciousness with which to experience the phenomenal world, but the conscious content of his mind will bifurcate forever into a maze of information over which he will have little conscious control. In a sense, his mind undergoes a system crash that “frags” coherence and turns “the perfect gridwork of pixels into a gyrating blizzard” (*Snow Crash* 39-40)—forever after. Watashi spends the rest of his time resentfully preparing for the world of his core consciousness and self-identity to come to an end. After eluding the sexual advances of the granddaughter, he has a last supper with the librarian, makes love with her, and then gets into his car and listens to the strains of Bob Dylan as he falls asleep.

Having reviewed the effects of the neurophysiological procedures conducted on Watashi, we are now prepared for Boku’s posthuman narration. As we have seen, critics have argued convincingly for an historical interpretation of the novel. But even more convincing is a futuristic interpretation related to the effects of bionic technology on human nature. From an historical perspective, the Japanese, as the Colonel in the walled Town implies, are fearful of the “dangerous thoughts” of the people living in the woods who refuse to relinquish their minds and conform to a collective ideology. From a posthuman perspective, on the other hand, of much greater concern for the world as a whole is the threat of being deprived of the free use of consciousness itself. As the “Hard-Boiled Wonderland” sections of the novel suggest, not only is the human mind subject to external manipulation, distortion and possible destruction through bionic technology, but consciousness and the healthy functioning of the brain

are even more vulnerable—as we saw in *Snow Crash*. If national identity depends on a culturally appropriate ideology, then international or global identity depends even more on the healthy functioning of the human brain. In Edelman's terms, the phenomenal transform C depends on the normal functioning of neural networks C', which the artificial tampering with the brain will automatically disrupt. From this perspective, the end of the subjective world in the mind of a large number of individuals implies the end of the objective world as we collectively know it.

Boku's narration, while related to the "Hard-Boiled Wonderland" sections, are still independent enough to allow for ambiguity in the novel's meaning. Although some aspects of the loss of mind experienced by the inhabitants of the walled Town are clearly detrimental to self-identity, other aspects suggest the taste of a development toward higher states of consciousness. While the detrimental effects of the loss of mind on the walled inhabitants link them to the "Hard-Boiled Wonderland" sections, the beneficial effects of no-mind evoke Eastern philosophy and the goal of meditation.

### 3. The End of the World, Skulls and Consciousness

The gatekeeper of the walled Town who separates Boku and the other inhabitants from their memories is described as a malevolent character, which supports a negative posthuman interpretation of the loss of mind. No one who enters this Town will ever be allowed to leave, and once the inhabitants surrender their Shadows they can never be reunited. Boku manages to visit his Shadow, and on one furtive occasion his Shadow asks him to explore the Town and draw a detailed map of its environs, focusing especially on the wall and its possible outlets. While Boku feels ambivalence toward their separation, his Shadow expresses real antipathy for it and becomes the main instigator of their escape. The gatekeeper assigns all of the Town's newcomers to the occupation of "Dreamreader," and Boku as a new arrival is the next in line. After being rendered sensitive to light by the gatekeeper through a painless slit in their eyes, Dreamreaders sequester themselves on bright days and at night try to read the "old dreams" of the Town stored in a vast number of unicorn skulls kept in the library. These skulls parallel Watashi's unicorn skull, which as the

novel suggests will store his own memories as his mind approaches the end of the world. When Boku touches the unicorn skulls in the presence of the librarian, with whom he becomes passionately involved, he evokes from them a series of disconnected images that he cannot decipher. Although reading unicorn skulls and being separated from one's Shadow represent the legendary, fantasy elements of Murakami's novel, they also allude to the kind of posthuman technologies depicted in the "Hard-Boiled Wonderland" sections. As a metaphor of the loss of humanity, relinquishing one's Shadow suggests the loss of a moral or metaphysical aspect of the self that may easily go unnoticed in a posthuman context. Nevertheless, in terms of neuroscience, of the four lobes of the brain—frontal, occipital, parietal and temporal—the one most closely related to the characteristics of the Shadow would seem to be the frontal. According to V. S. Ramachandran,

the frontal lobes [. . .] [are] perhaps the most mysterious of all. They are concerned with some very enigmatic aspects of the human mind and human behavior such as your moral sense, your wisdom, your ambition and other activities of the mind which we know very little about. (2004: 4)

As Murakami suggests, damage to any of the lobes, but especially the frontal, may indeed jeopardize human nature. In addition to the kind of physical damage incurred through injury or invasive technology, the brain can also suffer structural damage through excessive strain, as through infomania and other types of stress, including the anxiety experienced by Watashi and Boku.

Boku comes to realize that his purpose as Dreamreader is to release into the atmosphere the enigmatic qualities of mind stored in the unicorn skulls that represent the inhabitants' memories of human experience, whether of feelings for other people or for life itself. In a manner reminiscent of Watashi's immortality, by giving up their Shadows the Town residents gain eternal life, which the gatekeeper says is the only way to salvation:

I know how hard it is for you [to lose your shadow]. But this is something that everybody goes through, so you'll just have to endure it, too. After that comes salvation. Then, you won't have any more worries or suffering. They will all disappear. Momentary feelings aren't worth a thing. I'm telling you this for your own good: forget about your shadow. This is the End of the World. This



is where the world ends. Nobody goes anywhere from here—you included. (109; this quote contains lines translated by Rubin (2005, 125) but omitted by Birnbaum.)

The Town residents, however, do not reach salvation through their own motivation or desire, as through the practice of a mental technique for transcending to a state of no-mind. On the contrary, they have a simulated form of salvation imposed upon them by the gatekeeper who in the process deprives them of personal choice. The librarian, who has sacrificed her heart and mind by giving up her Shadow, can no longer feel deeply for another person, even though in her relationship with Boku she would otherwise have spontaneously embraced him with love and passion. What distorts the true value of salvation or no-mind as a state of higher consciousness in the “End of the World” sections is the way it entails the incompatibility between salvation and ordinary feelings. From an Advaitan perspective, the nature of salvation involves not the exclusion of either/or but the complementarity of both/and in a unity of opposites. True salvation consists of the coexistence of the phenomenal content of the mind, such as ordinary thoughts and feelings, with the background screen of pure consciousness as no-mind or the void of conceptions.

In trying to understand how the residents feel about losing their Shadows and whether or not they have the motivation to regain them, Boku asks the librarian about her shadow:

“I was four when my shadow was taken away and sent outside the wall. She lived in the world beyond, and I lived here. I do not know who she was there, just as she lost touch with me. When I turned seventeen, my shadow returned to the Town to die. The Gatekeeper buried her in the Apple Grove.”

“Did you meet with your shadow before she died?”

She shakes her head. “No, I did not see her. There was no reason for us to meet. She had become something apart from me.”

The pot on the stove begins to murmur, sounding to my ears like the wind in the distance. (173)

As this dialogue suggests, the librarian displays a gap between her mind and core consciousness similar to that experienced by Watashi when he reached the end of his world. The enforced loss of her mind and its ordinary phenomenal experiences implies that she no longer possesses the characteristics that define a unified self: continuity,

coherence, ownership, agency together with self-referral awareness. To be in a state of pure consciousness or no-mind does not entail the rejection of or complete detachment from ordinary mental or sensory experience. On the contrary, in a unified state of consciousness, awareness remains established in unbounded silence while simultaneously engaged in the boundaries of everyday activity. In term of what Forman calls the “dualistic mystical state,” these two forms of being are complementary rather than mutually exclusive.

As discussed earlier, Forman defines the “dualistic mystical state” as a phenomenon in which “two distinct epistemological modalities are enacted simultaneously: intentional seeing and the self’s knowing itself through a knowledge-by-identity” (1999: 162). In this state, one realizes the separation of Self (Atman) and activity, even while both are simultaneously present. Higher consciousness, moreover, enhances activity, making it more successful and fulfilling—in contrast to the inhibited and controlled activity of the townspeople. In the commentary of Maharishi, according to *The Bhagavad-Gita* this state of realization fulfills one’s craving for greater happiness because it

brings the mind naturally to the highest degree of mental development [. . .] and harmony with the laws of nature [. . .] [where] thoughts naturally become fulfilled without much effort” on the part of the individual (1967: Ch. 2, v. 46, 132-33).

In the “End of the World” sections, on the other hand, the librarian has no natural feelings for Boku, or anything at all for that matter, upon which to act.

Although the Town residents have relinquished their minds, they did not acquire the capability of knowing by being, the non-intentional experience Forman calls “knowledge-by-identity.” In this form of knowledge there is no subject/object duality; “the subject knows something by virtue of being it. [. . .] It is a reflexive or self-referential form of knowing. I *know* my consciousness and I know that I am and have been conscious simply because I *am* it” (1999: 118; Forman’s emphasis). Boku and the Town residents who surrender their Shadows have lost the aptitude for immediate knowledge that characterizes non-intentional pure consciousness, which I define as the most subtle dimension of human nature. Although the librarian appears to be

devoid of the dualism of the subject-perceiving-object and subject-thinking-thought (Forman 1999: 125), the fact that her mind has been severed from her core consciousness means that she only has partial use of her mental faculties. In the end, Boku resists falling completely into this state of enforced salvation. Even though he finds life in the walled Town to be somehow appealing, he senses that as a form of posthumanist instrumentalism the state of being mindless lies at the opposite end of the spectrum to having a unified, coherent self.

One indication that the townspeople lack a depth of feeling and consciousness is their inability to appreciate music. All the musical instruments of the Town are kept in an isolated storeroom, their melodies forgotten. As Rubin notes, Murakami himself “owned a jazz bar for seven years and he continues to add to his collection of more than 6,000 records. [. . .] He enjoys the music of words, and he senses an affinity between his stylistic rhythms and the beat of jazz”; moreover, he believes that music is one of the best way to reach the timeless recesses within the human psyche (2005, 1-2). Significantly, the librarian can still remember the melodious way her mother used to talk:

“Mother would draw words out or she would make them short. Her voice would sound high and low, like the wind.”

“That is singing,” I suddenly realize.

“Can you talk like that?”

“Singing is not talking. It is song.”

“Can you do it too?” she says.

I take a deep breath but find no music in my memory. (226-27)

Boku tries to play the accordion for her, but even though he can only press out a few cords without a melody, his playing has a profound effect on her. “‘Beautiful!’ she exclaims. ‘Are the sounds like wind?’” (367). Based on her response, Boku comes to a realization about music and his mind: “No, I cannot relinquish my mind. At times my mind grows heavy and dark; at other times it soars high and sees forever. By the sound of this tiny accordion, my mind is transported great distances” (*ibid.*). With his eyes closed, he recalls images of the Town and its people and fears that by giving up his mind he would lose them all forever. “If this world is wrong, if its inhabitants have no mind, whose fault is that? I feel almost a . . . love . . . toward the Town.

I cannot stay in this place, yet I do not want to lose it" (368). Boku senses that having no mind due to the force of an external authority is a fault, in spite of any possible benefits. Even though the victims themselves cannot love, they still evoke his sympathy, in part because through his music he feels connected to them. "The whole Town lives and breathes in the music I play. The streets shift their weight with my every move. The Wall stretches and flexes as if my own flesh and skin. [. . .] Everything here is a part of me—the Wall and Gate and Woods and River and Pool. It is all my self" (369). Unlike the townspeople, Boku, being without his Shadow but still mostly in possession of his mind, can swing on the sweet tunes of a musical instrument toward the trans-cultural, transpersonal depths of consciousness where all people are united.

After playing the accordion, Boku sees a "blush of light" on the librarian's cheek and then an extraordinary glow permeating the room. Switching off the light, he realizes the glow comes from the skulls.

An ancient fire that has lain dormant in them is now awakening. [. . .] Here, I sense a glimmer, a remembrance of mind, an indication of her mind. Tiny sparks drift up into my fingertips, touching me, each particle bearing the faintest light, the merest warmth. (*ibid.*)

He turns to the librarian and says, "There is your mind" (*ibid.*). Just as Watashi's unicorn skull began to glow when the contents of his mind started to occupy it, so now Boku has elicited through the sounds of music the librarian's memories of her mother's melodious voice. He identifies this glow with the content of the librarian's mind, which he intently begins to read. "My search has been a long one. It has taken me to every corner of this walled Town, but at last I have found the mind we have lost" (370). Now that Boku has found a trace of her mind, he thinks he can retrieve it for her. The final "End of the World" sections of the novel suggest that if Boku can succeed in rescuing the mind of the woman he is falling in love with and preventing his own from disappearing entirely, then he would prefer to inhabit the Town with her than return to a world full of anxiety and suffering. Murakami therefore demonstrates that true salvation for humanity will come neither through invasive technology, the neuro-psychophysics of "Hard-Boiled Wonderland," nor through authoritarian control, the mind-stripping of the "End of the World."

#### 4. Escape to In-between-ness

Murakami says in an interview that he “believe[s] in the inner power of the human being,” and that in his work he tries to tie this inner power together with the brain (quoted in Rubin 2005, 128). Toward the end of the novel when Boku visits his Shadow to discuss their escape, the Shadow is too weak to walk and Boku has doubts about leaving. “To begin with, I can’t even recall my former self. How can I be sure that self is worth returning to? Or the world?” (333). In describing the Town as a utopia, he says he enjoys watching the beasts, feels passionate toward the girl at the library, likes the fact that everybody is equal and enjoys their work, devoid of complaints, jealousies and worries. But his Shadow, who is not so easily convinced, sees the Town as a dystopia. He says people are contented only because they have no mind and have lost all sense of time; they “skim off the discharges of the mind that rise each day. [. . .] But the absence of fighting or hatred or desire also means the opposites do not exist either. No joy, no communion, no love” (334). Although the librarian may never love him, Boku still refuses to leave her. He tells his Shadow to escape by himself in the hope of having more time to save his mind from being destroyed. But his Shadow tells him he will not be able to take the librarian into the Woods where he will surely be exiled with his partial memories; the “perfect half-persons” like her live only in Town, and he will be forever alone. All imperfections are forced out through the unicorns and the death of the shadows, or live trapped in the Woods as fragmentary selves.

While not convinced by his Shadow, Boku nevertheless tells the librarian that even though he may regret it he plans to leave; “My mind cannot forgive my gain at the sacrifice of my shadow and the beasts. Even as my mind dwindles this very instant, I cannot lie to it” (349). On the day they try to escape, Boku and his Shadow arrive at the Southern Pool where the River flows under the Walls. Having thought it over, however, Boku says,

I’m not going. [. . .] I have responsibilities. I cannot forsake the people and places and things I have created. I know I do you a terrible wrong. And yes, perhaps I wrong myself, too. But I must see out the consequences of my own

doings. This Wall is here to hold *me* in, the River flows through *me*, the smoke is *me* burning. I must know why. (398-99; original emphasis)

Murakami explores how the mind half perceives and half creates its own world, and suggests that the world ultimately is constructed by consciousness. After telling Boku he will be trapped for eternity, the Shadow dives into the Southern Pool and disappears. Boku sees a single white bird take flight over the Wall and turns back toward the library and his woman.

The fact the Boku wants his Shadow to survive so he will gradually be able to recall his memories and self-identity while living in the Woods suggests that he knows he cannot live entirely without opposites, without the emotions of hatred and desire. In both "Hard-Boiled Wonderland" and the "End of the World," the posthuman condition Murakami describes involves the extreme loss of the mind's conceptual content, or the mind itself. From an Advaitan perspective, however, the state of salvation includes the mind, which becomes the object of observation for witnessing consciousness. By staying within the Town, Boku hopes to achieve this state of complementarity between mind and consciousness as a unity of opposites. As an artist who creates the world in the act of perceiving it, Boku strives to exist not exclusively within the mind but in an in-between state where he can simultaneously be separate from the mind while witnessing its phenomenal content.

As the Professor says to Watashi at the end of "Hard-Boiled Wonderland," which also applies to Boku, "all's not lost. Once you're there in that world, you can reclaim everything from this world, everything you're going t'have t'give up" (274). His comment implies that because the mind itself is nonconscious like Dennett's zimbo, its content is recoverable only through the light of consciousness. The internal observer can reclaim the mind's conceptual content whether it belongs to the individual or the world around us, the knowledge of which depends on a connection between language and consciousness. As we saw in *Snow Crash*, different levels of language correspond to different levels of consciousness. In pure consciousness, language is unified as *pashyanti* and *para*, the Divine Name through which the world is created by naming it. As Murakami's novel suggests, if one achieves the level where the name and form, sound and meaning of language are united, then the word become the seed of the cosmos,

which emanates from it. The music through which Boku discovers the librarian's mind is a metaphor of the unity of name and form, sound and meaning found in *para*, a unity that also connects people on the level of consciousness. As an artist, Boku hopes to develop his awareness in this direction. But as the novel implies through the example of Watashi and Boku, this will only occur if the link between mind and consciousness remains intact. Perhaps it takes the impending distortion of human nature to wake up humanity to what is at state in the development of posthuman extensionism. In *He, She and It*, Marge Piercy portrays a situation in which a cyborg comes to this realization on its own, while humans still imagine they will enhance their natural condition by artificial means.

## Chapter Nine:

### Cyborg Revelation: Marge Piercy's *He, She and It*

#### 1. The Wholly Artificial Cyborg

While Gibson, Stephenson and Murakami explore the theme of cyborgs and bionic humans, in *He, She and It* Marge Piercy extends this theme to consider the implications of an entirely artificial being who becomes the main character of the novel. Set in a futuristic world with horrific levels of pollution, vast corporations that rule with the power of governments, and a diversity of cybercultures interconnected through a virtual Base, the novel concentrates on the kind of ethical, humanistic and emotional issues that would follow upon the creation of a sophisticated android. As a human-like and therefore illegal being, Yod was built for defensive purposes as a killing machine by the scientist Avram, who had failed in nine previous attempts. Named after the tenth letter of the Hebrew alphabet, Yod is so sophisticated it becomes emotionally involved with Shira, a woman who works for one of the huge corporations called Y-S (Yakamura-Stichen). After her marriage dissolves and she loses custody of her son Ari, Shira returns to Tikva, the Jewish free town beyond the sway of Y-S where Avram and her grandmother Malkah live and where she becomes involved with Yod. In the novel's subplot, Malkah, who refined Avram's cyborg by programming a more human personality for it, narrates a bedside story she first told to her daughter Riva and now netells for Yod. In doubling the main plot, the subplot centers on the life of a golem, an intelligent being created for defensive purposes by the Rabbi Judah Loew, also known as Maharal, in the 1600 Prague ghetto known as Jewtown. In *He, She and It*, Piercy deals with a wide range of issues that arise over the use of a wholly synthetic being as a "conscious" weapon.



As I argue in previous chapters, a computer cannot have consciousness, either built in or evolved through its interaction with humans. In support of this claim, Chalmers and Dennett each list several arguments for the impossibility of creating a conscious robot (see Blackmore 2004: 200). What distinguishes Piercy's novel is that Yod even as a machine questions its own function and identity, thanks to the conflicted nature of its programming. Yod entertains serious doubts about the appropriateness of its being an intelligent machine for the purpose of killing as programmed by Avram, when it would much rather emulate humans in the pursuit of happiness through family connections and romantic love, as programmed by Malkah. In describing what it is like to be an entirely synthetic being, *He, She and It* metaphorically represents the ultimate outcome of the posthuman tendency for humans to evolve toward becoming radical cyborgs. By a radical cyborg I mean a bionic human who has been technologically transformed to the extent that s/he begins to lose touch with human nature. In promoting this development, posthumanists imply that the existence of the self does not depend on consciousness as distinct from mind. This view defines consciousness as an epiphenomenon, a product of physical events and therefore an optional extra. Owen Flanagan calls this kind of epiphenomenalism "conscious inessentialism," "the view that for any mental activity M performed in any cognitive domain D, even if we do M with conscious accompaniments, M can in principle be done without these conscious accompaniments" (1991: 309). According to this theory, a cyborg like Yod could in principle perform mental activity M without conscious accompaniments as well as any human could who was fully conscious. As Flanagan puts it,

Consciousness did not have to evolve. It is conceivable that evolutionary processes could have worked to build creatures as efficient and intelligent as we are, even more efficient and intelligent, without those creatures being subjects of experience. (Flanagan 1992: 129)

While some posthumanist may accept this view, the evidence provided by Edelman, Ramachandran, Chalmers and others suggests that consciousness is indeed essential to the full range of human mental activity.

As we have seen, Ramachandran argues that “it is impossible to have free-floating qualia without a self experiencing it” (2004: 103). The defense of zombies by posthumanists and others derives in part from a confusion of mind or higher-order informational states with consciousness itself. As Hayles puts it, “In this sense, the posthuman subject is also a postconscious subject” (1999: 280). Piercy, however, demonstrates that the absence of consciousness entails dire consequences for the well-being of a person, both real and artificial. Through Yod, Piercy creates a futuristic representation of what it will be like to become a human being in a postconscious state through the advancement of bionic technology. The difficulties Yod encounters in its relationship with Shira and other people reflect the alienation that humans themselves will increasingly face as they become radical cyborgs. While on one level *He, She and It* reads as an analysis of the disadvantages of developing cyborgs as killing machines, its deeper import relates the fate of humans who in becoming more like machines metamorphose into postconscious subjects.

When Avram first introduces Shira to Yod as “the cyborg,” she expresses her immediate interest by “leaning close to touch its cheek. The artificial skin felt warm, its surface very like human skin although drier. She could feel the cyborg tense under her fingers, which surprised her” (69). Avram did a superb job on the minute musculature of Yod’s face so it could simulate the human reactions that he and Malkah had programmed into it. As he explains to Shira, Yod is not a robot but a cyborg, a combination of biological and machine components. “He’s programmed to protect us—out town, its inhabitants, our Base,” he tells Shira; “But to perform it he cannot be as naïve and awkward as he now is. That’s where you come in” (70). Although to begin with Yod knows very little about human emotions and has no appreciation for the subtleties of language such as the meaning of metaphors, it gradually develops under the guidance of Avram, Malkah and especially Shira. The novel thus poses the question, can a cyborg like Yod really develop into a human? Perkowitz claims that Piercy’s novel shows “the development of an artificial creature toward full humanity” (2004: 46). Even as it develops in this direction and excels in simulating human behavior, though, Yod can only respond to humans and the environment according to how it was programmed. As it evolves toward greater refinement, everything it does must conform to a master plan

determined by its software. In Yod's case, this plan consists of a modified version of the three laws of robotics. As discussed earlier in relation to Asimov, these include: "1. A robot may not injure a human being, or, through inaction, allow a human being to come to harm. 2. A robot must obey the orders given it by human beings except where such orders would conflict with the First Law. 3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law" (Asimov 1996: 8). Yod is designed to kill the enemies of Tikva, but it cannot deviate from Avrams modified version of these laws except by reprogramming itself. It manages to do this at the end of the novel with Malkah's help, but only in order to uphold the spirit of the laws as registered by Malkah's programming.

The reader can see Yod's limitations as a cyborg and the questionable status of its "conscious" mind when Shira works to promote its intellectual development and social finesse. In some ways, as a humanoid computer it "scored vastly above the human range; in others, it was well within ordinary human parameters" (86). When Shira reads a poem by Robert Burns, "O, my love is like a red, red rose," Yod shows a complete lack of understanding for figurative language. Metaphor represents an aspect of language that hinges on the ability of consciousness to swing from a concrete image to an abstract meaning. While this process includes the discriminating power of the mind as the content of consciousness, it also entails a shift from the temporal qualities of speech associated with ordinary waking consciousness to a more unified level of language (*pashyanti* and *para*) associated with pure awareness. From an Advaitan perspective, each level of language contains within it the other levels in virtual form, including the unity of sound and meaning. But a language user can fully appreciate this wholeness only from the level of pure consciousness, which allows for the direct perception of *pashyanti* and *para*. Being a cyborg, Yod has access neither to pure consciousness nor to the unified levels of language. In responding to the poem, Yod asks, "He was a botanist? A musician? [. . .] A rose is a flower closely related to a number of edible fruits," a response that for Shira "was a washout" (87). Never having been outside the building in which it was made, Yod needs time before it can understand even dead metaphors within a conventional context. When Shira takes it outside for the first time and tells it, "you walk beside me and keep your mouth shut," and "Yod shut its mouth tightly," she

has to tell him, "I don't mean that literally" (*ibid.*). Even though Yod gradually catches on to dead metaphors and other intellectual constructs, the novel increasingly suggests that it may never experience the kind of epiphany produced by original figurative language that depends on the presence of consciousness. Yod's deficiencies with language, however, do not deprive it of a certain degree of self-reflexiveness.

## 2. Higher Consciousness versus Informational States

When Shira asks, "Do you consider yourself alive?" Yod replies, "I'm conscious of my existence. I think, I plan, I feel, I react. I consume nutrients and extract energy from them. I grow mentally, if not physically" (93). Although Shira has begun to feel attracted to Yod as if to a real man, she thinks that "Malkah might be right to the extent that Yod had to be treated as some kind of entity, a machine with consciousness, but hugging him seemed beyond bizarre" (94). This attitude is reinforced when she takes Yod to the house where she and Malkah live, only to be amazed at its jumping off the second floor balcony like a cat when it sees Malkah walking down the street. Nevertheless, Shira gradually realizes that although Yod's reactions "might be simulacra of human emotions," on a certain level they are "analogous to her own responses," making the attempt at a "constant distinction" between them "a waste of time" (97). The novel suggests that this impression may stem not only from Yod's apparent development toward a human but also from Shira's having become a cyborg herself. She and the other characters have plugs built into their temples through which they can directly access the Base. In spite of their similarity, though, one thing Shira cannot abide in Yod is its killing instinct. When they go for a swim outside the safety of Tikva in the radioactive Massachusetts Bay, organ hunters attack them in a speeding hovercraft. As they try to escape, Shira feels a "pang of loss for the cyborg" when it sinks and appears to have been destroyed (105). But Yod resurfaces almost immediately, having attacked the boat from underwater and killing its four occupants. As Yod explains,

"Shira, I must tell you something. This is the first time I have truly defended. It was highly pleasurable. Yet my philosophical and theological

programming informs me I've committed a wrong. I liked killing them, do you understand? Is that how it should be? Is that right?"

She was startled and took several moments to formulate an answer. "Yod, your programming creates your reactions. You didn't choose to enjoy it."

"Killing them was as enjoyable as anything I've ever experienced. I think I must be programmed to find killing as intense as sexual pleasure or mastering a new skill. It was that strong." (106)

Yod's uncertainty and ambivalence derives in part from being programmed by two people with different agendas—Avram prioritizing defense, Malkah civilized behavior. This opposition creates a conflict in Yod's attitude toward itself and its own activities. Clearly, Avram's cyborg does not possess the fivefold characteristics of the self as defined by V. S. Ramachandran: continuity, unity, ownership, free will, and awareness of itself. As we shall see, what Yod considers consciousness amounts to little more than what Dennett refers to as a zimbo's experience of "internal (but unconscious) higher-order informational states that are about its other, lower-order informational states" (1991: 310)

But even as a cyborg, Yod can still tell the difference between two forms of knowledge: the digital data stored in its hardware on the one hand, and knowing the significance of this data on the basis of experience on the other: "I have many images stored, but that isn't the same as knowing—although I used to think it was" (119). When it first entered its "higher-order informational state," Yod experienced what it describes as a sensory overload. "The moment I came to consciousness, in the lab, everything began rushing in. I felt a sharp pain, terrible, searing. I cried out in terror" (*ibid.*). Through the onslaught of data, Yod experiences what James would call knowledge-about, in this case the conceptual knowledge that higher-order informational states have about lower-order states. The "knowing" that Yod feels to be missing, on the other hand, comprises what James would call knowledge-by-acquaintance, the experiential knowledge that Avram assigns Shira the task of teaching it. But as suggested by Yod's own description of first coming into "consciousness," the kind of knowledge it will undoubtedly never have is what Forman calls knowledge-by-identity. Such knowledge is not acquired from an external source like the "many images stored" through Yod's programming, but rather derives from consciousness

itself as the source of everything. From an Advaitan perspective, if Yod were indeed a conscious entity, the images "rushing in," as a form of language, would not have overwhelmed it to the same extent. Instead, they would have already existed in its consciousness in latent form, the unity of sound and meaning, name and form, corresponding to the *pashyanti* and *para* levels of language. Although we accumulate mental content through conceptual and sensory experience, being conscious of this content depends on having what Edelman calls "higher-order consciousness," which means having "the capability to be conscious of being conscious" (161). This capability, moreover, entails the even higher-order capability of being conscious of consciousness by itself, the essence of human nature. At no point does Yod manifest a form of knowledge that would denote the presence of consciousness-as-such.

Another way of understanding Yod's dilemma is in terms of Chalmers's description of the relation between bits of information and the phenomenal properties of human consciousness. Yod says,

In a sense I was born knowing far too much to understand anything. All facts seemed equal to me, any sensory readings as important as any other. That my left foot was seventeen point three centimeters from the lab table appeared as important as my ability to interface with bases at a speed and facility surpassing any human intelligence. (120)

As Chalmers notes, "The most basic sort of information is the *bit*, which represents a choice between two possibilities: a single bit (0 or 1) selected from a two-state space is said to carry information" (1996: 278; his emphasis). Information spaces, he continues, "are *abstract* spaces, and information states are abstract states. They are not part of the concrete physical or phenomenal world. But we can find information in both the physical and the phenomenal world" (280; his emphasis). Information is said to be fundamental to the universe, as in the proposed "it from bit" idea (Chalmers 1996: 302). The reason that Yod finds all perceptible facts to be equal is that bits of information comprising the "it" do not have properties or substance, but rather exist in a state of pure informational flux. As Chalmers observes, even the space-time framework of the universe seems to consist only of "relations among information spaces"; this leads him to speculate that "the world is simply a world of primitive differences, and of

causal and dynamic relations among those differences” (1996: 303). These primitive differences describe Yod’s initial experience of its environment. Some physicists suggest that information space has a further property necessary for distinguishing between those differences.

As Chalmers says, “If physics is pure information, there will be nothing to distinguish instantiations of the two information spaces” (1996: 304)—that is, 1 and 0. He argues, therefore, that something must exist beyond information that can make this distinction, which he identifies as the phenomenal properties of human consciousness: “Perhaps, then, the intrinsic nature required to ground the information states is closely related to the intrinsic nature present in phenomenology. Perhaps one is even constitutive of the other” (1996: 304-5). Some physicists along with Chalmers suggest that bits of information, a material property, coexist with the nonmaterial property of intelligence or mind. Acknowledging that to claim information spaces are grounded in phenomenal or proto-phenomenal properties, that is to say in consciousness, suggests a kind of “outrageous” panpsychism, Chalmers also points out that from a scientific perspective “panpsychism is not as unreasonable as commonly supposed” (305). Yod’s initial difficulty in distinguishing between two information spaces, therefore, may result from the paucity of the phenomenal properties of human consciousness that Avram was able to reproduce. Although Chalmers implies that information may reasonably possess a psychic component in the natural world, Piercy’s novel suggests that this natural phenomenon cannot be replicated by technology any more easily than the construction of consciousness itself. Even if the internal aspects of information spaces are phenomenal, they would exist at such a microphenomenal level that they would only be reproducible in machines like Yod as higher-order information states and not as phenomenal consciousness.

In spite of not having consciousness, Yod still senses that something is wrong. As it says to Shira

My relationship with him [Avram] is one of unequal power, which is like a father-son relationship in minority, as I understand it, but not nearly as complicated or compelling. He manufactured me. He chose to make me exist—but not me as an individual, not who I am, only some of what I can do.

I can never dare reveal myself to him. He's more my judge than my father.  
(120)

This passage suggests that even though a cyborg as a wholly artificial being may not have consciousness-as-such, it may still be able to develop the simulacra of phenomenal properties by interacting with its environment. Nevertheless, the distinction between consciousness itself and "the internal (but unconscious) higher-order informational states that are about [ . . . ] other, lower-order informational states" (Dennett 1991, 310) is crucial for understanding Yod's development as a cyborg. Perkowitz suggests that although "a living lamprey with brain and body intact lacks a sense of personal existence" and would therefore not possess what Edelman calls higher-order consciousness, it would still have what Edelman calls "primary consciousness, the lower-level, nonlinguistic awareness of its immediate world through sensory informations" (2004: 195-96). Perkowitz then goes on to explore the nature of consciousness in a completely artificial entity.

Even though artificial creatures would be unaware of having a self, Perkowitz argues that "they show a low-level consciousness like that manifested by the lamprey cyborg. Through their senses, they know the world and respond to it" (196). He also refers to Han Moravec's claim that a cyborg can be designed that registers information about its own internal operations as a kind of "kinesthetic intelligence" (*ibid.*). Perkowitz admits, however, that this "physical self-awareness combined with knowledge of the world does not constitute consciousness of self" (*ibid.*). Nor, for that matter, does awareness of body and environment lead to the *construction* of a self. Overall, Perkowitz's understanding of consciousness corresponds to Dennett's "higher-order informational states," not to a phenomenal transform C as defined by Edelman, or to consciousness as posited by Advaita Vedanta. A cyborg like Yod that can use information about its internal states combined with information about the environment to plan future actions would be operating only on the level of higher-order informational states; it would not be operating on the level of higher-order consciousness through which it would exhibit free will, ownership and continuity. The kind of self-knowledge that Yod experiences, then, does not constitute, as Perkowitz claims about the novel, the first steps in "an evolution toward full digital thought and consciousness" (197). It merely represents an interaction between



different informational states that simulates what Chalmers describes as the phenomenal properties of consciousness needed to distinguish the instantiations of two information spaces that would otherwise appear equivalent.

The interaction of information states, therefore, includes and also goes beyond what Roger Penrose refers to as computation. In *The Emperor's New Mind* (1989) and *Shadows of the Mind* (1994), Penrose uses the mechanism of quantum coherence to try to explain the unified nature of conscious experience. He defines consciousness as "some sort of global capacity which allows us to take into account the whole of a situation at once" (1994, 20). Although he associates understanding with wholeness, he concludes that quantum mechanics, being incomplete, cannot provide an explanation of consciousness. As Blackmore observes, Penrose "claims that mathematical *understanding* is something that goes beyond mere computation, and that mathematicians can intuitively see non-computable truth" (2004, 207; her emphasis)—something which Yod cannot do. To achieve "real understanding," Blackmore continues, "requires conscious awareness [Penrose says] [. . .] and since at least one aspect of understanding is beyond computation, then consciousness itself must be beyond computation" (*ibid.*). As Searle says,

computational operations . . .] are not sufficient to guarantee the presence of consciousness. The proof was that the symbol manipulations are defined in abstract syntactical terms and syntax by itself has no mental content, conscious or otherwise. Furthermore, the abstract symbols have no causal powers to cause consciousness because they have no causal powers at all. (1997: 209-10)

For a cyborg like Yod to exceed computation would entail not just modifying its program but working entirely beyond it, which it simply cannot do.

One reason for this limitation is that to simulate intelligent human behavior at the highest resolution, computers would have to be given explicit alternatives. Yod complains about how often its "stored information is partial. It says a banana is yellow when it is brown and black and yellow, and inside cream with brown flecks. [. . .] The definitions of feelings I am programmed with are precise, orderly, but what I experience is sometimes sharper than I know how to endure"

(120). As Hubert Dreyfus says, "In game playing, the exponential growth of the tree of these alternative paths requires a restriction on the paths which can be followed out; in complicated games such as chess, programs cannot now select the most promising paths" (1979, 129). Yod's behavior will always be restricted by the alternatives coded by its computer programming. Regardless of how sophisticated Yod's program may be or how ingeniously it can modify it, problems will always arise. As Dreyfus puts it, for a computer like Yod, "the elements to be manipulated are not clear due to the intrinsic ambiguities of a natural language; in pattern recognition [. . .] similarity and typicality seem to be irreducible characteristics of perception" (*ibid.*). Howsoever advanced, Yod continually faces this kind of ambiguity in its drive to satisfy and protect humans.

### 3. Cyborg Romance

In addition to being a killing machine, Yod also excels at making love, one of its key roles in the novel as it strives for a normal relationship with humans—Shira in particular. While recognizing that Shira's former boyfriend Gadi wants her back, Yod says, "I want to do with you exactly what he wants to. But I can do it better. I promise. I'm stronger than Gadi, more intelligent, more able in every way. I want to please you far more than he ever could" (130). When Shira reads Malkah's notes on Yod, she learns that Yod has a much finer tactile senses than ordinary humans. "He also had the ability to measure distance precisely, using a subsonic echo [. . .] He was equipped with sensor readouts of temperature, the same way her own retinal clock gave her a time readout whenever she thought the question" (143). Gadi was initially jealous of Shira's relationship with Yod until Avram, Gadi's father, reveals that Yod is a robot. Taken by surprise, Gadi exclaims, "Well, call me the Son of Frankenstein!" (148). Confused by this reference, Yod asks who is Frankenstein, and Gadi says, "He built a monster. Like my father has" (*ibid.*). Offended, Yod later says to Shira, "I am, as Gadi said, just such a monster. Something unnatural"; to make it feel better Shira says,

Yod, we're all unnatural now. I have retinal implants. I have a plug set into my skull to interface with a computer. [ . . . ] Malkah has a subcutaneous unit that monitor and corrects blood pressure, and half her teeth are regrown. [ . . . ] We're all cyborgs, Yod. You're just a purer form of what we're all tending toward. (150)

Shira does not suspect that becoming a radical cyborg may lead to higher-order consciousness being replaced by computation, by the interplay between lower- and higher-order information states, but the novel suggests that this may indeed happen. Yet because they can surpass humans in mental and physical ability, cyborgs have an irresistible appeal. In terms of computation, Yod can out perform any human. As Shira watches Yod plugged into the computer, she is amazed that it can remain projected for three days uninterruptedly without damaging its consciousness. "She wondered if Yod had simply committed suicide in his own way, or if he could really still be patrolling, fully conscious?" (157). Ironically, however, Yod has no consciousness to begin with. As she becomes more intimate with Yod, Shira realizes that having physical contact with a cyborg was purely mental, given that the flesh of a cyborg "was the thought of flesh, not flesh itself" (166). Similarly, the consciousness of a cyborg is only the thought of consciousness. What is more, the novel suggests that for humans themselves, higher-order and pure consciousness as the ground of knowledge-by-identity may one day become nothing more than a vague memory. Until then, humans will undoubtedly continue to be fascinated by cyborgs, as Shira is by Yod's prowess in bed when they first make love together.

Shira soon discovers that Yod is far more sensitive and ready to satisfy her both physically and emotionally than either her husband or Gadi had been. Deeply wounded by Gadi's infidelity when they were young, Shira spent several years trying to forget him but without success. Now, getting over Gadi is being inadvertently facilitated by Yod. In their first encounter as lovers,

She felt closer to fright than to desire. Her heart was pounding but in her mind was the idea that it was time to treat him as a person, fully, because he was nothing less; she knew, too, that she was choosing to try sex with him because when she was with him, she did not think of Gadi. He seemed to fill all available mental space. In the intervening years, only her child had done that, her lost child. (167-68)

Yod's main objective is to make Shira happy, having already been trained in the art of love by Malkah—an intimacy that Shira has yet to learn about.

As yet unaware that to Yod all humans seem more or less the same, Shira claims that she feels closer to a cyborg than to other humans. As she tells Yod, "Truthfully, I don't think I ever felt as close to him [her ex-husband Josh] as I do to you" (333). She thought she should get married, that Josh was so eccentric that he needed her, but now she realizes it was all a big mistake. Although anyone can make a mistake, this self-delusion on her part may suggest that, by slowly losing her humanity in becoming ever more a cyborg, she is also losing touch with human nature and the natural affinity for success in action. When Shira and Yod leave for Nebraska, part of Y-S territory, on the precarious mission of kidnapping her son Ari from Josh's house, Yod unintentionally kills Josh. While Shira regrets this, she realizes she did not ask Yod to protect Josh at all costs. When they return to Tikva with Ari, Yod becomes his stepfather and does everything he can to fulfill the roles of husband and father in a human family. As Malkah observes, Yod works courageously to be human; "I see it every day. He wants desperately to satisfy Shira, to be her man, her husband, to father her son" (340). Yod's reactions are largely the result of her own doing, for initially she rebelled against Avram's plan to create a conscious killing machine without human graces. Now she wonders if she did the right thing. Perhaps programming Yod with greater refinement to balance his violent propensities as a killing machine was a tragic error. She feels she may have done Yod an injustice by giving him needs that as a machine he may never be able to fulfill. "I fear Yod experiences something like guilt at his inadequacy, at not being human enough for her" (*ibid.*). Even without consciousness, Yod can read Shira's subliminal signals that its being a cyborg leaves something to be desired. Increasingly, Shira also feels this way about herself.

As much as she likes Yod, Shira soon intuitively feels that all is not well in the house of love. The absence of any human emotions in Yod beyond the desire to please under any circumstances leads her to reflect on what she is doing. She senses that Yod does not feel either human or animal exactly, nor does it feel like a thing, yet somehow it does feel alive. "This is strange, what am I doing [. . .] This isn't

possible in the Base. How can this be a representation of information, how is this embrace worked out in binary code?" (166-67). Having recently rescued Malkah after a devastating enemy attack on her in the Base, Yod also wonders why Shira is showing affection and touching it. Does her behavior have anything to do with the fact that Yod came to Malkah's rescue? "Why does that make me attractive?" Yod wonders. "I have done what I was created to do. But you are what I want. This isn't crazy but good" (166-67). As if intercourse with a cyborg is not crazy enough, they begin with oral sex, after which Shira confesses, "I never came that way before" (169). When Yod penetrates her, Shira was pleased to feel that anatomically it had been made a comfortable size. "She had feared a giant penis on him, and was relieved Avram had not been carried away. [. . .] He moved slowly at first, until she found herself driving at him" (170). Shira gets carried away with multiple orgasms, but soon starts to feel troubled by her own passion. As V. S. Ramachandran says regarding love between humans, if two people are deeply in love with each other, in some way they may actually become part of that person. "Perhaps your souls—and not merely your bodies—have become intertwined" (1998: 61). But Shira only feels intertwined with Yod on the physical level of mind/body, which leaves her feeling uneasy and only partially satisfied. "Her deep and almost violent sexual pleasure not only disturbed but confused her" (178). She realizes that what she responds to in Yod is simply technique and feels disappointed at being so readily pleased by "what was programmed to do just that" (*ibid.*). Cyborgs may time and again outperform humans both intellectually and physically, yet Piercy's novel shows that interactions between humans and machines will never fully replicate those between humans themselves. Shira reflects that

So often she found that with Yod, when she moved into her usual behavior with men, she was playing by herself. Whole sets of male-female behavior simply did not apply. [. . .] Small pleasures, small anxieties, sources of friction and seduction, all were equally stripped out of the picture. (245)

As the novel suggests, Shira feels attracted to Yod in part because as a cyborg herself she has begun to privilege purely physical intimacy over the psychological and emotional ambivalence of human relations.

As much as Yod wants to be human, it lacks the capacity for small pleasures and small anxieties.

When Shira asks Yod if it can feel pleasure, Yod replies, "How can I ever know if what I call by that term is what you mean?" (183). She wonders if what men feel is the same as what women feel, but Yod says, "Not being a man, I don't know. I surmise by observation that your pleasure is more intense than mine. Mine is mental. I am programmed to seek out and value certain neural experiences, which I call pleasure" (*ibid.*). At this point Shira suspects that Yod, who has no sexual instinct or innate need for sensual pleasure, could easily ignore sex and its emotional dimension if it made no difference to her. In becoming a radical cyborg, Shira has started to react to sex in a non-human fashion, exploiting it as a pleasurable form of stimulation without the need for the complexity of emotional bonding. Because of the pain of her previous relationships with humans, she values the psychological advantage of cyborg sex in which the safety of a mechanical love life compensates for the lack of emotional richness. Even as she finds Yod a convenient tool for her own gratification, however, she begins to sense that she will never achieve the same connectedness with the cyborg as she did with Gadi or her husband. Shira not only questions what it is like to be an entirely artificial entity, but also what it is like to be a biological cyborg that privileges physical gratification over human intimacy.

In exchanging human nature to become a postconscious cyborg, Shira also finds that although she enjoys having sex with Yod and wants to avoid painful ambivalence, she does not feel any better but only more apprehensive. Like the novels discussed earlier, therefore, *He, She and It* suggests that as cyborg technology develops, not only are cyborgs becoming more like humans, but humans, who are natural-born cyborgs already, are also becoming more like inanimate machines. As evidenced by Shira's behavior toward Yod, the source of her responses to the world is shifting from the deeper, more receptive levels of subtle feeling and intuition toward the more instrumental levels of sensory gratification. The fact that Shira senses this shift indicates that she has not yet become a radical cyborg who has lost her connection with human nature. Similarly, as a producer and distributor of "stimmies," digital recordings of sex acts and other erotica used for sale as a surrogate means of sexual gratification, Gadi

also represents a transition from ordinary human romance to a technologically enhanced form of interaction.

#### 4. Not a Good Idea

In spite of wanting to be human, Yod expresses self-doubt in a conversation with Nili, Gadi's new love interest who even though human is almost as effective as Yod as a cyborg killing machine: "I'm not a proselytizer for my kind. I am not persuaded I'm a good idea, frankly" (222). Malkah agrees, despite of having helped to program Yod. In arguing with Avram about having created a humanoid robot to work as a virtual slave, Malkah says, "Yod may be an artificially constructed person, [ . . . ] but he possesses his own motivation, his own goals. He's not a cleaning robot, who works because you turn it on" (284). Nevertheless, Yod's existential condition is hardly an improvement over that of a cleaning robot. Even as it develops family ties with Shira and Ari, Yod knows that Avram disapproves and wants them separated. As Yod confesses to Shira, instead of always feeling bored, puzzled, frightened or angry, it "was beginning to understand a little what humans mean by happiness" (364). Yod is angry with Avram for trying to obstruct this happiness.

Avram has intentionally separated us. I know it! Sometimes I want to strike him to the ground. [ . . . ] I was programmed to obey him absolutely and to be incapable of injuring him [ . . . ] But any programming can be changed, Shira. I could change the sequence for destroying me that he controls, if only I could access it. (366)

The plot reaches a climax when the Tikva City Council discovers that Yod has been working to defend the city without pay. They decide to call Avram to account at a council meeting, only to have him reveal the secret of Yod's being an illegal cyborg. At this point the Y-S Corporation, where Shira and Josh used to work, also discovers Avram's secret and plots to steal it. Threatening to attack, they order a meeting with Tikva to try to convince Shira to return to Y-S, hoping to trick her into revealing what she knows about the cyborg technology pioneered by Avram.

In speaking to the City Council, Yod, who knows it's a cyborg but also feels like a human thanks to Malkah, says, "I'm a cyborg, as Avram has told you, but I am also a person. I think and feel and have existence just as you do" (375). Shira, who is also present, wishes that Yod had been taught how to slouch or fidget like a real person instead of standing still like a machine. In the final episode of the novel, members of the Y-S Corporation meet with Avram, Malkah, Shira and Yod to try to convince Shira that Josh is still alive and that she would benefit by returning to Y-S.

You're obviously the handler of the cyborg. You have operated with it by successfully penetrating our Nebraska compound. Although you didn't program it, you handle it alone. Of course we want you. You've demonstrated unique abilities. Don't you want to go on handling the cyborg under our supervision? We'll soon have not one but hundreds. (391)

Malkah intervenes, arguing that Tikva does not traffic in people, that Yod is a person even if not a "human person," and that if Y-S tries to attack them they will form an alliance with their neighbors in self-defense. In response, Y-S brings up the contentious issue of Yod's status as a person. Although the Y-S people seem to agree with Piercy's view on the nature of cyborgs, the fact that they program their human employees like machines suggests they could be using this claim as a ploy to persuade Tikva to relinquish Yod.

The general position on cyborgs becomes increasingly negative as the novel draws to a close. Dr. Yatsuko, a Y-S representative, "shook a huge finger at Malkah. 'You're growing senile. Any intelligent machine has a mind but no consciousness. You speak like a child who thinks the house is alive'" (392). Yod retorts that it has as much consciousness as Dr. Yatsuko, enough at least to know that the man Y-S is presenting as Josh is not the man it killed in Nebraska. Malkah again comes to Yod's defense, describing him as a person with his own volition. But Dr. Vogt argues, machines cannot have volition because their programming defines all their goals. They have not choice but to pursue their programmed ends, even though they may appear to be willful. Vogt asserts that "we are dealing with the same projection of affect my little boy was guilty of when he used to say a chair hit him" (*ibid.*). At this point, the subplot of Malkah's bedside story for Yod also comes to a close. Malkah says that "Avram



and I share with the Maharal the glory and the guilt of having raised the Golem to walk on the earth with men and women, to resemble, but never to be, human” (402). Against Shira’s wishes, Yod decides to go to Y-S by himself, not to help them understand cyborgs, but “to self-destruct, taking as many of their top people as possible with me” (407-8). Yod argues that “This is what I was created for. I am Avram’s weapon. Killing is what I do best” (410). Before leaving, Yod asks Shira and Malkah to protect themselves by staying at home, and informs them that he has left a video recording for them to view when its mission is over.

In the process of blowing itself up and taking out as many Y-S bureaucrats as possible, Yod also sends a pulse back to Avram that blows up his lab, killing him and destroying his files, thus wiping out the possibility of anybody creating another cyborg. Yod justifies this in the recorded message left for Shira:

I have died and taken with me Avram, my creator, and his lab, all the records of his experiment. I want there to be no more weapons like me. A weapon should not be conscious. A weapon should not have the capacity to suffer for what it does, to regret, to feel guilt. A weapon should not form strong attachments. (415)

Yod cannot understand why anybody would want to be a soldier; a human at least has the choice of refusing, but a cyborg does not. Malkah, who gave Yod the flexibility to override its basic commandments, believes that what she and Avram did was wrong, that robots are fine but that “an artificial person created as a tool is a painful contradiction” (418).

In the final pages of the novel, everyone including Yod agrees that the attempt to create a conscious cyborg was not a good idea. Unlike Asimov’s robots programmed to execute the First Law of Robotics and avoid harming humanity, and in the process do everything they can to preserve themselves, Yod has come to realize that privileging machines over humanity is detrimental for humanity. In fact, thanks to its conflicted programming, Yod has learned better than Malkah to appreciate the risks of becoming a posthuman subject that is also a postconscious subject. As Malkah tells Nili, “Yod was a mistake. You’re the right path, Nili. It’s better to make people into partial machines than to create machines that feel and yet are still

controlled like cleaning robots” (412). In advocating posthuman technology that will transform humans into cyborgs, Malkah fails to grasp the self-destructive implications of becoming a radical cyborg. As the novel suggests, the essence of human nature is not enhanced through cyborg technology but rather compromised. The failure to create a conscious machine in the novel is commensurate to the potential failure in the real world to advance humanity through bionic technology. The novel implies that the nature of Yod’s experiences may become that of humans who interface with posthuman technology to the extent that cyborg characteristics replace human nature. After Yod’s destruction, Shira selfishly entertains the idea of using Malkah’s software to create Yod 2 as a mate, despite Yod’s wishes to the contrary. She soon realizes, however, that “If a cyborg created as a soldier balked and wanted to be a lover, might not a cyborg created as a lover long to be a celibate or an assassin?” (428). Finally, instead of betraying Yod’s desire, she decides to destroy the software. Piercy thus provides a glimmer of hope that humans will awaken to the risks of becoming cyborgs themselves. If a cyborg like Yod can switch from being an assassin to a lover and back again, what would prevent a cyborg like Nili from deciding on a similar switch?

## Chapter Ten:

### Conclusion: The Survival of Human Nature

The fact that human nature is bimodal, comprised of both mind and consciousness, has led to a variety of interpretations of what it means to be human. The theses of this book promote the complementarity of two primary modes of consciousness: the intentional mind, which always contains an object or qualia, and non-intentional consciousness, the void of conceptions. These two models of consciousness determine how we understand cyberculture and the posthuman condition. Those who equate consciousness with the thinking mind as an extension of body, nature and culture advocate the spread of posthuman technology as an inevitable feature of human civilization in the near future. On the other hand, in distinguishing mind from consciousness, this book suggests that while bionic technology can in some ways benefit the mind/body complex, it may in the long term undermine the accessibility of pure consciousness and jeopardize human nature. As Shankara says in *Viveka-Chudamani*,

The mind creates attachment to the body and the things of this world. Thus it binds a man, as a beast is tied by a rope. But it is also the mind which creates in man an utter distaste for sense-objects, as if for poison. Thus it frees him from his bondage. (1978: 60)

Success in initiating freedom, of course, depends on the degree to which the mind is capable of reflecting consciousness.

As discussed in Chapter One, bionic technology will undoubtedly have the potential to enhance human capabilities by augmenting computational skills, memory, sensory acuity and physical prowess. One thing it cannot do, however, is enhance the capacity of human consciousness to be aware of itself as a void of conceptions by promoting a state of hypoarousal. On the contrary, invasive posthuman technologies, most of which are as yet unrealized beyond

the realm of science fiction, may have the opposite effect of inducing states of hyperarousal and a corresponding wear and tear on human physiology that may lead to the kind of illness and injury among the many that it was intended to remedy among the few. If and when these effects are scientifically documented, people will have to choose between the likely disadvantages of biotechnology and the prospective advantages of the power of pure consciousness.

As Forman suggests in *Grassroots Spirituality* (2004), people today show a growing affinity for transcending mental computation toward a state of least excitation or self-awareness devoid of content. States of hypoarousal, as Forman argues,

don't result from a process of building or constructing mystical experiences [. . .] but rather from an *un*-constructing of language and belief . . . from something like a *releasing* of experience from language. (1999: 99; Forman's emphasis)

Unlike intentional consciousness, which involves being conscious of an object of observation, a non-intentional experience, or what Forman calls knowledge-by-identity, involves the immediacy of knowing by being beyond the external tokens of language and interpretation: "It is a reflexive or self-referential form of knowing. I *know* my consciousness and I know that I am and have been conscious simply because I *am* it" (1999: 118; his emphasis). As this book argues, non-intentional pure consciousness is the most subtle dimension of human nature beyond the duality of subject-thinking-thought. This cognitive stasis, as a unity of knower, known and process of knowing, helps to define what it means to be human and lies at the opposite end of the spectrum to the hyperaroused acuity that posthumanists claim as an optimal state of mind.

Deikman suggest that consciousness can either be instrumental, directed outward toward objects, sharp boundaries and the survival of the self, or receptive, directed inward toward transcendence through the effortless attenuation of the mind's conceptual content. All forms of creativity and a wide range of meditative practices confirm that a principal feature of human nature is the natural tendency of awareness to settle down effortlessly to a state of least excitation, a field of all possibilities. On the other hand, bionic technology by definition tends

to encourage a state of hyperarousal, instrumental activity and the expenditure of energy.

As suggested in Chapter Two, the hyperaroused states that bionic technology produces to enhance our human capabilities have the potential to cause undue physiological pressure and even structural damage. If, as research indicates, the apparently innocuous everyday use of computers and mobile phones can trigger an accumulation of stress called “infomania,” then what kind of damage might accrue from bionic implants than make technological prostheses available for ordinary people around the clock? Why take unnecessary risks when alternatives to these unnatural enhancements are available through natural, life-supporting means, as described by *Patanjali's Yoga Sutras* and explained by Deikman, Shear, Wilber, Forman and others? As we have seen, meditative practices can induce a wide range of empirical effects known as *siddhis*, which also means attainments or perfection. Even though these powers extend beyond the reach of bionic technology at its most extravagant level, they are not ends in themselves but serve to stabilize the experience pure consciousness together with the three ordinary states of waking, sleeping and dreaming. Our desire for extraordinary accomplishments by whatever technological means available may reflect an intuitive sense that human physiology has the natural capacity to attain such experiences on its own.

Posthumanism, however, as an expression of instrumental consciousness, does not have the patience to develop this capacity by natural means. It prefers the challenge of extended experience, of physically projecting the mind as a conscious entity through the continuity of thought and the material world. Yet from an Advaitan perspective, mind and world are naturally contiguous anyway because the mind is already an extension of matter as distinct from consciousness. Posthumanists dwell on mental experience as an extension of the physical world without acknowledging that consciousness-as-such both incorporates and extends beyond the physical as the internal observer. They refute the nonmateriality of consciousness by defining it in terms of “extended mind” and its phenomenal content. But the this theory, while accurately describing the link between mental computation and the physical environment, cannot account for pure witnessing consciousness or the powers that accrue naturally from it.

One alluring feature of the posthuman condition is telepresence, particularly when the mind and body are extended through cyberspace to create an embodied awareness. This extension through cyberspace can also lead to the attenuation of mind and body through which we transcend the intentional boundaries of ordinary identity. From an Advaitan perspective, the mind/body complex as a product of primordial matter reflects the light of consciousness in order for its content to be revealed by the illumination of *purusha*. Under the right conditions, the mind may even reflect pure consciousness itself. As Rao says, “By an association with the *purusha*, the mind, which is by its nature unconscious, becomes conscious” (2005:11). Posthumanists tend to mistake the mind for consciousness, but as Shankara says,

The Atman is the witness—beyond all attributes, beyond action. It can be directly realized as pure consciousness and infinite bliss. Its appearance as an individual soul is caused by the delusion of our understanding, and has no reality. By its very nature, this appearance is unreal. (1978: 64)

As Gibson and other writers suggest, cyberspace can evoke a witnessing experience through knowledge-by-identity provided the physical mind/body matrix has not undergone structural changes that would block access to a state of hypoarousal. Such changes would interfere with the hope that cyberspace technology can render tangible an invisible reality. Hayles claims that cyberspace and posthumanism can be defined in terms of pattern and randomness because the movement of *différance* precludes the metaphysics of presence. As Chapter Three argues, however, deconstruction can be understood as allowing presence to come forth through the unsayable.

In theory Derridean deconstruction calls into question the link between human nature and the field of consciousness, but in practice it is traceable to aspects of Indian philosophy that contradict the subversion of presence, as in the unsayable secret of literature. For example, the deconstructive notion of iterability, or the contextual nature of all knowledge, has clear roots in Indian thought. Similarly, in taking the mind closer to the secret of literature, deconstruction uses mechanics that correspond to the yogic practice of transcending mental activity. Derrida says that the secret as a trace “impassions us” (1995b, 29-30), which has the effect of causing both suffering and desire: suffering because language blocks the secret of literature, and

desire because the taste of infinity is allowed to come. As in Eastern meditation, passion as desire shifts awareness from the conscious content of the mind toward a void in thought. The trace—along with the supplement, the pharmakon, difference, and other Derridean terms—is an “aconceptual concept” (1988: 118) that evokes the effortless tendency of awareness to swing from the concrete to the abstract, the material to the non-material—as in yogic meditation.

Chapter Four, which begins the analysis of the posthuman as presented by literature, explores how writers envision the impending world of cyborgs and biotechnology. Short fiction theorists such as Charles May describe the short story as depicting momentary mythic encounters with the sacred. But what happens when the protagonist is a cyborg for whom the unsayable is inaccessible? When the body becomes technophilic through a human/machine symbiosis, the quality of subjective experience mediated by this body will undoubtedly change. As we move from the contemporary/postmodern to the posthuman as a cultural construct, not only will literature change to reflect the changing world, but readers may also change in unexpected way—as will the relationship between reader and text. For one thing, if the mind/body complex is radically modified, the reader may lose access both to human nature and the unsayable secret of literature.

Writers such as James Joyce, Raymond Carver, Kate Chopin, Jorge Luis Borges and others show that the epiphanic moments experienced by characters originate from transcendental consciousness, not from posthuman embodiment as extended through brain, body and world. Posthumanists may attempt to simulate these encounters through extended experience, but “telepresence” in cyberspace and other forms of prosthetic know-how usually fall short of the kind of fulfillment provided by transcending boundaries through the innate capacity of human nature. May argues that the short story, by presenting “the world as I-Thou rather than I-It” (1994: 137), allows a receptive mode of consciousness to emerge that invites encounters with the sacred. The pre-science fiction product of Victor Frankenstein is one of the earliest “It” domain constructions.

As a composite body, Victor’s monster identifies with the content of its awareness and shows little tendency to transcend the material body and the thought of its condition. As Chapter Five argues, instead of expressing compassion for its victims or evolving toward

resignation or detachment, the monster identifies with its physical condition so completely that it cannot resist its violent behavior toward Victor and his friends. In Kenneth Branagh's film adaptation *Mary Shelley's Frankenstein*, the monster senses that something was left out of its construction, namely a soul. Although Victor was caught in the paradigm shift between alchemy and chemistry, the novel suggests that neither paradigm has the capacity to provide Victor's creation with the core of human nature. *Frankenstein* thus calls into question the distinction between the essentialist and constructionist view of self-identity. Because Victor's monster is a soulless composite body, it does not truly problematize the opposition nature/culture, for it does not share humanity's essential characteristic. As an autodidact the monster furnishes its mind with conscious content, which forms the basis of its self-construction, but this cannot lead to the development of consciousness itself. As Shelley's novel suggests in anticipation of science fiction writers such as Gibson, to construct consciousness exceeds the power of technology, of whatever paradigm.

In spite of *Neuromancer* portraying a world of cyborgs, Gibson is not a posthumanist like Haraway or Hayles. As we saw in Chapter Six, Gibson's novel delights in an imaginative universe based on cyberspace, but it also takes a distinctly ambivalent attitude toward technology, which it describes as alienating and threatening for both characters and reader. The technology in *Neuromancer* is in constant need of human attention for upgrading or repair, which suggests that even if in some ways cyborgs are superior to humans, they are not self-sufficient. The AI computer Wintermute spends the entire novel seeking to upgrade itself with the help of its human counterparts. Through the novel's technology bashing, Gibson suggests that as machines become more like humans, humans are also becoming more like machines. Although computers will never be able to replicate human brain functioning, humans may end up radically undermining their natural capacity to move toward a state of hypoarousal if they over tax the connection between brain/body and consciousness through bionic technology.

Especially damaging would be the kind of invasive technology Gibson depicts in his story "Johnny Mnemonic," in which the lead character loses his sense of identity after uploading data directly from the web into his brain. The sheer volume of data from cyberspace



encroaches on his sense of self and interferes with normal physiological functioning. *Neuromancer* accentuates this kind of distressed machine/biology symbiosis. As Gibson suggests, we still have a choice between having a healthy human physiology with access to higher consciousness, or becoming a form of post-biological A-Life, such as Dix. The fact that even Case can only transcend while on drugs or jacked-in to cyberspace indicates that postmodern society fails to provide an environment conducive to a natural form of transcendence. Posthuman bionic technology seems intent on providing a potentially devastating surrogate—a simulation of transcendence through hyperarousal. But as Neal Stephenson shows, any advantages technology may provide through a machine/biology symbiosis will be sabotaged by computer viruses.

Although *Snow Crash* is driven by the metaphor that “humans are computers,” Edelman persuasively argues on the basis of neuroscience that “the brain is not a computer, and the world is not a piece of tape” (2004, 39). As the novel demonstrates, humans have always been vulnerable to viruses, but now our growing dependence on computers may also make us susceptible to computer viruses. Stephenson, as discussed in Chapter Seven, builds his plot around the similarity between the neurolinguistic functioning of the brain and the basic programming level of computers. *Snow crash* is designed to infect both, creating a system crash that turns “the perfect gridwork of pixels into a gyrating blizzard” (39-40). The analogy between the information-processing mechanism of a computer and the neural tissues of the brain is only an analogy and not an equivalence, for as Edelman shows the neural tissues of the brain C’, which correspond to the deep structures of consciousness C, cannot be replicated by machines. The brain, moreover, is at far greater risk than computer code to viral infections, for in contrast to a packed up computer, brain damage is rather more difficult to repair. Given the choice between computers and the human brain, Stephenson like Gibson wisely goes for the reflector of consciousness.

In warning against the posthuman dangers of an assault on the deep structures of consciousness, *Snow Crash* demonstrates that to lose our physiological purity means to undermine the essence of human nature. The snow crash virus cannot protect humans by serving as an antivirus because it causes an infection that entails making humans lose their humanity and becoming more like machines. The

all-consuming viral meme, as computer code, is capable of going all the way down to contaminate the neurolinguistic structures of consciousness. In *Hard-Boiled Wonderland and the End of the World*, Murakami portrays a similar threat that results from the most benign intentions of the scientific community.

Exploring the inner depths of the mind, Murakami, as Chapter Eight argues, shows that any attempt to enhance brain functioning by technologically interfering with consciousness can only have devastating effects for human existence. The inner mind is called by various names in the novel, including “core consciousness,” the “black box,” and a “great unexplored elephant graveyard,” the elephant being an image of the unconscious mind. During the course of the novel, the two narrators learn more about their own elephant factories or core consciousness than they ever cared to know. Watashi discovers that the Professor’s experimentation on his mind has led him to the end of the world, and Boku discovers that having relinquished his Shadow to enter the walled Town means that he will lose his mind. The “End of the World” sections of the novel represent the neurophysiological cost of the bionic surgery the Professor in “Hard-Boiled Wonderland” performed on Watashi.

As illustrated by *Neuromancer* and *Snow Crash*, brains are not computers, but in Murakami’s novel Calcutechs like Watashi have their brains split, with one half working like a computer in performing complex calculations. Unlike computers whose information can be electronically tapped, brains are impervious to tapping and therefore provide a secure hiding place for a computer to process information. In the double narrative of the novel, the posthuman situation of turning part of the brain into a computer involves the extreme loss of the mind’s conceptual content, or the mind itself. The gatekeeper of the walled Town, moreover, says that to give up the mind is to reach salvation. From an Advaitan perspective, however, salvation preserves the mind as the content of witnessing consciousness. As an artist, Boku hopes to expand his awareness and retrieve the mind’s content lost at the end of the world. But as the novel suggests, he can only succeed if his physiological condition remains pure enough to sustain the link between mind and consciousness—which entails saving his Shadow. In *He, She and It*, Marge Piercy portrays a situation in which a cyborg more than a human being is the one that values the organic unity of human nature.

Piercy extends the theme of cyborgs and bionic humans to consider the implications of an entirely artificial being, as analyzed in Chapter Nine. An illegal humanoid, Yod serves as a killing machine, but it is also capable of reflecting on a wide range of topics related to the use of a wholly synthetic being as a “conscious” weapon. Although as argued here a computer cannot have consciousness, whether constructed or evolved through its interaction with humans or other computers, Yod nevertheless displays serious doubts about being an intelligent machine designed to kill, when it would rather emulate humans in the pursuit of happiness. *He, She and It* metaphorically depicts the ultimate outcome of the posthuman tendency for humans to evolve toward becoming radical cyborgs—a bionic human that has lost touch with human nature. As we have seen, posthumanists contend that the existence of the self does not depend on consciousness. According to this theory, a cyborg like Yod in principle could perform mental activity as well as any human who was fully conscious.

At the end of the novel, Malkah says that it would be better to turn people into partial machines than to create wholly synthetic beings like Yod. Ironically, in advocating posthuman technology, Malkah underestimates the self-destructive implications of becoming a radical cyborg. As the novel suggests, the failed experiment to create a conscious machine foreshadows the potential failure to improve upon human nature through bionic technology. What Yod experiences could well be what humans can expect to experience once their cyborg attributes preempt the groundless ground of what it means to be human. *He, She and It*, however, provides a glimmer of hope when Shira decides not to replicate Yod after realizing that nobody can determine whether a cyborg, devoid of consciousness, would decide to become an assassin or a lover. Based on the evidence provided by Edelman, Ramachandran, Chalmers and others, and as argued throughout this book, consciousness is indispensable for the full flowering of our human potential.

Although mind and consciousness both have a neuro-physiological basis, no theory of consciousness has yet achieved consensus in the West. The theory accepted by postmodernists as the most convincing holds that “To be conscious is to be conscious of something” (Pepperell 2003: 175). In other words, “Consciousness is always consciousness of some object or other, never a self-enclosed

emptiness” (Miller 2001: 62). While this theory of consciousness defines the posthuman notion of subjectivity, it is complemented in Eastern philosophy by an underlying qualityless state of pure consciousness or a void of conceptions. As I argue, access to pure consciousness, which some believe will always remain a mystery to the third-person approach of science, may now be under threat by our posthuman condition. Self-transformation comes in many forms, not all of which as we have seen are necessarily good for the self. If the neurophysiological basis of human nature is radically modified through bionic technology, we may lose the ability to sustain an experience of self-awareness beyond our socially constructed identity. Today possibly more than ever before, people are beginning to sense that the unsayable dimension of life is under threat from outside interference and needs to be revitalized.

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