



# Cyberculture, Cyborgs and Science Fiction

Consciousness and  
the Posthuman

WILLIAM S. HANEY II

Consciousness  
Literature  
the & Arts 02

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Amsterdam - New York, NY 2006

Cover illustration: Ella van Wyk, *Cyborg Glance*, 2005

Cover Design: Aart Jan Bergshoeff

The paper on which this book is printed meets the requirements of "ISO 9706:1994, Information and documentation - Paper for documents - Requirements for permanence".

ISBN: 90-420-1948-4

ISSN: 1573-2193

©Editions Rodopi B.V., Amsterdam - New York, NY 2006

Printed in the Netherlands

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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 Najj 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 fourth state (*turiya*) of Atman or pure consciousness. Like a white screen reflecting the projected colors and images of a film, the fourth 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: