It was for the construction of those micro-bubbles that human intelligence and science had evolved, that savants and engineers and whimsical caricaturists had put together the separate pieces of the great invention. In a roundabout, absurdly elaborated fashion—requiring special effects laboratories, wagonloads of art directors and prop men, years of systematic alchemical research—the brain had set about creating an image of itself, with a view toward projecting it into every corner of This Island Earth.

Dutiful technicians and creative workers carried out their small pieces of the design, like the laborers on the pyramid. It was as if the technology of the movies had from the beginning been built at the behest of an inconceivable Overmind working through human agents. . .

Geoffrey O’Brien, *The Phantom Empire: Movies in the Mind of the 20th Century*

I

[The neo-realists] are concerned to make cinema the asymptote of reality but in order that it should ultimately be life itself that becomes spectacle, in order that life might in this perfect mirror be visible poetry, be the self into which film finally changes it.

André Bazin, *What is Cinema*, II

The “guiding myth” of the cinema, “the myth of total cinema,” has been with us since prehistory.[1] André Bazin thought: “a recreation of the world in its own image, an image unburdened by the freedom of interpretation of the artist or the irreversibility of time” (21). An age-old “forbidden desire to re-create and store up the appearances of reality with complete fidelity” (Andrew 74), Bazin was convinced, gave birth to the movies as part of the historical evolution of human representation and has guided film history’s development as well. In formulating his conception of the “myth of total cinema,” Bazin was anxious to distinguish his quasi-religious understanding of the art form from that of reactionary theorists like Rudolf Arnheim, who was convinced that even
the advent of sound was a retrograde affront to the silent cinema’s formal purity. But could Bazin, guided by his central faith that the movies’ evolutionary effect will ultimately be centrifugal, directing the human imagination outward, back into the world, have accepted that latter-day perfection of the storing up and recreation of appearance known as Virtual Reality as a development, not only as the cinema’s possible apotheosis but as subject for its narratological reflection, as welcome as the coming of sound or the perfection of deep focus and the long take? [2]

The simple virtuality of the movies was based on the inherent human incapacity known as persistence of vision. The more enthralling illusion of Virtual Reality—and I will use the term here to mean any technology capable of causing a user to accept an artificially generated presentation of reality as a “real” world—likewise feeds on our psychological blind spots, as the medium’s wildest thinker, Jeron Lanier, explained a decade ago:

the reason that the whole thing works is that your brain spends a great deal of its efforts on making you believe that you’re in a consistent reality in the first place. What you are able to perceive of the physical world is actually very fragmentary. A lot of what your nervous system accomplishes is covering up the gaps in your perception. In Virtual Reality, this natural tendency of the brain works in our favor. As soon as there's a threshold, the brain will tend to think of either the physical world or the virtual world as being the reality we're inside of. But as soon as the brain thinks the virtual world is the reality you are inside of, all of a sudden it's as if all the technology works better. All variety of perceptual illusion comes into play to cover up the flaws in the technology. All of a sudden the world becomes much more vivid than it should be. You perceive things that aren't there. You perceive the resistance of objects that actually have no mass as you try to push on them. . . . [4]

In Lanier’s metaphysics, the body is innately unfaithful, epistemologically promiscuous, always ready—even willing—to switch allegiance, to abandon life-long commitment to "reality" when enticed by a more powerful and enthralling one, and to switch loyalties yet again every time it is seduced by a still more captivating simulation. In the entire history of mankind, Hannah Arendt once reminded, contemplating the delicate balance between reality and appearance, being and becoming, necessary for the continued functioning of the mind, "nobody so far has succeeded in living in a world that does not manifest itself of its own accord" (26). Convinced that "physical reality is tragic in that it's mandatory" (Lanier), Virtual Realists are ready to break with that seemingly irrevocable precedent. [5]

It has become increasingly clear that virtual reality may well be driven by a very different mythos than the one Bazin discovered operative in film, a more sinister, and less human, project along the lines O’Brien has limned (see the epigraph above). The movies and virtual reality, I have come to think, may belong to different cultures.
[T]here seems little chance of getting out of this century with the same human nature with which we entered it.

William Irwin Thompson, *The American Replacement of Nature*

“I’m really worried about my body. Our real bodies, are they all right?”

Ted Pikul in *eXistenZ*

In *Late for the Sky: The Mentality of the Space Age* (1992), I speculated that C. P. Snow’s famous “two cultures” had morphed at century’s end, first, into Earthkind and Spacekind: those accepting of the limitations of earthly existence and those Krafft Ehricke calls “*Homo extraterrestris,*” who are driven by otherworldly ambitions; second, into what I call “Carbon Chauvinists” and “Body Snatchers”: those who accept the body’s mortality and the limits of an earthly existence and those “New Gnostics” who seek to escape their physical entrapment and drop the body in search of potentially immortal cyber- or robotic selves.

In two recent articles in *Wired,* that once countercultural but now mainstream chronicler of the “new new thing,” Bill Joy, chief scientist of Sun Microsystems, and Kevin Warwick, Professor of Cybernetics at the University of Reading in the UK, offer very different takes, the products of very different cultures, on the future relationship of man and machines. Joy’s “Why the Future Doesn’t Need Us” presents a sobering meditation on the dangers posed to species’ survival by robotics, genetic engineering, and nanotechnology in the century ahead. As he contemplates the futurism of everyone from the Unabomber to Carnegie-Mellon robotics visionary Hans Moravec, he takes very seriously the likelihood that machines could supplant *homo sapiens* as the dominant “life” form on the planet. The plain white cover of the April 2000 issue of *Wired* containing Joy’s essay shows a crumpled piece of paper, evidently torn from a future dictionary, bearing a definition:

**human:** (‘hyū-men) *adj.* 1. of, belonging to, or typical of the extinct species *Homo sapiens* <the human race> 2. what consisted of or was produced by *homo sapiens* <human society> *n.* an extinct biped, *Homo sapiens,* characterized by carbon-based anatomy; also, HUMAN BEING. Obs: hu·man·n ess

Joy’s contemplates the future realization of this definition and suggests how we might prevent it. In a series of devoid-of-context colorful cartoons interspersed with the endless advertisements that fill the table of contents-burying opening pages several alarming quotations from the essay are highlighted:

Biological species *almost never* survive encounters with superior competition.  

*(Hans Moravec)*

In the game of life and evolution there are three players at the table: human beings, nature, and machines. I am firmly on the side of nature. But nature, I suspect, is on the side of the machines. *(George Dyson)*

I’m as fond of my body as anyone, but if I can be 200 with a body of silicon, I’ll take it. *(Danny Hillis)*
Unlike Warwick, whose essay is redolent with true-believing in a transhuman cyberfuture, Joy is not ready to sell out. He contests each of these sobering propositions. In “Cyborg 1.0,” however, Warwick “outlines his plan to become one with his computer,” a feat he hopes to accomplish thanks to a variety of implants which have already begun to become, though surgery, part of his own flesh. He hopes to “try out a whole new range of senses,” to record his own experiences and feed them back into himself (so that he test whether the virtual record is identical to the original), to have cybersex with his wife (who has agreed to implants herself), and, eventually, along with his fellow implantees, to evolve, by “natural progression,” “into a cyborg community” that will hook up “people via chip implants to superintelligent machines . . . creating, in effect, superhumans.” “I was born human,” Warwick admits, “but this was an accident of fate—a condition merely of time and place. I believe it’s something we have the power to change.”

The stances of Joy and Warwick confirm that the “two cultures” are still with us in the new millennium. They also powerfully inform two science fiction films which arrived almost simultaneously at the end of the last century, the Wachowski brothers’ The Matrix (1999) and David Cronenberg’s eXistenZ (1999)—the first films to deal at all successfully with virtual reality.[6]

### III. The Matrix

I hate this place, this zoo, this prison, this reality, whatever you want to call it. I can’t stand it any longer. It’s the smell, if there is such a thing. I feel repulsed by it. I can taste your stink, and every time I do I feel that I have been infected by it. It’s repulsive, isn’t it? I must get out of here. I must get free.

Agent Smith in The Matrix

A film with a US gross of $171,383,253 and international sales of $456,300,000, The Matrix (1999) has become a genuine cultural phenomenon, though by no means a complete critical success.[7] Work on the other two parts of a Matrix trilogy is about to begin (both films will be shot at the same time during a year and a half of filmmaking). By now, the movie’s story is well known: in a future world—the actual date is unknown, but in the first film, Morpheus (Laurence Fishburne), a leader of the human underground, estimates it to be late in the 21st century, perhaps 2199—human beings have become oblivious slaves to computer intelligence. After the birth of AI—“a singular consciousness that spawned an entire race of machines”—in the early 21st Century, we learn, war broke out between humans and computers. In an attempt to rob the computers of their power source (solar energy), our kind "scorched the sky," creating an apocalyptic "real world" of perpetual darkness, that drove our species deep underground. The AI, however, found a new power source: human beings themselves. Born and harvested as living batteries in immense power plants,[8] all human beings who have not escaped to the underground are kept in womb-like pods where, simultaneously, their energy is drained and they are perpetually fed a fully-realized, but entirely virtual, late 20th century world in which they live their lives utterly unaware of their actual condition as "Copper Tops." In an early scene Morpheus explains The Matrix to a still-trapped-in-the cave Neo (Keanu Reeves):
**Morpheus:** The Matrix is everywhere, it's all around us, here even in this room. You can see it out your window, or on your television. You feel it when you go to work, or go to church or pay your taxes. It is the world that has been pulled over your eyes to blind you from the truth.

**Neo:** What truth?

**Morpheus:** That you are a slave, Neo. That you, like everyone else, was born into bondage, kept inside a prison that you cannot smell, taste, or touch. A prison for your mind.

Just as Lanier had theorized, the overwhelming majority of human beings readily accept reality’s virtual replacement, with only a few bothered by nagging doubts there might be another reality. The subterranean “Zionists” (Zion itself is an underground city, near the earth’s core, and they move about the “real world” in hover ships, like Morpheus’ Nebuchadnezzar, navigating city sewer systems) wage guerrilla warfare against the AI, liberating whenever possible those few individuals who have become suspicious from their cradle-to-grave incarceration in The Matrix’s cave of illusion. They nevertheless live in fear of Agents: sentient computer programs working within The Matrix to eradicate the human resistance. *The Matrix* focuses on the liberation of Thomas Anderson, a hacker known as "Neo," who, Morpheus is convinced, is in reality “The One”: an individual of extraordinary gifts (able, for example to defeat The Agents), an individual long-ago prophesied who will lead the Zionists to victory over their oppressors.

Although the Agents seem at first to be devoid of personality and differentiation (“You all look alike to me,” Morpheus quips with speciesist humor), one of them, Agent Smith (Hugo Weaving), manifests a “mind” of his own. As he interrogates Morpheus in pursuit of the Zion mainframe access code, he becomes philosophical. After asking Morpheus if he sufficiently admires the majesty of the Matrix, he reveals a secret of its origin:

Did you know that the first Matrix was designed to be a perfect human world? Where none suffered, where everyone would be happy. It was a disaster. No one would accept the program. Entire crops [of human batteries] were lost. Some believed we lacked the programming language to describe your perfect world. But I believe that, as a species, human beings define their reality through suffering and misery.

Agent Smith, we learn as he continues to speak freely, is himself a speciesist, full of disgust for the human. “I’d like to share a revelation that I've had during my time here,” he explains to Morpheus.

It came to me when I tried to classify your species. I’ve realized that you are not actually mammals. Every mammal on this planet instinctively develops a natural equilibrium with the surrounding environment. But you humans do not. You move to an area and you multiply and multiply until every natural resource is consumed and the only way you can survive is to spread to another area.

Smith suggests a revision of our taxonomy:

![Image](http://mtsu32.mtsu.edu:11072/Writing/From_Cinespace_to_Cyberspace.htm (5 of 11)9/18/2004 1:32:17 AM)
There is another organism on this planet that follows the same pattern. Do you know what it is? A virus. Human beings are a disease, a cancer of this planet. You are a plague. And we are . . . the cure.

Moments later, still unable to break his captive, Agent Smith, dismissing his fellow agents from the room, becomes even more “honest” about his disgust for his present assignment as his torture accelerates and his hatred for all things human (see the epigraph to this section). When his fellow agents enter to inform him of Neo and Trinity’s in-progress rescue attempt, they are shocked to find him in mid-rant. Even within the Matrix, it would seem, the two cultures have reproduced themselves. Agent Smith is a cyber-agnostic, unable any longer to bear his “incarnation” in the Matrix, revolted by his exposure to even the digitized equivalent of human embodiment, possessed by the overpowering call of some higher world. As movie fans the real world’s Kevin Warwicks and Hans Moravecs must, if they wish to be consistent, root for Agent Smith, must find The Matrix’s ending—in which Neo, realizing his messiah nature, surviving his own death, vanquishes the agents and destroys Agent Smith—most unhappy.

IV. eXistenZ

Ted Pikul: I don’t like it here. I don’t know what’s going on. We’re both stumbling around in this unformed world whose logic and rules and objectives are largely unknown, seemingly indecipherable, or even possibly nonexistent, always on the verge of being killed by forces that we don’t understand.
Allegra Gellar: Sounds like my game all right.
Ted Pikul: It’s not going to be easy to market.
Allegra Gellar: But it’s a game everybody’s already played.

The conversation above takes place at the Trout Farm that Ted and Allegra visit during their Micropod game, a factory where neural fibers are harvested for use in Metaflesh game pods, mutant creatures become new dishes (“Mutant reptiles and amphibians provide previously unimagined taste sensations!” we learn), and “hypoallergenic weapons” made from the remains of the creatures, like the one that fires human teeth used by Allegra’s would-be assassin and the one Ted constructs out of his luncheon special in order to kill the Chinese waiter.

As this sampling makes abundantly apparent, eXistenZ is an open-ended, self-referential, decidedly non-Hollywood text, a film with no real narrative resolution, which sends the interested viewer right back to the beginning in hopes of making connections and filling gaps impossible on a first pass and still difficult on a second or third. Only after reaching the end do we realize that the entire story has a frame we have not yet seen. The film’s primary narrative tells the tale of the attempted assassination at a focus group of “the demoness Allegra Gellar” (Jennifer Jason Leigh), a renowned game designer for the Antennae Corporation, developer of such previous games as “ArtGod” and creator not only of the new game eXistenZ about to be premiered but of the "Metaflesh Game
From Cinespace to Cyberspace

Pod,”[9] a seemingly organic contraption to which participants connect through an umbilical cord that plugs into a gamer’s “bio-port”: a sphincter at the base of the spine [10]). Keeping an ever-growing mental list of the story’s numerous gaps, questions, and incongruities, we follow her flight into the country with “PR nerd” Ted Pikul (Jude Law); her struggles against the “Realists,” a terrorist group committed to putting an end, by any means necessary, the “deforming of reality” brought about by the spread of advanced computer gaming, and the theft of her new game by Cortical Systematics Corporation. Only at the movie’s end do we realize that this whole narrative has been a game. Only then do we understand that each character in the above plot line is, “in reality,” a participant in a game of TransCendenZ, a creation of world famous computer game designer Yevgeny Nourish (Don McKellar) for Pilgrimmage Corporation, being played, in what we assume to be the film’s outermost frame, by yet another focus group[11]—a trial run which ends with the “real” Allegra Gellar and Ted Pikul disclosing themselves to be Realists and assassinating the “demon Yevgeny Nourish.” The [previous] main narrative of eXistenZ had already taken us two narrative levels deep: (1) into a game of eXistenZ being played together in the ski chalet by Ted and Allegra; (2) the Micropod variation of eXistenZ, embedded in (1), played by Ted and Allegra at D’Arcy Nader’s. At the movie’s closure-less end, we realize, however, that we have in fact gone four levels (games) deep: (1) the “real” Pilgrimmage focus group playing TransCendenZ; (2) the game focus group playing eXistenZ; (3) the game of eXistenZ played in the ski chalet; (4) the Micropod game played at Nader’s. The question posed in the film’s last shot by one of the focus group members to Ted and Allegra (as they threaten him with a gun)—“Are we still in the game?”—leaves the viewer wondering, to use a phrase from The Matrix (and, of course, Alice in Wonderland), “just how deep the rabbit hole goes.”

IV

Early in The Matrix, Choi, DuJour, and friends arrive late at Neo’s apartment in order to pick up a promised piece of stolen software. After Neo answers the knock on his door (presaged by the words “knock, knock” on his computer screen), he returns inside to secure the software from his stash in a hollowed-out book. For just a moment we glimpse the title: Simulacra and Simulations by Jean Baudrillard. Later, Morpheus quotes (without attribution) the controversial French critic of postmodernism. “Welcome to the desert of the real,” he tells Neo, words taken from Baudrillard’s “The Precession of the Simulacra.”[12] While on the lamb, Allegra and Ted spend their first night in a motel. In a brief scene, we see them eating fast food purchased from “Perky Pat’s.” The name evokes Philip K. Dick’s masterful The Three Stigmata of Palmer Eldritch, a reference to the line of Barbie-like dolls into whose miniature world Martian colonists “translate,” thanks to the use of the hallucinogenic drug Can-D. Cronenberg is signaling us that his story is transpiring in a Dickian universe, that his narrative, and by extension reality itself, is a set of Chinese boxes and we are never entirely certain, nor can we ever be, which one we are in.[13] In The Matrix we know very well where the “real” world is. After Neo’s body has been snatched from the sewer and hoisted into the Zionist hovercraft, Morpheus introduces him to it: “Welcome to the real world.” The real world exists, even under the reign of Baudrillard’s “Third Order of Simulacra,” and cinematic art, faithful even in the age of
special effects to Bazin’s “myth of total cinema,” can represent it and tell an heroic tale of its recovery. Cronenberg’s eXistenZ, though it does imagine seemingly heroic realists fighting against the triumph of illusion, has no such faith. For even they cannot escape from the ever-recursive game of eXistenZ and TransCendenZ. There is nothing which is outside the text.

Bibliography


[1]“Thus [Bazin explains] the myth of Icarus had to wait on the internal combustion engine before descending from the Platonic heavens. But it had dwelt in the soul of everyman since he first thought about birds. To some extent, one could say the same thing about the myth of cinema” (22).

[2]In development since the '60s, already in use in the 80s as a research and simulation tool—in designing automobiles, planning mass transit systems, laying out assemblage procedures, creating molecules for new medicines, training surgeons (allowing a physician to move around inside a "virtual body" in preparation for a difficult operation) and NASA robots (enabling, for example, a technician on Earth to fix a virtual satellite, so that a robot in space, programmed to imitate his or her every move, might repair the real one), Virtual Reality enables users to enter and explore simulated worlds. to trick our perception, limited by persistence of vision, into believing it witnesses a continuous visible world.

[3] One of the "experience industry's" founding fathers and most interesting theoreticians, Lanier (b. 1960) was the son of a science fiction writer father and an artist mother. A high school drop-out, largely self-educated, he became a computer game designer in his 20s and in 1984 founded the VPL Corporation, which throughout the '80s and early '90s proved to be a pioneering force in the development of VR.


The cyberspace experience is destined to transform us . . . because it is an undeniable reminder of the fact we are hypnotized since birth to ignore and deny—that our normal state of consciousness is itself a hyperrealistic simulation. We build models of the world in our mind, using the data from our sense organs and the information-processing capabilities of our brain. We habitually think of the world we see as "out there," but what we are seeing is really a mental model, a perceptual simulation that exists only in our brain.

The "real" world, Rheingold is telling us, is actually virtual. Not surprisingly, Rheingold quotes with seeming admiration Jean Baudrillard's critique of the ass-backwards *modus operandi* of modern representation as evidence for his point of view, co-opting Baudrillard's exposé of postmodernist unreality as if it enthusiastically prophesied the end of our entrapment in the pre-virtual cave of illusion.
At the end of the 1980s, Lanier felt certain that Virtual Reality "doesn't affect the subjective world; it doesn't have anything to do directly with what's going on inside your brain." Indeed, the promotional literature of Lanier's VPL Corporation described its product (in 1989) as being "as unlimited and harmless as a dream." The conjunction of "unlimited" and "harmless" in the same sentence testifies, however, to the incredible presumption of such a line of thought.


Jonathan Rosenbaum’s capsule review in *Chicago Reader* can be taken as representative of the nay-sayers:

The Wachowski brothers, who brought us the entertaining *Bound*, turn their attention to metaphysical SF with less happy results. Keanu Reeves plays a software technician who discovers that the universe (i.e., America and environs) is run by computers that use human beings as batteries for bioelectric energy, and that he's living not in 1999 but roughly a century later, when the wreckage that is earth has been camouflaged by virtual reality programs that keep people happy and innocent. Laurence Fishburne enlists Reeves to lead a revolt, which is staffed by a small coed, multinational crew (including kick-ass heroine Carrie-Anne Moss). Though positively brimming over with pretensions, this is simpleminded fun for roughly the first hour, despite frequent reminders of *Blade Runner* (rainy and trash-laden streets) and *Men in Black* (men in dark suits with shades). But eventually it becomes clear that the Wachowskis are equal-opportunity plagiarists, drawing just as freely on *Star Wars* for mythology, *Die Hard* for skyscrapers, *Alien* for secondary characters and decor, *Superman* and *True Lies* for stunts, *Videodrome* for paranoia, and even, God help us, *The Game* for metaphysical jive. There's not much humor to keep it all life-size, and by the final stretch it's become bloated, mechanical, and tiresome.

"Throughout human history we have been dependent on machines to survive," Morpheus explains, thinking of the computers' reliance on human batteries (we learn that the body "generates more bio-electricity than a 120-volt battery and over 25,000 B.T.U.'s of body heat"). "Fate, it seems, is not without a sense of irony."

The metaflesh pods will no doubt remind the veteran Cronenberg viewer of the videotape inserted into the stomach of Max Renn (James Woods) in *Videodrome* (1983).

Bio-ports, we learn during a stop at a gas station, can be installed by automechanics like Gas (Willem Dafoe).

One member of the test group, Kiri Vinokur (Ian Holm), wonders aloud as they emerge from the game back into the real world if anyone else has found his accent incomprehensible, and indeed we (the film’s audience) agree, experiencing a shock of recognition as at least one of the viewer’s questions has been answered.

Baudrillard’s words: "It is the real, and not the map, whose vestiges subsist here and there, in the deserts which are no longer those of the Empire, but our own. The desert of the real itself."
In a draft of the screenplay of *The Matrix* Morpheus tells Neo “You have been living inside Baudrillard’s vision, inside the map, not the territory.” See the “Literary References” section on “The Matrix Unfolded” site at http://www.suspensionofdisbelief.com/matrix/faq.html.

Before the end of the last millennium, Harold Bloom sought to convince us that even the greatest authors suffer the “anxiety of influence,” struggling to escape the suffocating example of “precursor,” “father” poets,” leading them to misread and distort (“misprise” is Bloom’s special term for the process) the work of their influencers into their false originality. Movies, too, may have precursors and may suffer the anxiety of influence.“ Baudrillard and Dick, I would like to suggest, are the precursors of *The Matrix* and *eXistenZ*, respectively, and so it should not surprise us that they (and their ideas/creations) have insinuated themselves into their “belateds.”