

EIRReviews

There is real danger in 'virtual reality'

by L. Wolfe

Virtual Reality

by Howard Rheingold
Summit Books, New York, 1991
415 pages, hardbound, \$22.95

Several score millions of Americans were offered their first glimpse of a new computer technology, dubbed "virtual reality," during the six-hour ABC prime time broadcast of Oliver Stone's made-for-television film "Wild Palms" on May 16-19. The well-promoted "special event," played over four nights during the national ratings sweeps, was designed to create the maximum interest in what the movie graphically depicted as a means to create mass illusions, as powerful as any hallucinogenic drug, and described by the media as "electronic LSD."

The Stone movie, set in the first decade of the new millennium against the backdrop of a darkly fascistic society, seemed to indicate the danger if evil forces controlled the technology, and hence the illusion. However, that message, clouded by a bizarre plot, paled before the power and seductive appeal of the technology itself. As the dreadlocked, 34-year-old guru of "virtual reality," computer hacker Jaron Lanier, told an ABC News's Nightline audience, the technology is on its way, and no one can stop it, so "we might as well sit back and enjoy the ride."

In the days since, in followup interviews, news reports, in both print and electronic media, virtual reality, formerly the "property" of a small cult of ex-druggies, computer hackers, and research scientists at a number of small companies and institutes, has exploded onto the national consciousness.

This is all very carefully planned and timed. By next fall, a major marketing campaign will be under way to sell virtual reality gear, in its most crude stages, to Americans. By the end of the decade, its promoters, such as Sony, Fujitsu, Time-Warner, and Disney who are pumping billions of dollars into hardware and software development, expect it to have the same penetration as video recorders or personal computers. By the first part of the new century, nearly every American home will have access to a virtual reality system while "virtual reality fantasy parks" and "theaters" will dot the American landscape.

Lanier and other "experts" in the field are quick to point out that the technology is far behind what was portrayed in "Wild Palms," that its three-dimensional images are still more cartoon-like than real, and that the human-computer interface and capacity for interaction are still very primitive. However, no one will disagree that the technology is headed toward the capabilities depicted in the movie. "We've got everybody's attention now," said someone working on the marketing of the first virtual reality products. "What more could we ask for?"

With all the recent publicity and sensationalism, the best and most thorough examination of virtual reality is contained in the 1991 book by Howard Rheingold. The author, a computer hacker, makes no effort to conceal his bias in favor of the technology. But perhaps because of this, he presents a rather complete view of both the state of the technology and some useful insights into minds of its advocates, provided one can get past the computer- and psycho-babble that suffuses his writing. Not surprisingly, Rheingold does not locate virtual reality as part of larger developments, or more properly, as a phase change in the mass brainwashing process involving movies and television, a process that has already

rendered much of our population psychotic and incapable of rational, moral thought on a daily basis.

What is virtual reality

In "Wild Palms," characters put on what appeared to be a pair of sunglasses and entered a world of realistic illusion and dreams, controlled by some dark forces known as the "Fathers." The people in those "virtual worlds" looked real and interacted with the "real" characters as if they were real. It was explained that such people and environments were "holograms" projected onto the retina of the individual wearing the sunglasses. There was supposedly feedback between an individual's dream state and these images, which determined some of the characteristics of the projected holograms. One could travel in time to imagined lands, talk to deceased people or to individuals yet to be born in some future time. One could have exotic, erotic relations with the projected images, seeming to feel them to be real in every way.

The current state of the art of virtual reality is much cruder, although the promise of the "Wild Palms" technology is inherent, at least from a seductive standpoint, in the present technology.

A virtual reality setup involves the following: a "mask," called a "head-mounted display" which essentially shuts out the outside world and consists of tiny liquid crystal television monitors over both eyes and stereo headphones; and a set of gloves, called a Dataglove. Both the glove and the head-mounted display are wired to a high-speed personal computer, capable of using new three-dimensional monitoring and color graphics software. The computer program generates the 3-D graphics that compose the "virtual world," and is capable of responding to sensory information transmitted from the gloves and head-mounted display. In that way, the person wearing the mask and gloves can interact within the virtual world, moving things around, reorienting himself, and having the images projected in the mask reflect those changes.

The computer clothing, as the head-mounted display and gloves are called, can be extended to include full-body suits, with appropriate sensors that will more completely place the wearer inside the projected "virtual world" and expand the level of his or her interaction with that world.

According to Lanier, the key to the process is to "trick" the sensory organs and the brain, through the bombardment with simulated stimuli, that what is being projected is "real." At that point, judgment about whether the projected, alternative world, is real is suspended. Rheingold, comparing this to what takes place in a theater performance where an audience "identifies" and "empathizes" with the performers, applies Aristotle's term, *mimesis* to the phenomena. "If you generate enough stimuli outside one's sense organs to indicate the existence of a particular alternate world, then the person's nervous system will kick into gear and treat the simulated world as real," Lanier told an interviewer in 1991.

One set of limitations placed on this process occurs because of the problems with processing data. Even the fastest of available computers cannot process the necessary data, and feed back the results in changes in the "virtual world" in "real time." For the system to work, it must eliminate enough of the lag time to allow for the cues provided to work in the way Lanier described; if it does not make that threshold, the results can be both disorienting and in some cases, where it is close to, but below the threshold, even sickening.

A similar *mimetic* process, to use Rheingold's term, of "cued" suspension of judgment takes place when one watches a movie or television. The viewer of such entertainment is not aware of the projected series of pictures in a movie, but sees a continuous image; the television viewer does not see the changing dots that make up the image, but the continuous projection. Nor do the viewers of either generally find themselves aware of other outside stimuli, or, in the case of television, aware that the size of the projected image is generally much smaller than normal visual field.

Fred Emery, who worked on television brainwashing effects for the Tavistock Institute of Human Relations in the 1960s and 1970s, described the process by which the viewer is being drawn closer and closer to the screen. Movies first created that sensation, which was enhanced with the enlargement of the screen for Cinemascope. It was further enhanced by television, which brought the effect of movies into the living room. But the screen always represented both an apparent "physical" barrier between image and audience. Virtual reality technology collapses that barrier by placing the subject *inside* the screen, into the projected fantasy, and enables the subject to interact with it, according to the limits established by the programming and the sophistication of the technology.

In the immediate future, the first stage virtual reality entertainment will be pre-programmed, much like video or computer game software. Ultimately, the programming will be "user customized." But while that might open up what appears to be limitless possibilities, it is in fact *limited* by the very nature of the computer technology.

Redefining the problem

Virtual reality technologies, within certain defined limits can be extremely useful. It is when one attempts to force it outside these necessary limits, using deconstructionist metaphysics and New Age spiritualism, that the technology, as mass entertainment, becomes dangerous.

Rheingold, Lanier, and others are fond of comparing what they think virtual reality accomplishes to the famous allegory of the cave from Plato's *Republic*. From their distorted view of Plato, they understand it to mean that man can only see images of reality, projected as if shadows on the wall of a cave, "an illusion based on reality, a virtual world," as Rheingold describes it. From this the adherents of virtual reality extrapolate that there is *no reality that can be known*;

therefore, each personal virtual reality is potentially as valid as any other. There is no power of reason that cannot be fooled, Rheingold claims, saying that the virtual reality technologies must cause us to look toward *less reasoned*, more mystical solutions that link our sense impressions to some "higher realm." This, they claim, will establish the basis of a true human identity.

Rheingold and hackers like Lanier, while citing Plato, are Aristotelians; they even boast that their programs are based on principles defined in Aristotle's *Poetics*. As one of the leading programmers, Brenda Laurel, writes in her book *Computers as Theater* that computers can "create" in the manner that Aristotle understands the act of "creation," by naming what is there and describing what it does. Action and interaction are programmed according to simple principles, linear rules, that do not change; what is "created" is a closed system.

While Plato does say that man does not know reality through his senses—through sense certainty—in opposition to the Aristotelians, he argues that it is possible to get past *sense certainty* to understand what is behind or the cause of the sense impression. However, we can never wind up finding the cause of the sense impression by interpreting the sense impression itself. The domain of reason exists on a *higher* level than sense certainty, and cannot be accessed from that lower domain of the senses. It is the function of creative reason, the power of the mind that distinguishes man from the beast, and makes him in the image of his Creator, to see beyond sense certainty to understand the laws which govern the universe.

All computer programs and systems, virtual reality programs and systems most emphatically included, operate in the Aristotelian realm of *sense certainty*, or in a variant, *sense-experience*. An Aristotelian, like virtual reality cult members, or degraded individuals immersed in spectator sports and Hollywood, television entertainment, can only rationalize the relationships between sense-certain phenomena.

The creative person uses his power of reason to discover the axioms that change the conditioned behavior of mankind, in accordance with natural law. It is man's moral obligation to act accordingly, and by so doing preserve and expand the dominion of our species over nature.

Virtual reality programs, or so-called virtual worlds, are merely representations of sense certainties, of objects and data, arrayed according to the Aristotelian process of computer electronics. They are technologically possible because you can reduce such representations and simplistic interactions to mathematical formula of "less than" or "greater than" character, and give them a plotted location within an electronic computer memory. You can increase the speed by which such data are processed, spit out, but no matter how fast they get, computers cannot replicate the power of human creative thinking: the object of human reasoning is the creation of

ideas, not data or information—*no computer will ever create an idea, in the manner which Plato defines an idea.*

It would be better to call what now passes for "virtual reality," "computer-generated, three-dimensional interactive simulations," and to understand their inherent limitations.

Such technology can be extremely useful in the design of machine tools and other tools that can enhance the power of human labor. They have been employed for some time in flight simulators, saving lives and making for more skilled pilots. They are already being used to train surgeons in procedures without incurring risk to human life. In other areas they are employed, through what is called "telepresence," to operate equipment and probes in places where humans cannot go, such as in volcano cores or human arteries; they can ultimately help us to build cities in space. These simulations are further being deployed in the design of new chemicals or in the aiming of radiation treatment for cancer patients.

All of these uses are helpful in a linear, simulation technology to help advance human skills. Many represent simple training devices for improved motor skills, in which, if one does a certain task in a particular way, there will be an effective and lawful result. Rheingold's book provides exciting evidence of how such simulation works now, especially in the medical field, and what other areas are under study for future application.

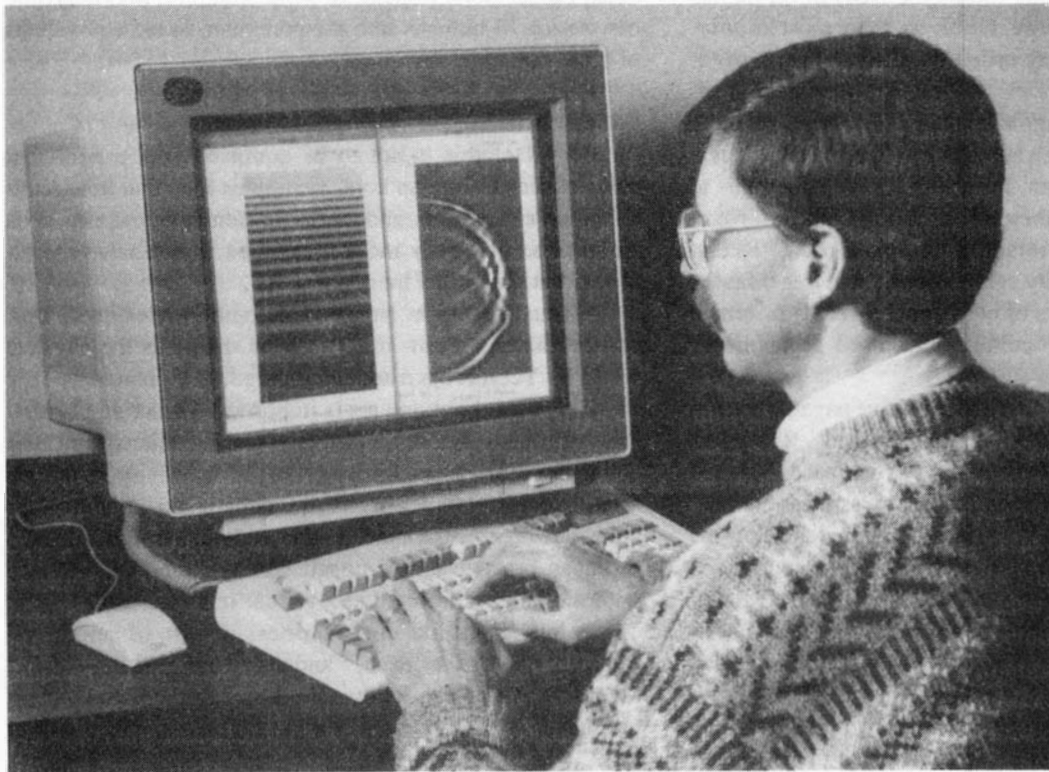
'Ecstasy machine'

However, there exists an *absolute boundary condition* that separates the "virtual reality" technology from human intelligence. When people deliberately blur this primary distinction between man and computer, the virtual reality technology takes on an evil and destructive purpose.

A few years ago, in one of the first major media discussions of the new technology, the *Wall Street Journal* ran a front-page story under the headline "Electronic LSD." Since that time, devotees of the virtual reality cult, have been busy qualifying that description. The preferred one, used by Rheingold, is "ecstasy machine." They are careful to point out that this is not the *only* use of virtual reality, but admit that it is *one* use.

While they stick on their qualifiers and claim that it is nothing like a hallucinogen, those involved deeply with virtual reality have adopted the epistemological outlook of the 1960s LSD drug culture, attempting to use virtual reality to reconstitute the drug culture in 1990s guise. In fact, the same individuals involved in the 1960s spread of hallucinogenic drugs to cause America's youths to "tune in, turn on, and drop out," have found a niche in the virtual reality precincts, including:

- Timothy Leary, the guru of the LSD movement, plays a prominent role among virtual reality adherents;
- members of the Hog Farm, a group that earned fame for dosing unsuspecting victims with lysergic acid diethyl-



Virtual reality technology was initially developed to help humans improve their world through science and technology. Shown here is a seismic modeling simulation jointly developed by IBM and the Colorado School of Mines. Other uses include remote control of instrumentation in dangerous environments or microscopic medical procedures. With such an exciting reality before us, who would want to escape it?

ide (LSD or “acid”) and later providing the security apparatus for the Woodstock concert in 1969;

- Jerry Garcia of the rock band Grateful Dead, as well as scores of others associated with the rock-drug counterculture.

In fact, one participant in a convention of virtual reality enthusiasts pondered, in an interview, whether he hadn’t wandered back into 1960s Grateful Dead concert crowd. A significant number of virtual reality adherents admit to having used LSD—some admit to using it now—while others prefer to be a bit more discreet, hoping that the associations don’t hurt the wide popular acceptance of the new technology. Those involved in its promotion, however, realize that the prospect of a new, legal, LSD experience—all the thrills of an induced ecstasy without some of the risks—is extremely powerful motivation.

The other principal grouping within the virtual reality cult, with an overlapping membership among “acid heads,” is what have been called “technoweenies”: people who are effectively self-brainwashed by their personal computers. Most are products of the deconstructionist assault on education, including what passes for higher education, and speak in terms of “personal empowerment” and “hyper-networks.” They don’t communicate—they “interface,” having reduced themselves to Aristotelian “mailboxes” in some network. There is really very little difference between their epistemology and that of an “acid head.”

“I am at liberty to say that I am an acid head,” said John

Perry Barlow, a former songwriter for the Grateful Dead and a leading promoter of virtual reality. “Drugs are not the issue here. It is the slippery epistemology that psychedelics [hallucinogenic delusions] induce.”

Virtually nothing is taboo

Most of those deeply involved with virtual reality have fallen far down that slippery slope. They call their alternative reality, the world produced by the computer simulations, “cyberspace,” a term borrowed from the science fiction cult novel *Neuromancer*, about a computer-driven “brave new world.” They see themselves as “cybernauts” who are at once explorers of this new world—Lanier likens it an “invented new planet”—and *warriors* against the old order, the old way of thinking. That “old way of thinking” is the foundation of more than 2,000 years of Judeo-Christian civilization and the values it embodies. Virtual reality provides a “tool” by which we can overturn this restrictive old order, Rheingold explains, and replace it with one in which both happiness and imagination are unlimited—or so he claims.

What Rheingold, Lanier, and their fellow cybernauts object to is that there is a universe whose laws are knowable and where there are such things as universal truths. The imagination, they claim, and therefore human freedom, are fettered by this outdated concept of the universe since it defines certain boundary conditions, certain realities which are unchangeable. They rebel against the relationship be-

tween *freedom* and *necessity* that is the basis of all human progress, all human creativity. For them, there must be *absolute freedom* as the primary ordering principle; *necessity* is to be rejected and denied.

Virtual reality, Rheingold explains, re-creates a more primitive state in man, when he was unfettered by the concept of *necessity*. He and others, including Lanier, liken this to the state of mind, which they regard as the highest form of "creativity," to that of an infant. If "properly used," Rheingold explains, virtual reality can restore in man this infantile mental state, the same state of bliss as achieved by primitive cultures, especially those cultures that used psychotropic drugs.

Modern religion, as opposed to primitive pagan worship, has become too structured, too centralized, Rheingold claims. With the advent of the Age of Cyberspace, he says, man can finally experience religion "as it was meant to be," as a "decentered" personal experience, unmediated by the structures of the church. Modern religion, with its centralized structures, instructs in self-denial and calls this self-denial of the senses true consciousness; the new religion, made possible by the creation of virtual worlds using the modern-day practices of the Shiva and Dionysus cults, presents man with "unlimited possibilities and unhindered sensibilities."

The culture so created will be one in which man need not deny his senses their pleasure, because such pleasure can be found without limit and without penalty, the virtual reality cultists maintain. There is nothing that is forbidden, nothing that is taboo. It is the sense of being able to act without suffering the responsibilities for one's action that is principal seductive inducement for virtual reality among a population already degraded by popular culture.

This extends to the sex act, where Rheingold has coined the term "teledildonics" to conjure up the proper image of virtual sex. There is a real life consequence for having sex with your neighbor's wife. In a virtual world, one can have a virtual sex experience, with no apparent consequence, Rheingold imagines. Morality, as defined in the classic sense of that term to signify an ability to judge right from wrong according to certain principles, collapses under the weight of a virtual world. Without a developed moral conscience that informs judgment, man is reduced to a beast-like state, the Freudian *id*. Rheingold counters that such virtual experiences as having sex with your neighbor may serve to dampen the desire to commit such acts in the "real world."

He puts aside the discussion by stating, as do many of his co-thinkers, that the technology is still too crude to make such experiences more than theoretical possibilities. (Theoretically, it is possible to program a computer to simulate sex; it breaks down to stimulus and response, at given locations, all of which can be mapped and programmed. Should the processing speed improve, should various body suit fabrics be designed, with appropriate sensory devices, one can imagine the "creation" of the computer equivalent of one of

those rubber dolls popular in some quarters, and later, the conversion of humans into the computer-suited equivalents of those dolls.)

No such thing as 'virtual love'

But all of this is not to be confused with a nonlinear concept such as human love, a complex *idea* that transcends the sense-experience, and therefore cannot be mapped in an Aristotelian geometry and programmed. You can have virtual sex, but not virtual love.

"Virtual reality is an epistemological milestone," proclaims Lanier, "a new reality that is shared as the physical world is. Yet it is open and unhindered, like dreams."

The point about dreams is important: Lanier and his fellow cybernauts, borrowing from radical Freudians like Hitler enthusiast Carl Jung, believe that all creativity is unconscious, that it involves mystical processes that are unknowable. The dream-like state associated with a religious trance of pagan practice or a drugged state are therefore equated with the height of creativity. Virtual reality enables one to access this dream-like consciousness, a form of heightened sensibility to "experience," and from there to have direct access to what these fellows think is "pure creative potential." This is exactly what was proclaimed as the power of LSD.

Lanier, the dreadlocked guru of virtual reality, like Harvard's Timothy Leary before him, is capable of spinning out examples of this type of "creativity" at a moment's notice. He speaks of playing a virtual bagpipe that, as you play notes, builds a city in your virtual landscape: "You toot out a few notes. What happens is there is one crooked, funny skyscraper, and a slum. But as you play, all of a sudden a city spins out." There are no laws of nature in these virtual worlds, if one wants to "create," then like a conjurer, one can create anything one wants, Lanier and Rheingold point out. As the computer technology advances, these creative experiences can be shared by individuals networked together, "creating" whatever comes into their mind.

But this is not creativity. It should more appropriately be called mental masturbation. No matter what the cybernauts say, *there exists a reality*, a reality behind all the shadows, that is knowable and governed by natural law. It is not creative to deny the existence of such a reality, nor to wish into existence an alternative reality, in which, it is posited, there are no such laws. Through the creative acts of human individuals, mankind as a whole discovers the universal truths that govern our world. This is done not by arranging objects within a fixed universe. The creative act is defined by the search for necessary principle that can overturn the axioms of one system of knowledge, so that mankind might progress to the next higher level of knowledge. It is the search for the perfection of man's knowledge of the universe that is the essence of creativity. In so doing, we act in such a way to participate in the divine creation, using that power, that di-

vine spark of reason, that makes us in the image of our Creator. Only by acting in accordance with such principles, can one be truly free.

Virtual reality operates in the realm of the senses. It seeks to impose that realm, the realm of Aristotle, on the mind, and thereby keep man enslaved to his "sensibilities." In the virtual world, every so-called creative act, no matter how irrational, is programmed in a linear mode on a computer. Response "B" follows from act "A"; if a different act, "A-1," had taken place, then the response would have been "B-1." If one moves one's head to the right, then the image in the head-mounted display moves to the right, according to a calculated formula. In the case of Lanier's "bagpipe city," a particular note causes a certain image in the cityscape to appear; if you play certain notes in sequence, then a particular sequence of buildings appear. This can be varied according to an almost limitless number of possibilities. And one can learn, how to create certain expected responses, similar to playing a Nintendo game. This is what is called "interaction"; but it is not creative, nor is it human.

Say you want to make a farm rather than a city in Lanier's "bagpipe" example. You'd have to change the computer program, to create a new set of fixed variables and possibilities and responses. But could you discover, while in a given virtual world, the means by which to change the axioms of the one virtual reality so as to "create" another? How can you turn your city into a farm—what notes would you have to play? You can't find any axiom, you can't find any sequence of notes. You are limited by the fixed universe of possibilities and responses as defined by the universe of that specific virtual world. You may transform objects in that world—if the program allows—but you cannot transform the world itself.

Yet, it is precisely this principle of searching for what changes something from one mode of behavior or activity to another, for axiomatic changes, which is the essence of scientific or creative reason.

Aristotelian unreality

What passes for "creativity" in virtual reality is in fact a phony shadow of creativity: it is merely a rush, a cheap thrill induced by manipulation of the senses. Stated in another way, all virtual worlds are on one plane, one level, an Aristotelian level. One can never get to the level of reality from there, which explains why those involved with the virtual reality addiction must so vehemently deny that any such reality exists. There is a linear sequence of "realities," all strung together by computer programming, but there is no way to get to another level: Once inside the computer experience, you can easily become trapped by it. That is perfectly lawful, because, as we stated, there is no way to get from the domain of the senses to the higher domain of reason by looking at or manipulating objects within the domain of the senses.

"Our creative mental processes do not address directly sensory objects per se," Lyndon LaRouche writes in his essay

"On the Subject of Metaphor" (*Fidelio*, Fall 1992). "Human thought knows only change; we know only a thinkable correspondence between a change in our behavior and a correlated change in the manifest behavior of nature. It is correspondence of the two Types of change which constitute the entirety of physical science. That correspondence is what is intelligible for us; we must discover everything else respecting nature from this approach to the elementary primacy of change, to the universal space-time of nothing but change."

To communicate this, one needs literate language, not the gibberish of deconstructionists, symbolists, post-symbolists. Without literate language, there can be no thought. Lanier and his associates speak of a new language of hyperreal images, where gestures and looks substitute for words, where words are not allowed nor desired, in short a return to primitivism.

I hate the language of words, says Lanier. It leaves so much out. "It leaves out the experience."

Lanier longs for the time when virtual reality interfaces will enable one person to "see" the thoughts in another's mind, in a sort of "Vulcan mind-meld," as performed by Spock on the Star Trek television series. In Lanier's world all thoughts are reducible to "pictures," and that is all that is "communicated."

But as LaRouche explains, what is communicated between individuals is a *thought-object*, not the *thought* itself; it is comprehended in the mind of the other, by reproducing the process by which the first person reached the idea. The *thought-object* is an *idea*, not a picture, and cannot be communicated by a computer or any medium. This is something that the brainwashed victims of modern culture like Lanier and Rheingold cannot understand.

In the Aristotelian universe there is a past, present and a future, linked together by a linear time line. The past is essentially dead, to be studied as a dead object in this universe. The future is a projection, a non-real, or in the terms of our discussion, *virtual* world, knowable by extrapolation from past and present experience.

What is left out and what makes it false is the concept of change, as LaRouche develops, and it is this change that gives meaning to our mortal existence on the planet. By our individual moral action, we participate in the process of universal change. Acting in the present, we alter the relationship of all previous human generations to the present and to the future, thereby altering the past. Thus, each individual is morally responsible, not simply for the present and possibly the future, but for the past.

Virtual reality reduces everything to an "at-onceness," as Lanier calls it, echoing Marshall McLuhan. In so doing it kills the past, destroys the future, and renders the present morally impotent. Mass-marketed virtual reality helps create a world in which nothing is real because, nothing can be understood as true. By eliminating the concepts of universal truth, there is no truth. And without truth and the search for truth, there can be no civilization.