

Useful Vocabulary for the Metaphysics of Virtual Reality

cyber

A prefix found throughout the literature of VR. The root reference is to *cybernetics*, the science of self-regulating systems, but the reference has expanded to become a name for mainframe computers (the Cyber 960) and now connotes the human involvement with computers (the cyborg, or cybernetic organism). For instance, the primary human body becomes a cyberbody when appearing in the cyberspace of a virtual environment.

cyberpunk

A postmodern literary-cultural style that projects a computerized future. The future is dominated by private corporations that use information technology and drugs to control individuals. Cyberpunk stories are told from the criminal perspective and portray the widespread use of biotechnology, computers, drugs, and a paranoid life-style. Individuals increasingly merge with electronic devices, and hallucinations rule public life. Cyberpunk is based on a dystopian brand of science fiction whose patron saint is Philip K. Dick and whose manifesto is William Gibson's novel *Neuromancer*.

cyberspace

The juncture of digital information and human perception, the "matrix" of civilization where banks exchange money (credit) and information seekers navigate layers of data stored and represented in virtual space. Buildings in cyberspace may have more dimensions than physical buildings do; cyberspace may have different laws of existence.

Holodeck

An idealized computer-to-human interface from the science fiction television series "Star Trek: The Next Generation." The Holodeck is a room where spoken commands call up images in realistic landscapes populated with walking, talking "humans" (artificial personalities) and detailed artifacts that appear so lifelike that they are indistinguishable from reality

hyper

The prefix *hyper* means "extended." Hyperspace is space extending beyond three dimensions. *Hypersystems* are nonlinear linked systems in which one link may route directly to a link on an entirely different plane or dimension. *Hypermedia* cross link information in text, graphics, audio, or video.

hypertext

An approach to navigating information. From the computer science point of view, hypertext is a database with nodes (screens) connected with links (mechanical connections) and link icons (to designate where the links exist in the text). The semantics of hypertext allows the user to link text freely with audio and video, which leads to hypermedia, a multimedia approach to information

interface

The locus of communication between two systems, applied to either hardware or software or a combination of both. A graphical interface, for example, may use metaphors such as a desktop or house with garbage pail, paintbrush, or yardstick. An alphanumeric interface, such as that of an IBM-style personal computer, consists of a monitor and a keyboard and the appropriate software for input and output. Interface is a key term in the philosophy of technology because it designates the connecting point between human and digital machine.

network, the net, the matrix

A network connecting computers through cables, telephone lines, or satellite transmission. The global Internet network connects institutions of all kinds: military and government, commercial and educational. Networks also exist in local areas such as a business and on commercial mainframe computers, such as those used by CompuServe and Prodigy. Most often, gateways exist through which one network opens onto another.

neural interface

Projected by science fiction, the notion of connecting human-computer input and output by tapping immediately into the nervous system of the human user. Discouraged by neurologists because of its obvious dangers, the notion still persists among scientists looking for an "ultimate interface."

ontology, ontological

The study of the relative reality of things. An ontology ranks some things as "more real" or "actually existing," as opposed what is unreal, phony, fadish, illusory, ephemeral, or purely perceptual. Ontology locates the difference between real and unreal and then develops the implications of that way of differentiating the real from the unreal.



virtual

A philosophical term meaning "not actually, but just as if." It came into recent vogue with the use of computer techniques to enhance a computer memory. Virtual-memory techniques extend the data storage of a computer without adding hardware. On a personal computer, for example, virtual memory can be a part of RAM used as though it were a hard disk storage space. Such a virtual disk can be used like a hard disk, but does not have the physical limitations of an actual mechanical disk. Similarly, something can be present in virtual reality without its usual physical limitations.

virtual reality (VR)...pertains to convincing the participant that he or she is actually in another place, by substituting the normal sensory input received by the participant with information produced by a computer. This is usually done through three-dimensional graphics and input-output devices that closely resemble the participant's normal interface with the physical world. VR includes several factors and emphases: artificial reality, as when the user's full-body actions combine with computer-generated images to forge a single presence; interactivity, as when the user enters a building by means of a mouse traveling on a screen; immersion, as when the user dons a head-mounted display enabling a view of a three-dimensional animated world; networked environments, in which several people can enter a virtual world at the same time; telepresence, in which the user feels present in a virtual world while robotic machines effect the user's agency at a remote location in the actual primary world.