VIRTUAL REALITIES AND VIRTUAL MISTAKES: A COMMENT ON TART

D.A. Begelman, Ph.D.

D.A. Begelman, Ph.D., is a psychologist in private practice in New Milford, Connecticut.

For reprints write D.A. Begelman, Ph.i)., Briar Lane, New Milford, Connecticut 06776.

Charles Tart. (1990) has presented an intriguing set of proposals for extending the use of computer-generated virtual realities (VR) to concepts like *personality*, *alter personality*, and *stale of consciousness.* In essence, he feels that. newer multi-sensory technologies are capable of artificially creating or reproducing certain experiences *in* subjects. Drawing on ingenious adaptations of VR in flight simulation designs like the Link Trainer, Tart undertakes to extrapolate from aeronautics to the more elusive realm of clinical phenomena. As if to emphasize how broadened a notion VR actually is, he assures us we all "already live in a variety of internally generatedvirtual realities " (Tart, 1990, p. 227) _without realizing it. Au example of such a personal and uncontrived analogue of flight simulation models is, according to Tart, illustrated in an experiment in which an advent .itiousrelationship between a visual display (lights) and music is perceived by subjects as beautifully synchronized. In this case, our personal VR functions to create a phenomenal synchrony where none actually exists. (Tart's point may also be illustrated by any of a number of common phenomena that do not involve cross-modality paradigms, such as the experience of apparent motion in stroboscopic movement [Rock, 1975].)

Tart's extended discussion of our personal VR, however, ventures into the limbo of metaphysics:

> "The accepted modern understanding. _indicates that we do not experience the outer world directly but indirectly. Various physical energies like light and sound are not experienced directly. Rather, they cause electrochemical changes in various receptor organs...given the widely accepted psychoneural identity hypothesis that consciousness is equivalent to and nothing but these electrochemical processes in the nervous system, what we experience is not the world per se but processed neural abstractions. Although these neural events are initially related to external world events, this relationship may be greatly altered by the time we deal with the final neural events comprising consciousness." (Tart, 1990, p. 227)

Tart's sympathies in the foregoing passage are with two philosophical positions: identity theory and Kantian metaphysics. The latter presupposes we cannot have direct knowledge of the external world, but. only a filtered access to it, colored by receptor processes. It is something of a mystery why Tart feels neural identity theory renders reality-access indirect. If consciousness is for Tart *identical with* processes in a materialistic medium, one could as well envision an even more direct access to the external world than is provided by alternative formulations of the mind-body relationship.

It is perhaps premature to grant the mind-brain identity thesis the currency Tart claims for it. The "theory" is a hotly contested network of conceptual issues within modern philosophy (Borst, 1970), including one as to whether it qualifies as being, strictly speaking, a hypothesis at all. For example, critics like Malcolm (1970) challenge neural identity theory as a legitimate scientific hypothesis. He argues that since its defenders provide for a sense of strict identity between consciousness and brain processes, conditions essential for its confirmation cannot he satisfied. One such condition for strict identity is "occurs in the same place at the same time " (Malcolm, 1970, p. 175). Obviously, any such confirmation would require independent determinations of both the conscious event and the neural process held to he identical with it, as well as the further test of seeing whether they both occurred in the same place. However, conditions for conducting the further test cannot even be formulated for the conscious event. Malcolm 's critique of neural identity theory, whatever its shortcomings, is but one entry among many others in recent years.

Be that as it. may, where under older accounts Tart 's "processed neural abstractions" becomes "confinement within the circle of our own sensations " (Pap, 1949, p. 144), in Kant they become a world of phenomena forever blocking our direct access to *noumena,* the world as it really is. In effect, we are, according to Tart, forever imprisoned within an organismic VR, making our relationship to reality considerably less than flat-footed. It is an old story, discussed for decades by leading epistemologists (Price, 1932; Pap, 1949; Ayer, 1956; Austin, 1963; Hamlyn, 1970). Tart is correct in likening the story to a "movie theatre of our own, lost in the show created by the usually hidden mechanisms of the World Simulation Process" (Tart, 1990, p. 227). Except he believes it.

That something is amiss in Tart's extrapolation from flight simulation models is apparent when he graduates them into analogues counterposed between us and reality. The analogy breaks down because, in the aeronautical examples, straightforward comparisons between simulators and the real world can *in principle* be made. The situation is utterly different for comparisons between the "real " world and those

collections of neural abstractions Tart deems us all to he. If we are forever insulated from "the world *per se"* (Tart, 1990, p. 226) , we are *logically,* not merely technologically, debarred from investigating comparisons of the latter kind. Accordingly, these comparisons cannot he expressed as coherent scientific claims. On the other hand, Tart's "Lori Lite" example presupposes an intelligible meaning for the notion of a personal VR, because the illusion of synchronization of light and sound can he studied against a backdrop of specifiable stimulus conditions. Indeed, the very notion of an "illusion" like the one produced by Lori Litt has meaning precisely because the relationship between light and sound patterns is an adventitious one. That it is not perceived this way by subjects is the "illusion" in question. No such comparison is even possible between our personal VR and the pervasive reality it presumablyrnisrepresents.Ifso, the claim our receptor systems fundamentally distort or transform an occult reality beyond all recognition is a metaphysical, not scientific one. In summary, if there is no conceivable way for us to access "reality" directly, how do notions like "distortions of reality" get a foothold in the realm of coherent claims when comparisons are made between the real world and our processed information about it?

I confess to some apprehension over Tart's VR applications to clinical contexts in which "you could observe *your* client's reactions in a computer-generated virtual reality much more directly by donning your own Eye Phones Tm " (Tart, 1990, p. 231). My trepidation does not spring from anyfancied mismating between the needs of a vulnerable population and Tartean technology *perse* (acknowledgement of the human factor and ethical issues about adaptations to clinical populations are an overriding concern of Tart's) . All the same, Tart's first example of prospective applications is to paranoid patients-a population one would expect to he low on any list of priorities for who should commence wet runs into Buck Rogers-type experiences!

> "Suppose your client has strong paranoid tendencies, for example. We could program a virtual reality to reflect that...we might. have the computer darken the shadows in the room, for instance, and have ambiguous motions occur in the shadows. Then we might have the computer modify the facial expressions of the virtual people in the room (including or not including you, the therapist, if your virtual body is present in the scene) to make them look more threatening. Perhaps we could program this computer-generated reality so that no matter which way you turn in it, there is occasionally something moving in the periphery of your vision that you can never get a good look at. Can you now understand your client's reality better?" (Tart, 1990, p. 231).

In a word, no. Tart's paranoid VR seems less designed to reflect or assess paranoia than to induce it anew. Maybe this is because rather crucial questions arise at the initial level of software design in simulating "paranoid perception." For example, a VR program articulating a world in which ambiguously perceived objects move in the periphery of vision may be technologically achievable, but what does it have to do with paranoia? Tart opts for programming *illusory* or *hallucinatory* perceptual fields he construes as ingredients of paranoid states, whereas these con trastwith *a* delusionalworld. Visual alterations of the real world such as are implied by "darkened shadows," "ambiguous motions," and "modified facial expressions" presumably contrast with veridical perceptions of it. Since the delusional component in all paranoid systems affects interpretation rather than visual organization, it is questionable whether Tart's paranoid VRs are valid renditions of the experiential world of this patient population. Unless the core pathology is compounded by types of schizophreniform symptoms, paranoids are not ordinarily subject to sensory experiences differing from those associated with normal functioning. Tart's paranoid VR seems to be an arbitrarily concocted world; one in which technologically contrived stressors are more abundant than they are in the real world of the paranoid.

In another sense, however, Tart's paranoid VR seems apt, only not as a way of reproducing a patient's actual perceptions. The system may actually be a programmed reality in which a normal person would begin to feel paranoid. But its effect on real paranoids, I fear, would only be to potentiate, rather than reproduce, an already hypervigilant existence. ■

REFERENCES

Austin, J.L. (1963). *Sense and sensihilia.* Oxford: Clarendon Press.

Ayer, A.J. (1956). *Theproblem ofknowledge.* New York: Penguin Books.

Borst, *V. (1970) . The mind/brain identity theory.* London: Macmillan.

E-Iamlyn, U.W. (1970). *The theory of knowledge.* Garden City, New York: Anchor Books.

Malcolm, N. (1970). Scientific materialism and the identity theory. In V. Borst (Ed.), *The mind/brain identity theory,* pp. 171-180. London: Macmillan.

Pap, *A.* (1940). *Elements of analytical philosophy.* New York: Macmillan.

Price, H .H. (1932). *Perception.* London: Methuen.

Rock, I. (1975). *An introduction to perception.* New York: Macmillan.

Tart, C.T. (1990). Multiple personality, altered states, and virtual reality: The world simulation approach. *DISSOCIATION,* IV (3), *222-223.*