

## Response

Steven Schneider's kind and thoughtful review of *Virtual Realism* makes me want to send out some signals about what I have been discovering farther down the road since I wrote that book some five years ago. Mr. Schneider's review points out, quite correctly, that the main themes of *Virtual Realism* sprang from my earlier research into the metaphysical underpinnings of virtual reality. Similarly, *Virtual Realism* has since branched into areas that were only noted but not pursued five years ago. These new branches might strike readers as both surprising and inevitable. At least they seem so to me.

### The "Narrow" Path

Before relaying a couple signals from down the road, however, let me first clarify why I described virtual realism as a "narrow path." What I meant by "narrow" was not a sociological generalization about how much of the population might adopt a middle course between Unabomber dystopia and Network Idealism. The middle path is all too often a middling position, a compromising failure of strength or lack of decisiveness. Rather than a middle road adopted by default, I mean virtual realism to be a narrow path that consists of the existential steps needed by each individual to actually walk the middle path. The middle path may seem to many people a smooth government superhighway, but actually the true middle path of virtual realism is a tightrope. It is a delicate balancing act on the part of individuals rather than a broad, uncontroversial way. The path of virtual realism is narrow in the sense that it is difficult for individuals to maintain it moment-by-moment. All too often, our ideas become frozen into "positions" or "claims" which we feel obliged to either own or disown, as if the idea resides outside our moment-by-moment practice. Too often our intellectual discourse overlooks the personal, existential aspect of ideas that get put into practice. Virtual Realism, the middle path between Unabomber dystopia and Network Idealism, may indeed sound like good common sense but it is not really so common to practice.

The path of personal balance demands more than our assent to an idea or a nod towards a nice conceptual balance. How easy is it for the individual to actually walk the path of virtual realism step by step?

While the path may lead to a conceptual balance between undesirable extremes, the actual walking on the path remains difficult. At least, it remains difficult for me.

Keeping one's balance and maintaining a center is more than the default position. It is in fact a most difficult challenge. We need to re-learn the balancing process especially during times of rapid transition and of increasing pressures from every side. In this sense, I see in myself involved in a continuous struggle to become a virtual realist every time I pull my body away from its tendency to collapse and slump in front of a computer monitor, every time I rest my eyes from their intense fixation on the screen, every time I pull myself from virtual worlds to go outdoors where I feel my physical dimensions shrink under the stars and moon of the night sky. Loosening the organism from its fixations after long hours of computer work belongs to the daily practice of virtual realism. And so does the re-discovery of the internal organs with their special energies and their powers to integrate the organism as it is so elaborately explained by Taoist documents. Walking the path likewise means continually moderating those moments of doubt when our cultural trajectory jolts us with ever-changing upgrades of hardware and software. These processes must be moderated step-by-step along the way. The path is not a highway between two cities but a series of rocky steps across a stream of moments.

The middle path is not narrow because it falls between two Hegelian extremes that logically cancel each other. Nor is it a narrow path because it is rare. Rather, the path of virtual realism is narrow because each of us must pass through the small gate that is our own lifetime dangling over the chasm of change and transformation. The care we take on this path involves more than the intellectual rejection of the extremes on either side.

### **Virtual Realism as a Distinctive Style**

As I walk my own path, I sometimes look back upon steps that I never imagined I would take. The path of virtual realism gradually led me into areas not conceived in my book but maybe hinted or implied in its argument. The most surprising (to me) appeared in the area of online 3D graphics.

Readers of *Virtual Realism* will note the humble status accorded online virtual reality (towards the end of “VR 101” for instance). My treatment there of desktop or “fishtank” virtual reality disparages online experiences and describes them as far too limited to deliver an immersive quality. My book does not rank desktop VR as virtual reality in the strong sense. VR in the strong sense, either the CAVE or the HMD, completely blows away the glass screens of desktop computer monitors. Some feeble attempts to add gear to the personal computer, like the Iglases 3D goggles on the shelves of local electronics stores, offer a paltry field of view that fails to come anywhere near a sense of full immersion. You cannot feel you are somewhere else (telepresent) when you still see the physical room around the periphery of your goggles. When I wrote *Virtual Realism*, I was convinced that the desktop was not a good place for experimenting with virtual reality. At least that’s what I thought until the Fall of 1995.

At that time, I had used the Internet for over ten years, having signed on with CompuServe in 1983 and having used systems in academia from the late 1970s. My experience of Internet virtual reality was based on text-based MUDS and MOOs, and on the clunky, slow VRML worlds on the Web. Occasionally I looked through the 3D browsers of Worlds, Inc. and Alphaworld, both of which created worlds inside the Web. These worlds had not impressed me with their cartoon-like surfaces, and when I used them, I felt outside and non-immersed, still sitting in front of a computer screen. Then sometime in Fall of 1995, at the Digital World convention in Los Angeles, I ran across a demonstration of Activeworlds. AW (Activeworlds) was a spin-off from Alphaworld and Worlds, Inc. What immediately impressed me was the smoothness of the 3D graphics movement. The navigation through 3D worlds was so smooth that it seemed psychologically possible to “slip into” that virtual reality if only the content were compelling. I was told at the convention that the demonstration I saw was actually real-time and modem-based Internet content. I rushed home to try Activeworlds.

Besides the smooth graphics, what caught my attention was the growing community of avatars (graphic self-representations) that populated these virtual worlds. Already a dozen virtual worlds had popped up, developed by different people and organizations. (This

year, in 2000, over 300 worlds populate AW.) The Activeworlds universe was open for avatars to build new worlds or to make additions to already existing buildings. The construction process enhances social communication among the avatars (“Come over and see what I’m building...”), and this mutual recognition (“die gegenseitige Anerkennung,” Kant might say) further deepens the sense of immersion, of being pulled inside the virtual dimension.

Once I had gone through the computer screen, my research would soon follow. One day while cruising through AW, I discovered Atlantis. It was an enchanting fantasy world where your avatar can walk off a pier of classical arches and swim with dolphins through a deep blue sea environment. By losing horizon and gravity, the navigational control of the avatar from the keyboard became somewhat more difficult. The concentration required to navigate increased the psychological immersion, as did the degree of fantasy. I suddenly became enchanted by the possibilities of online virtual reality. The photo of the author on the jacket of *Virtual Realism* shows me against the background of Atlantis. The jacket photo was the very last step in the publication process and at that time I was already groaning at the limits of my “strict” definition of VR in the first chapter of the book. The photo of me in the AW Atlantis signals my conversion to online desktop virtual reality. I now believe we can shape the future of high-end VR by developing avatar worlds on the Internet.

Over the following months in 1995, I introduced my students at Art Center College of Design to these 3D worlds. (This took many months as neither the hardware nor the curriculum was in place for this research.) Over time, we developed a distinctive style for the design of virtual worlds. The style developed while reflecting on *Virtual Realism* and while students learned how to build online avatar worlds. While nearly all the worlds in AW sought to re-present the horizon and gravity of the physical world, our world (called “accd” world) traded gravity for vast open spaces and eliminated horizons for the sake of multi-layered areas of experience (what we call “aesthetic nodes” after Whitehead’s notion of “aesthetic occasions”). Our style was not entirely fantastic however. We sought to preserve implicit real-world references, much as abstract painters use psychologically processed realities. This world reference allows us to tap into the

experiences users bring to virtual reality.

Our style was neither totally abstract (we used birds and insects for avatars) nor truly representational (we saw no reason to duplicate the real world). Because it mediated the extremes of fantasy and realism, we called our style “virtual realism.” It was realism but not physical or representational realism. From a theoretical point of view, we view our design style falling somewhere between the styles of those who would dissolve all reality into the virtual (“everything is virtual reality”) and of those who would insistently adhere to the real physical world (“why doesn’t my avatar have five fingers?”). By actually designing virtual worlds, we discovered a new dimension to the meaning of “virtual realism.” Virtual realism was a style concept that reflected and supported the concerns of theory but that also expanded and modified the theory.

The transition from virtual realism as theory to virtual realism as style was documented in a paper first delivered at the UNESCO International Conference "Media in Contemporary Culture," in Rio de Janeiro, Brazil, May 21, 1998. The paper was subsequently published in issue 7:3 Fall 1998 of *Technos: A Quarterly for Education and Technology*. You can find the paper with images of our world on the Web at: [www.mheim.com/design](http://www.mheim.com/design).

A further offshoot of these experiments was the series of seminars I began holding annually online in 1997. These “Deep Cyberspace” seminars are done completely online and take place to a large extent inside the 3D virtual world. Seminar participants learn how to navigate in and build avatar worlds. At the same time, they read and discuss cyberspace theory. These online seminars, bringing together students from several continents, mirror to a large extent the teaching work I have developed at Art Center where every term I teach one course in virtual worlds theory and a companion course in virtual worlds design, both taught in a computer lab. The online version of these courses was offered each year, and this year for the first time, Art Center began listing the Deep Cyberspace seminars as one of its own offerings. (See [www.artcenter.edu/atnight/courses/online/cyberspace2000.html](http://www.artcenter.edu/atnight/courses/online/cyberspace2000.html)).

The transformation of virtual realism into a aesthetic concept for digital media has cost me personally much time and effort. Learning

to use 3D modeling programs is at first daunting, as is the technical task of getting virtual worlds to function. Student enthusiasm has been a sustaining factor, as has the institutional support of Art Center's Digital Media program. Throughout Spring Term 2000, our virtual world will host real-time avatar chats with authors of essays published by my colleague Peter Lunenfeld's in his book *Digital Dialectic: New Essays on New Media* (MIT, 1999). These author chats will be open to the online public and will take place in our virtual world. (See the announcement at [www.mheim.com/cyberforum](http://www.mheim.com/cyberforum).)

The artistic developments that grew out of my research in *Virtual Realism* could never in my life have been foreseen as steps springing from my writing. Yet now, at this point, I see each step as necessarily unfolding from the path set forth in that book, given also that I am a person engaged with life in this day and age.

### **Heidegger's Hidden Sources**

Another step I have taken is one that will probably not surprise Mr. Schneider, who seems to grasp the inner connection between my interest in virtual reality and Tai Chi. I continue to teach Tai Chi and study Taoist healing traditions. My study of Taoist bodywork intensified after writing *Virtual Realism*. Maybe "bodywork" is not the right word. Maybe "mind-body work" is better because the Western split of mind from body is waning. Post-Cartesian medical science, for example, is coming increasingly under the sway of alternative therapies and holistic understandings of human health. Over time, I believe our culture will mine many gems from Taoist research into inner body sensations.

From Socrates to Wittgenstein, philosophers have held that philosophy is a *therapeia*, a therapeutic practice, a way to foster psychic integrity. At the same time, from Socrates to Wittgenstein, our philosophy has been in denial from the chin down. Western philosophy has located the psyche in the head while the ungrounded body floats before the eyes as an object of neuroscience and genetics. At best, we recognize the body embedded in linguistic metaphors or in the outer shapes we cultivate and impose on ourselves. We abstract from the lived body in exchange for communication and control. The abstract, fractured self places a heavy tax on our well-being.

Early on, while studying and translating Heidegger's philosophy, I saw the need to develop a parallel line outside Western philosophy. This began with a study of Eastern traditions as found in the books available today in the philosophy section of any mass-market bookstore. But soon I learned that Eastern "philosophy" was not in fact philosophy as the Western intellect transmits it. The study of yin/yang theory, for instance, involves training the body, deepening awareness of stress and relaxation, of organic energies and subtle feeling dimensions acknowledged only infrequently in Western thinking. Asian thought is unintelligible apart from the practices tied to its oral traditions. Personal teachers and practices, not books, are essential to oral traditions. When Heidegger wrote about "the end of philosophy," I think he may have been pointing to the transformation of Western thought by an encounter with Asian thinking, as his "Conversation with a Japanese" suggests. But Heidegger seemed himself to re-capitulate the linear history that supports Western philosophy, much like Hegel, and his allusions to Earth, Sky, and "soundless sound" seemed vague and ungrounded. The reader of *Virtual Realism* may sense some of my struggle with these notions in the last chapter of the book.

In 1996, after writing *Virtual Realism*, I found an author who indirectly confirmed my trajectory from Heidegger and Western philosophical discourse. I read a book by Reinhard May called *Heidegger's Hidden Sources: East Asian Influences on His Work* (edited by Graham Parkes and published by Routledge in 1996). May's study confirms what I had long sensed in Heidegger. It shows how, from the early 1900s on, Heidegger read widely in Taoist literature and from it drew a critique of Western thinking. But because Heidegger went East only through reading and not through personal training and oral tradition, he remained uncertain and hesitant about his debt to Asian thought. In some ways, Heidegger's philosophy edged toward Asian modes of thought even without the crucial training with teachers of the Asian arts. Heidegger's focus on the question of technology since the 1950s drew on these Taoist sources which Western philosophy was not yet ready to absorb. May's book supported my long-held intuitions. In my mind, May's commentary is the most important of all the commentaries written on Heidegger's philosophy. As the West actively embraces many aspects of East Asian traditions, we find ourselves learning relationships to direct bodily experience, things

that cannot be conveyed through the abstract tools of Western logic and alphabetic writing.

The last chapter of *Virtual Realism* brushes against the peripheries of language. Another step beyond that last chapter is my personal discovery of the interpenetration of the inner organic body and the outer cosmic forces of sun, moon, and stars. Taoist meditation works with the sensations of internal bodily organs and finds correspondences of these sensations with the external elements outdoors. Through breathing techniques, the student stimulates the internal energies of lungs, heart, kidneys, spleen, and liver. These organs correspond to seasons and sounds and colors of the larger outer universe, according to the Five Elements theory of traditional Chinese medicine. The Five Elements theory shares many features with ancient Pre-Socratic Greek philosophies of nature. The difference is that the Taoist theory is embedded in contemporary practices that have been handed down since ancient times in China. The efficacy of the Five Elements practices remains a revelation for anyone who has studied the truncated and desiccated Elements theories of Western philosophy. Due to the avalanches of change in Western culture, the ancient Greek science of quality will never recover the lustrous gold preserved in the existing Chinese theory of Five Elements.

Silent exploration of the inner body tradition does not mean the end of speaking about it. Over time, we will learn to translate and absorb this dimension of experience into our Western ways of thinking and speaking. In Fall of 1999, the Hanchi (Chinese-American) Corporation commissioned me to write two chapters for their forthcoming book on the history and concept of Chi Kung. Those two chapters contain my latest attempt to put into language the Five Elements theory and its relation to the experience of our internal body. The book contains much other material about the healing effects of this practice as it is currently used in the cancer clinics in China. The book is called *The Mysteries of Chi Kung* and it features the clinical work of He Bin Hue, current director of several Chinese sanitariums. The book is scheduled for Spring 2000 and inquires about it can be directed to the Hanchi Corporation at [www.hanchi.com](http://www.hanchi.com).

So virtual realism, in my tightrope walk, has meant increasing study



of Asian bodywork like Tai Chi and Yoga. Over the years, this practice has come to belong to what I do. It is not an option for me but belongs to the need to ground the virtual in the real physical world. The “physical” world is not the world of abstract physics but the subtly felt inner dimensions of experience such as breathing, balance, and energy flow.

Both steps push the limits of language. The computer world of online virtual reality is a high-impact 3D experience that activates the right brain as much as the linear left where the typing goes on. I am finding it difficult to fit into book format my reflections on avatar worlds. My work began, in *Electric Language* (87), by watching words as I wrote about the word processor. *The Metaphysics of Virtual Reality* (93) presented the concepts behind computerization. *Virtual Realism* (98) offered – as a very limited aid to understanding – a number of illustrations of VR art works. Avatar worlds just do not fit the linear book, nor is it easy to convey the inner journey of silent meditation in a book.

Yet contradictions provoke us to speak about what provokes us, and we shall probably never give up the effort to re-configure experience through linear books. As Steven Schneider notes in his review, my language aspires to a more literary language than the average computer book with its shelf life of six months. I hope that such self-conscious literacy will not dim the details of the path, for we need to see what lies before our eyes, while at the same time we need to pass along what we see as it is continually reworked by cultural memory and imagination. If we succeed, we shall have left something behind for the next generation who will not regard us as alien ancestors but as distant family.

With this cyberculture exchange, we are re-shaping the book culture by merging it with online communication. It remains to be seen where this merger will take us. As an eternal beginner, I am glad to be part of it.

Michael Heim  
Redondo Beach, California  
January 15, 2000  
[www.mheim.com](http://www.mheim.com)  
[mike@mheim.com](mailto:mike@mheim.com)

