



OUR EVOLVING

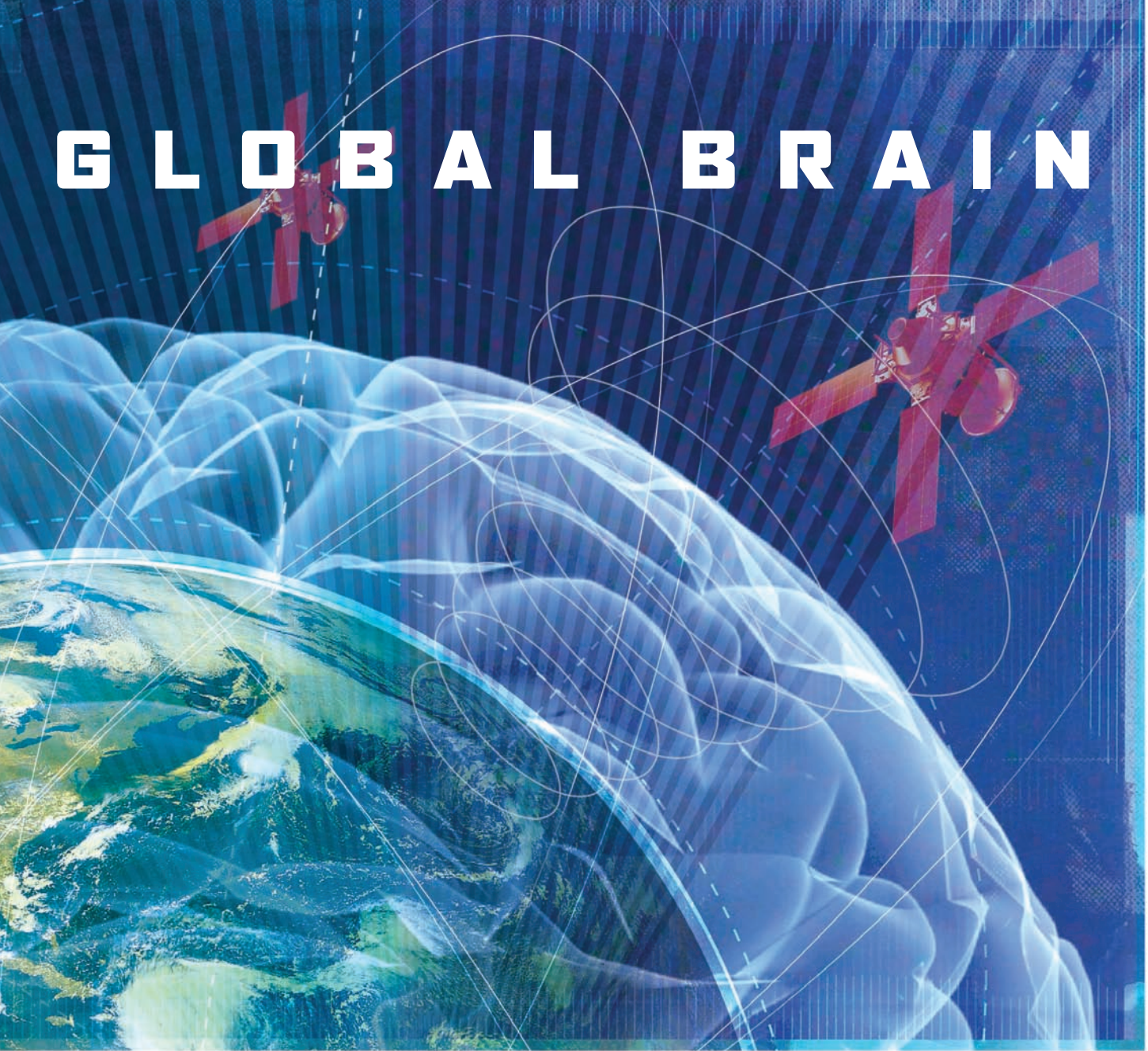


STEVEN VEDRO

IN THE MID-1960S, MEDIA SAGE MARSHALL MCLUHAN wrote that our nervous systems have been extended outward—via the “electric technologies” of sound and sight—beyond our physical bodies, drawing us all into a “global embrace.” Each new technology, he claimed, amplifies and extends the reach of different sense organs, changing our perceptions of ourselves and of the world. Electrical communications, with their ability to instantaneously move human intelligence beyond the confines of the physical body, have for more than a century been the focus of both utopian dreams of deep social and spiritual connection, and a general unease that

this emerging technology was pushing humans toward overstimulation and disembodiment. In today’s world, where our communications networks have advanced from wires to fiber optics, from radio and television broadcasts to an interactive grid of billions of wirelessly communicating sensory devices, each with its own address in cyberspace, these dreams and fears have increased exponentially. This *Infosphere*, a term derived from Pierre Teilhard de Chardin’s notion of a *noosphere* (an evolutionary collective “cerebralization”), is now a field that engulfs our physical, mental, and etheric bodies and that affects our dreaming and our cultural life.

GLOBAL BRAIN



STUART BRADFORD

MEDIA'S MANY IMPACTS

To many, the global Internet is the beginning of a true global brain: a virtual community where people of different cultures find a worldcentric common language and develop new mental abilities and spiritual energies. To others, our communications technologies seem to hold only the basest elements of human nature. These critics claim that television and, more recently, video games and Web surfing have cut us off from one another, instilled false beliefs, and taught us to worship material goods. They point to teenagers with thumbs callused from sending text messages, who cannot hold a face-to-face conversation. They see only gratuitous violence, demons, and dark ghosts inhabiting the virtual

world of video games. They fear that wireless connectivity has forever breached the boundary between work and home, destroying what little rest we have eked out for the inner self. In the dire view of philosopher William Irwin Thompson, our bodies are cooking “in a global mulligan stew of electromagnetic noise,”¹ and according to one Buddhist scholar, our minds are being “colonized” by the memes of commercial media.²

More critically, some researchers argue that our brains are being rewired by our constant exposure to media stimuli. For decades debate has raged over the social impact of media content. Psychologists have found, for example, that repeated exposure to violent content can produce lasting increases in aggressive thought patterns and

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aggression-supporting beliefs. A study completed in 2006 at Iowa State University concluded that exposure to violent video games desensitized individuals to real-world violence.³ Recent advances in neuroimaging techniques have extended this realm of study to the structure of the brain itself. There is growing evidence that ongoing exposure to violent images activates brain areas involved in arousal and attention, episodic memory encoding and retrieval, and motor programming, raising cortisol levels and sensitizing the flight-or-flight trigger.⁴

While these are legitimate concerns, the impact of the media form itself also bears scrutiny. Some examples follow:

❖ *Instant messaging and texting have created a culture of immediacy: short questions calling for short responses in formats too constricted for details, too limited for genuinely intimate communications. Coupled with wireless technology, this tool of business efficiency threatens to turn every waking moment in every physical place into an opportunity for doing more “productive work,” governed by always-on hierarchical control. It leaves no time or space for deeper, more penetrating queries or even for the simple hellos and goodbyes of old-fashioned telephone talk. In columnist Maureen Dowd’s words, “It’s as if your id had a typewriter.” Many Blackberry users call their PDAs “CrackBerrys”—harder to quit than cigarettes.*

❖ *In a 2003 study, researchers found that lab volunteers at the University of Utah experienced a 50 percent reduction in their ability to process visual stimuli when talking on cell phones while driving.⁵ Being in “deep connection” can be a wondrous*

experience when lying in bed talking to a lover, but it endangers us (and others) when we are driving. Some studies report that talking on a cell phone while driving increases the risk of having an accident fourfold.

❖ *Television’s flickering images, reliance on the close-up, and rapidity of scene changes all demand our visual attention. In *The Alphabet Versus the Goddess*, Leonard Shlain described what he saw as a shift from the ordered, masculine, left-brain world of print to feminine right-brain-dominant “pattern-recognition skills.” But other critics have not been as generous. Jerry Mander, author of *Four Arguments for the Elimination of Television*, called this right-brain activation not something akin to meditation but a negative form of sleep-learning. More recent studies show that heavy exposure to television induces passivity during viewing, as well as withdrawal symptoms such as unease and lowered alertness once the set is turned off.*

So what are we to do? Clearly the electronic media amplify, distort, and attenuate our senses, change our awareness, and mediate our experiences. But we must also consider that these technologies are not just outside forces that appeared out of nowhere to affect our consciousness and determine our future. As students of noetic sciences, we must not forget that the forms of our technologies reflect not just the forces of commerce *but also the products and the amplified reflections of our shared consciousness.* Just as earlier cultures projected the human development challenge into myths and heroic journeys, grail quests, alchemy, and hermetic spiritual practices, we have brought forth electromagnetic and electro-optical devices. Like our

DO NOT FORGET FOR MEDIA TECHNOLOGIES FORCES OF COMMERCE THE AMPLIFIED REFLECTIONS CONSCIOUSNESS.

consciousness, these devices are evolving—decreasing in size while increasing in complexity, interactivity, and even “self-awareness.” I do not think this is coincidental.

LESSONS FROM THE INFOSPHERE

All of our communications technologies—from the first telegraph signals traveling by wire to today’s intelligent network routers, radio-frequency identification microchips, and global positioning satellites—have emerged from the creative collective mind. And that global mind is constantly growing and changing. We are coevolving with cyberspace. I would like to suggest that the “cure” for our media addictions may lie in developing an awareness practice—a digital dharma—based upon the structures of the very technologies we have created: television’s inherent attention-grabbing nature, for example, can teach us about our hunger to see the face of the other; the Internet can remind us of the importance of discernment and filtering; digital audio and video compression technologies tell us that all reality is based on codes of perception; and “grid computing” (the demands of complex projects are shared across volunteer networks of locally donated computer capacity) can provide a model for tapping into the all-pervading nonlocal awareness that physicist-philosopher Amit Goswami calls “the quantum mind.”

As the planet grows smaller and more interdependent on every level, our contemporary dharma challenge is to be fully present in an overwhelmingly diverse world. This manner of living requires appropriate energetic filters to keep out unwanted negative signals—just as in the electronic world we have our TiVo and caller ID, air filters, the V-Chip, noise-canceling headphones, and iPods. In a world where Internet transparency brings not the one big truth but, in sci-fi novelist William Gibson’s words, “deliriously multi-

ple viewpoints, shot through with misinformation, disinformation, conspiracy theories, and a quotidian degree of madness,” we need to cultivate the power of discernment.⁶

On the Internet, as with all communications, appropriate and healthy interfaces between medium and message—between the expanding universe of information producers and one’s inner consciousness—are required. This means practicing the art of mindfulness: both conscious attention and conscious *inattention*. In a hyperstimulated media world, the silence of meditation clears the mental “memory buffers” and the “roof-brain chatter” that passes for authentic Self. These moments of silence are the inner firewalls against the waves of information spam that threaten to inundate us.

And what might we contemplate from this place of deep quiet? How about our belief in reality itself? From camcorders and camera cell phones to DVD players and HDTV receivers, we have surrounded ourselves with devices that openly rely on illusion: on the creation of sound and image files that are “reasonable facsimiles”—good enough to trick the brain into perceiving what it *expects* to find. These devices all work on the same principles of image interpretation and transmission efficiencies: analog-to-digital conversion and statistical compression and inference. New audio and video data are compared to the data already received and decoded in our brains, and only the changes are passed on. Everything else we consider real is based on our perceptual expectations and referenced to previously stored data.

Digital encoding and compression are not solely engineering strategies. These modes are also used by the brain in the process of determining what we see. The visual world is so complex that storing even tiny fractions of the changing image would overwhelm even the brain’s vast storage system. Instead, the brain discards most of the

information and relies on its own version of pattern encoding and perceptual expectation, converting analog images to a limited set of mathematical wave-pattern representations (called Fourier transforms) to tap memory and build its picture of the world. What we see is based as much on past habits of seeing as it is on the new data coming into our eyes; we map the unique elements—those that radically differ from the predictability model (e.g., the potholes in the road)—then paint the rest of the scene from stored image data.

The Infosphere demonstrates in media compression programs etched into silicon chips how we too create our consensual stories through patterns of prediction based on limited data. Digital dharma asks us to recognize that we are *always* processing codes of consensual reality and to pay attention to where we put our attention. Our challenge is to see beyond preconceived appearances to the creative forces behind the veil of illusion, of *maya*, and to discard the embedded habitual reference frames that keep us from seeing reality with ever-fresh eyes and fully experiencing the unfolding of the ever-present moment.

The brain already has in place the mechanisms for recognizing our “story codes.” When stimulated by psychoactive substances, meditation, fasting, or prayer, it can release chemicals that suspend short-term memory and damp the background mental chatter, bringing one into the deep present moment. From such a place we can observe the instruction codes of reality without processing them into thoughts, emotions, and suffering. We can choose whether to engage in or just to observe the flow of codes. Such discerning awareness of our programming can take us out of our self-imposed prison of limitation and conditioning. Every time we put a CD-ROM or DVD into a playback device, we can remember that life itself is an encoded story; every time we manipulate the virtual reality of a video game or engage in a collective immersive digital experience, we can step back and ask how our own everyday reality is being manipulated by our ego-identity and its expectations and defenses. We can consciously decide to look beyond the world of preconception, to clear the buffer of old patterns, and to start fresh with each new breath!

THE PATH BEFORE US

Beyond reflecting the importance of self-conscious mindfulness, the Infosphere is also modeling how we are more

than our individual egos, and perhaps even reflecting how the brain itself is increasingly being seen as a collaborative process of neurological teamwork. Grid computing networks are tackling such projects as modeling new cancer-fighting drugs, solving health challenges in Africa, and tracking the smallest quantum interactions. From an esoteric point of view, it is not surprising that one of the first (and still running) grid computing projects is focused outward to the vast universe—specifically, to search for extraterrestrial intelligence (SETI). Operating since May 1999, SETI@home involves more than two million users, all of whom analyze a tiny portion of radio telescope data every night on their home computers to detect signals from possible extraterrestrial civilizations. As of the end of 2006, SETI participants had cumulatively logged 2.7 million years of computing time!

Our computing devices are also getting smaller, more specialized, and more interconnected. Containing both tiny sensors and communications circuits, they will monitor their surroundings and engage in dialogue with other nearby microchips via wireless data connections. What has been called “pervasive computing” will extend cyberspace to our houses and shopping malls, to our appliances, our clothing, and even, through the dispersal of smart nanosensors, to our body parts. Eventually, all home, office, and school devices will be networked; public spaces will be awash in unseen radio signals traveling between tiny radio-frequency identification chips, smart appliances, cell phones, and GPS satellite receivers; and Internet connections will be available everywhere—literally.

At this level of the Infosphere, all devices will know where they are, monitor their internal processes, go out on the Web for information, and routinely talk to one another. In this world, office machines call service technicians before their owners are aware of any problems. Tiny “smart dust” sensors monitor soil and water conditions, alerting farmers when to irrigate and harvest. Similar devices embedded in bridges will send wind, wave, and traffic data to the highway department. Prototype Coke machines already adjust prices depending on supply and the current weather and traffic conditions; they will soon call nearby delivery drivers when they need restocking.

The debate over how we will use pervasive computing and nanocommunications technologies reflects the light and shadow of the networking paradigm shift awaiting human consciousness. We can choose the path of commerce and

control, or we can choose the evolutionary path they also model for us. Like our Infosphere, we are part of a joyously noisy communicating system, and we must transcend the illusion of separateness to fulfill our destiny of planetary cocreation. Just as our Infosphere is evolving toward cooperative intelligence, isn't it time for us to step back from the myth of being separate transmitters? Isn't it time to see ourselves as parts of an intelligent web, interdependently dreaming a new cooperative dream for humanity? 🌐

—Adapted from Vedro's forthcoming book, *Digital Dharma: A User's Guide to Expanding Consciousness in the Age of the Infosphere* (Quest, October 2007).

Endnotes

1. William Irwin Thompson, *Coming Into Being: Artifacts and Texts in the Evolution of Consciousness* (New York: St. Martin's Press, 1966).
2. Peter D. Hershock, *Reinventing the Wheel: A Buddhist Response to the Information Age* (New York: SUNY Press, 1999).
3. Craig Anderson, Brad Bushman, and Nicholas Carnagey, "The Effects of Video Game Violence on Physiological Desensitization to Real-Life Violence," *Journal of Experimental Social Psychology* 43 (May 2007): 489–496.
4. See, among other sources, Alison Motluk, "Do Games Prime Brain for Violence?" *New Scientist* (June 23, 2005): 10; V. Matthews, *Journal of Computer Assisted Tomography* 29 (May/June 2005): 287–292; and "TV Violence and Brainmapping in Children," *Psychiatric Times XVIII* (October 2001).
5. "Cell Phones Called Worse Than Alcohol on Road," *Newsday News Service*, reprinted in the *Capital Times* 1 (July 23, 2003). See also "Driving While Distracted," ScienceCentral, www.sciencentral.com/articles/view.php3?type=article&article_id=218392289.
6. William Gibson, "The Road to Oceania," *New York Times*, June 25, 2003.

STEVEN VEDRO has worked for thirty years as a technology planning consultant for public television stations and universities. His forthcoming book, *Digital Dharma: A User's Guide to Expanding Consciousness in the Age of the Infosphere*, uses the technologies of the Infosphere as metaphors on the path of evolving "teleconsciousness." Vedro can be reached at steven@srvedro.com.



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