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AUTHOR MICHAEL HEIM RIFFS ON THE DILEMMAS ATTACHED TO THE CHANGING STATE OF
LITERATURE AND LANGUAGE IN A NET-SAVVY WORLD.

BY MARK NIXON ● DIGITAL TYPE BY TOBIE CAMERON

TECHNØjectory

■ Technology is part of our evolutionary destiny, says Michael Heim. We are caught in a trajectory that propels us from interface to cyberspace and beyond. There's no turning back and there's no jumping off. But as we dream and fit ourselves into the future, Heim believes, we should not lose sight of what makes us what we are. As John Dewey once wrote: "Without control of ourselves, our use of other things is blind."

Heim is known as "the philosopher of cyberspace," but he is no silicon-age sage spouting the routine rhetoric of cyberhype. With one foot in the book-crammed world of the humanist scholar and the other in the factories of the future, his ideas are always sensitive to both the euphoria and the anxiety that new technologies engender. Above all, his approach is pragmatic – accepting our technological fate and examining different ways to absorb its impact.

A resident of Redondo Beach, California, Heim is a freelance philosopher by trade who teaches graduate seminars on digital art, reality and practice at the Art Center College of Design and the University of Southern California. As well as translating Martin Heidegger's *The Metaphysical Foundations of Logic* (1984), Heim is the author of *Electric Language: A Philosophical Study of Word Processing* (1987) and a collection of essays, *The Metaphysics of Virtual Reality* (1993). In between teaching and writing, Heim is a regular on the international lecture circuit, where he expounds on subjects ranging from existential pragmatics to info-ecology.

HEIM bought his first computer in 1983: a portable Radio Shack Model 100, complete with eight-line LCD display and 8K of RAM. Not much more than an oversized digital watch by today's standards, but Heim was immediately fascinated. "I knew I was holding something in my hands that was just profoundly going to alter the way we deal with text," he recalls. It wasn't long before his training in phenomenology flipped into gear and he began looking for clues about the relationship between thought and this new symbol-enhancing machine.

The result was Electric Language, originally published in 1987 and due for re-release this year. In it, Heim examines what he calls the "psychic framework" of word processing by comparing the (then) newly forming neon patterns of mind with those left by the classical imprint of the book. Electric language forms the basis of a new kind of criticism or perception of word processing that goes beyond the level of keystroke counts and compatibility. Heim also includes his own assessment of the trade-offs that emerge in the transition from written word to "electrified deed."

Overall, word processing comes off pretty badly. Central to Heim's thesis is the idea that the word processor facilitates the externalization of thought. Working with clay, papyrus or paper meant authors from early literate cultures had to think an idea through in their heads before writing it down. Overcoming the physical resistance of the material fostered linear thinking, according to Heim, as well as a sense of stable focus and mental integrity, characteristic of writing in its bibliocentric element.

The transition from page to screen replaces such recalcitrant materials with a nearly frictionless electronic environment, in which the penalties for revision disappear. A word processor encourages you to upload thoughts to the screen the moment they come to mind. Later, they can be cut, pasted and otherwise rearranged. Tentative ideas and embryonic notions blossom before the eyes rather than in the mind. Writing speeds up.

But as thoughts flow through the fingers to the screen, less attention is paid to the demands of linear organization, Heim writes. You no longer have to consider whether what you are writing is the beginning, the middle or the end. As thinking becomes open-ended, ideas fragment. Productivity increases but the material is less refined.

Here Heim's assessment is severe, comparing this predicament to Nietzsche's description of nihilism. As writers become swamped by the amount of text produced, he despairs that "symbolized language acquires the ambience of cheap, disposable consumer goods," The endless possibilities of word processing create a state of indetermination in which the notion of authentic choice-of meaning something and paying the price of meaning-goes by the board.

That view, says Heim, was partly shaped by the work he was doing at the time, helping to vet submissions for a number of publishing houses. "It was clear that people were basically dumping manuscripts to their printer. Dumping text that was not digested," he says. Although computer networks were in their infancy in the mid '80s. Heim predicted that the growth of computer-mediated communication would provide increasing opportunities for writers to dump undigested text straight onto the public networks.

You don't have to dip too deeply into the noise-soup of the Internet to get a taste for the "spew." That's the word Heim uses today to describe much of the writing he encounters on the Net. It comes with the immediacy of e-mail, the loosely threaded diatribes on Usenet, the sprawling alphabet worlds of the MUDs and MOOs and the real-time verbalism of Internet Relay Chat. "There is a certain cultural exuberance about it which is enjoyable," he admits, "but at the same time, it has to bring out the worst in text in the human tradition. It's literacy gone berserk." And for Heim, that involves the loss of that sense of deeply felt, authentic choice which he believes is an essential part of writing. Putting it on the line has become putting it on-line.

As the computer affects written communication, so, in turn, it comes to affect the way in which we regard and use language in general. The computer has become a "language machine," a term borrowed from Heidegger and one which appears again and again in The Metaphysics of Virtual Reality. There Heim repeats Heidegger's twin fears that the language machine (*Sprachsmachine*) would master the essence of human being and that thinking would end in the business of information processing. "It's not putting much into Heidegger's mouth to say that what we have now on our desktops and in the transmission lines of our Internet system is in fact a language machine even more fundamentally than it is a programming machine," Heim says.

It's a damning conclusion, but Heim sees much evidence to back it up. "The computer is so very powerful. We can do so many things with symbols and our externalized thought processes that we become very dependent on it," he explains. "It becomes part of our own memory. We start putting things into a machine and relying on the memory of the machine. People say, 'I've gotta look this up on my computer, I'll tell you later.' it's the way we work now. We look it up on the Internet."

To suggest that the computer has moved into the most intimate areas of human thought implies that the language machine has mastered us – that we have become alienated from ourselves. It's not the view you would expect from a practiced computer buff like Heim. Indeed, it would seem far more suited to the likes of Sven Birkerts (author of The Gutenberg Elegies), who sticks to a typewriter, or the outspoken neo-Luddite Kirkpatrick Sale, who believes the only appropriate way to deal with a computer is with a hammer.

But pulling the plug is not an option, says Heim. Ever the pragmatist, his aim is to bridge alienation as much as possible. "I think we have to try to work with our freedom within this medium. To try to adapt it to us and make it part of our gestures, and not to break away from it and turn our backs on it," he says.

As an example of his own efforts to do just that, Heim points to the fact that from this year he is running one of his seminars, "Deep Cyberspace," exclusively on-line, http://-www.mheim.com. As a teacher, he has found it very difficult to eliminate the physical interaction between himself and his students. Nevertheless, he sees the move as a necessary adaptation.

But there's a touch of irony in finding Michael Heim, the writer, on the Web. After all, this is the same author who feared in *Electric* Language that as writing moved increasingly on-line, the separate and univocai voice of authorship would be submerged in the complex dialogue of the network. I ask him what affect the Net is having on the concept of authorship.

That, he says, is a very thorny issue. "Traditionally, we have thought of writing as an act where an individual shapes their individuality – the concept of an author," he explains. "Postmodernism has indeed tried to show some of the weaknesses in that concept, but it doesn't take much for the electronic world to simply obviate the whole notion. Not even theoretically attack it but simply pull the rug out from under it."

But the author isn't dead and buried yet, says Heim, pointing to the ongoing questions surrounding intellectual property and copyright in the digital domain. On the other hand, those who see hypertext-the engine of the Web-as the next wave of literacy argue that the idea of authorial uniqueness is an exaggerated and outdated relic of print culture, one derived both from the organizing and financing of book production and from the uniform, fixed nature of the printed book.

Indeed. the proponents of hypertext see in the technology the possibility to concretize the postmodern view of the text. They celebrate the potentially liberating affect that hypertext offers for decentering the position of the author, destabilizing the text as an autonomous and complete entity and relocating the production of meaning in the collaborative effort between writer and reader.

Heim has grave misgivings about the cultural and linguistic worlds presented in this perspective. Following the French linguist Ferdinand Saussure, Heim says the collusion between postmodern literary theory and the world of hypertext is based on a fundamental misunderstanding of language as a codification of meaning. Once you accept this idea, Heim explains, "it then becomes an easy step to agree with those who think of language as transmissible code or information."

"But I don't think language is fundamentally a code. I think code is a derived form of language. It is derived for specific purposes, for hiding things and for transmitting things more easily than speech. I see language as a more existential articulation of ourselves in our physical embodiment," he says. As such, he believes it is crucial to maintain the idea of authorship. "I think there will always be the need for an individual to feel fully responsible for statements and expression. I think this is very fundamental for language."

The idea of physical embodiment figuresprominently in Heim's approach to the other side of literacy- the practice of reading. in a world increasingly redefined in terms of the digital metaphor, the book has come to be regarded as a less-than-optimal medium for the delivery of bits and bytes. Heim wants to further an understanding of the physical book that goes beyond mere utility value.

"Our embodiment is something that can bring us to a rediscovery of what books were about, of that sense of deep immersion in our own private lives, in which we work things out on a subconscious, nearly physical level," Heim explains. It's an idea that finds expression in the library experience.

Heim sees the disappearance of libraries, and their replacement by on-line networks and databases, as involving a certain loss in terms of our relationship with the world of knowledge. Describing his own experience in libraries, he says, "There is something that stirs in my physical, sensory memory and my sense of putting things together in life; about the age of

things; about who said what and when; and how this relates to the other books on the shelves. There is a process that is much slower, much more physical. It feels more private in the sense of involving my own personal sphere of recollection and anticipation."

The Web offers another experience altogether -"More of a whirlwind," Heim says, "a point-and-click, point-and-click, endless process that has a feel which is very different to book browsing." While browsing between the shelves is based on physical presence, on-line and disembodied we are led by the power of the flashing screen, "goaded on," as Heim puts it, "by the infinitely unreachable carrot of the next hypertext link."

There is a danger here, Heim warns, and one that is becoming increasingly apparent as the Net expands. While libraries are more inclined to foster a sense of humility, the hypertext world of the Web breeds "the confidence that we can really express and gain an adequate grasp of almost anything." Hypertext encourages a feeling of omniscience.

Heim sees this drive towards omniscience as part of the implicit logic of computerization, a logic he follows back through the electronic switching circuitry of the computer, to the rationalist philosophical speculations of Baron Gottfried Wilhelm von Leibniz in the 17th century

A courtier, diplomat and ecumenical theologian, Leibniz was the founder of modern symbolic logic. As well as designing a proto-computer (a stepped-wheel calculator), he also developed the binary logic that John von Neumann would use 300 years later to build the first digital computers.

Throughout his life, Leibniz dreamt of developing a universal language based on a kind of generalized mathematics by which calculating would replace thinking. Once conflicting ideas had been subsumed into a homogeneous matrix, dialogue or debate would give way to accounting A bizarre idea, no doubt. But the idea itself is less significant for Heim than the impetus behind it.

Leibniz's dream was based on his underlying belief that human knowledge should strive to emulate the *visio* Dei – the all-at-onceness of the vision of God. Hypertext, "the text of all texts" or "supertext," Heim explains, continues this spirit of modernity by simulating the instant access, the total control and knowledge, of the divine.

Sounds a bit far-fetched? Maybe. Maybe not. Ted Nelson, the man credited with the invention of hypertext, saw in the technology the means to realize a universal library, a new Alexandria that would link the world's knowledge in a seamless information environment. And with the phenomenal growth of the Net, terms like "universal library" and "new Alexandria" have developed renewed cogency.

Even so, using the Web is more likely to induce a sense of vertigo than omniscience. But that, says Heim, is exactly the point. "When I talk about omniscience, I am really taking a distance from it. That is, I think the attempt to be God should lead to vertigo. For a human being to try and stand in that position is to prepare for a downfall.... Like Icarus, I think we may go down if we really believe we can."

Up until 1989, Heim's concerns with technology centred around his reflections on the computer screen: the interface, the language machine. He hadn't thought about the world beyond the looking glass. Then he stepped into virtual reality.

It was a helicopter simulator at Boeing, and by his own recollection, he crashed badly. Yet even though it was only a primitive prototype, Heim was astonished by the impact of the technology on the senses. "The VR experience imprints sensory memory. It is just like reverse printing. It's printing on ourselves," he explains. "It is immediate and, I would say, irresistible in a sense."

Heim's writings on virtual reality between 1990 and 1993 have an optimistic tone rarely found elsewhere in his meditations on technology. He cites Wagner's *Parsifal* as a prototype of the VR experience as art of the highest order, and likens the ultimate virtual reality to the Kantian sublime.

He soon began to work with the newly emerging community of artists involved with virtual reality. "It seemed to me that here was a group of people who might be able to forge a link between the general population and those who designed and developed the systems," Heim explains.

But things didn't quite work out that way. The push-button military/arcade-game paradigm that has come to dominate the VR industry is a far cry from what he saw in the early vision of the technology. That vision is the subject of his latest book, Virtual Realism. Although he won't go into too much detail about its contents, he does explain that the aim of the book is "to reach back, preserve and put forward again the early vision of virtual reality as an artistic project."

This enthusiasm for VR might sound quite strange coming from someone who places such importance on the notion of physical embodiment. After all, the hype and hardware of current VR seems geared towards the repudiation of the body, once and for all. These systems represent the almost literal enactment of Cartesian ontology: cocooning a person as an isolated and disembodied subject in a field of sensations over which the user has total control.

But Heim doesn't see VR as the means to escape the physical moorings of the body. Rather, he believes the technology will provide us with new understandings of our physical selves. The catch is that such understanding will only be reached via a rather tortuous route.

He believes that our increasing immersion in virtual worlds in the future will lead to the emergence of new pathologies, the treatment of which will lead to the development of a new and perhaps deeper awareness of our bodily existence. It's an idea he touched on in *The* Metaphysics *of Virtual* Reality. There he developed his idea of the "dark side" of VR: a conflict of attention that arises between the virtual body and the biological body. For Heim, this "dark side" is a key to understanding our contemporary technological culture.

When immersed in virtual reality, Heim wrote, the user's nervous system adjusts to the virtual environment. Emerging from this environment, the user feels ,a lag as the bio-body recalibrates. Frequent immersion exacerbates this lag. Flashbacks and after-images result as sensory memory mixes virtual and actual. As the virtual body gains control over the natural energies and biorhythms of the body, the integrity of somatic experience is threatened. Heim called this cybernetic dis-ease "Alternate World Syndrome" (AWS), a pathology induced by the unsteady, out-of-phase merging of human beings and their technology. Malevolent techno-alchemy.

In *Virtual* Realism, Heim takes the idea of AWS a step further. There he examines the effects of the disorder writ large, as expressed in – of all things – the psychopathology of UFO abductions. In his reading, the close encounter is symptomatic of our relationship with a technologically driven world that we have not yet assimilated. As a result, our own technological selves appear to us as alien beings.

"In the UFO experience, a technologically advanced, very brain-centred entity, operates and inflicts pain on and abducts the human self. And in fact the abductor, the alien, is the future self of the human being coming out of the future to express, to manifest, the transformation that we are going through. The very hi-tech vehicles and tools of these beings – really it is ourselves that we see. And it is terrifying. It's a nightmare. It should be. It's correct."

In one way, this alien being represents the other side, the down-side, to the image of the cyborg, that much-vaunted trope of cyber-theory. Heim's reading of the UFO experience offers a critique of that brand of post-human, post-evolutionary rhetoric that objectifies the body, rendering it as a machine; hardware to be upgraded and perhaps replaced by so many plug-ins and peripherals. According to Heim, what is missing in the make-up of the cyborg is the crucial connection between our somatic experience and our understanding of ourselves.

As we continue towards our technological destiny, our pathologies will multiply. As this happens, says Heim. "we may develop another language that goes beneath subjectivity to reach the somatic level of ourselves." What this language will be he cannot say, exactly. Heim's experience with Tai Chi Chuan – he is a practioner and teacher – has led him to examine various Eastern models of the somatic self. "They are totally different languages of talking about the human experience and of human being," he says. But he is quick to point out that he is not advocating the adoption of such models-they simply demonstrate the existence of different points of view.

But overcoming the Cartesian legacy of subject/object, mind/body divides – a legacy of over 2,000 years of Western philosophical history – seems like an insurmountable task. Moreover, it would appear paradoxical to look for new understandings of our selves while remaining within a technological trajectory that continually reinforces the Cartesian worldview and propels us towards a bug-eyed, swollen-headed, puny-bodied figure of our future selves.

"What has been the trajectory of Western technology? Can we say that the trajectory is purely linear?" Heim asks. "From what we've seen in the 20th century, the modern project does not appear to follow purely linear extrapolations.... Our technology may sensitize us to our own evolution and the internal needs that cry for balance. Sometimes it is in the midst of the greatest danger that the saving solution arises, and the solutions often arise within the problem. The most extreme form of Western technology – VR – may turn us inside out so that we begin perceiving ourselves differently. The near-extinction of alternate understandings of the body and the Western rush to preserve those understandings through modern medicine coincide remarkably with the advent of VR. Sometimes it takes a long illness to make us appreciate the simple splendor of everyday average good health." □