

Signs of the times

by [Mark U. Edwards](#) in the [May 24, 2000](#) issue

*Holding on to Reality: The Nature of Information at the Turn of the Millennium*, by Albert Borgmann

In his earlier books, Albert Borgmann described the ways technological society constrains and directs moral choice. For example, to add a television to the household may limit traditional practices such as reading, game playing and storytelling, and may reduce choice to "What are we going to watch tonight?" Or, to take another example, when homes were heated by fireplaces, people could not overlook their dependence on those who cut the wood, tended the fire and cleared the ashes. But central heating has "disburdened" consumers from acknowledging their dependence on others for warmth.

Extending to information technology his thesis that material reality teaches moral lessons and favors certain moral practices, Borgman in his latest book argues that information is structured by the relationship between a sign, a thing and a person. But information is also dependent on context and requires intelligence in order to be understood. To summarize his theory: Armed with *intelligence*, a *person* is informed by a *sign* about some *thing* within a certain *context*. Borgmann is concerned about the moral implications that arise when one or more of these five components is lost or becomes ambiguous.

Natural information, the first of Borgmann's three categories, depends on the eloquence inherent in things, which always surpasses the human attempt to capture them in signs. Natural information is about reality, but cultural information can be both *about* reality--a report or description--and *for* the shaping of reality--a recipe, musical score or blueprint. Technological information can be both about and for reality and also present itself as reality. The information on a CD of a Bach cantata can be said to be the cantata.

While Borgmann recognizes that writing represents a "radical abstraction from speaking" and "extricates information from persons and contexts and sets it off against humanity and reality," he is most concerned about the moral and practical

implications of technological information, as the following examples demonstrate:

- Technology realizes itself. For a CD to become music, you need only a CD player. Through this technology, music becomes a commodity available to the individual upon demand, rather than a communal and focal activity that draws people together, demands and displays human discipline and skill, and teaches moral lessons about such things as the rewards of harmonious cooperation, the inevitability of human error, and the joy and redemption of communal celebration.
- Technological information introduces profound ambiguity about the relationship between sign and thing. "At the limit, virtual reality takes up with the contingency of the world by avoiding it altogether. . . . Intelligence, things, and context evaporate and leave a person with self-sufficient and peculiarly ambiguous signs."
- In the realm of cyberspace, information technology "not only allows for trivialization and glamorization but also for the blurring of the line between fact and fiction."
- Technological information is physically, socially and structurally fragile.
- Simulations of reality can lead to disastrous decisions when assumptions or data are faulty.

Borgmann calls for righting the balance between information and reality. To do so amounts to the restoration of eminent natural information. A well-ordered realm of natural information is both hospitable to practices of realizing cultural information and enlivened by such practices. As for technological information, there is no sense in trying to channel its development through narrow proscriptions or prescriptions. Nor does it make sense to let it run wild and overrun nature and culture. It is best allowed to develop freely within a world whose natural and cultural ecologies are guarded and engaged in their own right.

Borgmann wants to reconnect signs and things. He urges humans to continue to realize cultural information through reading, writing and performing. He holds up contingency and history as antidotes to our culture's overfascination with lawful structure. He calls for historians, journalists and essayists to reclaim their role as interpreters of information and creators of durable meaning.

By concentrating on the moral dangers of technological information, Borgmann does give short shrift to its potential. Simulation, like all planning, can be subverted by

ignorance or contingency. But it allows humans quickly and inexpensively to run through countless possibilities before constructing that cleaner, quieter airplane or testing a new cancer drug or designing a new traffic plan. The near kin of virtual reality, "augmented reality," allows a deeper experience of reality. For example, through technology a doctor can "see" overlaid on the real body the internal organs and the location of the cancer she is operating on. Virtuality can allow us to experience otherwise inaccessible realities: the microscopically small spectrums beyond human sight or hearing, and worlds inhospitable to human life, such as the ocean deep or the surface of Jupiter.

Borgmann also asserts too much and explains too little. I would have liked, for example, to have seen his fine mind explain why he dismisses the possibility of artificial intelligence. Certainly, such an explanation would have been of more interest and use than are his multiple pages on Boolean logic and chip logic gates! Charles Jonscher's skeptical account, *The Evolution of Wired Life: From the Alphabet to the Soul-Catcher Chip--How Information Technologies Change Our World*, and mathematician Keith Devlin's *Goodbye, Descartes: The End of Logic and the Search for a New Cosmology of the Mind* do a better job of debunking the claims of artificial-intelligence boosters. But Borgmann does deliver on his promise: the reader finishes *Holding On to Reality* convinced of the moral importance of doing just that.