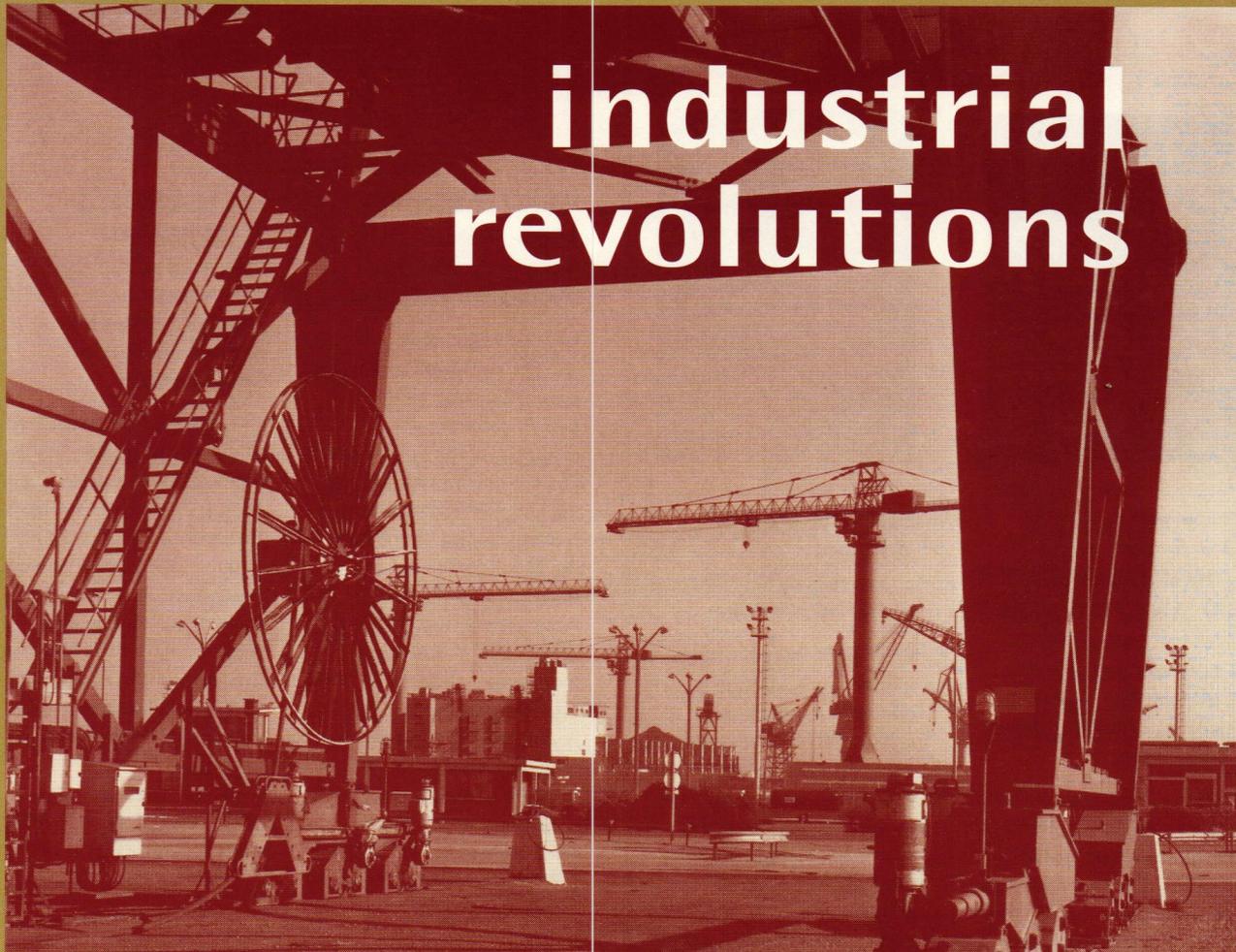


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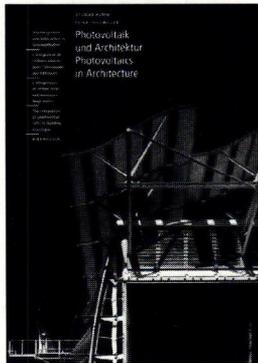
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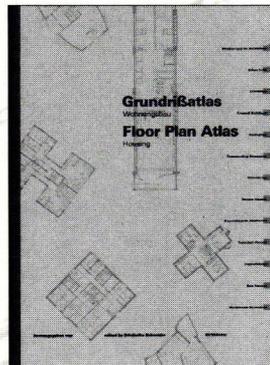


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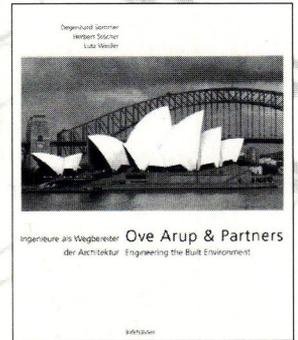
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# industrial revolutions

## FROM THE EDITOR

The so-called Industrial Revolution, which insinuated itself through the use of James Watts' steam engine and the spread of the factory system in Manchester, established a new narrative for human history in which the struggle with nature was interrupted by the possibility of machines going out of control. The Golem and Sorcerer's Apprentice were released from folklore into daily life as the dynamo and the treadmill. Wild capitalism, with the unparalleled riches it produced, was accompanied by the ruthless exploitation of human beings in industry and the unrepentant degradation of the natural environment as machines, the guarantors of material progress, were invited to take over.

Design was born at this precise moment, after a millennial gestation in the crafts, a birth welcomed by both necessity and longing—the need to eliminate scarcity through the mass production of items of everyday use, coupled with the desire to have more than is necessary. Design is nothing less than the imagining of what can be produced through technological means, but nothing more than what can be marketed for a profit. And once the market has been saturated, it is the peculiar destiny of design to internalize a kind of product death-wish, better known as planned obsolescence. Nigel Whiteley's analysis of design from a social, ecological, and feminist perspective, *Design for Society* (Seattle: University of Washington Press, 1994), leads to an almost nostalgic encyclical that everything is political, because if one cannot influence the demands of the market, then the market will determine the demands of the profession, which are so frequently contrary to conscience.

As the design machine grows, modifies, and adapts to historical conditions, it assumes almost organic characteristics. The warmth of its entropic heaving induces what Marx identified as a "melting point" and inspires historical cycles of technological paranoia. The Luddites felt the first Oedipal twitchings of technophobia and tried to reclaim their domain of labor by destroying the machines, ultimately falling victim to the cruel

irony that labor-saving technology inevitably displaces labor. Microchips are only the latest technological imperative to raise the temperature and destabilize patterns of employment through design. But it is just as futile to attack the agents of industrial displacement today as it was in the early 19th century, because such mechanisms are only expendable components of some larger, socially determined force.

A recent collection of essays dedicated to the psycho-social dimensions of current technology, *Culture on the Brink: Ideologies of Technology* (Seattle: Bay Press, 1994) edited by Gretchen Bender and Timothy Druckrey, intimates a teetering dialectic between the Whiggish interpretation of the conspiratorial nature of the deployment of design and the Futurist acquiescence to the lubricious machine work that aspires to breed an autonomous synthesis of human and machine. If professionals in advanced service economies feel comfortable with the term "postindustrial," they are more than likely participating in the necessary fiction that promises that the machine is entirely under control—when in effect, the machine is in almost every field competing for their jobs, including, of course, the design professions. In his contribution to *Culture on the Brink*, Stanley Aronowitz gets to the key ideological issue regarding current technology when he concludes: "The main use of computers and other cybernetic technologies is to *destroy paid work*." It seems to be no small coincidence that just as the possibility of eliminating large sectors of employment is becoming a reality, all of the most advanced economies in the world are reducing their welfare institutions. By comparison, the Luddites had little to worry about. Such a paradox is corroborated on other levels by Langdon Winner, who hypothesizes that as technology is becoming "smarter," its users are not; as machines are saving more time, people feel they have less of it; and through the electronic diffusion of democracy, democracy is steadily declining. In one of the few remedial methods attempted in *Culture on the Brink*, Win-

ner suggests, "As a person encounters a device or system, whether one in use or one on the drawing board, it is crucial that he or she ask what the form of this thing presupposes about the people who will use it."

Industrial revolutions occur when the social order is substantially "cooked" by new modes of production and consumption, and is reconfigured into a different chemical balance. Each new cycle of industrial revolutions—and their sequence might be compared to the radiating rings on a tree, one building on the other, from mass-produced clothing and industrial harvesting, to the railroad system, to the electrification grid, to telephone networks, to automobiles, radio, cinema, and TV, to nuclear power and space programs, to computers (with, of course, the major digressions of chemical engineering and biotechnology)—has forced both producers and consumers of new technologies into continually revised understandings of geography and of the body's relation to it. Space is increasingly dilating and losing all constraints, while the body, freed from spatio-temporal limits, is progressively etherealizing.

The majority of the contributors to *Culture on the Brink* write as if virtual reality is already a part of everyday life, as if they are already convening with cyborgs, that projected species of human beings with cybernetically enhanced body functions. Perhaps one of the contributors, Laurie Anderson, who has made an art of altering her form and even her gender through electronic devices, has already made the transition. The advent of the cyborg will fulfill the liberational dream of an autonomous machine, the ultimate mimetic acquisition of design, infused with human conscience. In "What Do Cyborgs Eat?" Margaret Morse investigates the literary and artistic reaction to the question of nutrition and bodily processes in her forecasts of "virtualism," ending with the question, "How can cyborgs become meat?" As virtualism becomes reality, both the body and design lose their relation to materiality. Andrew Ross, in his essay, notices that "if things are getting smarter, then it's also true that they look a lot dumber." The dumb box of cybernetic culture is "a haughty show of neutrality in an object world whose

physical laws barely impinge any longer on the transcendent processes concealed within the box." Meanwhile, "globalism" is habitually unveiled by many of the book's essayists as the trenchant obsession of the late 20th-century power elite, whose technologies long to defy territorialism. "The main miscreant in this deepening global crisis," writes contributor Herbert I. Shiller, "is the model of acquisitive behavior and consumerist attitude constructed and circulated worldwide by the powerful and deadly combination of media, technology, and the market." The old expression *caveat emptor* could take on a whole new vitality if it was considered not in terms of *what* the consumer is buying, but *how*.

If any ethical sense can survive in the design fields, it will depend on social forces such as culture, community, society—forces whose site and form, however, are no longer clear. Proto-cyborg Laurie Anderson delivers, perhaps inadvertently, the ontological analogue for the emerging human condition in her "Stories from the Nerve Bible": "You know the reason why some nights you don't have a dream? When there's just blackness? And total silence? Well this is the reason: It's because on that night you are in somebody else's dream. And this is the reason you can't be in your own dream because you're already busy in somebody else's dream." Technological displacements are the stuff that somebody else's dreams are made of.

Richard Ingersoll

*Design Book Review* (ISSN 0737-5344) is published quarterly (winter, spring, summer, and fall) by The MIT Press, Cambridge, MA, for the editors of *Design Book Review*, Berkeley, CA. Send subscriptions and address changes to: MIT Press Journals, 55 Hayward St., Cambridge, MA 02142; (617) 253-2889; E-mail: journals-orders@mit.edu. Subscription rates are: individuals \$34.00, institutions \$85.00, students/retired \$20.00. Outside U.S. add \$16.00 for postage and handling. Canadians add additional 7% GST. Current issues are \$9.00; double-issues \$18.00. Back issues are: individuals \$15.00, institutions \$30.00. Back double-issues: individuals \$30.00, institutions \$60.00. Outside U.S. add \$5.00 per issue for postage and handling. Canadians add additional 7% GST. Claims for missing issues will be honored free of charge if made within three months after the publication date of the issue. Prices subject to change without notice. Copyright © 1995 by the Massachusetts Institute of Technology. Second-class postage paid at Boston, MA, and additional mailing of offices. Postmaster: send address changes to *Design Book Review*, MIT Press, 55 Hayward St., Cambridge MA 02142.

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