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At last, a complete, radical history of the network society, exhaustively charted from all over the world. BY MARK WILLIAMS

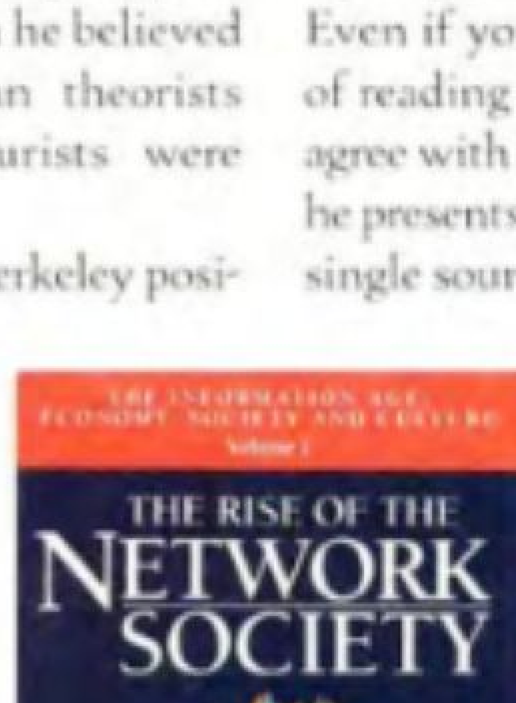
The Information Age:
Economy, Society and Culture
Manuel Castells
Volume 1: The Rise of the Network Society, 556 pages, $27.95
Volume 2: The Power of Identity, 460 pages, $27.95
Volume 3: End of Millennium, 418 pages, $28.95
Blackwell Publishers

IN *The Rise of the Network Society*, Manuel Castells invokes "international hotels whose decoration, from the design of the room to the color of the towels, is similar all over the world...airports' VIP lounges, designed to maintain distance vis-à-vis society...mobile, personal, online access to telecommunications networks...an increasingly homogeneous lifestyle among the information elite that transcends borders...the mandatory diet of grilled salmon and green salad...the ubiquitous laptop..."

Other cultural expressions of the planetary ruling class are the designs of their palaces, by preëminent architects (like Philip Johnson and Richard Meier) seeking an ironic, formal harmony in elements "liberated" from historical contexts. Such buildings—medleys of components selected from the global hypertext—are perfect manifestations for a culture that arises, Mr. Castells claims, from the unprecedented global network of financial and other information functioning as a unit in real time. This network derives its power from bypassing specific national contexts and geographic locations—selecting whole societies to plug into, or unplug from, what he calls its *space of flows*.

Mr. Castells, born in 1942, is a sociologist who fled Franco's Spain to become Paris University's youngest professor, at 24. Thence he arrived at the University of California at Berkeley in 1979 and recognized something happening in Silicon Valley, which he believed had implications European theorists and Tofflerian technofuturists were equally clueless about.

While retaining his Berkeley position, he took on visiting professorships at universities across North and South America, Europe, Russia, and the Pacific Rim to research "on the ground" the effects of what he anticipated would be a global revolution. He published 17 books and coauthored papers with the likes of the economist Laura d'Andrea-Tyson and Fernando Cardoso, later Brazil's president; chaired an international advisory committee in Russia during Boris Yeltsin's first term; and is presently a member of the boards of the United Nations' Geneva-based Institute of Labor Studies and the European Commission's High Level Expert Group on the Information Society. *The Rise of the Network Society* is just the first volume of a three-volume set called *The Information Age: Economy, Society and Culture*, which took 12 years to complete; its acknowledgments include Mr. Castells's somewhat obscure thanks to his surgeons for the time and energy to finish his magnum opus.

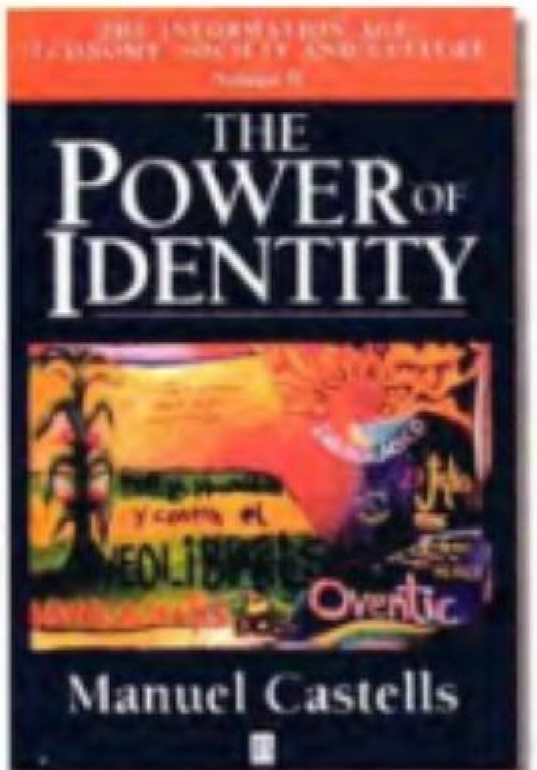


CANON FODDER

If only as an expression of one man's resolute spirit, I daresay the achievement's size requires us to genuflect dutifully. But do we really need to read this whole damn thing?

Yes. The reader absolutely should try to get through Mr. Castells's trilogy. Even if you don't make the investment of reading much of it, or read it but disagree with him, you'll likely find the data he presents, which is collected in no other single source, more various and resistant to simple interpretations than your ideological inclinations—whatever they may be—would lead you to expect.

Mr. Castells sees the '70s as the network society's first decade. He holds that it was then that America in particular, and the West in general, faced a crisis much deeper than rising oil prices: the public sector's inability to keep expanding its markets and income-generating employment without increasing taxes on capital or further fueling inflation through additional money supply and public indebtedness. Indeed, the real challenge was for capitalism as a whole to secure new markets that would absorb its growing productive capacity. (This possibility of general overcapacity with underconsumption was the foundation on which Marx erected his entire critique. Marx predicted that capitalists would use technical innovations to reduce labor costs to remain competitive, thereby inexorably narrowing the base from which profits could be taken.) Capitalism, more flexible than its communist adversary, confronted the need for its own perestroika—and accomplished it, Mr. Castells writes.



Counting on growing demand from an industrializing world, capitalism started to link valuable market segments in every country in a global network. Market deregulation and emerging information technologies provided the foundation for the transformation, and industrial capitalism began to become something infinitely more fluent, nimble, and responsive: *informational* capitalism. It achieved this, Mr. Castells writes, despite attempts by national governments to impose abstract market orthodoxies; he disparages the Reagan administration's "military Keynesianism" and legacy of indebtedness, for example. Today, through a convergence of technological and social logic, "networks are the fundamental stuff of which new organizations are made." And computer networks are essential for managing the new "web of strategic alliances, subcontracting agreements and decentralized decision-making."

Yet informational capitalism—further removed from industrial capitalism, perhaps, than the latter was from its agrarian-feudal predecessor—remains capitalism. Selectively investing itself transnationally, the network society *excludes* large populations from its space of wealth and information flows. Two businessmen shake hands in an airport lounge; a mile away armed guards separate starving people from food. Those people, possessing little that the market finds valuable, exist in what Mr. Castells calls "the Black Holes of Informational Capitalism."

JUST THE FACTS

I can only suggest here the exhaustiveness of Mr. Castells's elaborations on this initial thesis—there's a section of one chapter addressing the computers/productivity conundrum, for instance, that contains enough material for other books. But the reader will have already guessed that this is not the analysis of the so-called new economy that most technology businesspeople are used to. (For the *Red Herring*'s take on the subject, see "There

Is No New Economy," September, page 192.) In Mr. Castells's prefatory admonitions, he writes: "This is not a book about books." He intended, he says, neither to contribute to the cottage industries of postindustrial, postmodern, or information-society theory, nor to write futurology about the corporation à la Tom Peters.

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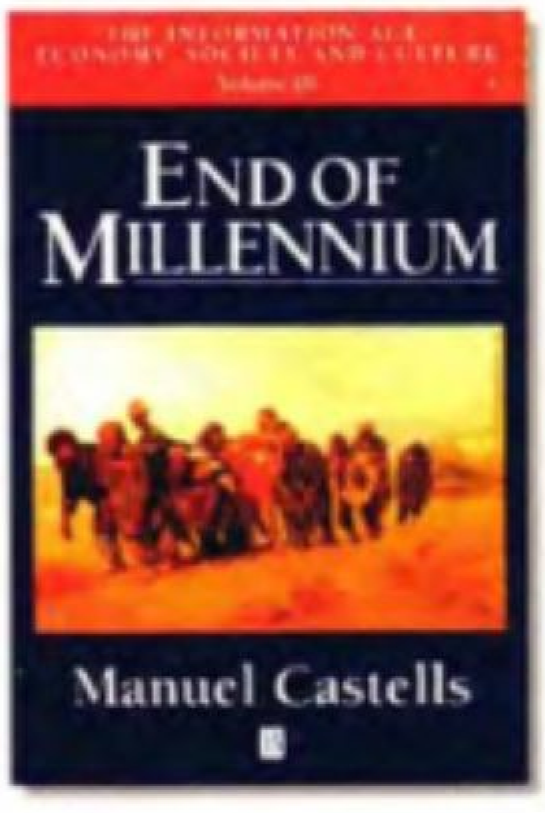
Reading the first few hundred pages, in fact, I felt guilty that I was struggling. Here, at last, was the real thing. Mr. Castells was brilliant and had worked his way across the world for two decades, amassing empirical data. There were 13 pages just listing tables, figures, and charts, with statistics packed on every page. In a section called "The Transformation of Work and Employment," for instance, I saw that managers, professionals, and technicians—the informational occupations—amounted to almost one-third of the American and Canadian labor pools in 1991, but only 14.9 percent of Japanese workers. Among the G-7 countries, Japan had the *lowest* rate of increase in information employment through the century and, with Germany, the strongest gain in manufacturing employment.

How could this be? Japan strongly emphasizes development of the *johoka shakai* (information society). I proceeded to the thorny statistics on service jobs, where, as everybody knows, most employment in advanced economies will be. I expected *producer services*, which provide information and support for firms, to have massively expanded. Not so! Despite growth (particularly rapid in Japan), they still aren't a really substantial part of any G-7 economy. *Social services* (largely governmental), however, represent around one-fifth of total employment in the advanced countries (except Japan). And in most nations the major services increase took place in the '60s; Japan, playing catch-up, is again the exception.

Why can't Mr. Castells just lay out the patterns (like the growth of a global services economy) we all are sure are there? His point is precisely that, on the evidence, they are *not* there—or else exist within a context of other factors that make many of our assumptions questionable. Here, he's persuasive that (1) our simplistic postindustrial model projects U.S. experience onto very different societies that are equally entitled to be considered "informational," and (2) though societies advance variously into informationalism, Japan and the

United States demonstrate opposite approaches. Japan, while reducing manufacturing, has kept it at a higher level; the United States, alternatively, phased out much manufacturing after 1970 as it accelerates toward informationalism and has since emphasized an entirely new employment structure where expansion of services is the key.



To those arguing that these positions are relatively unskilled, Mr. Castells points out that from 1993 to 1996, the more than 8 million new jobs created by the U.S. economy had average skills profiles higher than those of the jobs they replaced. He wonders why "the prophets of massive unemployment" don't analyze the gulf in job creation between the United States and Japan vs. Europe; leftist forecasters of joblessness, he writes, need to be challenged before they lead to "a new dead end, in the best tradition of ideological self-destructiveness." However, he also insists that under the onslaught of capital's flexibility, though the percentage of low-skilled workers in the United States is decreasing, average real U.S. wages remain down from 1970.

I've included this example of Mr. Castells's methodology to forewarn anybody chasing a quick read untroubled by facts that challenge cherished assumptions. "No systematic structural relationship between… information technologies and employment levels" exists, he concludes. Everything depends on the "given institutional setting (also called a nation)." In a classic study on the robotization of automobile plants, Mr. Castells notes that U.S. and Italian workers were displaced because the goal was to cut labor costs; French government policies protected jobs, leading to loss of competitiveness; Japanese companies retrained life-tenured workers, and employment *increased* with productivity, as market share was taken from U.S. competitors.

And this is just one brick in the edifice. Volume 2, *The Power of Identity*, analyzes how institutions (like the nation-state and the patriarchal family) are losing hold before informational capitalism. Mr. Castells has "no particular sympathy for modern nation-states that eagerly mobilized their people for reciprocal slaughter in the bloodiest century in human history." But a market isn't a civil society either; it's a "tragic irony" that as most nations finally begin struggling toward democracy, democracy is increasingly irrelevant. Then he examines a worldwide spectrum of movements—some relatively benign (environmentalism, feminism, the Mexican Zapatistas), some not (repressive fundamentalisms, Japan's *Aum Shinrikyo*, the American militias)—as evidence that individuals, marginalized, retrench in communal identities.

End of Millennium, the final volume, provides new facts on the failed Soviet perestroika and the inflexible industrial state in extremis. Recalling how much of the 20th century revolved around the Marxist-Leninist experiment, Mr. Castells writes, "Russia could have been industrialized…without the human holocaust" that was the product of relentlessly imposed ideology. Many current International Monetary Fund and World Bank policies are likewise ideologically driven disasters, he believes, for countries stunted already by "predatory states" and kleptocracies and all but excluded from the global networks. The only international networks in which these countries can participate, Mr. Castells notes, are illegal ones, in which everything (radioactive material, human organs, children) is for sale through elaborate strategic alliances.

Mr. Castells goes on to consider different European and Asian approaches to becoming informational. He demonstrates that state-controlled development is more responsible for successful Asian modernizations than free-market ideologues acknowledge. Yet "developmental states" also hold snares, of which China provides history's primary example: in the 14th century, near to industrializing, its rulers stalled technological change, fearing disruption of their social order. Today's party leaders plan to replicate the "Singapore model" (free market, tyrannized populace) with 1.2 billion people. Mr. Castells—who conducted a study of technology policy for the Chinese government, then taught in Taiwan, Singapore, and Hong Kong—thinks Chinese mainland leaders don't understand the implications of information technology.

Finally, at the conclusion of this volume, he glances ahead.

FREE OUR MINDS

The Information Age is an incomparably ambitious effort because Mr. Castells refuses to turn aside from our contemporary world *as it is*. Summing up, he allows himself to look toward a century with the potential for "the unleashing of unprecedented productive capacity by the power of the mind." But, though "the dream of the Enlightenment, that reason and science would solve the problems of humankind, is within reach," he warns that our societies, as they are currently constituted, will prevent this.

Technology *is* society, Mr. Castells tells us. "The most fundamental liberation is for people to free themselves from uncritical adherence to theoretical or ideological schemes," he writes. We've learned that once certain technical choices are made, certain paths—not necessarily the best—are locked in place as standards. We have also understood that there are technologies of management.

In the largest sense, our societies and their prevailing ideologies are such technologies: poor and inadequate ones, *The Information Age* suggests, for the century ahead.

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