Manuel Castells' Brave New World

Feeling Lost in the Information Age? A Berkeley Professor is Trying to Figure Out Where We Are and Where We're Headed.

by Jack Fischer

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photography by Karen T. Borchers

It was a moment for a university professor to savor.

When Manuel Castells rose to address a packed room in Davos, Switzerland, earlier this year, his audience wasn't struggling graduate students, but the global elite. The gathering was the annual meeting of the World Economic Forum, and participants included billionaire businessmen like Bill Gates and financier George Soros, government officials from Al Gore to Yassar Arafat, and international leaders like UN Secretary-General Kofi Annan and the International Monetary Fund's Stanley Fisher. For the 57-year-old professor of sociology and planning at the University of California, Berkeley -- one of a handful of academics worldwide invited to address the exclusive group -- it was confirmation that his work is finding an audience far beyond college campuses.

Castells is emerging as perhaps the first grand interpreter of the Information Age. An array of digerati -- from William Mitchell, dean of planning and architecture at MIT, to Stewart Brand, a founder of the Global Business Network consulting firm -- is recommending Castells as the person to read for a comprehensive vision of the forces driving the new age.

"In a sense, it doesn't matter whether he's right or wrong on every specific issue because he has raised the level of discourse so much," says Mitchell, who also has written about the Information Age. John Seely Brown, director of Xerox's Palo Alto Research Center, says Castells addresses "the issues we must come to terms with to move forward in a responsible way."

Last year, Castells completed what is likely to stand as his magnum opus, a 1,400-page scholarly trilogy entitled "The Information Age: Economy, Society and Culture." The work attempts to do for the emerging era what Karl Marx and German sociologist Max Weber, author of "The Protestant Ethic and the Spirit of Capitalism," did to explain the rules of the Industrial Age.

The trilogy -- which brings to 17 the number of books Castells has published -- deploys a region-by-region analysis of three decades of economic and cultural data in an attempt to craft a coherent picture of the forces driving civilization at the end of the 20th century.

Among its key observations are that flexible, ever-shifting electronic networks, like the international currency market and the Internet, already have emerged as the dominant organizing principle of the new age, trumping individual governments and corporations. And, Castells says, the way these networks function has profound implications for everything from national sovereignty to how people form their identities.

Castells pinpoints three major forces he believes have reshaped society, transforming institutions and creating instability for individuals: the countless global electronic

networks, the worldwide countercultural movements of the 1960s, and a restructuring of capitalism in the 1980s. One result has been that individuals, cut adrift from traditional rules of local society and from the security of stable economic support, are forced to craft identities on their own, with one foot in the local physical world and the other in the global virtual world.

Castells says the new age holds the potential for vast increases in productivity and fulfillment, but also is creating a more volatile and ruthless world. In it, those with nothing of value to contribute to the networks are discarded. Whole regions, like much of Africa, are consigned to "informational black holes" and global criminal enterprises, like those emerging in Russia, proliferate unchecked.

Relationships

In the end, the importance of Castells' work lies not in any one of these observations, but in his ability to show relationships among so many seemingly disparate phenomena. And unlike such pop futurists as Alvin Toffler, the author of "Future Shock," whom he dismisses as superficial, Castells uses exhaustive field research and the sophisticated tools of a social scientist.

Castells says his own hopes for the work go well beyond scholarly debate.

"People are lost," he said during an interview in his Berkeley office. "They sense it, but they don't know what it is. For many, many people there is no connection, no understanding, between what happens in their lives and what's happening in the world. What I've tried to do is provide enough data and interpretation for people to understand.... Understanding is the first step to transforming."

Not surprisingly for the author of such a sweeping interdisciplinary work, Castells has attracted critics. Some, like Mitchell Kapor, founder of the Electronic Frontier Foundation and Lotus Development Corp., have tried to read Castells but given up. "It may be profound," Kapor says, "but it's certainly opaque."

Even some academics find the information trilogy short on synthesis and long on collecting data.

"What he's done is put a lot of ideas together in one place," says Professor Martin Kenney, a member of the faculty of Applied Behavioral Sciences at UC Davis who has studied the Information Age and read Castells' trilogy. "Bringing a lot of things together has always been his strength. Whether he weaves them together into a whole is something each reader will have to decide for himself."

Conversely, Kenney says, when Castells does draw conclusions, they can be so aphoristic that their precise meaning can be elusive.

Kenney flips randomly to a page of Castell's first volume, "The Rise of the Network Society," and reads, "I propose the hypothesis that the network society is characterized by the breaking down of rhythmicity, either biological or social, associated with the notion of a lifecycle."

"What does that mean exactly?" Kenney asks. "Does he mean we're not going to die? Are people not going to have children? I don't think that's what he's saying, but that's the kind of thing that comes out."

For his part, Castells says he has been disappointed there has not been more criticism of the work. What criticism there has been, he says, has referred to the relative difficulty of reading the work and of his adamant refusal to offer prescriptions.

As he e-mailed me when I asked him about critics, "As stunning as it sounds, I am not aware of any major criticism in published reviews, and I am aware of dozens of reviews in many countries. In fact, it is a little bit disappointing, since I am sure there are many weaknesses in the work, and I would like to debate it more."

As to his refusal to offer solutions, he wrote, with uncharacteristic tartness, "I still have no prescription for our leaders. After all...we pay them to find solutions to our problems. I do not understand why we [academics] should both find the problems, and the solutions. Indeed, most political leaders only need experts to rationalize what they want to do anyway."

The ultimate arbiter of Castells' trilogy, of course, will be how it fares over time. Over the short term, the work has garnered increasing attention. Last month, for example, Harvard University's Institute for International Development invited Castells to address a closed session of the Harvard faculty. This week he is reaching beyond academia again, this time into mainstream media to address the American Association of Newspaper Editors annual meeting, in San Francisco.

Social theorist

In retrospect, it seems Castells' entire life was preparation for his work on the Information Age.

The son of a tax collector and conservative functionary for the Spanish dictator Francisco Franco, Castells arrived at the University of Barcelona at age 16 to study law and

economics, but was quickly swept up in leftist politics and the growing campus opposition to Franco. By 1962, with friends being arrested and tortured, Castells fled to Paris without completing his studies.

In Paris, the 20-year-old political exile enrolled in the Sorbonne and completed the equivalent of a master's degree in public law and political economy. Then, at the University of Paris, he began work on a doctorate in sociology and found himself studying under some of the world's leading sociological theorists, including Alain Touraine and business sociologist Michael Crozier. He met a fellow scholar who would become a lifelong friend, the future president of Brazil, Fernando Henrique Cardozo. Years later, Castells and Cardozo, along with Stanford economist Martin Carnoy and UC Berkeley political scientist Steve Cohen, would collaborate on a book about the global economy in the Information Age. They remain close friends.

Castells presciently wrote his doctoral dissertation on the strategies the fledgling French high-technology industry was using to decide where to locate facilities. His approach, which he would use in all his work, was unconventional for French academics at that time. In a culture that favored reading and ruminating on the great thinkers, Castells was intensely empirical. He recalls teaching himself the computer languages BASIC and FORTRAN and spending hours hand-punching computer cards to manipulate data about the high-tech companies.

Carnoy, a professor of education and economics at Stanford, says his friend's scholarship is uniquely positioned somewhere between the American and European models of social science. Americans, he says, favor deep empirical study on a narrow topic, while the Europeans rely less on field research and are more inclined to broad pronouncements.

"The Americans...see him as a social theorist — and that's a great strength," Carnoy says. "He has an amazing capacity to go some place, like Singapore, and 'get it' — understand the essential issues shaping it."

After earning his doctorate, Castells became, at 24, the youngest professor at the University of Paris and found himself at ground zero of the birth of the French countercultural movement. The student uprising at Nanterre, which Castells says began in one of his classrooms, was to French student politics what the Berkeley Free Speech Movement was to U.S. students.

At the time, Castells considered himself a Marxist and radical libertarian who shared many of the concerns of the students, who were only slightly younger than he. Today, Castells calls himself a social democrat, and describes Marxism as an analytical tool, albeit one of limited usefulness in the emerging age.

The real importance of Castells' experience with the student movement may be that it helped focus some of his research over the years on the impact of such social movements worldwide.

Capitalism in crisis

Along with global electronic networks, Castells views the collective changes wrought by social movement like the 1960s counterculture,

Manuel Castells in His Own Words

"Everything that is important — meaning that it generates power, money or information — happens through the flows in networks."

"It is not technology that produces inequity, but it's so powerful that it amplifies the effects of inequity."

"This network society I describe has extraordinary dynamism. It combs the globe ceaselessly for value and excludes everything, and everyone, not of value."

"It has the potential to become one of the most exclusionary systems in history, while possessing the potential to be the most productive system in history."

"There are no more stable power elites."

"The 21st century will not be a dark age. Neither will it deliver to most people the bounties promised by the most extraordinary technological revolution in history. Rather, it may well be characterized by informed bewilderment."

"The state does not disappear.... It is simply downsized in the Information Age."

"In a world characterized by individualization of work, destructuring of civil society, and the delegitimation of the state, families, more than ever, are the providers of psychological and material well being."

feminism, environmentalism and the decline of the traditional family as the second of three major phenomena shaping the new age.

In his view, all of these social movements emphasized individual freedom and created a cultural climate that challenged prevailing assumptions and fostered innovation.

"The Silicon Valley culture — iconoclastic, individualistic, even somewhat selfish, distrustful of government and bureaucracy — owes more to countercultural movements than people usually think," Castells e-mailed me. "Innovation and entrepreneurialism, daring to think in a radically different way — so important for innovation in the Information Age — are to some extent rooted in these movements, even if most people in high tech are politically conservative."

The third major force, in Castells' view, was the restructuring of capitalism in the 1980s. He says it spelled the end of the Industrial Age of capitalism and the beginning of what he calls informational capitalism, or "informationalism."

The 1970s had been a time of low gains in economic productivity combined with high inflation — dubbed "stagflation" by economists. In a 1976 book, Castells disagreed both with the traditional economists, who dismissed the difficulties as a routine business cycle, and with Marxists who said, for the umpteenth time, that this was capitalism's demise.

"I argued that it was a real crisis, not just something temporary, but that it could be fixed by changing the economic model," he said. "That's exactly what happened, and a new form of capitalism was created."

The new economic system, in Castells' view, is the combined result of deregulation of industry, the disappearance of trade barriers, and vast improvements in global trading networks made possible by high technology.

Castells sees this new informationalism as largely defined by the global networks, endlessly shifting and reconfiguring in pursuit of new business opportunities. It was the inability of the Soviet Union to adapt to these highly decentralized networks, Castells writes in the third volume, that caused it to fall behind technologically, and led to its demise.

Castells says the three major forces he identifies as driving the new age together have profound implications for individuals.

When people can begin to exist in both local and virtual worlds, they find themselves abandoned by the institutions from which they derived their identities: traditional society, which was mortally weakened by the countercultural movements, and their employers, who view them as instantly expendable in the quest for higher productivity and profits. The fact that people can't rely on their employers or their local communities to define and support them has left them on their own as never before — a world of individuals, he says.

And that, in turn, has created broad feelings of insecurity, he says. In extreme cases, Castells believes, the resulting pressures on individuals have led to such diverse phenomena as the rise of U.S. militias and religious fundamentalism around the world.

"A dangerous state of affairs"

After a stint as a visiting professor at the University of Wisconsin in the 1970s, Castells returned to Paris, but he grew restless and moved to UC Berkeley to chair the department of urban sociology.

Somewhere in these years, Castells and his first wife, a television journalist, ended an unhappy marriage. A daughter from the relationship, now 35, works for the European Union in Italy as an environmental economist. Castells met his current wife, Emma Kiselyova, in 1984 while conducting research in the Soviet Union. Today Kiselyova-Castells is a part-time researcher at UC Berkeley's Center for Slavic Studies and the Institute of Urban and Regional Development. She and Castells occasionally collaborate, most recently on a book about the role of information technology in the collapse of the Soviet Union.

Since embarking on the Information Age trilogy in 1986, he has used faculty appointments and stints advising governments around the world — from South America to Singapore — as a way to travel the world to gather field research for the books. In 1991, for example, he chaired an international committee of academics that advised Boris Yeltsin during Yeltsin's first term as president of Russia.

With the trilogy now completed, Castells seems intent that people begin to explore the issues it raises.

He doesn't believe that technology alone necessarily sets the course of events, and is deeply concerned that world leaders, both governmental and corporate, are abdicating their responsibility to try to shape the emerging global age. Intervention is needed not only to tame volatile world financial markets —

which do not operate under uniform international rules — but also to channel the bounty of the new age to benefit most of the world's people, he says. Markets, Castells said, by way of elaboration, do a lot of things well, but sharing the wealth they create among broad numbers of people is not one of them. Nor, he said, does the proliferation of electronic networks necessarily offer the promise that access to them will be widely shared among the world's people. Both will require leadership of the emerging technocracy.

"The technology elite could play an extraordinary role, of being the critical bridge between the new system of production and innovation and the new civilization we are creating." The stakes are high, he believes.

"With the crisis of traditional institutions around the world, we're each on our own," Castells said. "It's a dangerous state of affairs. There's no example in history in which individuals without institutions can survive."

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