

possible to “reseed the body with our own cells that are made more potent and younger.”

The question can't be resolved today, *Science* writer Constance Holden points out, because there is no reliable “biomarker” in the body—some change that occurs in all

humans regardless of environment—that would allow researchers to compare aging rates in different individuals, and thus reliably predict how long people might plausibly live. “At this point,” says Holden, “the most reliable biomarker for aging is death.”

The Last Guru?

“The Cult of Castells” by James Crabtree, in *Prospect* (Feb. 2002), 4 Bedford Sq., London WC1B 3RD, England.

The first years of the new century haven't been kind to the late 20th century's bumper crop of cybergurus. One of the few still standing is also one of the most unlikely: the 57-year-old Spanish-born, French-educated, ex-Marxist professor of sociology and planning at the University of California, Berkeley, Manuel Castells.

A pile of thick, jargon-clotted books attests to Castells's great industry. His 1,200-page information age trilogy (1996–98) is regarded in some academic circles as a masterwork on a par with those of Karl Marx and Max Weber. Castells has been called the “Voltaire of the Information Age.” In a new book, *The Internet Galaxy*, he is reaching for a wider audience.

Crabtree, a researcher at Britain's Industrial Society, is respectfully skeptical. He explains that just as Marx put the state at the heart of the social order and Weber put bureaucracy, Castells puts networks, such as the Internet. They are the “prime organizational form” of the information age. Electronic communications networks, along with the social and cultural revolutions that began in the 1960s and the global economic restructuring that started in the 1980s, are the driving forces in modern society. The decline of stable organizations and fixed values creates far-reach-

ing change. As Crabtree puts it: “The network citizens, stripped of certainty and security while cocooned in networks they cannot control or comprehend, become dominated by the search for personal or collective identity. Some adapt well, while others react aggressively.”

Crabtree sees a lot of flaws in Castells's thought. His work is full of jargon—“timeless time,” “the space of flows”—and it often sacrifices precision and careful definition of ideas for the sweeping assertion. There's not much evidence that Castells's ideas have a great deal of explanatory or predictive value. And very often Castells seems to “shoe-horn” into his grand theory things that don't fit. He tries to incorporate the Qaeda terrorists into his model of “networked dissent,” but Crabtree observes that the group in some ways is the antithesis of a network. For example, it “deploys autonomous cells defined by their *not* being in constant contact with the whole group.”

For all that, Crabtree concludes that Castells's reputation is largely justified. His network society is “an imperfect roadmap, perhaps no more than a useful metaphor.” Yet it is the most useful roadmap we have. If it now seems somewhat commonplace, it is only because Castells's ideas have carried the day.

Glowing with Optimism

“The Changing Climate for Nuclear Power in the United States” by Richard Meserve, in *Bulletin* (Winter 2002), American Academy of Arts & Sciences, 136 Irving St., Cambridge, Mass. 02138.

“The demise of the nuclear power industry was widely expected only a few years ago” writes Meserve, chair of the U.S. Nuclear Regulatory Commission. But things may be changing.

While the number of nuclear plants has dropped from 111 to 103 since 1990, the amount of electricity these plants produce has increased by nearly 40 percent. Although that 750 billion kilowatt-hours (kWh) of

electricity represents just 20 percent of U.S. consumption (countries such as France and Lithuania, by comparison, get over 70 percent of their electricity from nuclear plants), Meserve says the U.S. nuclear industry “is by far the largest commercial nuclear power program in the world.” About one-quarter of the world’s nuclear plants are in the United States.

Meserve thinks the United States may be ready to move away from its reliance on coal and natural gas for electricity in favor of nuclear power. One compelling factor is cost: The average production cost of electricity from nuclear plants was about 1.71 cents per kWh in 1999. That is less than the cost of electricity from either coal or natural gas, both finite fuel sources that contribute to greenhouse gas emissions. Price deregulation of electricity, along with the fact that the high capital costs of many older plants have now been largely repaid, has helped make nuclear competitive. But the plants have also become much more efficient. One reason: Operating capacity grew from 60 percent to 90 percent during the 1990s. Since most plants need to be shut down for refueling every few years, says Meserve, this capacity figure “is only slightly less than the practical maximum.” New

plants might be even more efficient. Researchers are working on three basic designs, all smaller and employing different approaches. Some, for example, are cooled by helium rather than water.

The main cloud hanging over all this optimism is the continuing problem of nuclear waste. Right now, spent fuel is kept in giant casks at each plant site, cooled by air convection. Meserve pronounces this storage system safe, but plants are running out of waste storage space. The Department of Energy has selected Nevada’s Yucca Mountain as the nation’s repository for nuclear waste, a choice endorsed by President George Bush and supported by a recent resolution in the House of Representatives. And even though Nevada’s state officials declare that they intend “to litigate at every available opportunity” to block the project, there seems little chance they can succeed.

Concerns over waste and lingering public nervousness after Three Mile Island and Chernobyl still color the public image of the nuclear power industry. But ultimately, as older plants near the end of their useful lives, the United States will have to decide whether it wants to capitalize on the advantages of nuclear power.

ARTS & LETTERS

Lost in the Corridors

“The Future in Your Bones: C. P. Snow (1905–80)” by George Watson, in *The Hudson Review* (Winter 2002), 684 Park Ave., New York, N.Y. 10021.

British scientist-turned-novelist C. P. Snow (1905–80) is still remembered for his division of the intellectual world into “two cultures,” the scientific and the literary, and for his phrase “corridors of power,” which became a cliché even before his 1964 novel of that title was published. Snow fervently believed that scientists—and he himself—had, in another favorite phrase, “the future in their bones.” But he was quite wrong about that, writes Watson, a Fellow of St. John’s College, Cambridge University.

Born in Leicester, in the English Midlands, the son of a clerk in a shoe factory, Snow earned a doctorate in physics at

Cambridge in 1930. But his early research on infrared spectroscopy went awry. The failed scientist turned to college administration at Cambridge and to novel writing. In 1939 he began a career in public life, joining a Royal Society group organized to harness British science to the war effort. The next year, his novel *Strangers and Brothers* appeared, and its title became the name for his long series of novels about the administration of power in contemporary Britain.

“The novels sold,” Watson notes, “and probably achieved something of their didactic intention, which was to inform the world about how power interacts with personality,