

Acknowledging pragmatism's "religious" foundation would allow pragmatists to be more persuasive, Malachuk argues. Most could defend their republicanism only by asserting that "all beliefs are fallible though beliefs about democracy are *practically* less

so." But "religious pragmatists are engaged in a straightforward program of conversion," offering "a religion of humility before Contingency . . . [that] will save the republic." This approach, he suggests, has a solid pragmatic virtue: It is more likely to work.

SCIENCE, TECHNOLOGY & ENVIRONMENT

Crowd Control

"Coping with Crowding" by Frans B. M. de Waal, Filippo Aureli, and Peter G. Judge, in *Scientific American* (May 2000), 415 Madison Ave., New York, N.Y. 10017–1111.

Ever since a psychologist in the 1960s packed a bunch of rats into a room and observed the gruesome results, the idea that overcrowding promotes increased aggression and even violence in humans has become widespread. In recent decades, however, scientists have revised their view. People, after all, somehow navigate peacefully through crowded situations every day, jamming themselves into trains and elevators without ordinarily resorting to ratlike savagery. Despite their irritation and stress, people adjust and stay calm.

But why? Is it human intelligence or culture that prompts people to behave in this civilized fashion? No, say de Waal, a psychologist who directs the Living Links Center at the Yerkes Regional Primate Research Center in Atlanta, and his co-authors. Remaining cool in overcrowded situations is part of humans' evolutionary heritage.

Studying 122 rhesus monkeys at the Yerkes center and two other locations, the authors observed that overcrowded adult males became more friendly and no more aggressive, while females did get more aggressive but also made a "concerted effort" to improve their usually antagonistic relationships with non-kin.

Even more relevant was the behavior of 100 chimpanzees—the closest human relatives—studied at the Yerkes center. Chimps "are known for deceptive behavior," de Waal and his colleagues note, and in this case, put into cramped quarters, they seemed to hold their emotions in check. In contrast to the female rhesus monkeys, the chimps showed no increase in aggressive behavior. "We found that chimpanzees in the most crowded situations had a three times *lower* tendency to react" to neighboring animals' cries—which usually provoke hooting and charging displays—than chimps with more space did, the authors say. "Chimpanzees may be smart enough to suppress responses to external stimuli if those tend to get them into trouble."

Chimps actually became less aggressive when they were put into very crowded quarters for a brief time—which is "a daily experience in human society," de Waal and his colleagues note. On a crowded elevator, people tend to limit body movement, avoid eye contact, and refrain from talking loudly. It's not simply politeness, the authors suggest. It's a way that we "and other primates handle the risks of temporary closeness."

Who Was Kennewick Man?

"Battle of the Bones" by Robson Bonnicksen and Alan L. Schneider, in *The Sciences* (July–Aug. 2000), New York Academy of Sciences, 2 E. 63rd St., New York, N.Y. 10021.

Recent archaeological discoveries have opened up the startling possibility that modern-day Native Americans are not descended from the first Americans. Yet, thanks mainly to a decade-old federal law that sought—

with archaeologists' consent—to recognize tribes' rights to their ancestors' remains, scientists are being hindered in their efforts to learn more.

"Biological knowledge of the earliest

humans in the Americas is amazingly thin,” write Bonnichsen, an archeologist at Oregon State University, in Corvallis, and his co-author. Fewer than 10 “relatively complete, securely dated skeletons more than 8,000 years old have been unearthed in North America”—and some may not be the remains of Native American ancestors. But federal and state officials, bowing to their reading of the 1990 Native American Graves Protection and Repatriation Act, have been handing skeletons over to tribes for reburial.

Bonnichsen and other scientists have sued the federal government to prevent the loss to science of Kennewick Man, a 9,200-year-old skeleton found on federal land in Washington State four years ago. Hardly a month after the discovery, when only preliminary radiocarbon dating had been done, federal officials decided to give the skeleton to a coalition of five local tribes—a move blocked by the lawsuit (in which co-author Schneider is an attorney). It is not clear that Kennewick Man really “belongs to any existing tribe at all,” say Bonnichsen and Schneider.

The possibility that the first Americans were not ancestors of modern-day Native Americans has arisen as a result of the emergence of DNA typing and other new dating technology, along with the unearthing of some very ancient, well-preserved skeletons. Until recently, most scientists strongly favored the so-called Clovis-first theory about the peopling of the New World. By the late 1960s, the authors explain, radiocarbon dating had established that the fluted spear points first found with the remains of mammoths and other animals near Clovis, New Mexico, in 1932 (and later elsewhere)

were between 10,800 and 11,500 years old. Scientists theorized that then, at the end of the most recent Ice Age, a single band of mammoth hunters from Siberia crossed the Bering land bridge into Alaska and began spreading through North America. That led to the diverse array of peoples present when the Vikings and Columbus arrived.

When excavations that began in 1977 at Monte Verde, a site in southern Chile, seemed to show that humans had been present more than 11,500 years ago, many scholars were skeptical. But three years ago, a team of archaeologists, including avowed skeptics, vindicated the claim. Archaeologist Thomas D. Dillehay has uncovered flaked stone tools at the site that are apparently about 33,000 years old. Many other sites that seemed to pre-date Clovis were now acknowledged, as well. “Rather than signaling a distinct migration,” the authors write, the Clovis spear points may simply represent “a technological innovation that took place at that time within groups of people who already lived in the Americas.”

Not only were the Americas peopled earlier than had been thought, but the latest research indicates that they probably were settled more than once and by different groups, say Bonnichsen and Schneider. “The first Americans probably came from many parts of Eurasia.” The early skulls “are quite distinct from the skulls of modern Native Americans,” which may indicate gradual evolutionary change—or else that the skeletons “are unrelated.” But without access to Kennewick Man and other remains, say the authors, scientists are stymied in their efforts to unravel the true history of the first Americans.

Women in Science

“Parity as a Goal Sparks Bitter Battle” by Constance Holden, in *Science* (July 21, 2000), American Assn. for the Advancement of Science, 1200 New York Ave., N.W., Washington, D.C. 20005.

Though more and more women have opted for scientific careers in recent decades, they still constitute less than one-fourth of America’s 3.3 million scientists and engineers. In physics and engineering, two of the most “hard-core” fields, the proportion is even smaller. Is this really a problem?

Many people committed to the advance-

ment of women in science—including the members of a recent congressionally mandated commission—answer yes. Women are not inherently less capable than men in these fields, they argue, so if America wants to make use of its best scientific minds, it must not neglect the female ones. But lately, reports Holden, a *Science* staff writer, some dissenting