Domesticated animals have enjoyed much more "reproductive success" than they would have in a state of nature. Man, far from being the oppressor of animals, is upholding "a remarkable evolutionary compact among the species."

Japanese Junk

"What?! Garbage in Japan?" by Phyllis Austin, in *Garbage* (Nov.-Dec. 1991), Old House Journal Corp., 2 Main St., Gloucester, Mass. 01930.

First in autos, first in TVs, and first in the management of solid waste as well. That is the view of a number of environmentalists who have studied Japan and estimate that the island nation recycles about 50 percent of its solid waste. After a visit to Japan, however, journalist Austin reports the reality there is far less rosy.

Second only to the United States as a garbage producer, Japan, she says, is "in a crisis" over what to do with the 4.1 billion tons of waste it generates each year. As Japanese wealth has mounted, so have the junk piles. The newly affluent Japanese jettison "perfectly functional, slightly used" televisions, stereos, bicycles, or furniture as if they were yesterday's newspaper. In just three years, according to a 1990 report from the nation's Ministry of Health and Welfare, waste production increased by more than one-third—to three pounds per person per day.

With 120 million people crammed into a country the size of California, Japan has little landfill space left. The government has resorted to creating garbage "islands" in Tokyo Bay and Osaka Bay. Rural towns are courted, frequently unsuccessfully, by

garbage managers seeking dump sites. "Midnight dumping" by private waste-disposal firms is on the rise. In 1989, there were more than 2,000 arrests for illegal dumping.

Most of what the Japanese cannot recycle, they burn, and the prospects for increased recycling are "negligible, very limited," says Makoto Saito, the ministry's deputy director of waste management. No official estimate of Japan's overall recycling rate is available. But contrary to the extravagant claims made by some U.S. environmentalists, Harold Levenson of the U.S. Congress's Office of Technology Assessment calculates—on the basis of data from the Clean Japan Center, a quasi-governmental agency—that Japan's recycling rate may be as low as 26 percent. That is still nearly twice the U.S. rate-and so would indicate that the United States can do a lot better at recycling. But this modest success, in "a country noted for its dependence on imports of raw materials, its homogeneous culture, and its propensity for citizen cooperation in community activities," suggests that recycling's potential is not as great as some have hoped.

Death Begins At 85?

All of us must die, of course, but what is the natural limit to a human life? Against a chorus of critics, Stanford rheumatologist James Fries has argued that the human body is biologically destined to begin falling apart at about age 85.

"It is frailty, rather than disease," that kills people at very old ages, Fries told Barinaga, a *Science* writer. Despite all the medical progress during the past decade, he points out, the remaining life span for

"How Long Is the Human Life-Span?" by Marcia Barinaga, in Science (Nov. 15, 1991), American Assoc. for the Advancement of Science, 1333 H St. N.W., Washington, D.C. 20005.

65-year-olds has been constant: 18.6 years, on average, for women, 14.7 years for men. Moreover, if the curves since 1900 for life expectancy from birth and from age 65 are extrapolated into the future, the lines converge early in the next century at about age 85—suggesting, Fries says, that that is roughly the biological limit to life.

Nonsense, say his critics. The recent plateau in life expectancy after 65, Duke University demographer Kenneth Manton asserts, is a result of short-lived changes in Medicare in the early 1980s that he contends made it harder for some of the elderly to get medical care. Death rates have since resumed their decline. He notes that killers once regarded as inevitable "frailties" of old age, such as osteoporosis, are now considered treatable diseases.

Fries's converging lines, says University of Chicago demographer Jay Olshansky, are meaningless. The fact is that overall life expectancy is affected by many more things, notably infant mortality, than just the survival of more people beyond 85. There may be a natural limit to life, but it is not necessarily 85.

Indeed, University of Minnesota demog-

rapher James Vaupel has scrutinized unusually accurate Swedish data on 85-yearolds and found drastic improvements in remaining life expectancy during the past 50 years. The same is true for Swedes as old as 100. If there is a biological limit to life, Vaupel suggests, it may be 100 years or more.

The search has taken scientists to other species, notably to fruit flies. Early results from one study suggest that death rates do not rise for elderly insects.

For most of us, unfortunately, all this is largely a theoretical exercise. We will continue to die from "preventable" causes long before we have a chance to test the outer limits of biology.

ARTS & LETTERS

Corruption And Democracy

"Democracy: Henry Adams and the Role of Political Leader" by B. H. Gilley, in *Biography* (Fall 1991), Center for Biographical Research, Varsity Cottage, Univ. of Hawaii, Honolulu, Hawaii 96822.

In Democracy: An American Novel (1880), Henry Adams skewered the post-Civil War breed of political leaders for having abandoned the high-minded disinterestedness of their patrician predecessors. Against the backdrop of corruption in the administrations of Presidents Rutherford B. Hayes and Ulysses S. Grant, the accusation seemed quite plausible. In fact, when the novel was first published anonymously, many American readers took it simply as a roman à clef.

Senator Silas P. Ratcliffe, *Democracy*'s villain, was actually inspired by James G. Blaine, who as speaker of the House of Representatives had helped to deny Adams's father, Charles Francis Adams, the GOP presidential nomination in 1872. Henry Adams "was not content merely to condemn his Senator Ratcliffe for betraying the people and for enhancing his personal power," observes Gilley, an historian at Louisiana Tech University. Political corruption, in Adams's view, had become a much more complicated matter than that.

Ratcliffe had begun his political career during the Civil War as a well-intentioned governor of Illinois. "The Senator sought power to achieve legitimate political objectives," Gilley notes, "but the quest for political power obscured his goals." His attitude toward politics became calculating and selfish. Means became ends, integrity was sacrificed to expediency. Finally, the senator accepted a \$100,000 bribe to stifle his opposition to a huge government subsidy for the Inter-Oceanic Mail Steamship Company and allow the legislation to emerge from his committee and reach the Senate floor.

Adams did not excuse Ratcliffe's selfish rationale, Gilley says, but he did suggest that the erosion of Ratcliffe's will was a subtle development that was partly due to the pressures of democratic politics. American society's movement in an egalitarian direction and the rise of political parties had changed the environment in which political leaders had to act. George Washington had been able to stand above