more benignly."

In liberalism today, there is a disjunction between the moral and economic domains, the historian says. Mill's dictum that "trade is a social act" is carried to an extreme. Government regulation has been extended from business and commerce to so-called "social" issues, such as racial integration, sexual equality, and multicultural education. This "social paternalism" is combined with "moral individualism," Himmelfarb says, in a way that suggests a double standard. "Why is it proper for the government to prohibit insalubrious foods but not sadistic movies, to control the pollution of the environment but not of the culture, to prevent racial segregation but not moral degradation?"

Mill himself, Himmelfarb writes, "did not intend to advocate so complete a double standard, let alone so radical an inversion of values. He put a higher value and priority on moral goods than on material ones." In *On Liberty*, unfortunately, he unwittingly left the opposite impression. Liberals today, Himmelfarb concludes, need to go back to the "other" Mill and to the liberal tradition of Montesquieu, Madison, and Tocqueville. Absolute liberty, like absolute power, tends to corrupt absolutely—and, indeed, is "a grave peril to liberalism itself."

SCIENCE, TECHNOLOGY & ENVIRONMENT

Perilous Pond Scum

"The Toxins of Cyanobacteria" by Wayne W. Carmichael, in *Scientific American* (Jan. 1994), 415 Madison Ave., New York, N.Y. 10017–1111.

To scientists, the blue-green microorganisms are known as cyanobacteria; non-scientists more often call them by a different name: pond scum. By any name, the many forms of cyanobacteria that are toxic may be posing an increasing hazard to humans, warns Carmichael, a professor of aquatic biology and toxicology at Wright State University, in Dayton, Ohio.

The deadly pond scum was discovered in 1878 by an Australian investigator, George Francis. Scientists have since confirmed that some cyanobacteria are indeed poisonous and have caused mass deaths of animals. In the midwestern United States, for instance, migrating ducks and geese have perished by the thousands after consuming water contaminated by toxic cyanobacteria.

Scientists so far have found two basic types of toxic cyanobacteria. *Neurotoxins* attack the nervous system and, by inducing paralysis of the respiratory muscles, often cause death within minutes. *Hepatotoxins* damage the liver and can cause death within a few hours or days.

"No confirmed human death has yet been attributed to the poisons," Carmichael notes. "But runoff from detergents and fertilizers is altering the chemistry of many municipal water supplies and swimming areas, increasing the concentration of nitrogen and phosphorus. These nutrients promote reproduction by dangerous cyanobacteria." Water-treatment processes only partially filter out the microbes.

Some evidence, Carmichael says, suggests that certain of the toxins may contribute to the development of cancer. He and other researchers are carrying out a long-term study in areas of China where, they suspect, extremely high rates of liver cancer may be linked to cyanobacterial toxins in the drinking water.

Cyanobacteria are not all bad, Carmichael points out. They have provided scientists with insights into the origins of life. The microbes existed more than three billion years ago; because they were the first organisms able to convert carbon dioxide into oxygen, they "undoubtedly played a major part in the oxygenation of the air." Also, researchers think that the toxins and their derivatives may yield medicines to treat Alzheimer's disease and other disorders.

Some cyanobacteria—from the genus *Spirulina*—are even sold as a sort of health food. *Spirulina* itself is not harmful, but the practice worries Carmichael. There are no regulations

requiring that the products be monitored for contamination by toxic cyanobacteria. Also, *Spirulina*'s popularity has led to the marketing of other types of cyanobacteria, *Anabaena* and *Aphanizomenon*, which have highly poisonous strains. Without "sophisticated biochemical tests," he warns, "the safety of these items is questionable."

Trading Organs For Dollars?

"Indecent Proposals?" by Margaret Davidson, in *The New Physician* (Oct. 1993), American Medical Student Assn., 1890 Preston White Dr., Reston, Va. 22091.

Each year, kidneys, hearts, livers, and other organs are transplanted from some 4,500 brain-dead or otherwise deceased individuals into critically ill patients. But that leaves more than 2,500 patients each year who die because they never receive transplants. Should families of potential organ donors be offered cash in order to boost the number of donations? An increasing minority of specialists and patients say yes, according to Davidson, a freelance writer.

"We're killing too many people who don't have to die," asserts Auburn University economist Andrew Barnett. "There are a lot of people who would be willing to have their organs harvested if there were a profit motive involved and if they were asked." He favors a full-fledged market approach: Spot markets would provide for paying the families of donors; futures markets would pay potential donors for the right to remove organs after they die.

But most advocates of compensation—which is now illegal—have something much less radical in mind, Davidson says. Dr. Thomas Peters, director of the Jacksonville (Florida) Transplant Center, for example, thinks that lump-sum death benefit payments of $1,000 to the family might be appropriate. Dr. Stephen Jensik, a transplant surgeon at Chicago's Rush-Presbyterian-St. Luke's Hospital, favors paying $2,000 to the donor's family to help defray funeral expenses.

Most medical and other specialists in fields related to transplantation are against offering any financial compensation, however. One survey found that 78 percent of neurosurgeons and 79 percent of critical-care nurses were opposed. Foes of compensation fear that physicians might not do their utmost to save lives if they knew that the family would get some form of payment if the patient died. They also worry that a market system would favor wealthy transplant patients.

One way that organ donations might be increased *without* providing financial compensation, Davidson points out, would be if more physicians were simply to ask families of potential donors about it. A survey of neurosurgeons indicated that many now do not regard that as their responsibility or are reluctant to place an additional burden on grieving families.

Have a Rice Day

In *American Historical Review* (Oct. 1993), Peter A. Coclanis of the University of North Carolina at Chapel Hill ponders the meaning of rice.

Rice (Oryza sativa) *has shaped the lives of relatively few Westerners over time. It has dominated the lives of fewer still. While the cereal has been known in the West since antiquity, its production and consumption for the most part have been of only minor importance, occurring at the margin of Western foodways. That we speak of breadwinners rather than ricewinners and pray for our daily bread rather than our daily rice tells us something about the hold of bread—primarily wheat bread—on the Western world. In the East, where the rice plant originated, things are far different; . . . in that part of the world, rice is indeed king. That the Indian word for rice,* dhanya, *means "sustainer of the human race," that the name of the Buddha's father, Suddhodana, the sixth-century–B.C. king of Nepal, literally means "pure rice," and that the idiomatic expression "Have you eaten your rice today?" was a polite way of saying hello in traditional Chinese society only begins to convey the place of rice in the East.*