ment did in fact begin to promote science. But the government viewed science less as a method or a theory than as a *commodity*: It encouraged learning scientific facts, not scientific research. The Western scientific revolution of the 16th and 17th centuries had established physics as the basis for other sciences; but the Japanese government favored biology over physics because the former had more practical applications (e.g., in medicine and agriculture). Today, science in Japan may be changing as research continues to grow; much of it is sponsored by the private sector instead of the government. Yet even Bartholomew suggests that research remains a means to attain practical goals, rarely a pursuit unto itself.

THE MEDICAL TRIANGLE: Physicians, Politicians, and the Public. *By Eli Ginzberg. Harvard. 301 pp. $27.50*
WHAT KIND OF LIFE: The Limits of Medical Progress. *By Daniel Callahan. Simon & Schuster. 318 pp. $19.95*

The United States spends more of its gross national product (GNP) on health care than any other nation. Canada, despite providing universal health insurance, spent 8.5 percent of its GNP in 1986 on health care—while America was spending 11.1 percent. And this year's half-trillion dollars in medical bills threatens to triple over the next decade. Ginzberg explains how health-care costs became so high; Callahan, why ethically they should not be.

Ginzberg, director of the Conservation of Human Resources Project at Columbia University, draws a medical triangle whose various "sides"—patients, medical professionals, and government—have such different expectations that they keep the health-care system permanently destabilized. Since World War II, the introduction of ever more health benefits (through job insurance, Medicaid, and Medicare) has whetted the public's desire for medical treatment. This created a greater demand for doctors, who in turn grew accustomed to providing as much care as possible for as much money as possible. Scores of for-profit hospitals sprang up to capitalize on the trend. The ever-rising costs could only be paid because the government—which this year will foot 40 percent of all medical expenses—pumped in funds in response to public demand. There is a broad consensus, especially in government, that runaway medical costs must be controlled. But with the sides of the triangle so politicized, Ginzberg worries that no solution can be agreed upon. One out of every 13 Americans works in health care; such workers constitute a powerful interest group that most politicians would be reluctant to offend.

Callahan argues that the solution to the accelerating health-care costs is not a matter of economics but of values. Callahan, a specialist in medical ethics, develops the ideas advanced in his controversial *Setting Limits* (1987): that a longer life is not necessarily a better life, and that everything medicine can do at whatever cost to prolong life should not necessarily be done. Americans, he says, must realize that health is a communal, not simply an individual, good. While health-care costs have multiplied, he reminds us, the portion of the GNP devoted to education has dropped; and the percentage of children living in families below the poverty line rose in the 1980s from 13 to over 20 percent. Today, only 10 percent of patients—often "hopeless cases" such as octogenarians requiring organ transplants and babies weighing less than 18 ounces—account for 75 percent of all health-care costs. Callahan's prescription for providing care for the most people at the lowest cost involves, he recognizes, centralized planning and rationing. Yet he fails to address Ginzberg's question about the politics involved in any solution. Until political institutions are confronted, Callahan's call for a more equitable, humane health-care system remains a provocative ideal left floating in air.