## **RELIGION & PHILOSOPHY**

firm basis for an orderly society in a fallen world") will seldom be heard by Episcopalians.

Missing from the new edition is the phrase "by the merits of His [Christ's] most precious death and passion," formerly in the post-communion prayer of thanksgiving. This omission, Hughes writes, implies that, contrary to apostolic teaching, worshipers may rely on merits other than Christ's to gain God's acceptance. He asks: "Is the stage being prepared for us to celebrate our own merits?"

Several references to the wrath of God have been expunged. Yet churchgoers need to be reminded, Hughes contends, that they must strive to be saved from divine anger incurred by their sinfulness. Hughes chides the authors of the new book for deleting phrases in the eucharistic services that portray Christ's sacrifice of himself on the cross as sufficient atonement for man's fall.

Hughes concludes with a plea that the old forms of Episcopal worship be retained. Failing that, he asks that the Church at least allow the continued use of the 1928 prayer book by those who have "a strong preference for its worship and theology."

## **SCIENCE & TECHNOLOGY**

# Exporting Innovation

"Technological Innovation, the Technology Gap, and U.S. Welfare" by Edward M. Graham, in *Public Policy* (Spring 1979), John Wiley & Sons, Inc., 605 Third Ave., New York, N.Y. 10016.

Ever since Adam Smith published *The Wealth of Nations* (1776), scholars have seen technological innovation as a major spur to economic growth. Now many U.S. analysts worry that the United States' technological capacity is on the wane. Not so, says Graham, professor of management at MIT.

The United States has been an innovative society since the late 19th century—when its big internal markets and high per capita income stimulated costly research and development. The U.S. lead in metalworking, Graham says, was obvious before 1900; American chemical technology equaled Europe's by the 1920s. Moreover, the rich U.S. markets allowed American industrialists to refine and commercialize foreign inventions (including the radio, sewing machine, internal combustion engine).

After World War II, its technology gave the United States a clear advantage in world markets. That advantage, some economists fear, may be slipping away as the economies of Western Europe and Japan expand. Economist Charles Kindleberger of MIT points to the "protectionist posture" of U.S. industries threatened by foreign competition;

# SCIENCE & TECHNOLOGY

## COMPARISON OF U.S. IMPORTS AND EXPORTS OF "TECHNOLOGY INTENSIVE" GOODS, in billions of U.S. dollars

	Exports	Imports
1968	9.6	3.9
1969	10.7	4.7
1970	12.3	5.7
1971	13.2	6.6
1972	14.1	8.5
1973	19.0	10.6
1974	26.6	12.9
1975	28.0	12.3
1976	31.2	17.0
1977	33.4	19.6

Despite fears of a "technology gap," U.S. exports of "technology-intensive" goods continue to outpace imports.

Source: U.S. Department of Commerce data for U.S. trade.

he sees a reduction in new products made for export as a sign that the United States, like Great Britain in the late 19th century, is stagnating. And Commerce Department studies indicate that the U.S. trade balance of "technology-intensive goods" is deteriorating.

But U.S. exports of such goods, Graham notes, in rebuttal, have steadily increased since 1968. If the "technology gap" is narrowing, he says, it is because other industrialized nations are becoming more innovative, not because the United States is any less innovative.

# What Happened to Atomic Power?

"Nuclear Energy: What Went Wrong?" by Carroll L. Wilson, in *The Bulletin of the Atomic Scientists* (June 1979), 1020-24 East 58th St., Chicago, Ill. 60637.

In 1948, the General Advisory Committee of the Atomic Energy Commission (AEC) correctly predicted that, with the investment of billions of dollars, industry support, and "a lot of luck," about half of the new electric power plants ordered by American utilities in 1968 would be nuclear powered. Since 1975, however, all orders for new nuclear plants have been cancelled or postponed.

Wilson, professor of contemporary technology at MIT and the AEC's first general manager (1947–51), notes several much-publicized reasons for the *de facto* moratorium; rising costs (\$1 billion for a new plant); more stringent safety standards; the jump in uranium prices (from \$23.46 per kilogram in 1970 to \$112.83 per kilogram in 1978); the "increasing number of anti-nuclear objectors"; the ambivalent attitude of the Carter administration; and lengthy licensing procedures.