try out new ideas. Foundations, in fact, are most frequently criticized for a lack of courage and imagination in supporting innovation, not for their failure to contribute to regular and ongoing budgets.

There is a good deal more that can and should be said on this topic (*1*).

WARREN WEAVER

Second Hill,
New Milford, Connecticut 06776

Reference

1. W. Weaver, *U.S. Philanthropic Foundations—Their History, Structure, Management, and Record* (Harper & Row, New York, 1967), chap. 12.

Does Science Neglect Society?

Although I am essentially in agreement with Weisskopf's letter (25 Aug.) that we should support all that is valuable in our civilization, it is time that percentages of our gross national product be used with caution and modesty. As Seymour Melman points out, only a frighteningly small percentage of our GNP is being used to add to the real value of our society (*1*). A huge remainder, for example, $50 billion, is being used primarily to increase or maintain our "overkill" capacity. It is because of the woefully inadequate sums being spent in the human sector of our society that a $200-million item (merely two Polaris submarines) can cause such a furor.

HANS WYNBERG

Department of Organic Chemistry,
University of Groningen, Holland

Reference

1. S. Melman, *Our Depleted Society* (Dell, New York, 1966).

One thing worries me more than the dollar drain connected with our present accent on basic science. There is a gigantic intellectual drain. No doubt the very top young minds today are attracted to basic science because that's the only place where there are clear, challenging, and solvable problems. This is wonderful to a certain extent. Our first-class minds are solving first-class problems. But I think they also use it as an escape. How many also turn their powerful intellects onto the many social and political problems facing the country? Some are willing to serve on summer studies but how many will take a year or two from research to attack our problems in urban affairs, pollution and con-

servation, education, and our overseas politico-military questions? Admittedly, 2 years off in some of these fields means an irretrievable loss in rank, but perhaps these indefinable rankings are a hazard to the health of the country.

As the flowering of art seemed to strengthen past cultures, maybe the flowering of basic science in ours can cause an illusion of robustness that masks some fatal illnesses. Few great cultures have died from external attack while they were healthy. First they went through a period of blindness to their inner diseases.

Unfortunately, as J. R. Zacharias pointed out recently, there doesn't seem to be any sense of urgency among our great scientific minds (social and physical) as there was in 1940. However, the threat to our nation is even greater now than it was then. Furthermore, although fund granting has become a way of life within government, administrators in Washington are not taking a leadership role in finding good minds to work on these problems. Perhaps they could develop a sabbatical system to encourage the taking of leaves from the big science areas.

JOHN R. FRIEDMAN
39 Chapel Street,
Newton, Massachusetts 02160

As one who has a personal stake in the science industry, I wish that Weisskopf had been able to make a more convincing case for "the relevance of science during times of stress." Alas, it is not enough to respond to critics of the Age of Technology with *scientia gratia scientiae,* for some of these critics pose difficult questions. As they observe the electronic affronts to human dignity, the threat of nuclear extinction, the fouling of the environment, and the citizen revolt against the vastness of our technically based institutions, these critics wonder whether science is an unalloyed blessing. They might not wholly agree that scientific effort is "a part of our cultural heritage which makes our lives worth living." A few would remain unconvinced even when informed that "science is the basis . . . for industrial progress," and, though instructed "never to forget the aims of our civilization," they take these aims to be more concerned with the fulfillment of human ideals than with the gratification of artificially stimulated human acquisitiveness. They tend to resist the concept of an ever growing science establishment feeding a constantly increasing

stream of new technologies to an exponentially expanding economic enormity.

Nor can one pass off such critics as a collection of chronic malcontents since they include the likes of Louis B. Sohn, of Harvard, whose report *The United Nations and Human Rights* was recently submitted to the U.N. by a committee of distinguished Americans. The report, dealing with the threat to individual freedom by applied science, says, "There is cumulative danger in the merry march of technology and science without adequate considerations of the social effects" (New York *Times*, 5 Sept.).

Norbert Weiner once remarked that, as science becomes more and more able to achieve human purposes, it must become more and more accustomed to the task of formulating human purposes. Scientists have given a large amount of lip service to its social responsibilities, but the public view is that science is becoming more and more captive to an "establishment" that is committed to purposes that are something other than human. In fact, I wonder whether the 200-Bev accelerator, the supersonic transport, the space program, chemical and biological warfare, and genetic tinkering are really steps toward the better life.

DAVID W. KEAN
19687 Gary Avenue, Sunnyvale, California

Decline of the Lobster

Emery and Iselin say that considerable controversy exists about whether the ocean can support much more efficient and intensive hunting ("Human food from ocean and land," 15 Sept., p. 1279). There are a number of areas where marine agriculture could effectively be practiced because of special geographic and physiographic peculiarities. One such location is the Northumberland Strait, which lies between Prince Edward Island and Nova Scotia, Canada. To date this ocean area is relatively unpolluted, and has in the past been very productive of certain kinds of marine animals, particularly lobsters and scallops. Current fishing practices are hopelessly inefficient (small lobster boats, lobster traps, and individual shellfish raking operations). However, perhaps because of the large number of "hunters," the catches have declined in recent years in a spectacular way. I have privately interviewed