

PRIORITIES BELONG IN THE BALLOT BOX

I am disturbed by the report in the June 1988 issue (page 49) that the president of the US National Academy of Sciences, Frank Press, has proposed priorities for public funding of US science. Priorities reflect societal values, and our society has decided that suggestions for priorities from scientists and engineers should receive no more weight than priorities suggested by other citizens. Granted, as reported, Press's speech may give quick relief to some of our representatives for their collective headache of establishing priorities for funding science, but I predict that soon they'll wish they had chosen aspirin.

Our representatives in government cannot shirk their responsibilities so easily: The people will hold them accountable. As a scientist and a citizen, I feel quite secure knowing that John Glenn, George Mitchell, Patrick Moynihan and their fellow senators, and Sid Morrison, George Brown, Bill Green and their fellow members of the House, are setting priorities for funding science. I do not always agree with their priorities, but I have always found wisdom in their decisions. Moreover, I have always found comfort in knowing that the people hold them accountable for their decisions—which I assume is a major source of their wisdom.

In contrast, I shudder at the ramifications of the National Academy's specifying priorities for the allocation of public funds. To whom is the National Academy accountable? If the National Academy steps beyond its role of evaluating potential consequences of specific investments of public funds, and steps into the political arena of suggesting research priorities (that is, political priorities), to what organization will the public then turn for scientific (that is, nonpolitical) advice? Moreover, even if the academy has recently and secretly discovered some magic formula for objectively evaluating the relative merits of different applications of science, when did the people give the academy permission to apply this formula?

The PHYSICS TODAY news story states that a report from a committee chaired by Senator Lawton Chiles "calls on the National Academies of Science and Engineering... to provide a framework, containing scientific and educational criteria, that the Congress could use in 'determining funding and organizational priorities for science and technology.'" Press is quoted as saying, "It is astounding but true that nowhere in the Federal budget-making process is there an evaluation of the complete Federal

Statement

In the November issue of PHYSICS TODAY (page 9), we informed readers that Gordon & Breach Science Publishers had complained that an article by Henry H. Barschall, "The Cost-Effectiveness of Physics Journals" (PHYSICS TODAY, July 1988, page 56), contained factual errors and was unfair to Gordon & Breach. We asked Gordon & Breach to provide specifics for review, following which PHYSICS TODAY would publish any appropriate corrections or clarifications. We have reviewed Gordon & Breach's submissions, but have been unable to reach agreement with that company with regard to the extent or significance of the claimed errors. PHYSICS TODAY has offered to publish a letter from Gordon & Breach stating its views, along with a response by Barschall, but Gordon & Breach has not accepted this offer. A letter from Barschall appears on page 15 of this issue. Readers who wish information on the views of Gordon & Breach may choose to contact that company directly.

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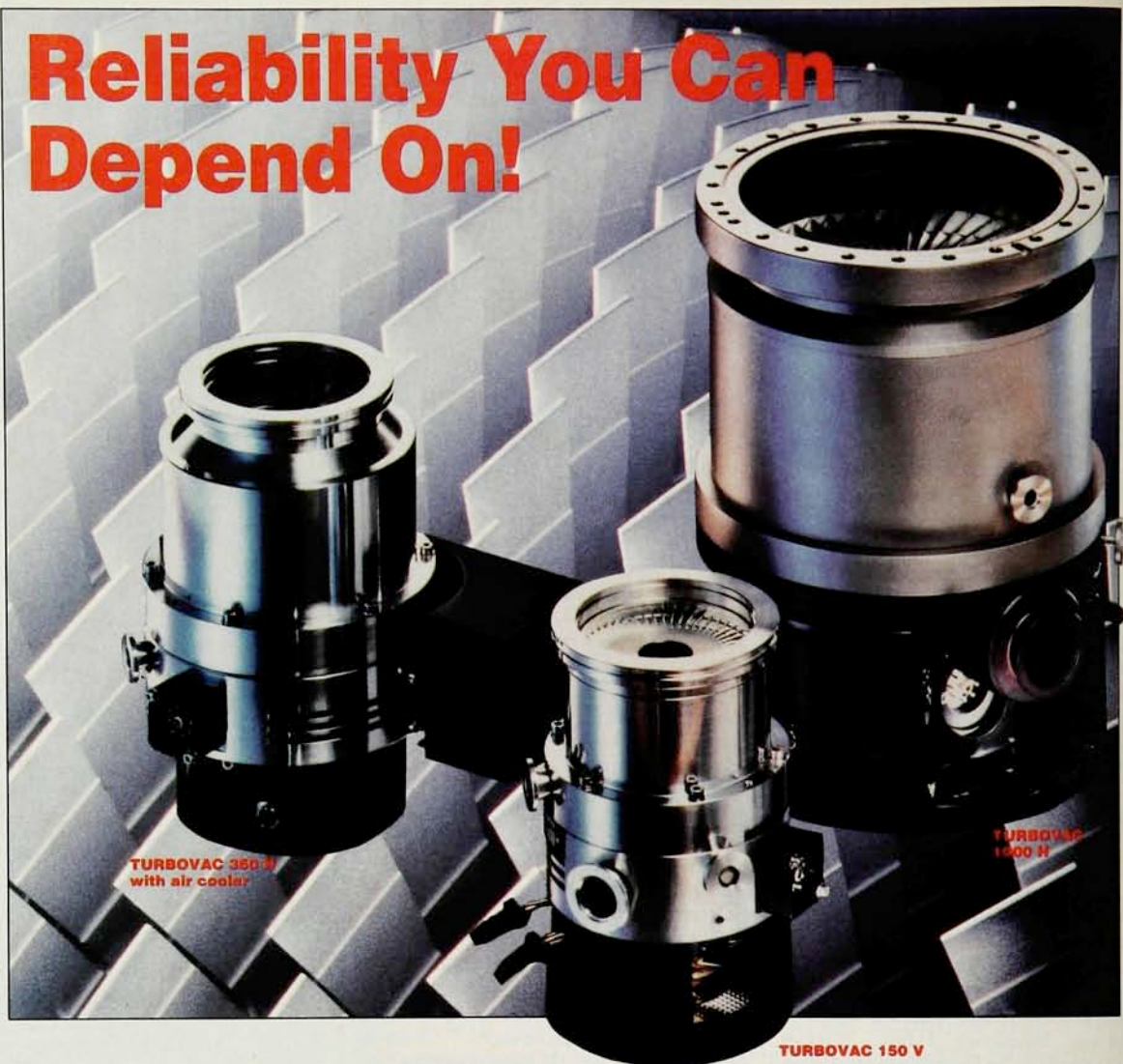


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budget for science and technology and its overall rationale in terms of national goals." I disagree: There is already a "framework" and there is already an "evaluation." It's called the ballot box.

Moreover, instead of trying to define priorities for funding science, there is already a top-priority job for the National Academy and for all of us, namely, public education. As Thomas Jefferson wrote in his 28 September 1820 letter to William Jarvis, "I know of no safe repository of the ultimate powers of the society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion."

W. GEORGE N. SLINN
Richland, Washington

6/88

PRESS REPLIES: I would encourage W. George N. Slinn to actually read what I said. He would find first that I did not set out priorities in the sense I infer from his letter—namely, that one particular field of science be given priority over another. Rather, what I tried to do was to set out a framework for thinking about priorities in the context of increasing opportunities in science and constrained resources.

In response to the request from the budget committees of the House and Senate, a special panel of the National Academies of Sciences and Engineering and the Institute of Medicine recently completed a review of the science and technology budget process. The panel's report suggests categories for Congress and the executive branch to use in developing science and technology priorities, especially in those crosscutting areas that appear in the budgets of several agencies. It does not comment on what specific science and technology programs should be funded.

I agree with Slinn that it is ultimately the responsibility of the public, acting through its elected officials, to set the overall priorities for science, and indeed for all categories of public spending. I also agree that public education is a very important component of this process; the National Academy of Sciences is already helping to improve public understanding of science through its public-television film series with WQED in Pittsburgh and through major programs to improve mathematics and science instruction at all grade levels.

I disagree, however, with Slinn's implication that the scientific community has no obligation at all to help inform the Federal budget process—

to set out for Congress where it sees the richest opportunities for the maximum payback on public investments in fundamental science. Working with the government in thinking about priorities is a difficult undertaking for the scientific community. However, it is one we can no longer evade. Therefore, my institution, when asked, will continue to offer its understanding of the nature and direction of science as an aid to the most effective use of public funds.

FRANK PRESS
National Academy of Sciences
Washington, DC
2/89

Cost-Effectiveness of Physics Journals

My article "The Cost-Effectiveness of Physics Journals" (PHYSICS TODAY, July 1988, page 56) discussed a survey of the cost of physics journals published in the *Bulletin of The American Physical Society*,¹ where the methodology used in the survey was explained. For the benefit of readers of the PHYSICS TODAY article who did not have access to the companion article in the *Bulletin*, the following explanations may be helpful:

▷ Differences of 20% in the calculated costs presented are not significant because journals differ in the use of blank or partially blank pages; in the amounts and sizing of graphic, tabular and mathematical materials; in sizes of print in tables and references; and in other practices.

▷ The subscription prices given were those applicable to academic libraries in the US. Some publishers charge higher rates for libraries at government and industrial laboratories. Subscription prices and hence cost per character outside the US may be higher or lower than those listed.

▷ The cost per character was calculated for 1987. When only part of a volume was published in 1987, no attempt was made to assign different parts of the volume to different calendar years. All prices and numbers of pages refer to complete volumes. This procedure does not affect the determination of the cost per character, since in all these cases the cost per volume was given in the volume.

▷ My coauthor on the *Bulletin* article, John Arrington, and I did not consider additional material distributed free to subscribers, such as separate author or subject indexes or advance abstracts, but we tried to include supplements that contained regular articles. We did not attempt

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