

representatives and make our views known. By the end of this session of Congress it may be too late.

LEWIS M. BRANSCOMB
Harvard University
Cambridge, Massachusetts

(The author is the director of the program on science, technology and public policy at the John F. Kennedy School of Government.)

Scientists Can't Afford Disinterest in US Debt

In the April Washington Reports (page 65) Irwin Goodwin presents in great detail a proposed Federal R&D budget for the next fiscal year. The news story also contains a few scattered comments that allude to fundamental problems in the Federal budget as a whole. These larger problems are so serious that the budget process described in the story sounds like a classic case of rearranging the deck chairs on the Titanic.

Goodwin makes the observation, in regard to projected interest payments on the national debt, that "such whopping payments exceed the nation's annual deficits." Well, they had better, or rather the deficits had better be smaller than the interest payments, because of a simple but little-recognized fact: In any year when the deficit is as large as the interest payment, we are borrowing all of the interest money, which causes the national debt to grow exponentially. The doubling time of the debt can be estimated from the numbers given in the story. The debt is cited as around \$4.9 trillion, with an annual interest payment of \$235 billion, which implies an interest rate of about 5%. Using the "rule of 72," the current doubling time is about 14 (72/5) years. Would we really borrow all of the interest money? Well, according to newspaper reports, deficits in recent years have actually been larger than interest payments (this situation changed just last year), and it is widely known that in a recent 12-year period the debt quadrupled, which implies a doubling time of just 6 years.

This simple picture suggests that we are in a financial state of emergency, and it may explain why the dollar has been "plunging to new lows against such strong currencies as Japan's yen and Germany's mark," as Goodwin notes. It also shows why the current efforts to balance the budget are so important. Many of us in the physics community are engaged in research that is most appropriately funded by the Federal government, so if we want such funding to continue for longer than a few more years, perhaps

our first priority should be to insist that our elected officials in Washington stop borrowing money. After all, if the budget were balanced tomorrow we would still be stuck with interest payments of more than \$200 billion every year, indefinitely. The longer we allow overspending to continue, the larger the debt and interest will grow, and the smaller the amount of money will be for R&D or any other worthwhile activity.

GARY G. GIMMESTAD
Georgia Institute of Technology
Atlanta, Georgia

Did Sagdeev Disguise Soviet System's Sins?

Richard Garwin, in his review (October 1994, page 69) of Roald Sagdeev's memoirs *The Making of a Soviet Scientist* (Wiley, 1994), presents this quotation from the book: "Many, despite the pressure of mundane life, stay firm in their selfless service to science. God help them to do so with the same grace, tenacity and integrity that distinguished that special breed of scientists, 'the keepers of the flame,' that were [Peter] Kapitsa and [Lev] Landau, [Mikhail] Leontovich and [Andrei] Sakharov." Garwin adds, "I have no doubt that Sagdeev also belongs on this list."

To place Sagdeev in the same rank as such outstanding physicists and personalities is a gross distortion of historical reality—a complete devaluation of moral standards. I worked in the Soviet Academy of Sciences for more than 50 years, meeting and talking with Sakharov, Leontovich, Landau and (less frequently) Kapitsa, as well as with many others mentioned in Sagdeev's book. The morality of the scientists and of their interrelations with the official bodies in the USSR was a significant and urgent question for me for many years, especially since 1968, when Soviet tanks entered Prague, and since 1975, as a refusenik and a participant in an unauthorized scientific seminar. This seminar was initiated in 1973 by physicists Mark Azbel, Benjamin Levich and Alexander Voronel. After their emigration to Israel, the seminar was moved from Azbel's home to the home of mathematician Victor Brailovsky. After he was arrested in 1980, the seminar operated at my home until 1987, when I and my wife, Svetlana Alpert, were permitted to leave the USSR. The seminar was attended by scientists from England, Denmark, France, Norway, Sweden, the US and other countries. In 1980—

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