that this could happen at a time when health care costs are already astronomical." He feared that the new RDA's would be used to "prove that less people are hungry in the United States." He found "almost unthinkable" the possibility that lower RDA's would bring about a lower official definition of poverty which the government uses to judge a person's eligibility for welfare.

The letter ended with an expression of hope that the "isolated thinking of a small group of scientists" would not bring about the results that were feared. "We hope that you can prevail upon all concerned," Lemov concluded, "to avoid the potential disaster that will occur—for the reputation of the Academy, for the public's understanding of the discipline of nutritional science, and for all lower income people in the United States—if the currently contemplated changes in the RDA's are implemented."

On 25 September the Academy held a special, by-invitation-only meeting on the future of the RDA's. Among those who spoke were representatives of the Food Action group and attorney James Turner, author of *The Chemical Feast*. They urged the Academy to seek comments from a broader group of specialists, including nonscientists, in preparing the next set of RDA's. Apparently the advice was taken to heart. On 7 October, Press met with Wyngaarden to explain why the Kamin report would not be published.

In a telephone interview, Isselbacher said, "I can assure you that neither the Kamin committee nor the Academy was influenced by pressure groups." There were two substantive issues, he said. One was Kamin's action of redefining the RDA, calling it a minimal nutritive requirement and doing away with the old, fuzzy statement that it is meant to meet "known nutritional needs." Many reviewers preferred the older statement, believing Kamin's innovation offered a false sense of exactness. The second problem arose over the decision to lower several specific RDA's, such as those for vitamins A and C. To make changes in such cherished and well-established standards, Isselbacher said, one must have compelling new evidence that a change is justified. Alternatively, one must have a broad consensus that old evidence needs to be reinterpreted. Kamin's group had neither. This made it very difficult to support the changes, particularly since many of the 15 reviewers disagreed. Also, it seemed important to "try to avoid giving conflicting signals" to the public, in Isselbacher's words.

Although Kamin's group was originally invited to take a radical and critical look at this subject in 1980, many of the reviewers, including members of the Academy's Food and Nutrition Board, were brought in later by Frank Press and feel no commitment to what may have been proposed in 1980. More than one critic said that, had the Kamin group given its findings without changing the quasi-regulatory element of the report (the RDA numbers), there might have been no quarrel. But since the RDA's do have a direct impact on public programs, it would be best to consult a wide variety of interested parties when radical changes are being proposed. "You may still arrive at the same conclusions," Isselbacher said, "but it helps to assure that all the opinions have been expressed."—**ELIOT MARSHALL**

Deficit Reduction Plan Threatens Research

Gramm-Rudman-Hollings amendment calls for wiping out the $180-billion budget deficit in 5 years with a set schedule that hits many federal agencies

Relative to many other federal programs, science has fared well under the Reagan Administration. But it appears that federal support for basic and applied science in academia, industry, and government could be slashed in the next 5 years under the deficit reduction plan now before Congress. The impetus for such an upheaval is a budget-balancing amendment attached to legislation to raise the national debt ceiling to $2.078 trillion.

Offered by Senators Phil Gramm (R–Tex.), Warren Rudman-(R–N.H.), and Ernest F. Hollings (D–S.C.) on 3 October, the amendment sets out a plan for wiping out the current $180-billion annual deficit by 1991. The proposal won easy passage in the Senate in a 75 to 24 vote. On 11 October, the House sent the measure to a House-Senate conference committee, where the proposal is expected to be modified and sent to the President late this month.

The directors of the federal science agencies, who are now in the throes of fiscal year 1987 budget deliberations with the Administration, are taking a wait-and-see posture on the budget-balancing amendment. But National Science Foundation Director Erich Bloch and other program heads concede that looming federal deficit problems are bound to trigger a shakeout in science, if not now, then in the near future.

> "We are only fooling ourselves, and worse, fooling the people, if we believe this proposal will bring order out of chaos. . . . "
> —Senator Mark Hatfield

"It has to happpen anyway," says Bloch. "The [budget] pie certainly is not going to increase." The advent of a budget reduction plan, adds Bloch, will require the science community to make hard decisions between basic and applied research. Likewise, some research programs that traditionally get funded may have to be dropped to accommodate new science efforts. "I am not convinced that everything we are doing across the federal spectrum is worth keeping," notes Bloch. "You can't carry everything forever."

The Gramm-Rudman-Hollings package has received strong support in the Congress, in part because of a growing concern about the cost of financing the national debt, which the Congressional Budget Office (CBO) estimates will hit $1.85 trillion in 1987. The interest charges the government pays yearly on the national debt have risen to $142 billion and will reach $155 billion by 1988, CBO says. Even some House and Senate members, who think the legislation is poorly structured, supported it for political reasons. With elections 1 year

away, they cannot afford to be portrayed as opposing the deficit reduction plan.

A number of prominent senators, however, including Mark Hatfield (R–Ore.) and Bill Bradley (D–N.J.), see the Gramm-Rudman-Hollings proposal as a crude tool that takes away some of Congress's budget responsibilities and vests unwarranted authority in the President. Should Congress and the President fail to agree on a budget, the President would be empowered to sequester one-half of the required reductions from department programs as he sees fit. The possibility for disproportionate cuts among programs within any given department could thwart the will of Congress, opponents argue.

Erich Bloch

"I am not convinced that everything we are doing across the federal spectrum is worth keeping."

"We are only fooling ourselves, and worse, fooling the people, if we believe this proposal will bring order out of chaos and put us on a sure path to deficit reduction," says Hatfield. No plan will work, he notes, unless there is a strong congressional will to tackle the problem—and there is no sign that that truly exists in Congress.

Under the Gramm-Rudman-Hollings plan, the annual deficit—projected at $180 billion in FY 1986—would be stepped down in increments of $36 billion a year. To achieve such large savings without increasing taxes, budget cuts far greater than those occurring in the first 2 years of the Reagan Administration might have to be imposed on federal agencies.

Concerns by House members that too much congressional authority was being abdicated under the plan is expected to be a source of conflict in the House-Senate conference. Indeed, opponents of the amendment in the House and Senate hope it will die in conference once members understand the legislation's pitfalls. But, given the legislation's momentum, aides to House Majority Whip Thomas Foley (D–Ore.) predict that some form of deficit reduction plan will emerge.

What is unclear is just how much of the federal budget, which for 1986 is projected at $965 billion, is available to absorb the scheduled reductions. The cut cannot be applied to the $155 billion in interest payments on the national debt or the $201-billion social security system. An estimated $240 billion in other entitlement programs such as medicaid, medicare, and military retirement also are largely protected. But cost-of-living allowances for such entitlements can be cut or eliminated.

With over half the budget declared out of bounds, the budget reductions must be wrung from other federal programs, particularly the Department of Defense, which has projected outlays of $302 billion this year. However, there also is uncertainty about what existing program contracts are exempt from reductions—and just how deeply the White House will let DOD be cut.

President Reagan gave the Gramm-Rudman-Hollings amendment a qualified endorsement in his Saturday morning radio speech 5 October, indicating deep cuts in defense are unacceptable. "When the spending cuts are made by this administration . . . the security of this country . . . will not be put at risk," said Reagan. "The Congress has agreed, and next year I will propose those amounts already accepted as necessary for keeping the peace."

The depth of budget reductions will be be influenced greatly by economic growth levels, which affect federal tax receipts. Higher growth rates would ease pressure on federal programs targeted for reductions. Tax increases also could dampen the size of the required budget reductions. But so far, there is no sign that the Administration would support new revenue measures in exchange for deploying the deficit reduction plan.

As structured, the act requires the President to submit a budget that complies with declining deficit targets. If the Congress fails to enact such a budget by the start of the fiscal year, an automatic deficit reduction plan kicks in. It spreads half of the reductions proportionately over individual federal program accounts. The likelihood of the automatic mechanism being activated is high, congressional budget committee aides say, given Congress' reluctance to make tough choices on cutting back or scrapping many existing federal programs.

—MARK CRAWFORD

Stanford President Calls for New Authorship Policy

The protocol for accepting or assigning authorship of scientific articles needs to be reassessed, according to Stanford University president Donald Kennedy, who has raised the issue with the Stanford faculty and the presidents of the 56 universities that belong to the American Association of Universities, which holds its semiannual meeting this month. AAU president Robert Rosenzweig believes the Stanford statement, which will become a topic for discussion by the faculty senate there, should be widely debated on campuses across the country.

In a statement circulated to both groups Kennedy says, "For some time, I have felt a need for systematic discussion within the faculty of two related issues: first, the allocation of responsibility and credit for scholarly work; and second, those forces that, in many disciplines, are pushing us toward a level of complexity in the conduct of research at which it becomes difficult to determine responsibility of authorship."

Noting that at Stanford there have been increasing numbers of disagreements between students and faculty members over credit for work to which each contributed, Kennedy says the subject needs frank discussion of ground rules for assigning authorship up front. It might, he suggests, ameliorate the "bitterness of disappointed expectations."

It is easy, Kennedy told his colleagues, to condemn the practice of a scientist demanding authorship credit for work that he or she made no substantial contribution to. But the newer issue relates to more difficult cases that "generally involve the allocation of credit for work to which several individuals have contributed something."

He posed this example of the kind of case that resists easy solution. "Graduate student S is working in Professor P's laboratory on an experimental problem within P's general field of interest and competence." S, who has an assistantship funded by P's grant, does experiments that he writes up as part of a doctoral dissertation. P subsequently incorporates S's data in an article or, perhaps, in a grant application, with only cursory