

Unified action by scientists, through such organizations as the academies of science, and clearly defined positions taken by education departments appear to be appropriate means for handling such controversies.

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4. J. Jensen *et al.*, "Iowa Senate file 261" (bill filed with the Iowa General Assembly, Des Moines, 16 February 1979).
5. S. Walters, *Des Moines Register*, 5 April 1979, p. 1.
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Administration of Research

Philip H. Abelson's editorial (25 Apr., p. 353) on the "Diversion of funds from research" prompts me to respond. In the editorial, Abelson suggests that university presidents who are close to the situation and who have responsibility to act have been relatively inert. As a recently retired university president, I have some suggestions.

For the past 1½ years I have served on the National Commission on Research, whose report "Accountability: Restoring the quality of the partnership"

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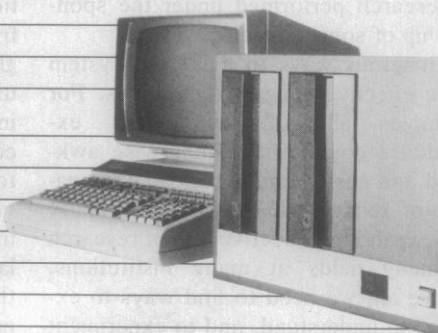
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was published in condensed form in the 14 March issue of *Science* (p. 1177). In that report we discuss what we have learned about the accountability problem, and we recommend a number of steps that we think have a chance of improving the present situation, which both the universities and the federal government perceive to be an unhappy one. A number of other commission reports will be published in the coming weeks and months, reports which address other aspects of the relationship between the research universities and the federal government.

These reports follow a pattern: (i) much in the federal government-university research scene is excellent and promotes the national welfare through healthy basic and applied science in the universities; (ii) the federal government can do much to restore the quality of the declining partnership; (iii) the universities can do many things to make the system work better; and (iv) both sides must devise a means for talking together and exploring together ways to make the system more effective. University presidents must pay particular attention to the last two items.

There are many points of friction, many gaps in understanding, and many undocumented complaints. For example, there is a substantial body of anecdotal material about the cost of federally imposed requirements and regulations, but there are few reliable data. There are complaints from the universities about the heavy hand of Washington, but few solid efforts at improving the situation. There are complaints from the federal government about irresponsibility of the universities, but few attempts to understand the atmosphere in which university research is conducted. The universities want to revise the new Office of Management and Budget circular A-21 even before it goes into effect, but the federal government must assure itself and must assure the public that public funds are used responsibly. Unfortunate delays in grant and contract renewals seriously compromise the quality of research performed under the sponsorship of some agencies.

Numerous ways to make the system more effective suggest themselves. For example, allowable pre-award expenditure could bridge otherwise awkward and costly funding gaps. Aggregation of related projects could simplify and expand the effectiveness of research in many fields at many institutions. Above all, we need to find ways to explore, to understand, and to experiment with new approaches.

The time has come for both sides to address these problems and for both sides to seek imaginative ways to make the system work better. There exists right now more opportunity for university-government discussion and exploration than has existed for a long time.

I believe discussion and exploration of these and many other issues will be encouraged at every level of government: in the sponsoring agencies, in the Office of Management and Budget, in congressional committees and their staffs, and in the General Accounting Office. I believe discussion can take place between individual university presidents and their administrative staffs and individuals in Washington. It can also take place in a more formal way through organized committees of educational associations addressing appropriate individuals and bodies in the federal establishment.

I do not think the burden of federal regulation is likely to be lifted soon, but I am optimistic about the chances of success if modest objectives are sought in the beginning—say the development of a rational scheme of effort reporting. To succeed, each side must understand the problems of the other. The university presidents and their staffs (some active research staff could participate with advantage) must understand the federal problem as viewed by the accounting and auditing agencies. Responsible federal officials need to visit university campuses and productive research laboratories to understand how they operate and what makes them effective.

We must start to work together. I urge my former colleagues in university presidencies to follow Abelson's advice. Now is the time to take the initiative. Now is the time to act.

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I must cry "foul" to Abelson's editorial of 25 April. Granted there is an obvious and apparently inexorable tide of federal bureaucracy sweeping the nation, engulfing every segment of society from the individual to the corporate conglomerates. However, no segment of the university is more aware of the debilitating effect of this blight on research project budgets than university administrators. Furthermore, these administrators vigorously lead the battle against existing federal regulation and proposed legislation that is, or may be, detrimental to the interests of research, and thus to the national interest.

The heart of my objection to the edito-

rial is the subtle and detrimental equating of federal bureaucrats and bean counters with their counterparts in the universities, where they "use the real or implied threat of the feds to enhance their own power and status on campus and to expand their already swollen ranks."

Foul!

The quality and vigor of life in academia depends—to an increasing extent—on competent administration. This is an endeavor that demands close cooperation with the faculty in an environment of mutual respect. Any diminution of these qualities weakens this essential relationship. The broad and inaccurate generalizations in the editorial could widen the faculty-administration gulf. This is unfortunate because, working in concert, we are in a strong position to work for the good of research. If the academics are stereotyped as the "good guys" while the administrators are branded as the guys in the black hats, the whole educational process will suffer.

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Oral Roberts and Objectivity

It is disappointing to see a magazine that purports to be objective, indeed, to be the voice of objectivity itself, indulge in such sensationalism as the article "And God said to Oral: Build a hospital" (News and Comment, 18 Apr., p. 267). I would expect something of this caliber from other publications, but certainly not from *Science*.

But there is a more serious problem. William J. Broad, the author of the article has repeated almost verbatim some material from a 10 September 1979 *Newsweek* article on Oral Roberts.

A long time ago a rabbi from Northern Palestine said, "Remove the log from your own eye, then you will be able to see to remove the speck of dust from your brother's eye."

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Erratum: In the letter from J. Alperin and S. Mac Lane (6 June, p. 1088), reference was made to a "group therapy seminar" held at the University of Chicago on 6 May. The text should have read "group theory seminar."

Erratum: In the report by H. Rothstein *et al.* (25 Apr., p. 410), the sentence beginning on the tenth line from the end of the text (p. 412) should have read: "However we have shown (23) that hGH does bind to frog hepatocytes."