

REFERENCES

1. D. Pimentel *et al.*, *Handbook on Pest Management in Agriculture* (CRC Press, Boca Raton, FL, 1991), p. 679.
2. D. Pimentel *et al.*, in preparation.
3. C. E. Grue *et al.*, *Trans. N. Am. Wild. Nat. Resour. Conf.* **48**, 200 (1983).
4. T. L. Litovitz *et al.*, *Am. J. Emerg. Med.* **8**, 394 (1990).
5. *Pesticide Poisoning Summary* (Health Effects Division, Environmental Protection Agency, Washington, DC, 1987).
6. E. G. Nielsen and L. K. Lee, "The magnitude and costs of groundwater contamination from agricultural chemicals. A national perspective" (ERS Staff Report AGES8700318, Economic Research Service, U.S. Department of Agriculture, Washington, DC, 1987).
7. M. B. Green, H. M. LeBaron, W. K. Moberg, *Managing Resistance to Agrochemicals: From Fundamental Research to Practical Strategies* (American Chemical Society, Washington, DC, 1990).

Indirect Costs

In the coverage in *Science* (News & Comment, 22 Mar., p. 1420; ScienceScope, 22 Feb., p. 863) and elsewhere of recent accusations of the padding of indirect costs at Stanford, no one has made the point that the real scandal is not the illegal activities of those who defraud the federal government; the scandal is what is *legal* (1). Direct costs of research grants receive meticulous scientific review and are now routinely pared to the bone by study sections. All of us must know of microscopes or other necessary pieces of equipment cut from grants on the grounds that they were not absolutely needed for full-time use and surely could be borrowed from another laboratory.

Indirect costs, on the other hand, which have over the past decade been rising at nearly five times the rate of direct costs in real terms [calculated for National Institutes of Health RO1 grants in (2)], receive no review for scientific appropriateness. Thus for Stanford University to charge its flowers, sailboats, sports programs, and antiques purchases to the expenses reimbursed by the indirect cost rate may well be legal and consistent with its other indirect costs accounting practices, however embarrassing it appears to be when brought to public notice. Few scientists realize that the question relevant to indirect costs is the extent to which they were incurred in support of the research as opposed to the teaching or public service activities of a university (3). Whether or not those expenses were necessary for the research, or even whether they actually facilitated research, does not enter in. Scientists simply do not participate in making these judgments. If a university administrator wants to install gold-plated benches in a laboratory not used for teaching, indirect costs will pay for them.

Indirect costs at some level are clearly necessary. No one wants to destroy our great university centers for research, which have flourished under federal support over the past 50 years. Nor do most scientists wish to continue working in old, crumbling buildings without hope of their renovation or replacement. Under the present rules, however, indirect costs are restrained only by the probity and innate frugality of most university administrators, who for the common good put their own institutions at a competitive disadvantage to those with more skillful accountants.

The capture of huge indirect costs from our limited research budgets by some universities deprives all working scientists of funds needed to conduct their research and threatens the public support for science. Movement toward a uniform national indirect cost rate for universities appears to me to be the only answer, forcing the universities to compete on the basis of the efficiency of their services rather than on the ingenuity of their accountants.

MICHAEL P. STRYKER
Department of Physiology,
University of California,
San Francisco, CA 94143-0444

REFERENCES AND NOTES

1. A point made repeatedly in other contexts by Michael Kinsley in *The New Republic*.
2. T. J. Kennedy, *Acad. Med.* **65**, 63 (1990).
3. K. T. Brown, *Science* **212**, 411 (1981).

ScienceScope (22 Feb., p. 863) reports that Stanford University President Donald Kennedy was not prepared for an interview on the ABC news show "20/20." Those who watched the program may agree. Those who did not watch the program know that it is not important for a university president to prepare himself for ABC's "20/20." What is important is for him to be prepared to run a university, and Donald Kennedy has done an admirable job over the past 10 years.

The present controversy over improper charges to the U.S. government stems from mistakes on the part of all of us, but it is Kennedy who is taking the brunt. If not Kennedy, then who? We, the faculty, are the beneficiaries of the research funding on campus, and we should not push the blame onto a single person. We should have been more diligent in tracing the charges. Mistakes have been made, such as the charging of the yacht as well as expenses related to the Stanford Shopping Center. They were not made in the president's office, but in the accounting office.

The accounting system must be corrected. Kennedy has appointed a committee of well-qualified people to review the current re-

porting procedures and make recommendations to effect a more accurate system.

Kennedy has been a strong president in leading a research and teaching institution that is part of our national pride and has an international reputation. We must not let this present controversy diminish what Stanford has accomplished. We must continue to work at improving the quality of both our research and teaching.

C. F. QUATE
Edward L. Ginzton Laboratory,
Stanford University,
Stanford, CA 94305-4085

NSF Directorates

We would like to correct the impression that there is unanimity among the organizations testifying on the issue of a separate National Science Foundation (NSF) directorate for the social and behavioral sciences (Briefings, 15 Feb., p. 742). Not all organizations "disagreed" with the doubts expressed by Mary Clutter and others within NSF.

The recently circulated testimonies of the

Diamond Depositions

Science and Technology

Low Pressure / High Pressure & Temperature Synthesis
Diamond, Diamond-Like, and Related Materials
Applications, Markets, and Funding Issues Worldwide

Breakthroughs!

Follow the breakthroughs in the only newsletter/magazine dedicated to the field of diamond synthesis and use

Column on C₆₀ "Buckyballs"

Worldwide Scientific Advisory Board
Ensures Quality

Technical News, Meeting Reports,
Company Profiles, Japanese News,
Calendar of Events, Patents, Photos

Only \$97 per year for ten 20+ page issues
Airmail: \$127

Call to enter your subscription today
U.S./Canada 1-800-621-2311 (toll-free)
All other locations (908) 846-2002
FAX (908) 846-2050

Write to request a free sample copy
DD:S&T, 710 Easton Ave., Suite C
Somerset, NJ 08873-1855

Circle No. 296 on Readers' Service Card