

panies may wish to produce and sell devices, and we specifically wanted to stay away from any information that might later prove to be proprietary. Nothing that I have ever come across in the bubble field was classified. Numerous papers have been published on the dynamic instabilities of magnetic bubbles and bubble walls based on the research done jointly using U.S. and Hungarian samples and equipment. The proposal for continuing this work was rejected by the NSF without offering the Hungarian partner any reason.

Contrary to what Carlucci says, the scientific knowledge I gained in the United States was *not* on bubble memories. All of my visits concentrated on domain physics and involved a seminar and a discussion on our work in Budapest and at Caltech. Carlucci makes no mention that this is the kind of scientific knowledge I could possibly pass on. He also fails to mention that my way of providing information to every scientist in the world, including the "Soviets," was to publish in international journals. Further, he does not mention that through the very same channel I also provided information gained in my own laboratory and that scientists of many nationalities, including ones from the United States and from the U.S.S.R., with whom I published did the same thing with the information they gained during their stay in Hungary. What Carlucci states about my role is taken out of proper context and is meaningless and offensive.

In the 1970's the "big deal" in magnetics was the bubble. Everybody was interested, and everybody including the U.S.S.R. wanted to find out what it could be used for. Scientists traveled back and forth. In fact, I cannot specify a single place I visited in the United States that would not have received Soviet colleagues. I might add that quite a few Americans were welcomed in Budapest and in Moscow. Many of these visits resulted in coauthored papers. A series of international conferences was launched by IBM; the four International Conferences on Magnetic Bubbles held so far have provided open forums to exchange ideas. I am proud to be a member of the organizing committee of these conferences. It is natural that we also conducted studies with Soviet scientists, and these included research on the practical applicability of magnetic bubbles and involved common construction and study of chips with certain potential in memory application. There was no secret about it; it is well known to the magnetics community not only through the frequent exchange of visits mentioned but also by its coverage in the

scientific and public press. Nobody ever questioned the legitimacy of this practice in any direct way addressed either to the Hungarian authorities or to me.

It is ridiculous to say that Soviet scientists, whose excellent abilities Carlucci gives due credit to in his reply, are in need of a Hungarian aide-de-camp in reading scientific literature or in visiting the very same laboratories.

GYÖRGY ZIMMER
*Marosvásárhely utca 11,
H-1182 Budapest, Hungary*

Circular A-21 Negotiations

Colin Norman, in his article "Faculty v. OMB: One more time" (News and Comment, 5 Feb., p. 642), discusses the Circular A-21 negotiating process and the views of Serge Lang. Lang's views on effort reporting were often helpful and were considered throughout our discussions with the government. Unfortunately, Lang does not acknowledge the need for a process of negotiations. He has defined a position which states, in effect, that faculty cannot and need not provide any accountability based on estimates of the distribution of activities. He argues that, in the recent series of discussions with representatives of the Association of American Universities (AAU) and Council of Scientific Society Presidents (CSSP), the government has not in fact negotiated, but has simply brought the university representatives to its position by refusing to consider others. This is not at all what has occurred.

Last summer, AAU and CSSP began a cooperative effort to bring about changes in federal effort reporting requirements. We believed that new requirements could be written that would permit universities to account for their use of public funds in ways that would be more compatible with the academic environment. The Department of Education, the Office of the Vice President, and the Office of Management and Budget (OMB) urged us to propose language that would accomplish that objective.

On 2 September, AAU and CSSP representatives met with a federal inter-agency task force to review draft language prepared by our joint task force. During the meeting, we agreed to revise the language by adding "after-the-fact-confirmation" of activities performed by faculty and by specifying examples of acceptable accounting methods.

On 11 November, the AAU and CSSP sent to OMB a proposal for modifying the effort reporting requirements of A-21; on 7 January, OMB responded in the

Federal Register with its proposal, which was in many respects consistent with ours. Unfortunately, OMB did not agree to all of our requests, but it did incorporate a number of our recommended changes, which substantially improve reporting requirements. Among those changes are the following:

- A more explicit recognition that estimates of the distribution of activity, not precise assessments, are expected and that *individual* employees themselves need not bear the burden of "effort reporting."

- The use of general principles and criteria to determine the acceptability of methods and the acknowledgment that there is no single best method, that differences among institutions require flexibility in devising documentation procedures.

- The acceptance of the concept of a residual category to limit the reporting detail and the acceptance of alternative methods such as statistical procedures, surveys, and negotiated fixed rates.

The general approach adopted by OMB was reasonable: institutions must document effort, both direct and indirect, if they expect federal reimbursement for that effort; if federal funds are not involved or if institutions don't wish to be reimbursed, no documentation is required.

The OMB proposal does contain ambiguities. Some of them are the unavoidable by-products of providing flexibility to institutions in devising their accounting procedures—one of our principal goals in discussions with OMB; to that extent, such ambiguities are necessary, if not desirable. Other ambiguities seem quite clearly to be simply unintentional drafting errors that can be expected to be clarified during the comment period.

In an adversarial government-university relationship, ambiguities define a battleground. In a cooperative relationship, they can provide the flexibility that will enable our differing institutions to account for federal funds with systems that are consistent with their own unique circumstances. There is good reason to believe that we are commencing a more harmonious government-university partnership. The proposed OMB revisions to Circular A-21 are both a symptom and product of that relationship.

HAROLD T. SHAPIRO*
*University of Michigan,
Ann Arbor 48109*

ROBERT HELLER†
University of Minnesota, Duluth 55812

*Chairman, Committee on Research Management, Association of American Universities
†Chairman, Council of Scientific Society Presidents