versity did not provide a list of the faculty members they plan to dismiss. Today (14 October), Tenet spokesman announced that "notices to laid-off faculty would begin going out early next week."

Apparently, the lawyers advising the university believe that this plan is legal, under bankcruptcy laws, and will be approved by the court. However, there is no precedent in the United States for a university reorganizing itself by arbitrarily dismissing, without due process, a large number of tenured and nontenured professors.

If this plan succeeds, this precedent will offer a temptation to other universities in financial difficulties to follow the same course. We urge all faculty and academic organizations to voice their strong objection to the destruction of the academic integrity of our university.

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Scientist-Diplomats

When I worked in the State Department in the 1980s, one of the foreign service officers in my office took advantage of my scientific expertise by asking me how to spell "Superconducting Super Collider" for a memo he was drafting. I told him and, almost as an afterthought, he asked, "What *is* a Superconducting Super Collider?" That said, I read the National Research Council's report (*1*) on improving the State Department's scientific expertise with some interest (D. Malakoff, News of the Week, 25 Sept., p. 1937).

Two of the report's recommendations for systematizing the use of personnel from other agencies (for example, the National Science Foundation or the Centers for Disease Control) and expanding the use of outside advisors and experts are cost-effective and imminently doable. However, there was no suggestion in the report to use Diplomacy Fellows from the AAAS. Since 1981, the AAAS has supplied the State Department (and the Agency for International Development) with more than 230 scientists (*2*). The fellows have Ph.D.s in a variety of fields, are put through a careful screening process, have to pass a background check, and often have language skills and international experience as former Peace Corps volunteers. State typically takes one or two fellows each year for a stint of 1 to 2 years. Most fellows then return to academia or move to other federal agencies. Preventing this annual loss of experienced scientists would help the foreign policy establishment shore up its scientific and technical base.

The AAAS could also assist the State Department in recruiting outside experts and advisers. A database of already vetted scientists—along with their technical and policy expertise—currently exists in the *Directory of AAAS Science and Engineering Fellows* (*3*). The State Department's efforts to integrate science with foreign policy can be accelerated by tapping into the pool of former and current fellows, many of whom are still in the Washington area.

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Ache puberty ceremony

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Among the Guayaki (Ache)

I have worked with the Guayaki (usually referred to as the Ache) in Paraguay for the past 21 years and have published nearly 40 articles about them (with almost a dozen different colleagues), as well as a 500-page book about their demographic patterns (*1*). Thus, I was surprised to find that two of the four groups that I have been studying are pronounced "vanished" in the review of the translation of Pierre Clastres's book *Chronicle of the Guayaki Indians* (*Science*'s Compass, 18 Sept., p. 1813). This appears to result from an error in the translator's introduction.

Furthermore, it is asserted in the review that remaining Ache "have lost much of their culture and traditional knowledge." Exactly how this loss was measured or what "much" means is unclear to me, but I saw the same puberty ritual illustrated in the book review take place in 1998. The Ache have changed in 20 years, but still spend considerable time in their ancestral forest environment and adhere to many of the cultural practices that characterized them before first peaceful outside contact.

Are Ache beliefs and behaviors accurately portrayed by Clastres? On the basis of years of interviews in the Ache language, and thousands of hours of data collection, I would reply, "partially." But since Clastres does not specify methods, operationalize or measure variables, or have a systematic sampling procedure, it is difficult to know how accurate his accounts are or how he reaches the many interpretive conclusions in his book. The Clastres work is good literature and provides many fascinating hypotheses about Ache cultural patterns. However, it is not science, and answers to important anthropological questions can not be obtained using the method that Clastres illustrates.

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Fishing Expeditions

There appears to have been a remarkable increase since last year in the prominence of what might loosely be termed "omic" research in biology. Following the definition (*1*) of "-ome" as an "abstract entity, group, or mass," "omics" would be the study of entities in aggregate, in this case the DNA, RNA, protein, or other molecular complement of a cell, tissue, or organism.

Beyond semantics, omic research appears to require a different mind-set from the more traditional study of one gene, gene product, or process at a time. Often, one generates a database of molecular information with only limited ability to predict what about it will prove most useful. A 1984 position paper on sequencing the genome (*2*) offered the candid opinion that

> In some respects, like the journeys to the moon, it is simply a "tour de force"; it is not at all clear that knowledge of the nucleotide sequence of the human genome will, initially, provide deep insights into the physical nature of man. Nevertheless, we are confident that this project will provide an integrating focus for all efforts to use DNA cloning techniques in the study of human genetics.

Despite obvious excitement about the genome project, some referees, editors, site visitors, and study sections have tended to disparage other omic studies as

"fishing expeditions"—often because the hypothesis that drives the generation of a molecular database relates to the nature of information and its utility, rather than to biological specifics. That bias has been dissipating (although not rapidly enough) because of the growing realization that we will have to understand our favorite biological molecules in the context of many thousands of others and that a wide net must be cast to be sure that we have, in fact, found the important ones. In line with a point made by Hieter and Boguski (*3*), omic research should be viewed as synergistic with the more traditional studies of single molecules. The two approaches to science require similar creativity, judgment, and technical rigor. If one is going to fish, it is best to do so in teeming waters with the finest equipment and flawless technique.

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Attracting Minorities to Science

The article "Wanted: A better way to boost numbers of minority Ph.D.s" by Jeffrey Mervis (News of the Week, 28 Aug., p. 1268) addresses a serious problem. Some programs have been successful in creating magnets of promise. One that Mervis mentions is the Leadership Alliance, with headquarters at Brown University. James Wyche, a microbial geneticist and Associate Provost, heads a consortium that links approximately 28 institutions, including major research universities and ethnic colleges. This project has, over the past 7 years, proved that a climate supportive of minority scientists can bind participating institutions and envelop students in an expanded network of encouragement and interaction.

We at Harvard are participants in the Consortium. In the graduate programs (Ph.D.) of the Graduate School of Arts and Sciences located at the Harvard Medical School, we currently have 35 members of underrepresented groups enrolled. This number does not include students enrolled in the M.D/Ph.D. program. For the years 1992-1996 (those covered by Mervis), we graduated an average of five such students per year.

At the high school level, the Macy High School Science Program, now called "Ventures in Education," and the Meyerhoff program at the University of Maryland Baltimore County are both successful.

Why not follow the suggestion of Joel Oppenheim and mount a conference to promote an exchange of views among those whose programs are working?

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As a white male recipient of a 1998 National Science Foundation (NSF) graduate fellowship, I have several observations on the ending of minority graduate fellowships

First, the political climate dictates that affirmative action will end, and we must find innovative new ways to recruit minority scientists. I believe that scientists are well positioned to do this: In a previous generation, scientists were leaders in opening university doors to foreigners. International cooperation was common in science even during the Cold War and remains strong today. American scientists are even leading our efforts to foster ties with Cuba by lobbying to ease restrictions on their first-rate scientific community (*1*). We diversified our profession internationally without affirmative action, and I believe that we can integrate our profession domestically in the same manner.

Second, I applaud suggestions to reduce the importance of scores on the Graduate Record Examination in awarding fellowships. This is a matter of common sense rather than equity: A multiple-choice test cannot measure the traits necessary for research success nearly as well as transcripts, résumés, and recommendations. Making allowances for candidates from smaller schools with fewer resources for advanced courses and research would also be a good step.

Finally, I think we should put the loss of minority fellowships in perspective: The decision to pursue a career in science begins at the undergraduate level, when NSF fellowships are not yet an issue for prospective sci-

CREDIT: RICK KOZAK

Participants at a recent Leadership Alliance conference

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