

member but also with ours. The censure mentioned in the letter was not for his public statements but rather for his taking complaints outside the department *before* attempting to resolve them within the department. The letter fails to mention that before that censure de Llano had been repeatedly censured by the department and reprimanded by the dean for yet more serious misconduct. That de Llano has also criticized the NDSU administration in public makes it easy to portray the matter as an issue of academic freedom or freedom of speech. It is not.

Some idea of the careful selection of information that appears to have been made available to the letter's authors can be had by examining their statement of de Llano's accomplishments at NDSU. Supposedly he "reformed and revitalized the department during his five-year term" as chair. De Llano was in fact hired as chair in 1985 for a three-year, not five-year, term, at the end of which an election for chair was to be held. That election, however, was canceled with the dean's consent and against the tenured faculty's recommendations. De Llano then continued as chair until the spring of 1990, when a strong and unanimous request initiated by the department faculty resulted in his removal from that position. This removal revitalized the department more than any action of de Llano's had. Indeed, research activity and grantsmanship have increased markedly since that time. De Llano's behavior, however, has grown progressively more disruptive, to the point where we felt compelled to request his dismissal.

As faculty members, we are keenly aware of the importance of tenure for the protection of academic freedom. Since dismissing a tenured professor is an extraordinary measure that must be taken only in extraordinary circumstances, any such action that appears to threaten academic freedom must be examined carefully. However, such examination requires access to *all* the facts, not just those selected by one party.

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Do Pensions Siphon Funds from Research?

Having recently left my position as a research specialist at Ohio State University, I have had the opportunity to learn about the pension plan. There is both an employee and an employer contribution; in my case the employer contribution was paid by Federal grants (NSF, DOE) in the amount of 13.5% of salary, which amounted to tens of thousands of dollars. Despite my having served long enough to qualify for pension vesting, the so-called benefits are so meager that it is financially favorable for me to request the return of the employee contribution (that is, my money), which has been held without interest for up to six years. I won't see a penny of the 13.5% ever.

In fact, it is practically impossible for a postdoc or similar employee of Ohio State University to gain anything from the pension plan. Yet this hefty charge limits available funds and hence salaries.

An additional "benefit" charged to the Federal government was 1.1% of my salary (thousands of dollars after several years), which went to pay for "early retirement." To the best of my knowledge, this money is charged to both faculty and staff members and paid entirely to faculty members. University overhead of 46% is charged on top of these "direct" costs.

Perhaps the general lack of research funds and the low salaries for scientists employed on a short- or not-so-short-term basis are due partly to systematic redirection of those funds to other purposes. I am interested in collecting similar stories (preferably with documentation) to help determine if a formal study is warranted.

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Support for Science: Rationales and Ratios

I very much agree with the main points of Roland W. Schmitt's article "Public Support of Science: Searching for Harmony" (January 1994, page 29). However, Schmitt overlooks one important benefit of science that seems to be missing from most discussions of the rationale for the support of science in the post-cold-war era. Science is important to society not just as a neutral tool to be applied toward meeting societal demands that originate entirely outside of science.

It is also important in helping to shape what those demands will be. Clearly a society whose members believe that the Earth is the center of a universe designed specifically as a stage for humankind to prove its worth will set very different goals for itself than a society that believes we occupy a tiny speck in a universe that evolved for billions of years before producing us.

Schmitt's discussion of societal concerns focuses on the need to recognize "what new things we must learn about nature or what pioneering concepts need to be invented to address these concerns." What is omitted is that the "new things we learn about nature" tell us something more about what our concerns should be. If the efforts of our society are to have real significance, we need to do the best we can to base our goals on a true understanding of how the universe is. This, it seems to me, is the most important benefit that science has to offer.

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Roland Schmitt helps perpetuate the myth that the Defense Department owns 60% of US Federal research and development expenditures (roughly \$40 billion of the \$75 billion annual total). Anyone as familiar with the DOD budget as Schmitt is must know that this is a red herring. Misleading ratios are not a satisfactory substitute for logical planning in deciding how much to cut defense R&D in the post-cold-war era.

The \$40 billion figure erroneously cited for the DOD is not just R&D but RDT&E (the T&E denotes "test and evaluation"). The true science and technology portion of the RDT&E total (budget lines 6.1, 6.2 and 6.3a, for the fiscally informed) amounts to about \$8 billion. The rest of the RDT&E budget goes to pay for things like F-22 aircraft development, missile defense deployment, operation of test ranges, military system upgrades and field engineering support.

Thus what a physicist would call R&D is really only about \$8 billion per year. A quick calculation shows this to be only about 18% of what the Feds put into *real* R&D. Included in this \$8 billion is over \$1 billion for basic research, distributed to hundreds of universities by the research organizations of the Army, Navy, Air Force, Advanced Research Projects Agency and Ballistic Missile Defense Organization. There's obviously no magic about attaining a 50:50 split