

THE POLICY SCIENCES CENTER, INC.

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Dr. Philip Sharp, Chair - AAAS Committee on Council Affairs
Dr. William Press, Chair - AAAS Council
1200 New York Ave., NW
Washington, D.C. 20005

Re: AAAS Accountability Meeting

Dear Dr. Sharp, Dr. Press, and Council Members:

In the interest of accountability I hope that the AAAS Council will invite the NSF Director and the Chair of the National Science Board to meet and answer questions about their stewardship and plans. Many concerns have risen about mismanagement of the Scientific Merit award competition and the growing Other Societal Benefits re-ranking: the hard data about who is getting what, when, and how need to be disclosed. I hope that the strong objections to NSF political censorship of the social sciences also will be on the table.

Background

Since writing to the Council on May 9, 2012, I have been unable to obtain hard data about NSF's expanded system of Other Societal Benefits rankings. About 55,000 NSF applications/year - competitively ranked for Scientific Merit with several hundred thousand hours of donated time - are at issue. It appears that an increasing fraction of the Scientific Merit awards is being changed at higher NSF levels by these new kinds of rankings. Basic and hard data about the egregious problems identified in the Leshner *et al.* Report have not been disclosed¹: We only know that Leshner *et al.* accept evidence that there are opaque definitions, different and inconsistent scoring criteria, and undisclosed weights - characteristics that do not pass federal legal standards for award competitions. Only incomplete and varying lists of recognized benefits have been released. (Also: the National Science Board has not disclosed an audit of the unfair program solicitations for which the criteria and weights ultimately used to select winners were only partly disclosed or not known equally to all of the applicants.)² It is somewhat surprising that the Leshner *et al.* Report did not use the best scientific research methods: it only reported survey data and did not examine scoring documents (which must, by law, be complete, accurate, and honest and signed by accountable officials), nor did it interview NSF Program Officers and higher management under oath, nor seek written depositions, about what they have been doing.

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The “science is a complex enterprise” and “national competitiveness” slogans of the Bush era National Science Board created opportunities for dissembling and opened doors of NSF largesse to an extraordinary number of new beneficiaries without requiring reliable evidence of competitive superiority or the cost-effectiveness of giving Other Societal Benefits money to them.³ Since billions of dollars are involved, this is puzzling.

How Far Has This Gone?

In Washington, vague and idealistic language (see Note 4, below) often is a mark of superb lobbying: As you may have noticed, the Leshner *et al.*, Report attested that this Other Societal Benefits list that evolved during the Bush era, and that it has provided to the public, the scientific community, and Congress, is incomplete.⁴ Nor did Leshner *et al.* evaluate and report the qualifications of the people who make these new rankings that overrule the national Scientific Merit competition. [Nor are the private censorship rules for Economics and the other social sciences (e.g., “Don’t Wave a Red Flag at Republicans!” of the majority on the current National Science Board and Dr. Suresh) that were queried to the Leshner *et al.* Committee candidly disclosed in the list.]

The Risk of a National Meltdown

For the AAAS Council, a fundamental national concern must be that science is a moral community held together by trust. Unless our nation’s research scientists (and students) believe that, in their turn, they too will be judged fairly by an independent, peer-review of Scientific Merit, our extraordinary national research system of donated time for 55,000 Scientific Merit reviews/year is at risk of a meltdown. The tipping point - which can occur quickly in the new era of communications technology - will not be determined by NSF-assigned lawyers or rhetoric-intoxicated defenses.

Here is a suggestive case that consequential re-rankings now are being made behind the inappropriate public image of the peer-reviewed Scientific Merit competition: Dr. Ray Bowen, former President of Texas A&M, recently completed his second term as Chair of the National Science Board and the Chair of the House Science Committee is a Texas Republican.⁵ It would have been improper and illegal for Dr. Bowen (holding an office of public trust) to effect institutional favoritism or transmit inside knowledge that was not equally available to all competitors. However Texas A&M advertises that it received \$705 million in federal research money in 2011 and is the third largest recipient of federal research money (of universities that do not have a medical school) behind MIT and UC Berkeley. It implies that these numbers are a source of prestige and reflect a competitive Scientific Merit ranking for its applications but the new system evolved by Bowen *et al.*, no longer implies this conclusion.^{6 7}

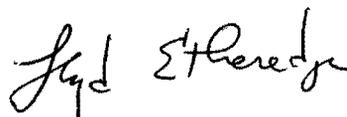
- The new NSF Other Societal Benefits re-distribution system also appears to be exploited by a

new breed of administrator. The newest Chair of the National Science Board, Dr. Dan Arvizu, now receives \$900,000+/year as a “non profit” research administrator under a DOE grant.⁸ The National Science Board now obligates all NSF Program Officers (in the views of some of them, places them under duress) to give a competitive advantage to grant applications that will create such new university-corporation partnerships with NSF funds.⁹ While the scientific community believes that NSF merely reimburses the legitimate cost of doing research, a growing number of universities openly discuss and create “Profit Centers” underwritten by federal science dollars. And the number of administrators at first, second, and third tier research universities has grown and their annual salary increases have exceeded the rate of inflation for many years. A typical science Dean - albeit holding a comfortable and usually routine job - now can be awarded \$100,000+ more than a full professor at a doctorate-granting institution.¹⁰ The new political coalitions being funded by redistributing the NSF science budget attract people who are living very well on NSF funds (and exploiting the public trust in the self-governance of science and the credibility of the traditional peer-review Scientific Merit competition) without doing any research themselves. (It would be interesting for the Council to hear Dr. Suresh’s candid estimate of the fraction of the NSF budget that, today, actually pays for new data.)

Policy Implications

I cannot make a professional recommendation until I see the hard data: Who is getting What, When and How? - nor can I expect the Council to decide whether a vote of No Confidence is justified until it has seen these data. However, my working hypothesis is that the performance of the NSF system can be improved by two changes: I will forward a discussion under separate cover.

Yours truly,



Dr. Lloyd S. Etheredge, Director
Government Learning Project

cc: AAAS Section Chairs and Council Delegates

Notes

1. John Bruer and Alan Leshner (co-chairs): National Science Board, Merit Review Criteria: Review and Revisions (Washington, DC: National Science Foundation, 2011). NSB/MR-11-22.

2. I am unaware of any plans to identify and treat the victims fairly. Even though Dr. Leshner is taken to represent AAAS, the Leshner *et al.* Report did not recommend that these scientists be

treated fairly. I believe that the AAAS Council will want to be firm about this question of principle.

3. NSF's expanded (and mostly obscured) Other Societal Benefits back door system justifies bonus awards for Christmas partying on Waikiki for lobbyists. Normally, earmarked awards would require a legal, public process and a system of open competition in Congress.

4. "These outcomes include (but are not limited to) increased participation of women, persons with disabilities, and under represented minorities in science, technology, engineering, and mathematics (STEM); improved STEM education at all levels; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a globally competitive STEM workforce; increased partnerships between academia, industry, and others; increased national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education. These examples of societally relevant outcomes should not be considered either comprehensive or prescriptive. Investigators may include *appropriate outcomes* [italics added - LE] not covered by these examples." Excerpt from the Bruer-Leshner Report: National Science Board, Merit Review Criteria: Review and Revisions (Washington, DC: National Science Foundation, 2011). NSB/MR-11-22, p. 11.

5. Texas A&M also houses the Presidential Library of President George W. Bush.

6. Cited in footnote 71 of the Wikipedia entry, "Texas A&M" section on Research.

7. This kind of institutional favoritism by people at the top injures the moral community of American research science: At a time of funding shortages, while graduate students doing leading edge research at first tier universities are unfunded, Dr. Suresh has been distributing funds to the University of North Texas - that in 2011 received two additional NSF grants for new Centers industry-university Centers (for a total of three). See "UNT Faculty Provide Industry Relevant . . ." <http://chronicle.com/campusViewpointArticle/UNT-adds-new-N2/SF-sites/90>.

Re moral community issues: It is distressing that the Leshner *et al.* Report described "confusion" about NSF criteria and behavior as the governing theme of complaints about the NSF **Other Societal Benefits** system. A public official should have used accurate language to respect and address these moral and system-level concerns.

8. <http://allianceforsustainableenergy.org> Form 990, 2010, p. 8

9. These new breeds of administrators have persuaded the National Science Board and NSF to compensate them by large salaries, paid up front. Perhaps they will be worth this money. But if they turn out merely to be hustlers, or fail to deliver, the entire risk has been transferred to the NSF budget - which is a tactic of hustlers that emerged during the Bush era in the financial industry.

I am not aware of any evidence that the NSF bureaucracy has the slightest scientific basis or

other competence to judge the cost-effectiveness or theories of the best ways to produce the Other Societal Benefits results. They have not asked qualified social scientists to audit their decisions or evaluate where the approved grants would rank in a rational, open competition with other routes to achieve the results.

10. "This was the 12th straight year that salary increases have outpaced inflation," Marisa Lopez-Rivera, "Pay of Administrators Still Outpaces Inflation, Even in Sluggish Economy," The Chronicle of Higher Education, February 27, 2009. online and College and University Professional Association for Human Resources, 2011-2012 Administration Compensation Survey, *passim*, <http://www.cupahr.org> online.

Administrators seem to be widening the gap between their own salaries and those of the faculty with (in the sciences) at least a 26% subsidy from NSF and other national science funds.