

Public Policy and Federal Investment in Basic Research in the Behavioral and Social Sciences

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Federal funding for basic research in the behavioral and social sciences (BSS) lags significantly behind funding for research in the natural, physical, and medical sciences. In 2003, for example, the National Institutes of Health awarded \$936.1 million for basic BSS research, which represented roughly 35% of the total BSS research dollars (\$2,684 million) and only 3.6% of the total NIH award budget (\$26,354.2 million) for that year. Across the 25 NIH Institutes and Centers, the percentage of funds for basic BSS research varied widely, with the majority allocating less than 2% and only three awarding 10% or more of their funds to basic BSS projects.

These figures appeared in the 2004 Report of the Working Group of the NIH Advisory Committee to the Director on Research Opportunities in the Basic Behavioral and Social Sciences (http://obsr.od.nih.gov/activities/Basic%20Beh%20Report_complete.pdf). Other data in the report show that total federal research spending over the period 1993-2003 has been consistently lower in behavioral and social science fields than in life sciences, physical sciences, mathematics and computer sciences, and engineering fields.

The distinguished group of scientists on the panel made two recommendations to address these issues: 1) "A secure and stable home should be established at NIH that can serve to foster basic behavioral and social sciences research that is not closely linked to the missions of the categorical Institutes and Centers" and 2.)

"The basic behavioral and social science research programs that are currently functioning well within ICs should continue in their present form" (p. 11). The first recommendation would designate an existing non-categorical NIH IC as the home for basic BSS proposals that do not fit within other ICS, with the panelists suggesting the National Institute of General Medical Sciences, National Institute on Aging, and National Institute of Child Health and Development as possible homes. The second would involve an enhancement of the funding and authority of the Office of Behavioral and Social Science Research. As reported in *Science* (10 December 2004), these recommendations "received a tepid reception ... from NIH Director Elias Zerhouni" (p. 1878). Comments from NIGMS Director Jeremy Berg further into the article point out that

while some behavioral research might fit within NIGMS, “the social sciences would not be a natural fit,” and ultimately any implementation of the recommendations would require reallocation of funds given the tight funding situation at NIH. Such reactions do not bode well for increasing the profile and funding of basic BSS research.

Administrative restructuring and a change in policy at the National Institute of Mental Health also promise to have negative effects on basic BSS research. NIMH was one of the institutes that provided a home for basic BSS research, with 8.1% of its funding awarded to basic BSS research in 2003. In October 2004, however, NIMH Director Thomas Insel announced an increased emphasis on translational research and a decreased emphasis on basic research, especially in the social sciences (*Science*, 22 October 2004). As stated on the NIMH web site, “We have shifted several areas of basic science, such as studies of emotional regulation or cognitive development, to new translational divisions to accelerate the development of tools to help patients. To work toward a long-term goal of personalized care, we are establishing new programs focusing on translating basic research into intervention development. Several current high priority areas, such as genetics and molecular, cellular, and behavioral neuroscience, will remain high priority areas. At the other end of the research spectrum, the Institute will continue to invest in practical clinical trials and services research. A key aspect of our reorganization is ensuring translation of the best ideas between divisions” (<http://www.nimh.nih.gov/strategic/strat>

[egicplanmenu.cfm](#)). *Science* (22 October 2004) identified several other areas affected by this shift, including research on personality, social psychology, theoretical modeling, and language. Implementing this shift not only involved restructuring the divisions within NIMH and setting guidelines for future applications, but also reassigning some current awards to other NIH Institutes and Centers.

Clearly, public policy as set by those within the National Institutes of Health in particular, and the federal government in general, has an influence on future progress in basic BSS research. Why should we care about the challenges to funding basic BSS research? Because the insights gained from such research are essential to a full understanding of the scientific challenges we face today. Consider Alzheimer’s dementia as an example of one of those challenges. While developing drugs to cure or slow the progress of AD is absolutely essential, it is equally important to investigate strategies to help individuals with AD, their families, and their caregivers cope with the consequences of living with the disease. The latter topic is the province of social and behavioral scientists. Further, just as drug development begins with basic research at the cellular level, identification of coping strategies begins with basic research into language processing in AD, identity maintenance, marital satisfaction, memory, etc., that can be used to build effective interventions. Thus the translational research desired by NIMH depends upon the knowledge gained from basic research. To the extent that the institute no longer supports such basic research,

the foundation for translational research will be weakened.

Basic BSS research can also play an important role in informing research in the medical sciences, physical, and natural sciences. Again, AD research provides a compelling example. Susan Kemper, Roy A. Roberts Distinguished Professor of Psychology at The University of Kansas, has a long history of NIH/National Institute on Aging funding for basic research into language processing in aging. Her research into the characteristics of language processing in normal aging provided the foundation not only for research on language processing in those with dementia (e.g., Kemper, 1997; Kemper, Thompson, & Marquis, 2001), but also provided insights into the etiology of AD through her work on the Nun Study (Mitzner & Kemper, 2003; Snowdon, Kemper, Mortimer, Greiner, Wekstein, & Markesbery, 1996). Kemper analyzed the grammatical complexity and propositional content of writing samples that the nuns had completed in early and late adulthood. That analysis revealed that there were marked differences in the linguistic ability of the women early in life that were predictive of the development of AD in later life.

Basic BSS research, then, is a necessary precursor to translational research and an important partner in many investigations of interest to the medical, natural, and physical sciences. Similar arguments, however, were advanced in the Report of the Working Group of the NIH Advisory Committee to the Director on Research Opportunities in the Basic Behavioral and Social Sciences (<http://obssr.od.nih.gov/activities>

[/Basic%20Beh%20Report complete.pdf](#)). As the official reaction to the report shows, the validity of these arguments may be acknowledged, but that acknowledgment may not result in structural and priority changes at federal funding agencies, perhaps due to financial and/or political constraints. As research administrators, we are concerned with promoting funding opportunities for basic researchers in all disciplines, including the behavioral and social sciences. Therefore we must consider ways that we can help our basic BSS researchers to be successful in this funding climate. Certainly lending our support to recommendations such as those offered by the NIH Advisory Committee is one way, but there are three additional strategies that can offer more immediate, direct benefits to behavioral and social science researchers on our campuses: (1) build interdisciplinary research programs, (2) develop faculty mentoring programs targeted at BSS researchers, and (3) ensure that basic BSS research is included in materials featuring campus research.

Interdisciplinary research programs bring the complementary perspectives of scholars from different disciplines to bear on a common area of study. At The University of Kansas, for example, support for interdisciplinary research is formalized and rewarded through a system of designated research centers (Roberts, 2004). One of those centers, the Schiefelbusch Institute for Life Span Studies (LSI), has been particularly successful in providing an environment that fosters the success of basic BSS researchers (Warren, 2004). The means to achieving these successes are various,

ranging from enabling basic and applied BSS researchers to work together, to fostering collaborations between basic BSS researchers and those in the biosciences. As a Life Span Institute faculty affiliate and a basic BSS researcher myself, I have seen firsthand the importance of the interdisciplinary dialogue and infrastructure within LSI to the ability of basic BSS researchers to formulate competitive, scientifically sound research proposals to federal agencies.

Not all basic BSS researchers, however, will find a home for their research interests within an interdisciplinary center, even though their research productivity would be greatly enhanced with external funding. Research administration can assist those faculty by working with academic schools and departments to develop effective mentoring programs for junior faculty. For instance, administrators might organize workshops in which experienced, basic BSS researchers share their knowledge about writing competitive grant proposals, how to address the criteria in requests for proposals in the rationale for their projects, how to articulate the importance of the basic research proposed to the development of effective interventions/treatments, etc. A related approach might involve faculty who have served on federal review panels for BSS research explaining the review process. In a more intensive process, experienced investigators could work closely with new investigators in the same area of study, providing feedback and guidance during the proposal preparation process. The goal of such mentoring programs would

be to provide a foundation for the success of junior faculty in the increasingly competitive federal funding arena. Note that the success of mentoring requires the buy-in of senior faculty members who are seasoned investigators. Proposal preparation staff within research administration units can assist faculty with the technical aspects of application forms, but they cannot be expected to provide the feedback on the quality of the scientific argument. Senior faculty must be the source of such feedback. These individuals are best able to help junior faculty to appreciate the requirements for a successful proposal because they understand the scientific issues involved and the strategies for communicating those issues to review committees.

The third strategy that we can adopt is to ensure that reports of university research successes include examples of funded basic BSS research. This will serve important functions. First, it will communicate to students and faculty that basic research in the behavioral and social sciences is valuable and valued. Communicating this message is critical to maintaining the morale of basic BSS researchers and providing an incentive for adding to BSS successes in the future. Second, it will help to broaden external audiences' conceptions of "research" and "science" beyond the natural, physical, and medical sciences. One outcome might be opening a dialogue on research agendas with policy makers that can include basic BSS research.

The data show that basic BSS research faces funding challenges, even though evidence of its importance to a full understanding of the scientific challenges of the 21st century is abundant.

Advocating for policy change within funding agencies should be continued. In addition, the basic BSS researchers on our campuses stand to benefit from our adopting the three “local” strategies outlined here. They would not be the sole beneficiaries, however, for the on-campus culture created by these strategies would improve the research climate for those in all disciplines.

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