

Merrill Advanced Studies Center

Research Retreat Summary

Planning for the Role of Behavioral Science in National Research

March 14 – 16, 2007 Tempe, AZ

The Merrill Advanced Studies Center organized a retreat of several scientists, science administrators, science and professional society leaders, and funding agency directors to discuss (“brain storm”) ways in which the funding climate for behavioral research might be improved. Participants presented their views of Behavioral Science research funding, various subgroups of the retreat participants discussed different aspects of funding research in Behavioral Science, and the outcomes of these discussions were presented to all participants, which stimulated additional discussions.

Since the time of the retreat, a serious debate concerning national competitiveness (responding to the National Academy of Sciences report: *Rising Above the Gathering Storm*;) and STEM (Science, Technology, Engineering, and Math education) has taken place in Congress, the Federal Administration, and elsewhere in national and local politics and government. These activities are leading to increased awareness of the need to fund the physical sciences and to new funding opportunities for the physical sciences. These initiatives have, to a large extent, ignored Behavioral Science. Thus, the Merrill Retreat on *Planning for the Role of Behavioral Science in National Research* was in retrospect a timely event in that it addressed ways that Behavioral Science is instrumental in addressing national competitiveness and STEM issues.

The retreat was not designed to provide a set of recommendations or a “report” on funding Behavioral Science research. Rather the retreat afforded a few key players in areas of funding Behavioral Science research the opportunity to share their views and ideas on the future of research funding for Behavioral Science. It was hoped that ideas coming from the retreat might find their ways into the organizations of the people invited to the retreat. This Summary is an attempt to provide an overview of some of the issues and ideas discussed over the two and one-half days of the retreat.

IEWS EXPRESSED

Funding for Behavioral Science research should not be narrowly construed.

Behavioral Science should be broadly defined to include all fields that study the behavior of an individual (i.e., contemporary Behavioral Science draws on a wide range of disciplinary backgrounds, scattered across different professional organizations). Behavioral Science deals with a vast range of problems and challenges (i.e., Behavioral Science research is not just biomedical). Almost every Federal funding agency supports Behavioral Science research. Thus, while the major funding agencies supporting Behavioral Science research are NIH and NSF, attention should also be paid to other funding agencies, especially for special fields (e.g., education). Issues of supporting Behavioral Science research are not limited to Federal funding agencies. Non-Federal funding entities provide crucial funding for Behavioral Science. Administrators responsible for the allocation of research support at universities (e.g., Deans, Provosts, and Presidents) and at other research institutions and foundations also play an important role in how funds are allocated for the support of Behavioral Science research. Behavioral scientists are diverse and global.

Behavioral Science struggles to convey the benefits of Behavioral Science research to those audiences that influence research funding.

There are many audiences that influence funding decisions: the public, politicians, funding agency administrators, review groups, research institution administrators, and peers. Different strategies are probably required to address these different audiences. Often the results of Behavioral Science research that would be beneficial are not used because of issues that have little to do with the science (e.g., a political position prevents the passage of legislation based on proven research findings), and this problem appears to be especially true for Behavioral Science. The lack of acceptance of results limits behavioral scientists in their ability to demonstrate the utility of the research. Sometimes the funds that have been spent are wasted in that excellent research with usable findings is not used to solve important problems. Behavioral Science reports rarely convey a sense of urgency in the need to use Behavioral Science to solve crucial problems. It is uncommon for Behavioral Science to propose “big science” ideas or suggest problems that can be solved with “big science” (e.g., ideas that would be Behavioral Science equivalent to global warming, energy crisis, human genome project, etc.). As in all sciences, Behavioral Science needs to maintain a balance between basic research and its applications. Behavioral Science is often in competition with other sciences (e.g., Behavioral Science as part of functional neuroscience sometimes needlessly competes with molecular and cellular neuroscience).

Education of students (at all levels) and the public about Behavioral Science is crucial.

Without future citizens having a better understanding of Behavioral Science, the possibility for improved funding for Behavioral Science research is limited as are the possibilities for the benefits of such research to solve important problems. The STEM initiative should include Behavioral Science. Areas considered “cutting edge” in the physical (e.g., nanotechnology) and biological sciences (e.g., genetics and neuroscience) should accept and acknowledge Behavioral Science as a full partner in solving important problems. As important as interdisciplinary (transdisciplinary) interactions are in modern science, attention to the traditional disciplines is still important. Education requires a diverse and global approach. Behavioral Science education must be based on rigorous and innovative science that is fully integrated with the other sciences.

SUGGESTIONS FOR ACTION

Based on the issues described above, several suggestions were mentioned during the retreat for ways to improve the climate for funding Behavioral Science research (in no special order):

- ❖ Form an umbrella Behavioral Science organization (like the American Institute of Physics or the Federation of American Societies of Experimental Biology) to represent all of Behavioral Science.
- ❖ Propose “big science” projects for Behavioral Science.
- ❖ Develop better forums of communication across all of the funding agencies that support Behavioral Science.
- ❖ Develop media outlets for publishing and disseminating information about Behavioral Science.

- ❖ Establish better communication between university/hospital administrators and funding agencies.
- ❖ Get more Behavioral Science research into major publications (e.g., *Science*).
- ❖ Improve and enhance the ability of behavioral scientists to speak effectively to the public and politicians.
- ❖ Monitor Behavioral Science to ensure high quality and innovation.
- ❖ Continue to increase diversity and international interactions.
- ❖ Strengthen the connections of Behavioral Science to public policy.
- ❖ Find and disseminate “success stories” regarding Behavioral Science research.
- ❖ Get Behavioral Science on the agenda of the STEM initiative.

POSSIBLE MAJOR BEHAVIORAL SCIENCES PROJECTS

During the retreat there was an agreement that articulating some “big problems” might be one way to enhance the chances for improved funding for Behavioral Science. While it was acknowledged that a complete listing could not be made, several ideas were “brainstormed”. Some of the suggestions generated at the retreat for solving “big problems” are (in no special order):

- ❖ Reduce obesity by 50%.
- ❖ Reduce disparity in society and across the globe by 50%.
- ❖ Map the linguistic genome; define the structures of human language and how it is acquired by children.
- ❖ Cure or prevent autism.
- ❖ Reduce substance abuse (drugs of abuse; teen smoking and tobacco use in general; alcoholism).
- ❖ Cure or prevent deafness.
- ❖ Reduce Type-II diabetes by 50% or more.
- ❖ Reduce violent crime significantly.
- ❖ Reduce accidents.
- ❖ Increase high-school graduation rates.
- ❖ Emphasize that the major causes of morbidity and mortality are behavioral (e.g., smoking, obesity, drugs of abuse, domestic violence, child abuse, gun use, accidents, wars) and that adherence to any “treatment” regimen depends on behavior change.