

**National Institutes of Health  
Center for Scientific Review  
Open House Workshop: Behavioral & Social Science  
April 25, 2007  
Natcher Conference Center, Bethesda, MD**

## **Meeting Summary**

### **Welcome and Introduction**

Dr. Raynard Kington (Deputy Director, National Institutes of Health [NIH]) welcomed the participants, among them 80 leaders from scientific and professional societies in the behavioral and social sciences, and thanked them for taking the time to participate in this important meeting. Dr. Kington asserted that peer review is the key to the continuing high quality of NIH-funded research. The peer review system has evolved over the years, with the most recent reorganization in 2000, and NIH is now asking whether those changes achieved their goals.

Dr. Toni Scarpa (Director, Center for Scientific Review [CSR]) noted that there were 180 scientists in the audience, about evenly divided between NIH and the extramural scientific community, and that 25 study section chairs in behavioral and social sciences were in attendance. He explained that this was the second of six workshops to be held every two months over the next year. In each case, the goal is to get the research community's responses and input on two central questions:

1. Is the science of your discipline, in its present state, appropriately evaluated within the current study section alignment?
2. What will be the most important questions and/or enabling technologies you see forthcoming within the science of your discipline in the next 10 years?

Participants were asked to focus on the science in the breakout sessions. Questions about process were held for the afternoon session.

### **Overview of the Current Organization of the Behavioral and Social Science Study Sections**

Dr. Anita Miller Sostek (Division Director for Clinical and Population-Based Studies, CSR) reported that the current structure of peer review in the behavioral and social sciences had its beginnings in 1992, when the research components of the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) were returned to NIH. The Division of Research Grants, the precursor to CSR, was given 5 years to design an integrated review process. In 1999 the first applications were reviewed under this design, which included 16 study sections organized under three integrated review groups (IRGs). Today there are 22 behavioral and social science study sections under four IRGs:

1. Biobehavioral and Behavioral Processes;
2. Health of the Population;
3. Risk, Prevention, and Health Behavior; and
4. AIDS and Related Research.

CSR's ongoing review of this reorganization has included external working groups, surveys of applicants and program staff, and a review of internal IRG data. The working group reports found that study sections were generally working well, but they also identified several issues that were not limited to the behavioral and social sciences, such as streamlining the review process, special treatment of new PIs, better training for reviewers, and new formats for the review process itself (e.g., telephone or Internet reviews). Survey results indicated that most applicants are completely or mostly satisfied with the review process, although this strongly related to whether they received funding. Applicants also gave reviewers high marks for their understanding of the importance, design, and goals of the proposed research. Internal data review revealed that reorganization has

significantly reduced the degree of “IC capture” in the behavioral and social sciences so that scientific merit is evaluated without regard to funding institute assignments.

## **Explanation and Charge to Breakout Groups**

Dr. Cheryl Kitt (Deputy Director, CSR) explained the goals and arrangements for the six breakout groups, which are designed to facilitate a more detailed discussion of the two central questions posed by Dr. Scarpa. Dr. Kitt reminded participants that CSR does not deal with funding issues, and she reminded them to concentrate their discussion on questions of science. (Time was made available in the afternoon for discussion of process questions.) Those six breakout groups were:

1. Basic Behavioral Science (1);
2. Basic Behavioral Science (2);
3. Epidemiology and Biostatistics;
4. Health Services and Demography;
5. Risk, Intervention, and Prevention at the Individual or Small Group Level; and
6. Risk, Intervention, and Prevention at the Large Group or Community Level.

## **Report Out from Breakout Groups**

Each of the breakout groups reported back with its answers and suggestions to the two questions they had addressed. The following summary is organized according to those questions rather than by breakout group.

*Question 1. Is the science of your discipline, in its present state, appropriately evaluated within the current study section alignment? Suggestions?*

In general, the breakout groups reported that participants were satisfied with the evaluation of their disciplines under the current structure and organization of CSR study sections. However, specific suggestions revealed that some areas of science may not be adequately covered, and that in many areas CSR faces an inevitable tradeoff between breadth and depth of expertise on a given study section. There was general agreement that new methodologies and interdisciplinary approaches are a special challenge for peer review.

- The Basic Behavioral Science 1 group suggested that some areas of science (e.g., pain, sleep) cut across several study sections and that applications in these areas may fall through the cracks. They also pointed out that a study section needs *both* specialized expertise (e.g., interdisciplinary approaches) *and* an appreciation of the broad perspective and context. They suggested adding a standing Special Emphasis Panel (SEP) that has members with expertise in specific content areas but not necessarily in the general context.
- The Basic Behavioral Science 2 group also identified several topics that may be underrepresented on existing study sections, including neuropsychology, I/O psychology, PNI, and treatment science, as well as an apparent gap in the review of applications involving new theories, tools and methodologies, and interdisciplinary approaches.
- The Epidemiology and Biostatistics group pointed to the need for additional expertise in psychological, social, and cultural issues—for example, in alcohol research. They also identified the special challenge of reviewing innovative research and large, interdisciplinary studies that involve a number of substantive and technical areas.
- The Health Services and Demography group agreed with the need for diverse expertise on study sections, pointing out that the behavioral AIDS study sections may not have an adequate representation of social scientists. Like several other groups, they suggested that interdisciplinary and translational research may be particularly vulnerable to review challenges.
- The Risk, Intervention, and Prevention at the Individual or Small Group Level group echoed the idea that interdisciplinary research is a special challenge, but they offered a different list of topics that may not receive appropriate review because of inadequate coverage, including behavioral psychopharmacology,

sleep, pain, developmental research, and behavioral interventions. In addition, several disciplines may not be adequately represented on specific study sections, including social work, emergency medicine, and toxicology.

- The Risk, Intervention, and Prevention at the Large Group or Community Level group put the point differently: study sections should not be wedded to a single approach or design; they should have an adequate breadth of expertise to evaluate cutting edge research designs and analytic methods. They also identified specified gaps in study section expertise, including translation, dissemination, and sustainability, as well as the need to reach out to other disciplines that affect behavior, including economics, environmental science, and health policy.

*Question 2. What will be the most important questions and/or enabling technologies you see forthcoming within the science of your discipline in the next 10 years? Suggestions?*

There was a remarkable convergence among the breakout groups with regard to enabling technologies, with all groups identifying one or more forms of information technology:

- Computational models connecting behavioral science and neuroscience;
- Data acquisition, data management and storage, new analytic models, data sharing, and dissemination;
- New methods for merging, analyzing, and sharing data from a variety of sources;
- Real-time data collection, new computational methods, and data integration;
- New technologies for data collection and database mining; and
- Mixed methods for collecting and analyzing data on real-world behavior in real time.

There was less agreement about what topics or questions will dominate the field in the next 10 years. This may be inevitable, given the diversity of approaches and emphasis that the breakout groups represented.

Nevertheless, several issues did appear on the summary lists from two or more groups:

- The impacts of genetics, non-neurological physiology, and environment on behavior;
- Translation and dissemination, especially the challenge of scaling interventions up from the individual level to the community level;
- Community participation and community-based research designs;
- Bioethics, especially the ethical implications of data collection and data sharing; and
- Population trends, especially migration and aging.

## **Discussion**

Dr. Kitt said that she was impressed with how consistent the identification of issues was across breakout groups. Beyond this, however, there was no further discussion of the reports of the breakout groups.

## **Questions of Process**

Dr. Toni Scarpa (Director, CSR) gave a summary of the progress that CSR has already made in reforming the process of peer review, as well as the remaining challenges and opportunities for peer review. The number of applications received by CSR nearly doubled between 2001 and 2006, reaching 80,000 per year. CSR has greatly increased the efficiency of the peer review process, notably by retooling to handle electronic submissions. Continuing reorganization and evaluation, of which this open house is a part, have improved the alignment and performance of study sections. CSR is working to shorten the review cycle and to improve the identification of significant and innovative research.

“At the end of the day,” he admitted, “the review is only as good as the reviewers.” As a result, CSR is constantly working to recruit and retain high-quality reviewers, and Dr. Scarpa took this opportunity to appeal to those in attendance to volunteer as reviewers and urge their members and colleagues to do the same. In the

long term, however, the solution cannot be more people. CSR already uses 18,000 reviewers per year, many of them ad hoc or “non-chartered” reviewers, and in too many cases there are simply too many reviewers on the study section. To improve its reviews, CSR is experimenting with new electronic review techniques, such as telephone- and video-enhanced meetings and asynchronous electronic discussions. These additional review modes may be used when the needed reviewers are not willing to travel to a meeting or when they prefer electronic meetings. CSR is working to have 10 percent of all reviews conducted electronically in 2007. It is also working with a trans-NIH committee to consider shorter R01 grant applications. Finally, CSR is considering ways to improve the incentives for reviewers, such as by increasing the intellectual value of the experience. He concluded by saying, “The best process is the one that brings the best reviewers.”

In response to questions, Dr. Scarpa indicated that no decision has been taken on shorter applications, including whether they would single out new PIs, who already do almost as well as experienced PIs on new R01 applications. NIH will try several pilot projects but is unlikely to make changes in all grant categories. International comparisons indicate that reviewers can read more applications if they are 10 or 15 pages, instead of 25, while still maintaining quality. He said that CSR is experimenting with a two-day orientation session for new reviewers, in hopes of improving the system’s handling of innovative and interdisciplinary applications. Even in a time of declining budgets, however, there is a considerable value to the face-to-face interactions that take place in study sections. Dr. Scarpa invited participants to suggest criteria for evaluating the performance of individual reviewers.

On the subject of incentives for reviewers, one participant estimated that reviewers currently are paid less than minimum wage for the time they spend on peer review. Another noted that federal auditors of universities and research institutions—who already urge grant recipients to spend time working on their current grant, not writing their next—are also urging them not to spend time reviewing grants. This seems to be subject to different interpretations at different universities.

Another attendee expressed concern that some applications require revisions for what seem like trivial reasons, and suggested that there should be a mechanism to fix small problems with a grant application within the review process. At present, the best option is to resubmit immediately, but this usually means the applicant must wait out a review cycle before his/her application can be reviewed again. Other participants, however, suggested that the review of amended applications already consumes a lot of time and resources, asking whether there should be disincentives to the submission of amended applications.

The open house adjourned at 3:30 p.m.

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