

**Division of Behavioral and Cognitive Sciences
Response to the 2009 COV Report and Actions Taken**

Executive Summary

The COV met March 18-20, 2009 and included the chair and sub-chairs and three members representing each of the nine programs: Archaeology/Archaeometry; Physical Anthropology; Cultural Anthropology; Geography and Spatial Sciences; Linguistics/Documenting Endangered Languages; Perception, Action and Cognition; Cognitive Neuroscience; Developmental and Learning Sciences; and Social Psychology. The HOMINID program was handled jointly between Physical Anthropology and Archaeology/Archaeometry and Linguistics/Documenting Endangered Languages had one additional member. The 32 members met in plenary and in program-focused and cross-program sessions and reported out to Dr. David Lightfoot, Assistant Director of the Directorate of Social, Behavioral, and Economic Sciences (SBE), and Dr. Judy Sunley, Deputy Assistant Director of SBE in a closed session. The COV then held an open report out that was attended by the division leadership, program officers, and staff.

The following response document considers and addresses each recommendation made by the COV at the division level.

Division of Behavioral and Cognitive Sciences

1.2 Context

Recommendation: SBE should routinely monitor the impacts of special initiatives such as HSD in augmenting the funding opportunities available to investigators in its core disciplines, and the subsequent success of their proposals.

Division's Response:

The COV is correct in thinking that social and behavioral science is supported through multiple mechanisms within the National Science Foundation. In the past, social and behavioral scientists have successfully competed in large and interdisciplinary competitions such as CNH, HSD, and CDI. The program officers within the SBE Directorate are often quite integral to the creation of these programs, the writing of solicitations, and the expansion of other programs to enhance the funding opportunities for the social and behavioral sciences at NSF (e.g., the Explosives and Related Threats competition out of the Engineering Directorate supported three SBE-related grants).

However, keeping track of the number of social and behavioral scientists who submit to competitions outside the SBE Directorate is not easily accomplished. This reflects both a shortage of staff to devote to this question and limitations in the data available in the many electronic systems at NSF. This data would be very informative to have, and we will investigate the feasibility of gathering it.

Actions Taken to Date (09/09):

The Office of Integrated Activities was notified of this recommendation in a letter sent by the BCS division, summarizing several of the COV's recommendations.

The need to monitor the involvement of social and behavioral scientists in opportunities and competitions outside the disciplinary programs is pressing. In a SBE Senior Management retreat on September 21, 2009, the incoming Assistant Director and senior management discussed the benefits and costs of partnering with others in the Foundation. The incoming AD discussed the need to keep track of the results of SBE's partnerships, the level to which SBE was involved, and the value of the experience including the degree to which the partnerships created opportunities for social and behavioral scientists.

Update on Actions Taken (09/10):

The Office of Integrated Activities did not respond to the letter sent by BCS regarding the COV's recommendation sent 05/08/09. A follow up email was sent to request guidance and information.

As noted, monitoring the involvement of behavioral and cognitive scientists on proposals throughout the foundation is difficult and daunting. As an initial step, BCS is compiling a list of SBE and BCS involvement in special initiatives such as Ecology of Infectious Diseases, Cyber-enabled Discovery and Innovation, Social Computing Systems, Creative IT, Science, Engineering and Education for Sustainability, and others. BCS has contributed funds to awards in these interdisciplinary competitions and will start by examining the involvement of our scientists in the awards receiving BCS support.

Update on Actions Taken (09/11)

The division of Behavioral and Cognitive Sciences continues to monitor its participation in and contributions to cross-cutting interdisciplinary activities. Human capital investments are now tracked to ensure appropriate coverage. Although there is still no systematic way of tracking the scientific background of PIs and coPIs in interdisciplinary collaborative team, the division does so informally through feedback from program officers involved in those activities. The workload of the division's science and administrative staff has made a more organized attempt to capture that data difficult to achieve.

1.2 Progress since 2006

Recommendation: BCS should continue to strive for a minimum of one permanent program officer in each program.

Division's Response:

BCS concurs with this recommendation of the COV, as does the Office of the Assistant Director. Since the 2006 COV the Cultural Anthropology PO has been appointed to a permanent position. Currently we are searching for a permanent Perception, Action and Cognition PO. We will continue efforts toward this goal.

Actions Taken To Date (09/09):

Since the COV meeting in Spring 2009, one additional permanent program officer has been added to the Division of Behavioral and Cognitive Sciences. The Perception, Action, and Cognition program now has one permanent program officer and one rotating program officer. The division will continue to strive for a balance of permanent and rotating program officers to meet the needs of the behavioral and cognitive scientific communities.

Update on Actions Taken (09/10):

In FY10, BCS conducted a search for a permanent program officer for the Developmental and Learning Sciences program but was not successful in identifying a suitable candidate.

However, in FY10, an additional program officer was added to the Cultural Anthropology program as a rotator. This is a step towards our goal that each program have more than one program director, one of whom would be permanent.

Update on Actions Taken (09/11):

In FY11, the division has taken a new approach to staffing that reflects its increased investments in activities across the foundation and across the sciences. The division has sought to hire individuals whose primary responsibility would be to manage and direct BCS's investments in interdisciplinary activities. For example, one program officer has primary responsibility for overseeing the division's involvement in environmental activities, such as SEES, as well as secondary responsibility to the GSS program. The division made efforts to hire a similar position for a computational behavioral scientist to contribute to the division's investments in cyberinfrastructure and computational approaches but those efforts were not successful.

Neither of these positions were permanent positions but they add to the division's ability to participate in a growing number of interdisciplinary activities.

Recommendation: BCS should identify programs that are exemplary in their treatment of the broader-impacts criterion, and publicize the approaches used across the Division to panelists, reviewers, and investigators.

Division's Response:

The COV expressed concern that there was little improvement in clarifying the meaning of "broader impacts" and its use as a review criterion. The National Science Foundation appreciates this concern, which is why explanatory and illustrative material regarding broader impacts has been posted on the web (e.g. <http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf>) Some COV members appear to assume that NSF policy is to weigh the two merit review criteria equally. Insofar as the broader impacts of a proposed research program may depend on its intellectual merit, the

two merit review criteria cannot always be considered separately or equally. In addition, some solicitations have additional review criteria (e.g. HOMINID, CAREER).

The program officers in BCS will continue in their efforts to communicate the importance of both merit review criteria and that both must be present for proposals to be considered highly competitive at NSF. It is important to note that many different activities and implications are relevant to the consideration of "broader impacts." Although this may cause some confusion in the minds of the scientific community, that flexibility is intentional and we will act to mitigate such confusion.

Actions Taken to Date (09/09):

The National Science and Technology Council report on "Social, Behavioral, and Economic Research in the Federal Context" highlights important broader impacts of the human sciences. Program Officers and Division leadership have sent notes to scientific organizations and listserves, informing the scientific community about this report and its usefulness for thinking about broader impacts.

Update on Actions Taken (09/10):

Program Officers and Division leadership have continued to distribute the NSTC report on "Social, Behavioral, and Economic Research in the Federal Context" as providing relevant examples of the broader impacts of our sciences. In the FY10 call for Highlights, program officers were encouraged to include a statement of the broader impacts of the highlighted work in their summaries of the exciting work supported by their programs, and they were very successful in doing so. The importance of the broader impact criterion is emphasized to, and discussed among, new program officers in the BCS round table as well as the NSF-wide Merit Review Basics workshop.

Update on Actions Taken (09/11):

The division continues its efforts to enhance PIs' and reviewers' understanding of the nature and importance of the Broader Impacts review criterion. A discussion of the two merit review criteria is included in all review request letters and in all outreach to the scientific community. In addition, the division has enhanced the use of a panel summary template that includes both review criteria to ensure panels address broader impacts as part of their discussion. Finally, the program officers and DD/DDD have been active participants in an ongoing discussion of NSB-suggested changes to the merit review criterion of Broader Impacts.

1.3 Quality and integrity of BCS operations

Recommendation: The COV strongly encourages BCS to increase administrative support substantially. This includes increases in staffing (program officers, administration, and technical support), and increased use of panels, site visits to institutions, and reverse site visits at NSF.

Division's Response:

BCS agrees with the COV's assessment. To maintain the integrity of NSF's "gold standard" peer review process, to provide timely and constructive feedback to PIs, to facilitate the review process, to reach out to the community and to develop new initiatives, more administrative staff is required. However, we must work within the FTEs allotted to BCS.

Actions Taken to Date (09/09):

An addition to the BCS staff was made in May 2009, with Ms. Paige Strange joining the division as an Office Automation Clerk.

Update on Actions Taken (09/10):

BCS is in the process of reviewing workflow to improve efficiency of proposal processing, coordinating with the workflow group in the SBE OAD. It is also restructuring the administrative staff, hiring a program specialist in place of a program assistant as we have recognized the evolving nature of administrative duties. An additional IPA has been hired within BCS in response to increased demands in the area of energy and the environment.

The BCS Division Director went on four site visits in FY10, one to a minority-serving institution. The BCS program officers are very active in participating in EPSCoR outreach and outreach to minority-serving institutions.

Update on Actions Taken (09/11):

In FY11, the division has focused on improving operational efficiency as well as communication among the staff. Program officers have been encouraged to rely more on their program assistants and to provide them with clear instruction and feedback. Responsibilities for different tasks have been made more explicit within each program. This has been in association with the division's active engagement in Directorate-wide efforts to assess and define workload activities and responsibilities

The BCS Division Director, Deputy Division Director, and program officers have been very active in participating in site visits in FY11, one to a minority-serving institution. The division has made an effort to include interested admin staff in these site visits.

Recommendation: The COV suggests that BCS make more use of collaborative technologies for virtual meetings for panel reviews and site visits, in order to accomplish the stated aims while not unduly increasing the Division's carbon footprint.

Division's Response:

The increased use of technologies to support virtual meetings has been a point of discussion in the past year in BCS. There are certainly important advantages to such meetings, including greater inclusion of participants who cannot easily travel, lower travel costs, and reduced impact on the environment. However, there are also important disadvantages that must be weighed. For example, such practice would exclude participants who are at institutions with few IT resources and support. Many panels are

large and holding such a meeting electronically would be cumbersome and ineffectual. And perhaps most importantly, panel discussions are cumulative and require on-going face-to-face interactions. It is essential to demonstrate that the quality of our recommendations would not suffer by this practice and that virtual meetings can uphold the same high standards of peer merit review that are the hallmark of NSF. We have had limited experience conducting panels via teleconference, and POs' initial impression is that the review process suffers when conducted via in this way. It would appear that this would be an appropriate area for social and behavioral science research. The BCS division will investigate the expanded use of virtual technologies for other activities, such as preliminary meetings of COV members to brief them before the on-site COV meeting.

Actions Taken to Date (09/09):

The BCS Division continues to explore the use of this technology and its effectiveness. The SES Division leadership will be encouraged to consider the use of teleconferences in preparation for and support of their upcoming COV.

Update on Actions Taken (09/10):

BCS has enhanced use of telecommunications technology, particularly when conducting interviews for administrative and scientific staff positions. In addition, the FY10 HOMINID panel review was held as a teleconference. Finally, the BCS Division Director has enhanced the capacity of the division, by acquiring the needed technology for teleconferencing and making it available for use.

Update on Actions Taken (09/11):

In FY11, the division used Skype to conduct virtual interviews of 100% of the candidates for program officer positions, resulting in a significant reduction in the investment of time and money.

The division has also actively engaged the staff in thinking of creative ways to conduct panel reviews while maintain the gold standard of NSF's peer merit review, including approaches that rely on technological innovations. A working group has been constituted to oversee this activity.

Recommendation: NSF should consider implementing the ideas for increasing return rates of ad hoc reviews that are contained in the program reports.

From Archaeology Program Report: That NSF for ALL its programs install an automated reviewer query mechanism, which includes the following features: (a) potential reviewers are queried about their willingness to review a proposal; (b) if potential reviewers decline to review a proposal, they are prompted to provide names of other potential reviewers; (c) if reviews are not received in 30 days (or whatever time is deemed appropriate), the reviewers receive a reminder of their commitment; and (d) reviewers receive acknowledgment of their reviews and (if allowed), information on the outcome of the decision.

From Cognitive Neuroscience Program Report: The COV recommends that ad hoc reviewers be given an opportunity to view de-identified versions of the reviews of

the proposal that they reviewed. This would provide the ad hoc reviewers with some feedback about the review process that would give them a greater sense of participation in the process.

From Social Psychology Program Report: have four suggestions for improving review acceptance rates: (a) cultivate a panel advisory board of experts across topics who commit to review X number of applications each year for 2-3 years, much like a journal editorial board. (b) provide more structured instructions to the reviewers about the level of review that is requested (e.g., apx. 1 page covering major strengths and weaknesses) so they can see that the burden is not great. (c) provide the reviewers with some feedback on how the panel reviewed the proposal (e.g., funding priority) and/or whether the application was funded. The latter could be implemented as an automated message to reviewers once the final decision about an application has been made. Providing this feedback would allow reviewers to see the influence of their reviews and motivate them to review again. (d) host a reception at SPSP or a similar conference for reviewers to discuss funding issues with one of the program directors, or some other public recognition of their work.

Division's Response:

It is not clear that this recommendation is based on accurate data rather than commonly held perceptions, since no data on review response rate was included in COV program reports, except for Social Psychology. In fact, Division-level data suggest the rate at which reviewers declined to review a proposal has gone down from the last COV period (from 51% declining to 43% declining).

Most BCS programs currently follow the recommendations of the Archaeology program's COV. Both the Cognitive Neuroscience and the Social Psychology program COVs suggest providing feedback to the reviewers on the ultimate funding decisions on the proposals they reviewed. This suggested practice raises issues of confidentiality in providing certain documents, as well as the perennial problem of over-burdening program officers.

Program officers in BCS have their own practices in soliciting external reviews for proposals. Some send initial invitations followed by more detailed review instructions, others conflate the two. However the ultimate goal is the same – to ensure a world class peer review of merit, and not necessarily to improve the response rate to review requests. Throughout the process, program officers monitor review response and submissions to ensure that a sufficient number of reviews are secured, often exceeding the NSF requirement of three reviews. Between the ad hoc and the panel reviews, the PIs are provided with excellent and constructive feedback on their work, which is the primary goal.

Actions Taken to Date (09/09):

The program officers within BCS continue to work diligently to find the appropriate expertise to review each and every proposal. With the increase in proposal load in the current cycle (fall 2009, FY10), it is possible that the rate at which potential reviewers

decline review invitations may increase. The division will keep an eye on this information.

Update on Actions Taken (09/10):

BCS Program Officers continue to be dedicated to conducting exemplary merit review of the proposals submitted to their programs. According to EIS, in FY10, the average number of reviews per proposal was 5.31.

Update on Actions Taken (09/11):

BCS Program Officers continue to be dedicated to conducting exemplary merit review of the proposals submitted to their programs. The division holds a weekly round table to discuss issues of merit review and proposal processing, attended primarily by newer program officers, but also by some more senior POs as well as administrative staff. In this round table, best practices for obtaining not only a sufficient number of reviews but also the necessary quality of reviews are actively discussed. According to EIS, in FY11, the average number of reviews per proposal was 5.41.

In addition, the NSF Academy is now offering a three-day workshop in the Basics of Merit Review. The BCS DDD was very involved in developing and implementing this workshop, which includes information on best practices from across the foundation. 100% of all incoming BCS program officers have attended the Basics of Merit Review Workshop.

Recommendation: BCS should work to ensure consistency across programs with respect to resubmissions, guided by the desire to do what is best for science, and should enhance the guidance given, particularly to young scholars.

Division's Response:

It is NSF policy that resubmissions will only be considered if they take into account the major concerns raised in the prior reviews and that resubmissions are treated as new proposals, independent of previous submissions. BCS agrees that it is important that program officers clearly communicate that policy to their community in a consistent manner. However, there will be variability between program officers in terms of how much guidance they provide to PIs who are considering resubmitting, determined in part by the needs of the program, the needs of the PI, the substance of the proposal, and competing demands on the time of the program officers.

Actions Taken To Date (09/09):

Program officers within BCS continue to provide timely and constructive feedback and instructions to their scientific communities.

Update on Actions Taken (09/10):

BCS Program Officers continue to provide timely and constructive feedback and instructions to their scientific communities. In FY10, 2767 proposal actions were taken in BCS, 88% of which were accomplished within dwell time goals.

Update on Actions Taken (09/11):

BCS Program Officers continue to provide timely and constructive feedback and instructions to their scientific communities. In FY11, 2579 proposal actions were taken in BCS, 94% of which were accomplished within dwell time goals.

The division is conducting discussions regarding resubmissions and other aspects of the proposal and review process in an attempt to manage workload issues while maintaining high standards of peer merit review and providing appropriate feedback to PIs. A working group was recently convened to lead these discussions.

1.4 Improvements in the COV process

Recommendation: For future COVs, summary information on the entire set of proposals is required. While we asked for and received such summaries during the site visit, having this material ahead of time would enhance the review process.

Division's Response:

BCS tracked the requests that the COV made during its meeting and will endeavor to have that information available to the next COV ahead of the meeting. We will also share this information along with other "lessons learned" with the Social and Economic Sciences Division, which will be hosting its COV next spring. If the BCS COV has further recommendations about types of information that should be provided, we would welcome them.

Actions Taken To Date (09/09):

The division has already created a shared folder called COV2012 in the BCSPub shared drive and in the BCS Sharepoint portal which contains informative tables to keep updated, instructions on what to include in the next COV, and other valuable information.

Update on Actions Taken (09/10):

The division continues to update the COV2012 folder in the shared drive with pertinent information.

Update on Actions Taken (09/11):

The division continues to update the COV2012 folder in the shared drive with pertinent information.

Recommendation: Improved guidance to COV members on what to look for in their preparatory review (such as annual reports for measuring outcomes, panel reviews for monitoring merit process) would be helpful.

Division's Response:

Such guidance was provided in the Frequently Asked Questions that was emailed to COV members and uploaded to the COV module. BCS will strive to make this information even more salient in the future. We have begun to compile a set of lessons-learned and suggestions for the 2012 COV in order to provide the members in advance with such materials.

Actions Taken To Date (09/09):

Division leadership has discussed different ways to instruct COV members in advance of the meeting. More detailed explanation of their roles should be provided to COV members earlier in the process and teleconferences should be held regularly at the program level to ensure that COV members are on track.

Update on Actions Taken (09/10):

The Division of Social and Economic Sciences has its COV in September 2010, and BCS leadership plans to meet subsequently with the members of SES to learn about best practices and their experience in guiding the COV.

Update on Actions Taken (09/11):

Consistent with the division's increased use of virtual technologies in recruitment, the division plans to hold virtual meetings with COV members to clarify expectations, provide guidance, and answer questions, well before they arrive for the actual COV meetings. Webinars may also be used to accomplish this goal.

Recommendation: COV members should be able to access the full set of proposals, and not be limited to a sample, subject of course to COI restrictions.

Division's Response:

It is necessary to strike a balance between providing the COV members with full access to information and overwhelming them with the sheer volume of material. Given the comments the COV made about the heavy workload, it seems that a random sample helps to strike that balance as it is designed to be representative of the population of proposals from which it was drawn.

BCS is considering alternative ways of presenting the proposals and documentation that would provide more information while reducing confusion, such as constructing COV modules for each program separately rather than having one for the entire division. This would allow COV members to access their program's specific information more easily and neatly. We will consider such alternatives in the future.

Actions Taken To Date (09/09):

The BCS Division leadership will continue considering alternate ways of providing thorough and complete information to future COVs balanced with a concern for their workload.

Update on Actions Taken (09/10):

BCS currently plans to provide access to a full set of proposals to the 2012 COV.

Update on Actions Taken (09/11):

BCS currently plans to provide access to a full set of proposals to the 2012 COV.

Recommendation: The COV would be better able to answer the questions in Section B if it had access to the annual and final reports of projects that had been started in earlier years.

Division's Response:

This is a consistent concern raised by COVs at NSF. The three year time period assigned to the COV can rarely capture the bigger picture needed to answer long-view questions. This helpful suggestion has been passed along to the Office of Integrative Activities, which is responsible for setting NSF COV policies.

Actions Taken To Date (09/09):

The Office of Integrated Activities was informed of this recommendation from the BCS COV with our endorsement of the idea. Providing COVs with a broader view of the science supported would allow them the opportunity to identify projects that met their potential to be transformative. This in turn could help provide evidence that NSF is meeting its performance goals of supporting innovation and discovery.

Update on Actions Taken (09/10):

This concern was communicated to OIA, but the division has yet to receive a response. A follow up email requesting further guidance on this matter was sent in FY10.

Update on Actions Taken (09/11):

OIA has yet to provide firm guidance on this issue, as this would be an NSF decision. The division recognizes the utility of providing a broader view so that the COV can judge the results of each program's scientific investments. It is possible that the Project Outcome Reports available for more recently awarded grants on research.gov will assist in augmenting the information available to COV members.

Recommendation: BCS should provide a realistic assessment of expectations for COV members and the amount of time commitment for the review process. The initial invitation should be clear about the time demands and about the rewards for undertaking such service.

Division's Response:

The invitation process will be standardized with explicit descriptions of the workload and compensation. It will be followed by more frequent reminders and updates to keep COV members informed and on-track with regard to their workload. In addition, the division will enhance its use of virtual meeting technologies to bring program officers and program COV members together prior to the meeting to discuss issues, answer questions, and monitor progress.

Actions Taken To Date (09/09):

The BCS division leadership plans to implement these ideas for the next COV in 2012. These ideas are included in documents already placed in the COV 2012 shared folder in the BCSPub shared drive.

Update on Actions Taken (09/10):

BCS division leadership continues to plan to do so for the next COV in 2012.

Update on Actions Taken (09/11):

BCS division leadership continues to plan to do so for the next COV in 2012.

Recommendation: BCS should consider compensating COV members (and merit review panels) for preparation time in advance of Ballston meetings.

Division's Response:

The compensation rates for COV panels and review panels are not set by the BCS division. However, we will be sure to share this recommendation with those who are involved in the policy regarding compensation.

Actions Taken to Date (09/09):

No actions taken to date.

Update on Actions Taken (09/10):

This recommendation does not fall within the division's purview.

Update on Actions Taken (09/11):

This recommendation does not fall within the division's purview.

1.5 Program support

Recommendation: Steps should be taken to address the perception that BCS programs are starved for funding.

Division's Response:

This recommendation was offered in the context of the concern that insufficient funds have the effect of steering cutting edge and large proposals to other agencies and of reducing proposals' budgets to the point of compromising the science. As such the response to this recommendation is two-fold. To address the perception that BCS programs are underfunded, many programs publicly publish information on budget levels and funding rates to address this misconception. The other response is to increase the budgets of BCS programs, an outcome that the division is consistently working toward.

When HSD funds became available at the culmination of that priority area, the SBE Office of the Assistant Director provided BCS programs with significant increases in their base budgets. In addition, between ARRA and fy09 and fy10 funds, BCS looks

forward to enhanced budget levels. We recognize, however, that there will always be a gap between what is available and what is needed.

Actions Taken to Date (09/09):

The Division continues to promote the behavioral and cognitive sciences through efforts to enhance program budgets and through the creation of interdisciplinary opportunities.

Update on Actions Taken (09/10):

With the arrival of a new SBE Assistant Director, many potential funding opportunities are currently under discussion, including the future of our sciences (e.g., SBE 2020) and the need for research infrastructure. BCS is an active partner in these discussions, and the BCS communities will benefit from this partnership. BCS is also actively engaged in extant cross-cutting undertakings, such as EID, CDI, SoCS, and the BCS communities have been supported through these efforts.

Update on Actions Taken (09/11):

BCS continues to expand opportunities for our sciences beyond the standing program through its growing involvement in cross-cutting interdisciplinary activities across the foundation as well as across agencies, both domestic and international.

Recommendation: The COV suggests that a strategic planning document for BCS and SBE be completed in time for the COV.

Division's Response:

BCS concurs with this excellent suggestion. The new division leadership had already made this a priority for BCS even before the COV met.

Actions Taken To Date (09/09):

The creation of a strategic plan for the BCS division is an important priority for FY10.

Update on Actions Taken (09/10):

A great deal of progress has been made. An outline of the BCS Strategic Plan was provided to a break-out session of the SBE AC in November 2009. An advanced draft was provided to all of BCS staff and was discussed in a BCS All Hands meeting in June 2010. Final edits and revisions are underway with the goal of ratifying the document in FY11.

Update on Actions Taken (09/11):

The BCS Strategic Plan has been approved by OAD and ratified by all the members of the division in FY11. It is being readied for publication. The division is beginning to discuss the development of program-level strategic plans in BCS.

1.6 Diversity

Recommendation: NSF should revise the forms that collect data on diversity to provide clear explanations of the reasons for requesting such data, and the benefits to science from doing so.

Division's Response:

This is a common concern raised by COVs at NSF. The Broadening Participation Working Group at NSF specifically recommended that reviewer demographics be obtained more reliably, and this issue is being addressed at the IT level. The hope is to make it an automatic feature in the system whereby a person would have to "opt out" in order to not have this information included. Research suggests that this feature would enhance response rates substantially.

Actions Taken to Date (09/09):

The Office of Integrated Activities was informed of this recommendation with our endorsement of the idea.

Update on Actions Taken (09/10):

BCS distributes a new OMB approved survey of demographics to panels to gather better data on diversity in the panel review process.

Update on Actions Taken (09/11):

BCS continues to distribute the OMB approved survey of demographics to its panels to gather better data on diversity in the review process. BCS is considering different approaches to enhancing panelist response rate to the survey.

Recommendation: BCS/SBE should undertake a systematic investigation of the degree to which social science disciplines benefit from Foundation-wide programs to broaden participation.

Division's Response:

It is difficult to assess the amount of social and behavioral science that is being considered and supported by programs outside the SBE directorate. A number of these foundation wide programs are interdisciplinary and it is difficult to extract the degree to which social and behavioral sciences are involved. This is an interesting idea and will be considered further, if information technology and staffing will support the proposed investigation.

Actions Taken To Date (09/09):

The Office of Integrated Activities was informed of this recommendation, which also has the support of the incoming Assistant Director of the SBE Directorate. Discussions continue on the logistics of successfully tracking this information.

Update on Actions Taken (09/10):

As noted earlier, monitoring the involvement of behavioral and cognitive scientists on proposals throughout the foundation is difficult and daunting. As an initial step, BCS is compiling a list of SBE and BCS involvement in special programs to broaden

participation, such as ADVANCE and others. BCS has contributed funds to awards in these competitions and will start by examining the involvement of our scientists in the awards receiving BCS support.

Update on Actions Taken (09/11):

BCS concurs with the COV that this information would be very beneficial to have, but the systems are not in place to access such data. BCS has compiled a list of all the special programs designed to broaden participation to track investment of division resources.

Recommendation: NSF staff should make every effort to extract and organize the available information on these important matters of participant diversity for future COVs.

Division's Response:

The idea of tracking the degree to which BCS programs support research that includes participants from underrepresented groups is intriguing. Unfortunately, it isn't clear that this information is readily available, particularly in the proposals.

Actions Taken To Date (09/09):

The Office of Integrated Activities was informed of this recommendation.

Update on Actions Taken (09/10):

OIA did not respond to our earlier communication concerning this COV recommendation. A follow up email has been sent asking for guidance.

Update on Actions Taken (09/11):

The division is still waiting for information about the development of a mechanism that would gather this type of information from the system. BCS will provide the information on diversity that is available in the system (e.g., PI demographics) to future COVs, but there is still no system in place that is capable of tracking diversity of other personnel involved in a research project.

Recommendation: SBE should proceed with plans to develop a program of support for research on ways of increasing diversity in the scientific community, and should draw on published research in disciplines such as Social Psychology in its own efforts at increasing diversity.

Division's Response:

The SBE Directorate is currently considering creation of such a program, contingent on funding and other matters. Efforts are underway to identify the extent to which SBE programs are actively supporting research in the science of broadening participation through an analysis of program portfolios over the past three years. This information will illustrate the degree to which there is an existing community of scientists already engaged in research on this topic and help to inform us as to future directions.

Actions Taken To Date (09/09):

The Division and the Directorate continue its discussion of the future of the Science of Broadening Participation.

Update on Actions Taken (09/10):

BCS has made strides in establishing a Science of Broadening Participation effort. In FY10, it dedicated \$250,000 to the formation of a Science of Broadening Participation program element, and promised an additional \$250,000 investment for FY11. Dr. Kellina Craig-Henderson, Program Director in Social Psychology, has been tasked with writing a corresponding Dear Colleague Letter.

Update on Actions Taken (09/11):

A Dear Colleague Letter inviting proposals in the Science of Broadening Participation was posted in January 2011. A total of \$1M in SBE was committed to investing in this endeavor, \$500,000 of which came from the commitment of BCS senior management.

Recommendation: BCS could take the lead in rethinking the categorization of diversity groups based on self-reported identity following the changes in race, ethnicity, gender, and disability classifications by the US Census Bureau.

Division's Response:

The categorizations used to collect demographic data reflect NSF policy decisions. BCS will inform that policy where appropriate. BCS has supported scientific efforts to clarify issues of race, such as the American Anthropological Association's RACE: Are we so Different? Project, <http://www.understandingrace.org/about/index.html>.

Actions Taken To Date (09/09):

None taken.

Update on Actions Taken (09/10):

No further action taken.

Update on Actions Taken (09/11):

No further action taken.

Recommendation: NSF should increase efforts to diversify its population of program officers.

Division's Response:

Agreed, and BCS is active in its recruiting of program officers from groups traditionally underrepresented in science. We will continue to request the assistance of individuals and organizations, including the SBE Advisory Committee, as we attempt to identify members of underrepresented populations who might serve as program officers.

Actions Taken To Date (09/09):

Since the COV meeting in Spring 2009, the division has hired an additional program officer who is from a traditionally underrepresented group.

Update on Actions Taken (09/10):

In FY10, BCS had six program officer positions open. These were broadly advertised, including target advertisement to Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) and diversejobs.com, the job site of Diverse: Issues in Higher Education.

Update on Actions Taken (09/11):

BCS continues efforts to recruit from a broad pool of qualified candidates through postings to Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) and diversejobs.com, the job site of Diverse: Issues in Higher Education. The division's leadership is ever mindful of the importance of diversity within the division as within all behavioral and cognitive sciences. The BCS Division Director and the head of the Sponsored Research Office at Gallaudet University have discussed encouraging faculty to apply to open program officer positions. The DD has provided the same message in outreach presentations to HBCUs and other venues.

1.7 Stewardship of Science

Recommendation: BCS/SBE should distribute the NSTC report "Social, Behavioral, and Economic Research in the Federal Context" (digital and hard copy) widely among Congress and congressional staff, university presidents, and the federal agencies.

Division's Response:

Agreed. Arrangements are currently being developed to distribute the NSTC report "Social, Behavioral and Economic Research in the Federal Context" to the groups listed above, as well as others (e.g. professional organizations).

Actions Taken To Date (09/09):

The NSTC report has been widely distributed by BCS. Over 7500 copies of the report have been provided to all House and Senate offices, select House and Senate subcommittees, other federal agencies, 100 university provosts, 200 research centers, and all scientists who serve on NSF review panels in the division. The report has also been posted on websites of professional organizations, and the link has been sent out to the scientific communities through professional listserves.

Update on Actions Taken (09/10):

The NSTC report had continued to be widely distributed.

Update on Actions Taken (09/11):

BSC continues to distribute the NSTC report. In addition, it is working on additional reports that highlight, situate, and guide our sciences into the future, such as the SBE 2020 report that SBE OAD is leading.

Recommendation: The NSTC report provides excellent information for understanding the broader impacts criterion. We recommend its use as a resource for PIs as they develop their proposals.

Division's Response:

Agreed. When we notify our communities about the availability of this report, we will highlight its relevance for understanding broader impacts.

Actions Taken to Date (09/09):

Program Officers were asked to use their professional organizations and listserves to inform their communities about the NSTC report and its value when considering the broader impacts of the human sciences. The following listserves or organizations have posted this information:

- Linguistlist
- Society for Personality and Social Psychology
- Society for Experimental Social Psychology
- Society for the Psychological Study of Social Issues
- American Association of Physical Anthropology website
- Federation of Associations in Behavioral & Brain Sciences
- APA Div 6 – Behavioral Neuroscience and Comparative Psychology
- Women in Cognitive Science
- Association for Psychological Science
- Cognitive Science Society
- Psychonomic Society
- Society for Chaos Theory in Psychology and Life Sciences
- International Society for Ecological Psychology
- International Society of Motor Control
- Vision Sciences Society
- APA Division 7 – Developmental Psychology
- The American Anthropological Association (e-news)
- Association of American Geographers listserve to department chairs.

Update on Actions Taken (09/10):

BCS Program Officers continue to direct PIs and the broader scientific community to the NSTC report, particularly as an illustration of the important broader impacts of our sciences.

Update on Actions Taken (09/11):

BCS Program Officers continue to direct PIs and the broader scientific community to the NSTC report, particularly as an illustration of the important broader impacts of our sciences.