

**2013 Committee of Visitors Report
Division of Social and Economic Sciences
National Science Foundation**



June 5, 2013

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Introduction

The Committee of Visitors (COV) for the Social and Economic Sciences (SES) met June 3-5, 2013 at the Headquarters of the National Science Foundation. The chair and two co-chairs were responsible for the conduct of the COV. In addition, 17 other Committee members were assigned to review the nine programs within SES: Decision, Risk and Management Sciences (DRMS); Economics (Econ); Ethics Education in Science and Engineering (EESE); Law and Social Science (LSS); Methodology, Measurement and Statistics (MMS); Political Science (PoliSci); Science of Organizations (SoO); Science, Technology, and Society (STS); and Sociology (Soc).

The COV was charged by the Assistant Director for the Social, Behavioral, and Economic Sciences to assess the performance of the Division in two primary areas:

- Assessments of the quality and integrity of program operations and program-level technical and managerial matters pertaining to proposal decisions.
- Forward-looking comments pertaining to areas of support and new opportunities for advancing science and infrastructure at both the program and division levels, and in interdisciplinary settings.

In addition, the Assistant Director asked for responses to specific questions on four topics, seeking advice on both scientific and management issues:

1. **Vision for the Future.** Looking forward over the next 10 years, what is your vision for the intellectual future of SES? Keeping in mind likely budget constraints, what infrastructure would be needed to attain this vision?
2. **Interdisciplinary Research.** Are there specific ways that the Division's programs can capitalize on the current broader trends toward greater support of interdisciplinary research? Do you have suggestions about specific organization or infrastructure modifications that the Division might make?
3. **Managing Proposal Loads.** What advice would you give the Division in thinking about these new approaches? Looking forward, what are effective ways SES could evaluate and monitor these new practices?
4. **Doctoral Dissertation Research Improvement Grants.** How essential are these awards for the growth and success of their respective disciplines and fields?

In addition to these broad SES-wide questions, the COV was asked to respond to 29 specific questions pertaining to each program, focusing mainly on the review process.

Division staff provided considerable information for analysis. Key documents included: strategic plans for NSF and SBE; a Division Narrative describing major activities of SES, the proposal review process, and summary statistics describing the flow of proposals through

each program; the 2010 COV report and response from SES; and detailed reports from each program, providing the program-specific responses to the 2010 COV and detailed descriptions of program activities during the past three years. In addition to these documents, staff provided “e-jackets” for a random sample of 610 proposals representing all SES programs, including 293 project awards and 317 declines. The e-jackets include comprehensive documentation for each proposal, including the proposals, PI history, reviews, all correspondence, and a detailed review analysis describing the reasons why the program officer came to the conclusion that he or she did.

The entire COV met as a group to discuss and evaluate the questions posed in the COV charge. The members assigned to each program met with relevant program officers. This report reflects the consensus of the entire Committee. When we were unable to reach consensus, it is noted and the alternate views are presented. Throughout the process, the involved NSF staff was consistently helpful and efficient. Although this report contains some suggestions for improvements in the COV process, the COV members congratulate NSF on maintaining a consistent atmosphere of intellectual and scientific integrity and transparency.

A central concern of the COV is evaluation of the SES peer review process. Peer review is the core mechanism ensuring impartiality in funding, and it is essential to the advancement of science. Indeed, the excellence of the autonomous peer-review system is arguably the key factor responsible for U.S. leadership in science for the past half-century. The COV strongly believes that it is imperative to maintain the integrity of the review process. We find that SES is a model of best practices for scientific peer review, and the rigorous process has yielded extraordinary returns on a sharply limited investment of resources.

Intellectual vision

Understanding human activity is essential for research across the landscape of science, from models of environmental sustainability to systems biology. The frontier of research is theoretically-driven, data-intensive, collaborative, and problem-oriented.

Interdisciplinary approaches are essential to our vision for the future of SES science. Many of the most exciting areas for research lie at the intersection of the Social and Economic Sciences with domains from other directorates. A strong foundation of SES science and scientists working at the frontiers of knowledge in these interdisciplinary collaborations is indispensable to their success. Examples include research on:

Interactions of human and natural systems. Changes in population size, characteristics, and behavior lie at the heart of key environmental challenges, including deforestation, declining biodiversity, and water shortage. Conversely, environmental change has profound implications for human behavior, including mass migration, food scarcity, and increased armed conflict. Analysis of these interactions has profound importance, allowing us to anticipate and prepare for future change.

Socio-genomics and other biological/social interactions. The completion of the Human Genome Project opened up a new research agenda for SES. As genomic research proceeded, the complexities of trait inheritance became evident, shifting at least part of the

focus to epigenetics (e.g., where methyl groups and histones attached to DNA as a result environmental factors, changing how genes function). For SES science, the process by which society "gets under the skin" has been called biological embedding. We are only at the beginning of important collaborations between the molecular and SES sciences.

Big Data. As described in the NSF Strategic Plan, there is a data deluge across all areas of science. An explosion of data from commercial transactions, social networks, satellite imagery, administrative records, and statistical agencies around the world has created exciting new opportunities for analysis and discovery. The massive increase in the scale and heterogeneity of data has also created new challenges: we lack the institutional and technological structures to sustain the flood of new data and to fully capitalize on the new opportunities. The research community needs infrastructure development to ensure data access, sustainability, and interoperability across diverse data formats.

Human security. Increasing social contact and global interdependence can heighten a number of risks to national and individual security. The onset and impacts of sudden and severe economic downturns, the spread and consequences of pandemics, the expansion of organized crime and trafficking, and the diffusion of terrorism and civil conflict exemplify some of the risks. Cross-disciplinary collaborations are needed to discover what institutions, policies and practices help to mitigate the risks, and to assess the factors that make nations and individuals more resilient.

Human factors in the development, adoption, and impact of new technologies. The effects of new technologies on our society often depend less upon their technical attributes than the decisions of the people who might use them. Whether the issue is the spread of more efficient energy-use technologies, the effectiveness of cybersecurity measures, or the selection of healthier diet and lifestyle options, SES insights into the wants of the public, its means for fulfilling them, and the purposive and unintended consequences will be key aspects of the design and promulgation of new technologies that can make life healthier, safer, and more sustainable.

Systems Science. With the growing recognition that most phenomena are complex, systems science has come to a more prominent place in SES science. The key tenet of systems science lies in the notion that large interacting systems from the biological to the geographic work together and in opposition to understand how individuals, organizations, institutions and societies operate. With an emphasis on dynamics, traditional linear models have limited utility, and must be augmented or replaced by agent-based modeling, systems dynamics modeling, and network analysis.

Committee members expressed enthusiasm for an extension of the highly successful, but currently discontinued, initiative on Human and Social Dynamics. In addition, the general importance of global-scale research initiatives, and multi-scale studies of SES research issues from the local to the global levels was noted.

As we capitalize on exciting new opportunities for interdisciplinary research, we must be careful not to neglect research and training within the core SES disciplines—Economics, Sociology, and Political Science. The disciplines are indispensable: strength within the

disciplines provides the foundation for innovative collaborations. Accordingly, the COV believes that SES must continue strong support of the core even as the Division seeks new ways to stimulate research at the intersection of disciplines.

Data Access and Infrastructure

The Committee reached consensus that issues of data access and data infrastructure should be a high priority for the Division. Shared infrastructure is one of the most efficient mechanisms for supporting interdisciplinary research. In the late 1990s, SBE launched a program for “Enhancing Infrastructure in the Social and Behavioral Sciences (99-32),” which yielded rich data resources that continue to pay dividends. A new program, “Building Community and Capacity for Data-Intensive Research (13-519)” promises to address some of the same concerns. The new program, however, is much smaller. A substantially expanded program to develop shared infrastructure would be a highly effective use of scarce resources for social and economic research.

We have seven specific recommendations pertaining to data access and infrastructure:

1. **The Big Three.** The COV is concerned that the “Big Three” surveys—the General Social Survey, the Panel Study of Income Dynamics, and the American National Election Study—have been slow to implement the very important recommendations of the 2011 “Future Investments in Large-Scale Survey Data Access & Dissemination” report, which calls for attention to data standards, shared software infrastructure, and interoperability across projects. One way to improve interoperability and communication across surveys would be to move the disciplinary programs into a Long-Term Infrastructure Cluster. NSF will need to think carefully about a management structure to ensure appropriate disciplinary input.
2. **Data Sharing.** The Committee applauds the NSF Data Sharing policy, but we find that enforcement is weak. Currently, there are no consequences if researchers fail to follow through on their data sharing plans. We propose that SES researchers should be required to certify that they have implemented their data sharing plan before being eligible to submit a new proposal, much as they are required to submit a final report for their projects. This does not preclude an embargo; for example, a researcher could document that the data have been transferred to a data archive under a limited-term embargo agreement. Researchers with data that cannot be shared for a legitimate reason (such as high sensitivity) would be required to document that reason.
3. **Data Citation.** The Committee agrees that proper data citation is vital, and suggests that the data sharing requirement include a data citation standard, such as a Digital Object Identifier. We further urge the SBE Directorate to maintain a catalogue of all NSF-funded SBE datasets, including work in progress, with data availability status and access information.

4. **Digital Curation.** With new data sharing requirements, NSF must be prepared to cover new costs. Accordingly, we urge the Division to provide support for data preservation, metadata, data integration, archiving, and dissemination.
5. **Confidentiality.** The exploitation of transactional and administrative Big Data will require overcoming confidentiality barriers. Sharing of qualitative data poses equally challenging issues of disclosure control. The Committee urges the support of research on statistical disclosure control as well as other methods—including virtual data enclaves—to address this issue.
6. **Interoperability.** The Division should exploit opportunities to collaborate across divisions and directorates on integration of data from different sources and exploitation of novel and large-scale data sources.
7. **Capacity Building.** We urge support the formation of disciplinary and interdisciplinary research networks to focus on fundamental SES questions, such as threats to the nation’s security or economic opportunity for young adults.

Implementation of some these initiatives may require a new data manager position, perhaps at the Directorate level.

Review Innovation

The Committee has several recommendations to streamline the review process and improve the quality of reviews.

1. **Review analysis.** Review analysis is one of the most time-consuming responsibilities of program officers, but these internal documents are never seen by researchers. The COV believes that these documents are vitally important when a program officer disagrees with the consensus of a review panel. They are also valuable—for both the Division Director and the COV—when the decision falls in the middle categories (“should fund” or “could fund”). Most COV members, however, see little value in the routine preparation of review analyses for the many proposals that fall in the “must fund” or “do not fund” categories, except where the Program Officer disagrees with the panel assessment. Accordingly, we strongly urge expansion of the “boilerplate” approach to review analysis now in place for some programs. Program officers should not spend their scarce time preparing internal documents in cases where the outcome of the review is clear and uncontested.
2. **Streamlining cross-disciplinary reviews.** Some COV members saw opportunities to streamline review process for cross-disciplinary programs. Currently, proposals submitted to multiple programs receive full reviews—often with 6 or 8 reviews and a panel summary—from each of the programs. Efficiencies could be gained if multi-program proposals received fewer reviews from each program.
3. **Panel diversity.** Several COV members felt that additional diversity is needed on review panels. These comments fell into two categories. First, there was a call for some disciplinary diversity in the three main disciplinary programs—Economics,

Political Science, and Sociology—where panels typically are composed exclusively of representatives of the discipline. Some COV members felt that at least a minimal representation of related disciplines would add valuable perspective; other members—especially those charged with evaluating the three main disciplinary programs—disagreed, and advocated continuation of the single-discipline review panels. Second, there is sometimes a need for additional diversity with respect to career stage, gender, and race/ethnicity. Although there has been longstanding concern and progress about diversity with respect to gender and race/ethnicity, less attention has been paid to ensuring adequate representation of different career stages. We also endorse continued and expanded efforts by NSF to encourage submissions of competitive proposals from underrepresented populations.

4. **Triage.** The COV strongly supports giving program officers the ability to triage proposals that have no chance of funding based on the *ad hoc* and panelist reviews (i.e., do not discuss them at the panel meeting), increasing the ability to give a fuller discussion to more competitive proposals.
5. **Number of annual review rounds.** The COV does not support reducing regular program reviews from two rounds to one round annually. Nevertheless, the Political Science experiment for dissertation proposals may prove fruitful; under this model, there are two review dates, but the second where the second is confined to revise-and-resubmit proposals. The Committee concluded that this decision may best be left to the Program Officers.
6. **Review management.** Several COV members suggested that SES should consider adopting review management and rating software developed for peer-reviewed journals, which could offer efficiencies in the selection of reviewers.
7. **Split scores.** We recommend that the Enterprise Information System be modified to recognize split scores—such as VG/G—and compute intermediate numerical scores. If this cannot be done, we recommend prohibiting split scores. We further recommend that EIS be enhanced to include filters/sort columns for numerical scores by reviewers and program officer recommendations. Instead of just sorting ability based on proposal number or PI name or institution, etc., proposals should be sortable by mean score, score sum, or other numerical measure, which would only make sense if split scores are disallowed or given distinct numerical values.

DDRIG Grants

The Committee believes that DDRIG grants are valuable and cost-effective and should not be cut back. We support efforts to streamline the review process in light of the increasing volume of proposals. We also urge NSF to develop improved metrics of outcomes to better evaluate and document the effectiveness of these grants.

Program Management

The Committee was highly impressed by the management of SES programs; they represent an outstanding model of scientific peer review. The dwell time is generally excellent; the

advice to PIs is clear and effective; and the review analysis for borderline cases is excellent (although we think it is not needed for clear-cut cases). We appreciate the thoughtful and insightful decision-making on budgets.

We have serious concerns about workload. The problem is common to all programs in the Division, but was especially stressed by the committee members for Sociology, Political Science, and STS. These issues are long-standing; for example, this is apparently the fourth COV that has recommended that Sociology be given additional staff. Beyond the level of staffing, the kind of staffing is a concern for the LSS program; the Committee recommends that LSS should have a permanent program officer to ensure adequate institutional memory.

The issue of Broader Impact continues to raise concerns, although they differ across the programs. Some reviewers were concerned that broader impacts may not be given enough weight in the review process, and stressed especially the importance of broader societal impact.

COV Reorganization

Some members of the COV felt that the current practice of separate COV reports and review templates for every program is excessive and puts substantial burdens on staff. SBE COV reports are almost an order of magnitude longer than the average of divisions in other directorates, and preparing for the COV entails considerable effort. An alternative—followed by most divisions in other directorates—would be to produce one consolidated report and template for the entire division. Other COV members, however, felt that the great detail of separate reviews yields program-specific feedback that is invaluable to staff and the process should remain as is.

CORE QUESTIONS and REPORT TEMPLATE
for
FY 2013 NSF COMMITTEE OF VISITOR (COV) REVIEWS

Guidance to NSF Staff: This document includes the FY 2013 set of Core Questions and the COV Report Template for use by NSF staff when preparing and conducting COVs during FY 2013. Specific guidance for NSF staff describing the COV review process is described in the “COV Reviews” section of NSF’s Administrative Policies and Procedures which can be obtained at www.inside2.nsf.gov/od/oia/cov.¹

NSF relies on the judgment of external experts to maintain high standards of program management, to provide advice for continuous improvement of NSF performance, and to ensure openness to the research and education community served by the Foundation. Committee of Visitor (COV) reviews provide NSF with external expert judgments in two areas: (1) assessments of the quality and integrity of program operations and program-level technical and managerial matters pertaining to proposal decisions; and (2) comments on how the outputs and outcomes generated by awardees have contributed to the attainment of NSF’s mission and strategic outcome goals.

The program(s) under review may include several sub-activities as well as NSF-wide activities. The directorate or division may instruct the COV to provide answers addressing a cluster or group of programs – a portfolio of activities integrated as a whole – or to provide answers specific to the sub-activities of the program, with the latter requiring more time but providing more detailed information.

The Division or Directorate may choose to add questions relevant to the activities under review. NSF staff should work with the COV members in advance of the meeting to provide them with the report template, organized background materials, and to identify questions/goals that apply to the program(s) under review.

Suggested sources of information for COVs to consider are provided for each item. As indicated, a resource for NSF staff preparing data for COVs is the Enterprise Information System (EIS) –Web COV module, which can be accessed by NSF staff only at <http://budg-eis-01/eisportal/default.aspx>. In addition, NSF staff preparing for the COV should consider other sources of information, as appropriate for the programs under review.

For section IV addressing portfolio balance, the program should provide the COV with a statement of the program’s portfolio goals and ask specific questions about the program under review. Some suggestions regarding portfolio dimensions are given on the template. These suggestions will not be appropriate for all programs.

Guidance to the COV: The COV report should provide a balanced assessment of NSF’s performance in the integrity and efficiency of the **processes** related to proposal review. Discussions leading to answers for Part A of the Core Questions will require study of confidential material such as declined proposals and reviewer comments. **COV reports should not contain confidential material or specific information about declined proposals.** The reports generated by COVs are made available to the public.

We encourage COV members to provide comments to NSF on how to improve in all areas, as well as suggestions for the COV process, format, and questions. For past COV reports, please see <http://www.nsf.gov/od/oia/activities/cov/covs.jsp>.

¹ The COV Reviews section has three parts: (1) Policy, (2) Procedures, and (3) Roles & Responsibilities.

**FY 2013 REPORT TEMPLATE FOR
NSF COMMITTEES OF VISITORS (COVs)**

Date of COV: June 3-5, 2013									
Program/Cluster/Section: Economics; Methodology Measurement and Statistics; Political Science; Decision Risk and Management sciences; Science of Organizations; Law and Social Science; Science, Technology and Society; Sociology; Ethics Education in Science and Engineering.									
Division: Social and Economic Sciences									
Directorate: Social, Behavioral and Economic sciences									
Number of actions reviewed: For each of the eight SES programs, COV members reviewed a total of 60 jackets (20 from each fiscal year considered). Awards: For each of the eight SES programs, COV members reviewed a total of 30 awards (10 from each fiscal year considered). Declinations: For each of the eight SES programs, COV members reviewed a total of 30 declinations (10 from each fiscal year considered).									
Total number of actions within Program/Cluster/Division during period under review: Awards: The total number of awards by the eight SES programs during the COV period is 1270 (this only reflects competitive proposals managed within SES, and only counts the lead in cases of proposals submitted collaboratively). Declinations: The total number of declinations by the eight SES programs during the COV period is 4605 (this only reflects competitive proposals managed within SES and only counts the lead in cases of proposals submitted collaboratively). Other: Total number of actions within Program/Cluster/Division during period under review:									
	STS	SOO	ECON	DRMS	SOC	MMS	PS	LSS	TOTAL
2010	348	79	417	165	409	79	365	257	2119
2011	359	70	327	187	326	75	365	247	1956
2012	315	69	268	151	247	103	366	281	1800
TOTAL	1022	218	1012	503	982	257	1096	785	5875

Manner in which reviewed actions were selected:

Jackets were selected for each program by using a random number generator in Excel to select 10 awards and 10 declinations for each fiscal year. For Law & Social Science, Sociology, Political Science, and Science, Technology & Society the sample is stratified random based on the ratio of dissertation proposals to regular proposals for that fiscal year. The same ratio stratification was used for both awards and declinations in each fiscal year for each program. The sample only reflects proposals managed by the program and does not account for anything co-reviewed but managed by a different program. The sample also only considers competitive proposals (not Continuing Grant Increments, supplements, withdrawn proposals, nor those returned without review) and only considers the lead in cases of proposals submitted collaboratively.

COV Membership

	Name	Affiliation
COV Chair:	Steve Ruggles	University of Minnesota
COV Co-Chairs:	Isaac Unah Bernice Pescosolido	University of North Carolina-Chapel Hill Indiana University
COV Members:	Antoine Bechara Joanne Linnerooth-Bayer Kwabena Gyimah-Brempong Marco Castillo Joanne Belknap David Law David Budescu Hal Stern J. Mark Hansen Donna Bahry James Griesemer Steve Epstein Elaine Englehardt Ray Reagans Kathryn Bartol William Roy Vilna Bashi Treitler	University of Southern California International Inst. for Applied Systems Analysis University of South Florida George Mason University University of Colorado Boulder Washington University Fordham University University of California, Irvine University of Chicago Pennsylvania State University University of California, Davis Northwestern University Utah Valley University Massachusetts Institute of Technology University of Maryland University of California, Los Angeles City University of New York, Baruch College

DECISION, RISK AND MANAGEMENT SCIENCES PROGRAM

INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program(s) under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged.

I. Questions about the quality and effectiveness of the program's use of merit review process.

Please answer the following questions about the effectiveness of the merit review process and provide comments or concerns in the space below the question.

<p>QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCESS</p>	<p>YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE</p>
<p>1. Are the review methods (for example, panel, ad hoc, site visits) appropriate?</p> <p>Comments: The use of both ad-hoc and panel reviews is desirable, since the panelists serve as additional reviewers, but can also evaluate the quality of the ad-hoc reviews (for example, if a reviewer misunderstood the purpose of a particular proposal), and have the benefit of being able to deliberate among themselves. Reviewers and panelists need to address two primary review criteria: scientific merit and broader impact. The panel then rates each proposal in one of four categories.</p> <p>The panel composes a Panel Summary for the PI that explains what the panel considered the key factors leading to its rating of the proposal. After the panel meeting, the program directors convene, decide the disposition of each proposal, and make their recommendations to the Division Director.</p> <p>There has been concern about the panel workload, and the limited time available to deliberate on the proposals. We understand that DRMS is piloting a new procedure: if the ad hoc reviews (at least three) fail to rate the proposal with one "excellent" or two "very good", the proposal will not go to the Panel. A statistical analysis has apparently shown that this new process will have a very low probability of rejecting proposals that would have been awarded with the current procedure. The advantage of the new approach is that it gives significantly more time for panel deliberations. We recommend that experience with the new process be monitored, and that other NSF Programs consider adopting this process. Data Source: EIS/Type of Review Module</p>	<p>Yes</p>

<p>2. Are both merit review criteria addressed</p> <p>a) In individual reviews? Our quick sample of reviews showed that with some exceptions reviewers addressed “Broader Impact”, and almost all reviewers addressed “Intellectual Merit”.</p> <p>b) In panel summaries? Always</p> <p>c) In Program Officer review analyses? Always</p> <p>Comments: The 2010 review noted that the criterion “Broader Impacts” was given less comment than “Intellectual Merit” by reviewers and panel summary. The DRMS program responded with the intent to revise the letter that goes out to reviewers to emphasize the importance of attending to the broader impacts funding criteria and to provide PIs, reviewers and COVs with links to existing NSF resources on broader impacts, including websites and FAQs.</p> <p>We note on the DRMS web site that attention has been drawn to Broader Impacts by in the latest revisions (National Science Foundation's Merit Review Criteria: Review and Revisions).</p> <p>Our review of sampled proposals shows that BI is still given less attention than IM. Because this criterion (especially the 'utility to society' dimension) can be critical for awards to interdisciplinary, policy relevant research, we recommend that DRMS continue to communicate the significance (and interpretation) of BI to reviewers, interpreting and taking account of the latest revisions.</p> <p>Data Source: Jackets</p>	<p>Yes, with exceptions</p>
<p>3. Do the individual reviewers giving written reviews provide substantive comments to explain their assessment of the proposals?</p> <p>Comments: Reviewers usually provide substantive comments to explain their assessment of proposals, but there is considerable variability. The 2010 COV report noted that reviews tend to be more in depth for negative than positive ones. DRMS responded with the intent to revise the letter that goes out to reviewers to encourage positive reviewers to provide in-depth feedback for strong as well as for weak proposals.</p> <p>Our sample showed no obvious difference in the reviews of negatively and positively evaluated proposals. There was, however, variability in the assessment of proposals in terms of the detail given to the substantive comments (we found, however, only one reviewer who gave a ranking with no substantive comments). We commend DRMS Program Director and Officer for personally reviewing proposals where the substantive comments do not match the ratings.</p> <p>We agree with the 2010 review that it might be advisable to rank reviewers paying attention to their substantive feedback, or, at the least, eliminate</p>	<p>Yes, with some exceptions</p>

<p>reviewers who give inadequate substantive feedback from the reviewer database. Data Source: Jackets</p>	
<p>4. Do the panel summaries provide the rationale for the panel consensus (or reasons consensus was not reached)?</p> <p>Comments: The quality of the panel summaries was noted in the 2010 COV report to be uneven, and not always helpful. This was also a concern in the 2007 COV report. A recommendation was made for creating a basic template for the panel summary that lists the positives and negatives of a proposal. The DRMS program responded seriously to these concerns. First they considered the proposal load, and the insufficient time for the panel to write good summaries. As a result, DRMS went from 1½ day panel meeting to 2½ day meeting starting in the fall of 2010. They also provided more explicit instructions to the panel on writing these summaries. Despite these efforts, some of these inconsistencies in panel summaries remain. In discussing these issues with Program Officers, they mentioned that more recently reviewing only proposals that receive an E or 2 VGs has reduced the workload for panelists. This provides more time for panelists to discuss and summarize competitive proposals. Also the Program mentioned that a template for panelists was developed and they started using it more recently. It's too early to judge the outcome, but we commend the Program for taking this serious effort to respond to prior recommendations.</p> <p>One issue remains is the inconsistency that some proposals receive when reviewed by different panels. Perhaps the best document that explains these inconsistencies is the Review Analysis document, which unfortunately is an internal document and not given to the PI. We recommend that perhaps Program officers could provide PIs with as many notes as possible from this Review Analysis document in the form of diary notes. Data Source: Jackets</p>	<p>Yes, with exceptions</p>
<p>5. Does the documentation in the jacket provide the rationale for the award/decline decision?</p> <p>[Note: Documentation in the jacket usually includes a context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), program officer review analysis, and staff diary notes.]</p> <p>Comments: The review analysis page provides clear rationales for award/decline decisions in the majority of instances. Perhaps this is the best document where a clear rationale is found, especially in the case of proposals where decisions were made against the recommendation of some panels (mostly in cases where different panels had conflicting recommendations). Data Source: Jackets</p>	<p>Yes</p>
<p>6. Does the documentation to the PI provide the rationale for the award/decline decision?</p> <p>[Note: Documentation to PI usually includes context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), and, if not otherwise provided in the panel summary, an explanation from the program</p>	<p>Yes, with exceptions</p>

<p>officer (written in the PO Comments field or emailed with a copy in the jacket, or telephoned with a diary note in the jacket) of the basis for a declination.]</p> <p>Comments: The context statement, the individual reviews, and the panel summaries provide a fairly good rationale for the award/decline decision in most cases. However, in instances where the reviews or panel summaries are inconsistent, the information provided to PIs end up being the sum of reviewer's comments. A better feedback for these award/decline decisions is usually found in the Review Analysis document, but this document does not seem to be shared with the PI. As suggested earlier, providing as many notes as possible from this document by the Program Officer would provide a better feedback to PIs on the award/decline decisions. Data Source: Jackets</p>	
<p>7. Additional comments on the quality and effectiveness of the program's use of merit review process:</p> <p>On the whole, the effectiveness of the program's merit review process is excellent.</p>	Not Applicable

II. Questions concerning the selection of reviewers. Please answer the following questions about the selection of reviewers and provide comments or concerns in the space below the question.

<p>SELECTION OF REVIEWERS</p>	<p>YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE</p>
<p>1. Did the program make use of reviewers having appropriate expertise and/or qualifications?</p> <p>Comments: The selection of reviewers is based on a combination of both PI suggestions of inclusion/exclusion and discretion of the program directors, who work from personal knowledge, web searches for those with appropriate expertise, etc.</p> <p>The reviewers over this period represent a wide range of social science disciplines that appear appropriate for the range of proposal topics. Affiliations of principal investigators include departments or schools of psychology, economics, public policy, business, management, communication, sociology, environmental studies, and political science. The disciplinary range of reviewers for this period included psychology (9), economics (5), management and business (4), marketing (4), political science (3), sociology (1) and geography (1). The dominance of psychology and economics/business reflects the interests and research of the community. We understand that program officers and directors also make an effort to assure representation of requisiteresearch methodologies. On the whole, it appears that the reviewers have appropriate</p>	<p>Yes, but thinking ahead, there might be more emphasis on interdisciplinary expertise</p>

<p>expertise and qualifications.</p> <p>Looking forward, we note (as reported by DRMS) the significant increase in research exploring biological, genetic, and neuro-cognitive factors in risk estimation and decision making, and the scale and frequency of environmental research proposals, and most recently in interest in environmental projects on adaptive environmental management and global change. All new emphases fit well with DRMS's history of support for interdisciplinary work. The question is whether the review process is equipped for the new emphases, especially given that reviewers are strongly embedded in disciplinary departments and research traditions? It might be worth exploring university departments and research organizations, including those funded by NSF's Decision Making Under Uncertainty (DMUU) program, that are developing interdisciplinary science curriculums and research to identify a cadre of interdisciplinary scientists who could serve as reviewers. Data Source: Jackets</p>	
<p>2. Did the program recognize and resolve conflicts of interest when appropriate?</p> <p>Comments: The management of COIs seems very thorough and complete, and we cannot think of additional procedures that would be valuable in protecting against COIs. Data Source: Jackets</p>	<p>Yes</p>
<p>Additional comments on reviewer selection: On the whole, we think the effectiveness of the program's merit review process is very good. Many of our comments are targeted at future review processes as DRMS and SES respond to the changing, and more interdisciplinary, research landscape. The context of our comments should be taken within our firm belief and understanding that DRMS is doing things very well in the current operating context.</p>	<p>Not Applicable</p>

III. Questions concerning the management of the program under review. Please comment on the following:

<p>MANAGEMENT OF THE PROGRAM UNDER REVIEW</p>
<p>1. Management of the program.</p> <p>Comments: Between 2010 and 2012, DRMS received a total of 503 proposals. DRMS funding rate for standard proposals was about 18%. The funding rate for the dissertation improvement proposals was about 43%. DRMS also funded two CAREER awards. This Committee echoes the comments of the previous one on the exceptional abilities of the program officers (O'Connor and Rigdon, and previously Leland and Meszaros), and their support staff (Judy Simmons and Robby Brown) in terms of hard work, knowledge, skills, and experience. The exceptional abilities of the program officers</p>

<p>include their very up-to-date knowledge on current trends in DRMS. They are highly respected scholars in their fields, with different skill sets that complement each other, and together they provide a great asset to DRMS and NSF.</p> <p>We note, however, that the DRMS program staff has substantial additional commitments and responsibilities outside their program, especially the very time consuming contribution to INSPIRE (Interdisciplinary Research and Education). This puts an enormous load on their time and hard work. Additional staff and outside support (e.g., the IT help desk) could help alleviate this undue workload and benefit the program.</p>
<p>2. Responsiveness of the program to emerging research and education opportunities.</p> <p>Comments: DRMS has been at the forefront of emerging research trends directed at increasing the understanding and effectiveness of decision-making by individuals, groups, organizations, and society. DRMS is also uniquely positioned to encourage innovative and transformative science. DRMS has been involved in reviewing and funding proposals across the directorate. Among other things, DRMS has been receptive to the integration of research from different disciplines, including neuroscience and computational neuroscience, which are truly interdisciplinary efforts and advances.</p>
<p>3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.</p> <p>Comments: DRMS has developed a truly cutting-edge portfolio. Specifically, the Future of DRMS Workshop held in Pittsburgh, PA in 2010 brought together several key researchers from a wide variety of backgrounds and topics within the area of DRMS and who may not normally speak to each other. This truly interdisciplinary effort provides an outstanding guide for the development of a cutting edge portfolio.</p>
<p>4. Responsiveness of program to previous COV comments and recommendations.</p> <p>Comments: The response to previous COV comments and recommendations was serious and appropriate.</p>

IV. Questions about Portfolio. Please answer the following about the portfolio of awards made by the program under review.

<p>RESULTING PORTFOLIO OF AWARDS</p>	<p>APPROPRIATE, NOT APPROPRIATE, OR DATA NOT AVAILABLE</p>
<p>1. Does the program portfolio have an appropriate balance of awards across disciplines and sub-disciplines of the activity?</p>	<p>Appropriate</p>

<p>Comments: The program portfolio seems to strike a good balance of awards across disciplines and sub-disciplines. The largest category of DRMS awards focuses on individual decision-making ranging from inter-temporal choice to moral decision-making and charitable giving. Some of these awards involve a single discipline, but many are integrative and bring together diverse methodological skills and theoretical perspectives. Most of these awards are traditional, but a few are the risky type, which have great transformative potential. A smaller category of DRMS awards involves research on risk perception and communication and the role these and other factors play in policy formation and implementation by organizations, communities, governments and people. Finally DRMS has invested in the future of the field by funding a couple of activities aimed at building infrastructures and partnerships for research. Overall this is a highly balanced portfolio (but also please see Other Topics, question #2 below).</p> <p>Data Source: Jackets</p>	
<p>2. Are awards appropriate in size and duration for the scope of the projects?</p> <p>Comments: Awards are appropriate in size and duration: a relatively higher percentage of awards (about 35%) were Dissertation Improvement Grants, but these are short in duration (<1 year) and size (<15k). The remaining number was similar across the different sizes of awards (ranging from <100k to >500k) with an average duration of 2.2 years. The average award size has increased in 2012 (relative to 2011 and 2010) perhaps reflecting increased costs of research, especially projects that involve neuroscience and imaging. Overall, given the size of these budgets, graduate student support might seem low, but the success rate is sufficiently high. Therefore, we recommend the Program continues its practice in this regard.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Appropriate</p>
<p>3. Does the program portfolio include awards for projects that are innovative or potentially transformative?</p> <p>Comments: Certainly when reviewing individual awards, there were several that were described in the panel summary as transformative and with a great potential for impact. However, data on the number of these awards was not found. Regardless, we are enthusiastically convinced that the overall program portfolio has an appropriate balance of innovative and potentially transformative projects.</p> <p>Data Source: Jackets</p>	<p>Yes (Appropriate), but statistical data was not made available</p>
<p>4. Does the program portfolio include inter- and multi-disciplinary projects?</p> <p>Comments: The program's portfolio is impressive in terms of inter- and multidisciplinary projects. About 29.5% of the DRMS portfolio was co-funded within the SBE Directorate, or outside SBE (e.g., ENG Directorate). Within the SBE Directorate, most of the portfolio consists of reciprocal co-funding (i.e., DRMS receives from other divisions an almost equal amount that they give to other divisions). Co-funding outside the SBE Directorate seems uneven. DRMS seems to have received funds from outside programs.</p>	<p>Yes</p>

<p>Our view is that DRMS has an appropriate balance of inter- and multi-disciplinary projects. It is clear that the ability of DRMS research to be of interest to multiple constituencies is one of its core strengths. Data Source: EIS/Committee of Visitors Module</p>	
<p>5. Does the program portfolio have an appropriate geographical distribution of Principal Investigators?</p> <p>Comments: When comparing the funding rates of EPSCoR to non-EPSCoR states, the overall difference is reasonably small (the mean DRMS funding rate for proposals from EPSCoR states is only about 6 percentage points less than non-EPSCoR states). However, this difference is inconsistent across years: in 2011 there was no difference, but in 2012 the mean DRMS funding rate for proposals from EPSCoR states was about 12 percentage points less than non-EPSCoR states). More efforts should be made to increase the success rate of proposals from EPSCoR states and reverse the declining trend of 2012. Data Source: EIS/Committee of Visitors Module</p>	<p>Yes, but it could be better</p>
<p>6. Does the program portfolio have an appropriate balance of awards to different types of institutions?</p> <p>Comments: A majority comes from research-intensive schools and, to a lesser extent, other Ph.D. granting institutions. As might be expected, success rate is slightly higher than the DRMS mean funding rate in the former and slightly lower than the mean in the latter. There were no proposals from RUIs. We would suggest targeting outreach to underrepresented institutions to encourage more proposals. Please refer to question 7 for our thoughts on how to improve the success rate of new PIs and underrepresented institutions. Data Source: EIS/Committee of Visitors Module</p>	<p>Yes, but this could be improved</p>
<p>7. Does the program portfolio have an appropriate balance of awards to new investigators?</p> <p>NOTE: A new investigator is an investigator who has not been a PI on a previously funded NSF grant.</p> <p>Comments: DRMS supports junior scholars and new investigators in four ways:</p> <ul style="list-style-type: none"> • Standard grants with a junior scholar as the PI. • Standard grants with a junior scholar as Co-PI or post-doctoral fellow. • Post-docs supported by DRMS funded grants • CAREER awards. <p>The mean funding rate for projects with at least one new PI is approximately 12.4% compared to 28% for projects submitted by only veteran PIs, that is, a difference of 15.6%. This is approximately the same as with the earlier period (2008-10) where the difference was 16 percentage points. A similar trend is found NSF-wide, where proposals by new PIs have a mean funding rate</p>	<p>Yes, but this could be improved</p>

<p>approximately 12% lower than proposals by veteran PIs. Consistent with the 2010 COV report, our view is that awards to new PIs are at an appropriate level, especially taking into account the three other vehicles for supporting young researchers, and also taking into account that new PIs are low on the learning curve.</p> <p>What is important is that new PIs learn and not drop out of the system. To support learning, we have an idea that might be worth considering. Given the extraordinary willingness of the DRMS research community to volunteer time for NSF panels and reviews, might the community, especially the "mature" researchers, be willing to help new and underrepresented PIs, for instance, by volunteering to pre-review proposals? Perhaps this community would also be willing to place successful proposals (for which research is complete and published) on the DRMS website.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>8. Does the program portfolio include projects that integrate research and education?</p> <p>Comments: To integrate research and education, DRMS awards</p> <ul style="list-style-type: none"> • Doctoral Dissertation Improvement Grants (DDRIGs), • Research Experiences for Undergraduate (REU) Supplements, • Research in Undergraduate Institutions (RUIs), and • CAREER proposals. <p>Funding postdoctoral, graduate, and undergraduate students in standard and other types of research proposals furthers this goal. Not taking account of the research of graduate students funded by DDRIG awards (and any other award that lists a graduate student or a post-doc as a PI or Co-PI), during the 2010-12 COV period (2007-9), DRMS supported a total of 99 (55 in 2007-2009) undergraduate students, 203 (174 in 2007-2009) graduate students and 40 (36 in 2007-2009) postdoctoral students. This shows an increasing trend in support for all students and especially undergraduate students.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>9. Does the program portfolio have appropriate participation of underrepresented groups²?</p> <p>Comments: Funding levels to women are slightly higher than the DRMS average (2%), whereas funding levels to minorities is 11% lower than DRMS proposals overall.</p> <p>According to DRMS, the discrepancy in funding levels to minority PIs is a</p>	<p>For women, it is appropriate, but not for other underrepresented PIs</p>

² NSF does not have the legal authority to require principal investigators or reviewers to provide demographic data. Since provision of such data is voluntary, the demographic data available are incomplete. This may make it difficult to answer this question for small programs. However, experience suggests that even with the limited data available, COVs are able to provide a meaningful response to this question for most programs.

<p>problem and must be investigated. "The submission rate seems on par with NSF average, but is at the level of award status that the discrepancy occurs. A similar lack of success in funding proposals from minority serving institutions (1 out of 11 submitted) is alarming. Greater effort needs to be made to understand why this discrepancy is occurring and how to improve minority success rates."</p> <p>According to DRMS, part of a potential solution might include facilitating greater opportunities for collaboration – perhaps a “match-maker” program to help provide mentors/collaborators with experience in the art of grantsmanship. In addition, as mentioned above for new PIs, creating a group of experienced PIs, who would be willing to pre-review proposals by new and minority PIs, might be worth investigating. Experience PIs might also be willing to put successful proposals (for which the research is completed and published) on the DRMS website to serve as examples.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>10. Is the program relevant to national priorities, agency mission, relevant fields and other constituent needs? Include citations of relevant external reports.</p> <p>Comments: The priority areas of the agency include three key areas: (1) the content of science, (2) capacity building, and (3) infrastructure. In the first, the goals of the agency are to examine new approaches and pursue fundamental questions in research. In the second, the goals are to form collaborations and create environments for sustained research. In the third, the goals are to enable researchers to easily access data, services, and the relevant program. To accomplish these goals, one of the most prominent achievements of DRMS in the content of science area has been the creation of many interdisciplinary research projects that cut across the directorate and across the Foundation and other agencies. In the capacity building, they have also enabled team-building and cross-disciplinary research. They have also invested in data and data access. A detailed account of these activities is provided in a publication of the SBE “Rebuilding the Mosaic” (http://www.nsf.gov/pubs/2011/nsf11086/nsf11086.pdf).</p> <p>These activities are highly relevant to the NSF strategic plan (Empowering the nation through discovery and innovation; NSF strategic plan for fiscal years 2011-2016), which elaborates on three strategic goals:</p> <p>(1) "Transform the frontiers" emphasizes the seamless integration of research and education as well as the close coupling of research infrastructure and discovery.</p> <p>We have discussed how DRMS serves the discovery and learning/education goals of NSF in section 4 question 8, noting the increasing trend of student awards and involvement through the Doctoral Dissertation Improvement Grants (DDRIGs), and Research Experiences for Undergraduate (REU) Supplements, Research in Undergraduate Institutions (RUIs). In addition the</p>	<p>Yes</p>

<p>Faculty Early Career Development (CAREER) Program supports junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research.</p> <p>(2) "Innovate for society" points to the tight linkage between NSF programs and societal needs, and it highlights the role that new knowledge and creativity play in economic prosperity and society's general welfare.</p> <p>Research funded by DRMS strongly demonstrates how social science contributes to economic and general welfare. Recent examples can serve to illustrate: By examining pharmaceuticals engaged in biotechnology, social scientists at Georgia Institute of Technology and the University of Virginia have identified principles and patterns that are consistent with or antithetical to successful innovation. NSF-funded research has also contributed to national security. A doctoral candidate at the University of Montana has shown the fallacy of the wide-spread view that poverty and lack of education breeds terrorism, a result that could influence the way the program funds anti-terrorist activities (The "Poverty Breeds Terrorism" Fallacy Highlight ID: 20655, Version: AC/GPA). Another important result growing out of NSF-funded research, which could also greatly influence international relations, is the finding that efforts to "sweeten the pot" to facilitate agreements in "value-laden" situations, such as the controversy over Iran's nuclear program the Israeli Palestinian situation, may backfire and that progress on proposals to trade material goods for matters actually heightens attention to value-laden dimensions of the conflict. (Is The Road to Peace Paved with Symbolic Gestures? Highlight ID: 20777, Version: AC/GPA). As a last example, NSF-supported researchers at Harvard, Boston College and the University of Pittsburgh have applied sophisticated economic matching theory to develop a system that dramatically improves the ability of doctors to find compatible kidneys for patients on transplant lists. Implemented in the New England Program for Kidney Exchange, their algorithm has so far facilitated eighty-three successful transplants and is in the process of expanding nationwide (Economists Design Life-Saving Exchange for Kidney Transplants Highlight ID: 22687, Version: Directorate)</p> <p>(3) "Perform as a model organization" emphasizes the importance to NSF of attaining excellence and inclusion in all operational aspects.</p> <p>We have discussed the excellent management of DRMS, along with its efforts for inclusion of underrepresented researchers and institutions, in earlier questions.</p> <p>Data Source: Jackets</p>	
<p>11. Additional comments on the quality of the projects or the balance of the portfolio: DRMS continues to select high quality projects and have a well-balanced portfolio. To the extent that we have made recommendations in this report, they are directed at improving an already high quality of projects and a balanced portfolio.</p>	<p>Not Applicable</p>

OTHER TOPICS

1. Please comment on any program areas in need of improvement or gaps (if any) within program areas.

All issues have been pointed out in earlier questions and there are no other gaps. We feel that the Program is doing an outstanding job in meeting its mission. DRMS and its leadership team are performing extremely well. To the extent that we have made recommendations in this report, they are directed at improving an already very strong program, which is operating at a very high level.

2. Please provide comments as appropriate on the program's performance in meeting program-specific goals and objectives that are not covered by the above questions.

In recent years, there has been an increase in the scale and frequency of environmental research proposals, and most recently in interest in environmental projects on adaptive environmental management and global change. Given that many of the critical issues affecting the nation are now global (e.g. climate change, biodiversity, marine resources, land-use change), it would be worth examining how the submittal of more proposals addressing global risk issues could be encouraged. With regard to climate change, the NSF has taken a lead on funding research. Most notable are the four centers funded by the Decision Making under Uncertainty for Climate Change (DMUU) program. DRMS also encourages research proposals on climate change. During the period 2010-2012, 26 research proposals and 5 DDRIG proposals directly addressing climate change (with climate in the title) were submitted to DRMS. Two research proposals (one for a workshop) and two DDRIG proposals received awards. The success rate was 7.7% for projects and 40% for DDRIG compared with an overall rate of 18% and 43%, respectively. DRMS might consider how the low success rate for climate related research projects could be improved, and whether the recent NSF revisions of the BI criterion ([National Science Foundation's Merit Review Criteria: Review and Revisions](#)) might increase the competitiveness of climate and other global change proposals.

3. Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.
4. Please provide comments on any other issues the COV feels are relevant.
5. NSF would appreciate your comments on how to improve the COV review process, format and report template.

We suggest that the program provides a list of all the acronyms used by NSF for COV reviewers. We also ask if the Program could consider conducting these COV reviews every 5 years instead of 3 years.

SIGNATURE BLOCK:

Joanne Linnerooth-Bayer
Antoine Bechara

For the Social and Economic Sciences COV
Steven Ruggles, Chair

ECONOMICS PROGRAM

INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program(s) under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged.

I. Questions about the quality and effectiveness of the program's use of merit review process.

Please answer the following questions about the effectiveness of the merit review process and provide comments or concerns in the space below the question.

QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCESS	YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE
<p>1. Are the review methods (for example, panel, ad hoc, site visits) appropriate?</p> <p>Economics receives standard proposals, dissertation proposals, and RUI proposals twice yearly, with target dates of January 18th and August 18th. CAREER proposals are received by the NSF wide deadline in late July, and are reviewed along with the August submissions. If a proposal has violated the Grant Proposal Guide (GPG) requirements, the principal investigators (PIs) are notified and given a brief amount of time to correct the proposal. The program directors electronically request a "mail" review from (usually six) topic area experts. These experts provide written assessments of the intellectual merit, potential broader impacts and a summary rating of the proposed project.</p> <p>The Economics program then convenes a meeting in November and April of each year with respected economists who make up the program's Advisory Panel. The panelists meet at NSF's Arlington offices to discuss the proposals. Prior to the meeting, two or three members of this panel of experts provide written reviews of each proposal. The comments and evaluations contained in the mail reviews are a vital component of this discussion. The panel places each proposal into one of three categories: highly competitive, competitive, and not competitive.</p> <p>The panel also composes a "Panel Summary" for the PI(s) detailing what the panel considered to be the key factors that lead to its rating of the proposal. After the panel meeting, the program directors convene, decide the disposition of each proposal, and make their recommendations to the Division Director.</p>	Yes

<p>Reviewers are identified by several methods: PI suggestions, from references cited in a proposal and past proposals in the general topic area; scholars identified through Internet-based search tools, and, finally, the program directors' own familiarity with scholars in the scientific community. The goal is to select a fair, appropriate, and balanced set of reviewers. Reviewers include both junior and senior faculty, economists working in policy positions for government agencies, and scholars in other disciplines as appropriate. Dissertation proposals are generally not sent to outside reviewers, but are instead reviewed by three members of the Advisory Panel. Over the review period, the average number of reviewers per awarded proposal was 6.6 while there were 6.8 reviewers per declined proposals. At least two of these reviews are written by panel members.</p> <p>Data Source: EIS/Type of Review Module</p>	
<p>2. Are both merit review criteria addressed</p> <p>a) In individual reviews? According to the NSF Enterprise Information System, over 70% of individual reviewers address both merit criteria. The actual rate at which both criteria is addressed may be higher than shown here because of the way the information is collected in the web-based information collection system.</p> <p>b) In panel summaries? Panel summaries we reviewed indicate the summaries adequately address both merit criteria.</p> <p>c) In Program Officer review analyses? Program directors explicitly identify how proposals being recommended for funding satisfy NSF's two review criteria. Looking at a random sample of awards and declines, we found that these two factors were explicitly included in all 60 review analyses.</p> <p>Comments: There is evidence that the review process at all levels considers the two merit criteria in decision making.</p> <p>Data Source: Jackets</p>	Yes
<p>3. Do the individual reviewers giving written reviews provide substantive comments to explain their assessment of the proposals?</p> <p>Comments: While the reviews vary in length, depending on the reviewer (ad hoc, panelist, program officer) and type of proposal, the written reviews provide substantive comments on why a particular decision was arrived at. For declinations, the reviews provide generous comments on how to improve the proposal as well as why it was not funded.</p> <p>Data Source: Jackets</p>	Yes

<p>4. Do the panel summaries provide the rationale for the panel consensus (or reasons consensus was not reached)?</p> <p>Comments: Yes, the summaries provide a good rationale for the panel consensus (or lack thereof) and explain why some apparently very competitive proposals are not funded.</p> <p>Data Source: Jackets</p>	Yes
<p>5. Does the documentation in the jacket provide the rationale for the award/decline decision?</p> <p>[Note: Documentation in the jacket usually includes a context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), program officer review analysis, and staff diary notes.]</p> <p>Comments: Given the work load of the program staff, going to an automated/form statement coupled with the review materials would reduce the work load of the program officers without compromising the integrity of the process.</p> <p>Data Source: Jackets</p>	Yes
<p>6. Does the documentation to the PI provide the rationale for the award/decline decision?</p> <p>[Note: Documentation to PI usually includes context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), and, if not otherwise provided in the panel summary, an explanation from the program officer (written in the PO Comments field or emailed with a copy in the jacket, or telephoned with a diary note in the jacket) of the basis for a declination.]</p> <p>Comments: The information sent to the PI (context statement, written reviews, panel summary, and program officer explanation) provide ample information to the PI as to why a particular decision was arrived at.</p> <p>Data Source: Jackets</p>	Yes
<p>7. Additional comments on the quality and effectiveness of the program's use of merit review process:</p> <p>The Economics program has been extremely successful in utilizing the merit review process. In addition, the attention to COI has allowed the program to get impartial advice. It has allowed the program the get reviews and advice from the best and impartial experts in the field and as a result, improved the quality of the decision making process. There is no need to change the process.</p>	

<p>NSF should consider simplifying the rules for sending proposals to panels. For example, not sending proposals that receive less than one "excellent" or two "very good" ratings to panels will reduce the number of proposals handled at panels by one third without compromising the integrity of the review process. Our analysis of a random sample of 30 proposals revealed that this rule will not eliminate any proposal that was eventually funded. Program directors should be encouraged to explore the adoption rules for this purpose.</p>	
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II. Questions concerning the selection of reviewers. Please answer the following questions about the selection of reviewers and provide comments or concerns in the space below the question.

<p>SELECTION OF REVIEWERS</p>	<p>YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE</p>
<p>1. Did the program make use of reviewers having appropriate expertise and/or qualifications?</p> <p>The Economics Advisory panel is made up of distinguished scholars across the range of fields in the discipline. Panel membership is staggered so that panel membership always includes a few experienced panelists. Nine women were among the 39 panelists serving during the FY 2010-2012 period. This compares well to the overall averages in Economics; approximately 13% (2011 Report of the Committee on the Status of Women in the Economics Profession) of full professors in Ph.D. granting departments in Economics are women. All panelists are economists, but their interdisciplinary interests varied widely, from psychology to environmental science to health. The random sample of 60 proposals shows that the non-panel reviewers constitute a qualified group of scholars.</p> <p>Comments: This is a very balanced panel. Regarding non-panel reviewers, we find a good representation of women as well. Of the people that are solicited to provide a review about 19% are women. This is a somewhat smaller number than that of women in the profession (23%). The proportion of reviews done by women is 21%. This is due to the fact that women are more likely to turn in a report (29% of women do not report and 38% of men do not report).</p> <p>We do not have enough information to ascertain the representation of different regions within the US, the representation of minorities or the seniority of the reviewers. However, a non-random sample of reviewers by university shows parity in the number of reviews an institution receives and gives. We encourage</p>	<p>Yes</p>

<p>the program to further analyze the review process.</p> <p>Data Source: Jackets</p>	
<p>2. Did the program recognize and resolve conflicts of interest when appropriate?</p> <p>Prior to selecting ad-hoc reviewers, the program director reviews the Biographical Sketches of the PI and co-PIs to avoid asking reviewers who have a conflict of interest under NSF guidelines. Reviewers with conflicts are removed from the reviewer list. As each review is received, the program director reviews the section on "Conflict of Interest" and marks as "un-releasable" and excluded from the review process when a conflict is detected. In cases where there is uncertainty regarding a conflict of interest, the program director consults appropriate officials at NSF before including the review.</p> <p>The program director asks panelists to identify proposals for which they have COIs and ask the panelist not to review the proposal or participate in the discussion of that proposal. NSF staff will also mark panelist COIs in the computer system, resulting in a panelist's inability to access the proposal and its reviews. During the meeting, NSF staff members provide panelists with a briefing on conflict of interest procedures at the beginning of the panel meeting, and each panelist signs a conflict of interest statement.</p> <p>If the program director has a conflict of interest with a proposal, the program director does not participate in any part of the review process for that proposal. Another program director within the Economics program will manage the review process for that proposal. The conflicted program director will also leave the room during panel discussion of the conflicted proposal, and the program director who has handled the reviews oversees the panel discussion of the proposal.</p> <p>Comments: This is an area the Program takes very seriously and goes to all lengths to avoid COI.</p> <p>Data Source: Jackets</p>	<p>Yes</p>

III. Questions concerning the management of the program under review. Please comment on the following:

<p>MANAGEMENT OF THE PROGRAM UNDER REVIEW</p>
<p>1. Management of the program.</p>

Comments: The Economics program appears to be very well managed. The Career Program Director is continuing the high standard of performance and enthusiasm set by her predecessor. She is an able ambassador for the program and effective communicator with the research community. The two rotators are outstanding additions to the Program Director. The Economics research community is fortunate to have this outstanding team to manage the program.

2. Responsiveness of the program to emerging research and education opportunities.

Comments: The Economics program has relied on PIs to determine the direction of research and has responded to the quality of proposals, including new directions. This practice of refraining from “picking winners” has allowed the program to “harvest” a lot of new ideas and new directions that the program officers could never have dreamt of. This “bottom up” approach has served the Economics program, and more important, the Economics profession very well and we encourage the program to continue this practice.

The current Program Director is deeply involved in the mentoring of young academics and is an active member of the CSWEP. The numbers on the gender composition of panel and ad-hoc reviewers as well as the numbers on the distribution of grant monies by gender show a balanced approach.

3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.

Comments: The previous COV raised concerns about the workload that makes it difficult for program staff to have enough time for outreach to the economics profession, coordination with other programs and other activities of strategic importance to the program. We share these concerns; we are particularly concerned that budget cuts, combined with increased proposal submissions may have exacerbated this pressure and thus leave even less time for planning and strategic thinking about the program. We believe that finding a way to streamline the proposal processing to reduce the burden program staff without degrading the quality of reviews will be desirable.

In addition, the program and the Division as a whole would greatly benefit from improving their information systems. For instance, the review process requires program officers to make individual searches of potential reviewers and tracking them in a case-by-case basis. There is no automated system that would allow the managers to search, select and track the review process. This makes the review process lengthy and distracts attention from other issues. The lack of information system support extends to the tabulation of information on proposals, researchers, reviewers and the like. For instance, a simple tabulation of field of economics being funded requires the program officer to manually enter the data. Similarly, it is currently impossible to track how many and how much money go to economists through the whole SBE Directorate. This means that NSF as a whole is not able to evaluate how much interdisciplinary work occurs besides cross-program or division funding opportunities. We consider that this not only distracts time from program officers, but also prevent them from making better decisions and evaluating the Division and its programs.

The Foundation would benefit enormously from improving their information system and data collection.

4. Responsiveness of program to previous COV comments and recommendations.

Comments: The previous COV did not make specific recommendations for changes to be implemented by the program staff. However, the previous COV made several recommendations, especially on issues of transparency and equity in budgeting, to be addressed at the Divisional and Directorate levels. We are aware of the budgetary constraints imposed on the Foundation and Directorate and the constituent Divisions. We are however still concerned that the budgetary process still remains so opaque that one never knows how much funding goes to a discipline. For example one does not know how much money goes to fund economic research in the Division or Directorate. This may partly be due to the way information is gathered within the Foundation. We make specific recommendation on effort to improve the information gathering, storage and retrieval system in the Foundation.

IV. Questions about Portfolio. Please answer the following about the portfolio of awards made by the program under review.

<p style="text-align: center;">RESULTING PORTFOLIO OF AWARDS</p>	<p style="text-align: center;">APPROPRIATE , NOT APPROPRIATE , OR DATA NOT AVAILABLE</p>
<p>1. Does the program portfolio have an appropriate balance of awards across disciplines and sub-disciplines of the activity?</p> <p>Comments: The Economics Program officers use 12 ‘field’ categories in managing proposals by research area: Theory, Econometrics, Macroeconomics, International (including trade, finance, and development), Finance, Industrial Organization (IO), Environmental, Labor, Public and Regional, Economic History, Behavioral Economics and Infrastructure (conferences, large data collection efforts, etc). Table 1 provides information on new awards by field for each fiscal year. The table indicates that awards during this period cover all sub-fields in the discipline.</p> <p>In what follows, we discuss a few projects in each category. ³</p>	<p>Yes</p>

³ Categorizing awards by fields is a subjective task. For example, a research project that estimates the effects of fuel economy standards on automobile purchases and gasoline consumption might be categorized as IO, Environmental, or even Public if the major focus is on regulatory issues. One program director (Niloy Bose) reviewed the entire award portfolio to categorize the awards, so the definitions are consistent throughout the time period.

Table 1: New Awards by Field

Number of Awards (percentage of awards)				
Field	FY2010	FY2011	FY2012	Total
Theory	9(10.4%)	11 (13.5%)	11 (16%)	31 (13.1%)
Econometrics	11 (12.7%)	8 (9.8%)	9 (13%)	28 (11.8%)
Macro/Financial Markets	16 (18.6%)	11 (13.5%)	8 (11.5%)	35 (14.8%)
International	6 (7%)	6 (7.4%)	4 (5.7%)	16 (6.7%)
Development	7 (8.3%)	5 (6.1%)	4 (5.7%)	17 (7.2%)
IO	2 (2.3%)	10 (12.3%)	2 (2.8%)	14 (5.9%)
Environmental	2 (2.3%)	2 (2.4%)	1 (1.4%)	5 (2.1%)
Labor	2(2.3%)	4 (4.9%)	7 (8.8%)	13 (5.5%)
Public/Regional/Pol	9 (10.7%)	4 (4.9%)	9 (12.8%)	22 (9.4%)
History	4(4.6%)	4 (4.9%)	7 (10%)	14 (5.9%)
Behavioral/Experiment	10 (11.6%)	8 (9.8%)	6 (8.6%)	24 (10.1%)
Infrastructure	6 (7%)	8 (9.8%)	6 (8.6%)	20 (8.4%)
Total # Awards	84	81	70	235

Economic Theory. These projects develop and analyze formal mathematical models of decision making (by individuals and by organizations such as firms and governments), models of strategic behavior, and models of economic systems from small scale systems, such as a single market, to large scale work in general equilibrium modeling that considers entire economies. Work in this area is increasingly incorporating insights from other social and behavioral sciences. Examples include a project on the theory of cooperation and self-control conducted by Drew Fudenberg, and Matt Jackson's groundbreaking research on the formal game theory of social network formation. Jackson's project also includes innovative empirical work that analyzes how ethnic identity can affect network formation.⁴

A number of projects categorized as economic theory address issues in mechanism design. This area uses methods from economics and game theory to develop innovative incentive schemes for achieving desired goals. One major example of a mechanism design problem is developing new auction methods. Mechanism design problems arise in a wide variety of other contexts, and researchers working in this area have been able to achieve substantial broader impacts. Two leading examples are Al Roth and Parag Pathak. Roth is of course a 2012 Nobel Laureate in Economics, and was funded by the program during this time period for his innovative work in designing new methods for kidney exchange.⁵ Pathak is working on an ambitious research agenda that combines theory and empirical work designed to improve the design and

⁴ 0951462 Fudenberg, Cooperation and Self-Control and Jackson 0961481, Studies of Social Structure and Economic Behavior. The Fudenberg award was co-funded with DRMS.

⁵ Roth 1061932 and Ashlagi 1061889, Collaborative Research on Kidney Exchange. These awards were co-funded with the Directorate for Computer and Information Science and Engineering (CISE).

implementation of student assignment systems used in many urban public school systems in the U.S. (eg, the "school choice" systems that allow families to request placement in a particular desired school.)⁶

Econometrics. These awards fund research that develops new methods for the analysis of data. Some of these projects are quite applied in their focus, including both the development of new methods and the immediate application of the methods. An example is Bo Honore's project to generalize familiar economic duration models to allow for interactions between durations. The project includes both theoretical work focused on identification issues and empirical work that specifies and estimates a model of the joint retirement decision faced by married couples.⁷

Other projects are driven by the econometric needs of a specific field of economics. For example, Barbara Rossi and Atususi Inoue are developing new methods to identify the sources of instabilities in macroeconomic data. They are also developing new tests for weak identification in macroeconomic models and a method that will guarantee consistent estimation of the parameters of DSGE models even if the model is mis-specified.⁸

Macroeconomics and Financial Markets. The award portfolio in this area includes a variety of perspectives and approaches and reflects the diversity of methods in modern macroeconomics. Ricardo Caballero is developing his idea that the behavioral concept of ambiguity aversion may provide new insight into how complex financial instruments helped to feed the global financial crisis.⁹ Ragu Rajan and Doug Diamond are examining banker incentives to understand the actions banks might take that increase the risks of a crisis, as well as their behavior in the midst of a crisis.¹⁰ Some awards are funding research on overlapping projects; Harald Uhlig is working on Bayesian estimation methods for macroeconomic models, is investigating the use of log-linearization methods in DSGE models, and is building a model with sovereign default with impatient governments and rollover risk for sovereign debt to study the role and impact of bailouts.¹¹

International. This group of awards is especially wide ranging, since it includes work on the macroeconomics of international finance, work in microeconomics on specific markets affected by international trade, and projects that examine questions in development economics. International trade projects include work by Rob Feenstra and Alan Heston that is part of an international collaborative

⁶ Pathak 1056365, CAREER: From Assignment to Evaluation: The Design of School Choice Systems.

⁷ Honore 1022018, Specification and Estimation of Economic Duration Models.

⁸ Rossi 1022125 and Inoue 1022159, Collaborative Research: New Methods for Inference In the Presence of Instabilities, Weak Identification, and Mis-specification.

⁹ Caballero 102461, Complexity, Uncertainty, and Macroeconomic Policy in the Global Economy.

¹⁰ 0962321 Rajan, Understanding Credit Crises.

¹¹ Uhlig 1227280, Understanding Macro Risks.

effort to produce data that allows for direct cross-national comparisons of income, outputs, inputs and productivity (the Penn World Tables).¹² This part of the portfolio also includes projects examining the economics of exports and imports, such as Dave Donaldson and Arnaud Costinot's project on global agricultural trade and how regional market integration and trade policy affect prices and trade flows.¹³ Finally, some projects in this category focus on the economics of less developed countries. This includes work using randomized trials as field experiments to measure the success of interventions designed to encourage economic growth. The program is funding the innovative collaboration between Esther Duflo, Abhijit Bannerjee, and Matt Jackson who are testing Jackson's theories of network formation with field experiments designed to measure the effects of social networks on microfinance efforts in rural India.¹⁴

Industrial Organization. Awards in this field include projects in mechanism design that are focused on specific applications rather than broad new methods, as well as empirical projects that evaluate the effectiveness of specific kinds of market designs and tests theories about market competition. Jon Levin and Liran Einav are using innovative data sets to study the effects specific marketing methods used on internet sales sites to test theories about the effects of taxes on consumer behavior.¹⁵ Greg Lewis and Jakub Kastl are each developing new empirical methods for testing theories about auction markets.¹⁶ This field of research also includes projects in innovation and technical change. Projects in this area are frequently co-funded with SciSIP, NSF's interdisciplinary program focused on innovation.

Environmental and Resource Economics. This has been a relatively small area for the program over the past several decades, but the program is seeing an increasing number of high quality proposals fueled by current policy concerns. An example is Arik Levinson's project to estimate household-level environmental Engel curves, the relationship between households' incomes and the amount of pollution embodied in the goods and services they consume. The project will give us a new basis for estimating how much observed environmental improvements in developed countries can be attributed to personal income growth.¹⁷ The program is also funding an interdisciplinary project by a team of economists (Wolfram Schlenker and Michael Roberts) and a geographer (David Lobell), that applies new developments in econometrics to location specific data about climate and crop yields to better estimate the effects of climate change on global food prices.¹⁸

Labor. This field includes not just work on the economics of labor supply and

¹² 1061880 Feenstra and 1061908 Heston. Collaborative Research: The Next Generation of the Penn World Table.

¹³ Donaldson 1227635, Gains from Economic Integration: Theory and Evidence from Agricultural Markets.

¹⁴ Duflo 1156182 and Jackson 1155302, Collaborative Research: Social Networks and Microfinance.

¹⁵ Levin 1227676, Economics of Internet Markets.

¹⁶ Kastl 1123314, Empirical Analysis of Auction Markets: Liquidity, Electricity and Information Structure and Lewis 1155518 Dynamic Auction Markets.

¹⁷ Levinson 1156170, Environmental Engel Curves.

¹⁸ Schlenker 0962559 and Lobell 0962625, Collaborative Research: Food Price Spikes in a Warming World.

demand, but research on a variety of factors that influence both supply and demand. This category also includes work in education and health economics.¹⁹ David Autor and Gordon Hanson are estimating the impact on U.S. workers of exposure to import competition, with a focus on employment and earnings trajectories over the long term.²⁰ Patrick Kline and Melissa Tatari are developing new methods for estimating models of labor supply and program participation using data from large scale randomized welfare reform experiments.²¹ Robert Shimer and Fernando Alvarez are developing a fresh perspective on unemployment that yields new and testable hypotheses on how unions affect unemployment risk.²²

Public/Regional/Political Economy. This category includes research in public finance, work that focuses on the effects of taxes on behavior and government revenues, as well as research that looks at the effects of public expenditures. An excellent example is Raj Chetty, John Friedman, and Emmanuel Saez who are working together and separately to make innovative use of government administrative records to estimate the behavioral responses to both tax and transfer programs.²³ This field also includes projects in political economy, projects on some aspects of education, and projects on the economics of law, including work on the economics of crime.

History. Awards in economic history focus on projects that use or develop historical data sources to test economic theory in significant ways. One example is the team of Price Fishback and Kenneth Snowden; they are gathering and analyzing data on residential mortgages issued between 1920 and 1940 to understand whether or not New Deal interventions in housing finance had any effect on macroeconomic outcomes during this period.²⁴ Jason Long is testing theories about the effects of business cycles on geographic and occupational mobility using a new micro panel data set that he is constructing by linking individuals across four waves of the US Census.²⁵

Behavioral/Experimental. Work in behavioral economics has become increasingly integrated with other fields of economics research, and a number of the awards mentioned above could also be counted as behavioral economics. The program funds projects on a variety of important issues in behavioral economics, often in collaboration with the DRMS program. For example, Levon Barseghyan is using a unique data set on insurance purchases and insurance claims to test

¹⁹ NIH funds more work in health economics, but NSF does fund some work that has general implications beyond health applications.

²⁰ Autor 1227334 and Hansen 1337466, Collaborative Research: Worker Adjustment to International Trade: Evidence from Administrative Data

²¹ Kline 0962362, Labor Supply Models and the External Validity of Randomized Welfare Experiments

²² Shimer, Human Capital and Unions in the Theory of Unemployment.

²³ Saez 1156240, Inequality and Taxation: Evidence from Data, Experiments, and Tax Policy Variation. Friedman 1025490, New Evidence on Tax and Transfer Policies from the Universe of U.S. Tax Records.

²⁴ Fishback 1062079 and Snowden 1061927, Collaborative Research: Institutional Performance and Change during Boom and Bust: The Residential Mortgage Market, 1920 - 1940.

²⁵ Long 1227295, RUI: Geographic and Occupational Mobility During the Great Depression.

implications drawn from behavior models such as reference-dependent preferences.²⁶ The program also funds projects that use lab experiments to test a variety of different kinds of economic models. For example, Guillaume Frechette is conducting a series of experiments on the effects of private monitoring on cooperation in repeated games.²⁷ David Cooper and his collaborators are conducting experiments to test hypotheses about the effects of leadership in coordination games.²⁸

Infrastructure. This category includes three different components. The first is NSF support for large data collection efforts. The second is sponsoring conferences and workshops, and the third is projects designed to assist in the education of future economists. The single largest award made by the Economics Program funds the Panel Study of Income Dynamics (PSID), a longitudinal survey initiated in 1968 of a nationally representative sample for U.S. individuals and the family units in which those individuals reside.²⁹ The panel provides shared-use databases, research platforms, and educational tools on intergenerational and life-cycle measures of economic and social behavior. The data are not available elsewhere (no other data set combines intergenerational data on families and adult children from those families, life course observations on the same families for thirty-seven years, observations on a comprehensive national sample of U.S. families) and they are critical for research on poverty, savings, fertility, labor supply, and intergenerational relations. Although the PSID is used predominantly in economics, sociology and demography, the data are available and have been used throughout the social and behavioral sciences. Articles based on PSID data have appeared in 315 different journals from a variety of other scientific disciplines, including geography, psychology, child development, management and organizational development, survey methods, statistics, gerontology, food and nutrition and epidemiology. The PSID is co-funded by a consortium of government agencies including HHS/ASPE, NIA, NICHD, and HUD. The program also partners with the MMS program and other NSF programs to make awards providing seed funding for new Census Research Data Centers (RDCs), which grant secure access for academics to confidential Census administrative data. The program also contributes to other data infrastructure projects, including the Luxemburg Income Study. Along with Sociology and MMS, the program funds the Luxemburg Income Study (LIS), a consortium of over 30 nations which cooperatively finance a research and data center.³⁰ LIS harmonizes household income micro-data sets collected by each nation and makes the data available to researchers.

Conferences and Workshops. The Economics Program continues to fund a number of different conference and workshop series that meet each year and involve researchers from across the United States. Examples include the

²⁶ Barseghyan 1031136 An Empirical Investigation Into the Nature of Risk Preferences.

²⁷ Frechette 1225779, Infinitely Repeated Games with Private Monitoring: An Experimental Analysis.

²⁸ Cooper 1127704, Leadership and Overcoming Coordination Failure.

²⁹ Brown 0518943, Continuity and Change in American Economic and Social Life: The PSID 2007 – 2011. This award was active during the time period covered by the COV; a new award made in January 2013 is now funding the PSID.

³⁰ 0952663 Smeeding, LMICS: The Luxemburg Middle Income Countries Study.

<p>Stony Brook Summer Program that brings together an international group of distinguished scholars and graduate students from across the U.S. to develop new research ideas in game theory or the Brookings Conference on Economic Activity, which brings leading scholars together to discuss papers on current issues in macroeconomics.</p> <p><u><i>Future Economists</i></u>. The American Economic Association's (AEA) Economic Pipeline Project expands the pool of minority Ph.D. economists through interrelated programs targeted at critical stages in their training and professional development. In the Mentoring Program, students, their mentors, and a selected group of economists participate in an annual conference with formal and informal sessions on research, graduate school and the early years of one's professional career.³¹</p>	
<p>2. Are awards appropriate in size and duration for the scope of the projects?</p> <p>Comments: Standard awards average about \$300,000.00 with about 3 year average duration while dissertation grants averaged about \$16,000.00 and lasted about 1.5 years during the period under review. While it may be desirable to increase the average size of grants, the average award appears appropriate given the budget constraints the program faces.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	Yes
<p>3. Does the program portfolio include awards for projects that are innovative or potentially transformative?</p> <p>Comments: The best evidence for this is in the reviews, panel summaries, and review analyses, since reviewers and program directors look for evidence of transformative research. Panel reviewers' comments indicate that the research being funded is likely to alter the way economic analysis is done, but also shorten the distance across social sciences. To mention just a few, this ranges from research on better ways to conduct randomized trials, identifying the roots of economic development, integration of behavioral insights into game theory and macroeconomics and the statistical analysis of human interactions.</p> <p>Data Source: Jackets</p>	yes
<p>4. Does the program portfolio include inter- and multi-disciplinary projects?</p> <p>Comments: One way to answer this question is to look at how the Economics Program co-funds awards with other programs. During the period under review, Economics co-funded 141 proposals worth about \$9.3 million with several</p>	yes

³¹ 0965700 Mason, The Economics Mentoring Program

<p>disciplines across the Foundation. This information understates the inter-disciplinarity of the program portfolio, because it only includes information on awards that were funded with other programs. The Economics Program has also single funded awards with significant interdisciplinary content.</p> <p>A second way to look at this question is to acknowledge the large impact that other disciplines have on economics. For example, several of the theory and macro projects funded develop new implications and applications of psychological insights to economics. Similarly, there is new theoretical and empirical research on networks as well as political economy. Finally, there is research on the interaction between biology, individual behavior and the social environment.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>5. Does the program portfolio have an appropriate geographical distribution of Principal Investigators?</p> <p>Comments: While there is a concentration of awards in a few states, most of the proposals come from these few states. We encourage the program to analyze if there are disparities in the success rate by location and the reasons for these disparities if they exist.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	Yes
<p>6. Does the program portfolio have an appropriate balance of awards to different types of institutions?</p> <p>Comments: The Economics program works hard to ensure that it has a portfolio of awards that is balanced by institutional types. However, by virtue of the fact that research-intensive PhD granting institutions submit most of the proposals, they get most (80+ percent) of the awards. Minority serving institutions do not get funded mainly because proposals coming out of these institutions are not competitive. Perhaps the program staff may engage in outreach to help these institutions produce competitive proposals. We find that Economics program officers do an excellent job in ensuring that all proposals are fairly reviewed. While we do not find any differences in the data available to us, we encourage the program staff to test for any difference with data over a longer term than we have.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	Yes

<p>7. Does the program portfolio have an appropriate balance of awards to new investigators?</p> <p>NOTE: A new investigator is an investigator who has not been a PI on a previously funded NSF grant.</p> <p>Comments: The program regularly makes awards to new investigators. The funding rate for projects with at least one new PI is significantly lower than the funding rate for projects submitted by PIs who have been previously funded by the NSF. The mean funding rate for projects with at least one new PI is approximately 23 percentage points lower than that of projects submitted by veteran PIs. In evaluating these data, it is important to understand how NSF's data systems label researchers as "New PIs". A researcher is a "New PI" if he or she has not been previously funded by NSF. The data therefore, give us only a partial look at whether or not the program funds young economists. Reviewing the award list shows that many of the awards are made to young investigators. These include not just doctoral dissertation awards and CAREER awards, but also regular awards to promising junior faculty such as John Friedman (Harvard), Yusufcan Masatlioglu (Michigan), Leena Rudanko (Boston U), Silke Forbes (UC San Diego), and Panle Jia (MIT).</p>	Yes
<p>8. Does the program portfolio include projects that integrate research and education?</p> <p>A large number of students are supported by awards.</p> <p>Data Source: Jackets</p>	Yes
<p>9. Does the program portfolio have appropriate participation of underrepresented groups³²?</p> <p>Comments: The data show that under-represented groups are funded at approximately the same rate as the program as a whole. The low funding rate for members of under-represented groups in 2012 is possibly due to an unusually large number of CAREER proposal submissions. CAREER proposals are funded at a lower rate than regular proposals. While the number of proposals received from women and minorities has decreased over the past three years, the percentage of proposals from under-represented groups has remained roughly stable throughout the three-year period. However, we should mention that 18%</p>	Yes

³² NSF does not have the legal authority to require principal investigators or reviewers to provide demographic data. Since provision of such data is voluntary, the demographic data available are incomplete. This may make it difficult to answer this question for small programs. However, experience suggests that even with the limited data available, COVs are able to provide a meaningful response to this question for most programs.

<p>of the awarded proposals have a female as the PI and our analysis of a random sample of proposal suggests that about 17% of the PI's of all proposals are women. The success rate of proposals with women involvement is about 25% that is similar to the overall success rate of proposal (23%). This suggests that the economics program has a balanced regarding gender.</p> <p>We commend the Program for doing an outstanding job insuring participation by women. However, there is evidence that there is under-representation of minority serving institutions in both submission and awards. Proposals from minority serving institutions were low and no proposal from these institutions was funded during this COV cycle. This may reflect the fact that proposals from these institutions are not competitive. We encourage program staff to devise outreach programs to encourage these institutions to submit competitive proposals.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>10. Is the program relevant to national priorities, agency mission, relevant fields and other constituent needs? Include citations of relevant external reports.</p> <p>Comments: The economics program continues to produce research of extreme policy importance. The disaggregated budget shows the amount of money allocated to field in economics directly related to policy and welfare. Forty percent of the research funds in the economics program are allocated to fields dealing with pressing and long-term policy problems (Macro/Financial, Markets, International, Development, Industrial Organization, Environmental Economics, Labor and Public Economics). In addition, basic research currently being funded is likely to have very large policy implications as well.</p> <p>Data Source: Jackets</p>	Yes
<p>11. Additional comments on the quality of the projects or the balance of the portfolio:</p> <p>The quality of the research funded in economics is excellent. If anything, it is remarkable the amount of excellent projects that do not get funded.</p>	

OTHER TOPICS

1. Please comment on any program areas in need of improvement or gaps (if any) within program areas.

In reviewing the portfolio of projects funded by the Economics program, the COV finds that program has a generally balanced portfolio. However, we were struck by the number of highly competitive projects that were not funded because of low overall funding.

The Program staff should be commended for doing an excellent job in ensuring that women submit and receive awards. All the evidence reviewed by the panel suggests a very balanced gender approach. We will also like to see more competitive proposals being submitted by non-highly intensive PhD granting institutions, especially those serving under-represented populations.

We find no evidence of differential award rates by state or type of institution with the data we have, conditional on the quality of the proposals. We recommend, however, that the program staff test this non-differential outcome with longer and larger data set available to the program. Similarly, it would be informative to analyze the wealth of data on the review process to evaluate if there are biases in the process. We find no evidence of bias in the sample of proposals and reviews we have reviewed. A systematic analysis of the review process might help design better policies to promote submissions by under-represented populations.

2. Please provide comments as appropriate on the program's performance in meeting program-specific goals and objectives that are not covered by the above questions.

The economics program has been exceedingly successful in meeting program-specific goals. For example, working with the AEA, the program has been very successful in increasing the supply of female and minority economists in the profession. The openness to new and innovative ideas has aided the development of economic science to what it is today.

2. Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

NSF has generously supported the economics program to the benefit of the research community as well as the economics profession generally. The economics profession is grateful. However, there are areas of concern that we feel the Foundation ought to address in order for the program to continue its excellent performance and possibly improve upon it. Three areas are of particular concern.

Information Gathering and IT Upgrade: One of the frustrating aspects of the COV process is getting appropriate data within a reasonable time frame. More often than not program officers have to manually compute simple statistics from spreadsheets when these could have been automated; there is no tabulation of awards that goes to specific disciplines system-wide except what is gleaned from discipline programs. It will improve the efficiency of all programs if the Foundation will invest in upgrading its IT system to be consistent with the many demands on data gathering, storage, and retrieval (see Section III (3) for further discussion).

Budgeting: Previous COVs have commented on budgetary issues that affect the program. In particular, the system of allocating budget cuts (across the board equal percentage) and budget increases (equal dollar amounts) seem to disadvantage the Economics program with the result that

several very promising and highly competitive proposals in are not funded. We echo the concerns of previous COVs and ask that a more efficient and transparent way of allocating budgets be devised and implemented.

Workload: Previous COVs have commented on the workload of the program staff which continues to increase as budgets get cut and proposals increase. We have made specific recommendation to streamline the review process to reduce the workload. We have also suggested automating the selection and tracking of reviewers---a process that has been adopted by almost all academic journals. This COV is suggesting moving the big infrastructure programs from the disciplines to a Long term Infrastructure Cluster. We feel that the Division should ensure that this does not add to workload to the already over worked staff. At the same time, steps must be taken to keep the high quality of these programs. There is a concern that as infrastructure programs move out of specific disciplines there might be a loss in quality and institutional knowledge.

4. Please provide comments on any other issues the COV feels are relevant.

The design of the COV process should leave a little discretion to the COV members

5. NSF would appreciate your comments on how to improve the COV review process, format and report template.

SIGNATURE BLOCK:

Marco Castillo
Kwabena Gyimah-Brempong

For the Social and Economic Sciences COV
Steven Ruggles, Chair

LAW AND SOCIAL SCIENCES PROGRAM

INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program(s) under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged.

I. Questions about the quality and effectiveness of the program's use of merit review process.

Please answer the following questions about the effectiveness of the merit review process and provide comments or concerns in the space below the question.

<p>QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCESS</p>	<p>YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE</p>
<p>1. Are the review methods (for example, panel, ad hoc, site visits) appropriate?</p> <p>Comments: The review methods are both rigorous and appropriate.</p> <p>Data Source: EIS/Type of Review Module</p>	<p>Yes</p>
<p>Are both merit review criteria addressed in individual reviews?</p> <p>a) The individual reviewers were (almost) uniformly thorough and addressed the criteria.</p> <p>b) In panel summaries? The panel summaries addressed the criteria and also explained divergent rankings and perceptions of the proposals. The summaries also indicated important suggestions for the PI, both in cases where the proposals were funded and unfunded.</p> <p>c) In Program Officer review analyses? The Review Analysis reports provided clear reasons for awarding or declining support for the proposals. In most cases the Program Officer concurred with the sentiment of the panel. In those few cases where the Program Officer's recommendation for awarding or not awarding a project differed from the Panel, the reasons for differing were clearly explained and the COV members agreed with the ultimate decision.</p> <p>Comments: The rigor of review is consistent and high.</p> <p>Data Source: Jackets</p>	<p>Yes</p>

<p>3. Do the individual reviewers' written reviews provide substantive comments to explain their assessment of the proposals?</p> <p>Comments: The individual reviewers consistently identified the merits of the various proposals, ranging from the methodological and theoretical contributions to the innovativeness of the research question and/or study design.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>4. Do the panel summaries provide the rationale for the panel consensus (or reasons consensus was not reached)?</p> <p>Comments: These were thorough and explained disagreements among the panel members.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>5. Does the documentation in the jacket provide the rationale for the award/decline decision?</p> <p>[Note: Documentation in the jacket usually includes a context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), program officer review analysis, and staff diary notes.]</p> <p>Comments: The documentation provided very thorough rationale. The most important are those where the panel recommendation regarding funding differs from the program officers' decisions to fund. Particularly careful readings of those cases with diverse recommendations from the panels and the program officer are clearly explained in the program officers' review analysis reports. Typically, the program officers raise methodological concerns that have been identified by one or more of the individual panel members. Regardless of the reason the program officers' decisions differed from the panel recommendations, the review analysis reports were convincing and diligent in their rationales for making a different decision than what the panel recommended.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>6. Does the documentation to the PI provide the rationale for the award/decline decision?</p> <p>[Note: Documentation to PI usually includes context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), and, if not otherwise provided in the panel summary, an explanation from the program</p>	<p>Yes</p>

<p>officer (written in the PO Comments field or emailed with a copy in the jacket, or telephoned with a diary note in the jacket) of the basis for a declination.]</p> <p>Comments: Documentation to the PIs offered constructive suggestions. In particular, "revise and resubmit" letters typically offered clear and constructive suggestions and led to resubmissions that were not only superior on the merits, but often required significantly less NSF monies (due to cost-cutting recommended in the documentation to the PIs).</p> <p>Data Source: Jackets</p>	
<p>7. Additional comments on the quality and effectiveness of the program's use of merit review process:</p> <p>The merit review process successfully employs leading scholars in the various disciplines that fall under the umbrella of law and social sciences. Predictably, these scholars conduct thorough reviews of the proposals. In those cases where the scholars differ in their overall or partial support (or rejection) of proposals, they explain these in their individual letters and the panel letters. The Program Officers also do an excellent job of summarizing and integrating the proposed studies, and the panel reviews, in their final reports regarding their recommendations.</p>	<p>Yes</p>

II. Questions concerning the selection of reviewers. Please answer the following questions about the selection of reviewers and provide comments or concerns in the space below the question.

<p>SELECTION OF REVIEWERS</p>	<p>YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE</p>
<p>1. Did the program make use of reviewers having appropriate expertise and/or qualifications?</p> <p>Comments: The COV was very pleased and impressed not only with the names on the list of reviewers, but their individual reviews.</p> <p>Data Source: Jackets</p>	<p>YES</p>
<p>2. Did the program recognize and resolve conflicts of interest when appropriate?</p> <p>Comments: They didn't always ultimately agree as panel members, and in some</p>	<p>Yes</p>

<p>cases, the Program Officer disagreed with the Panel Review, but these differences were always very clearly explained.</p> <p>Data Source: Jackets</p>	
<p>Additional comments on reviewer selection: The LSS COV members were very satisfied with the reviewers and their reports. We were also impressed with the competency with which the panels joined their reviews, particularly when they disagreed. And finally, the Program Officers appeared to very capably make the final decisions and to explain them.</p>	

III. Questions concerning the management of the program under review. Please comment on the following:

<p>MANAGEMENT OF THE PROGRAM UNDER REVIEW</p>
<p>1. Management of the program.</p> <p>Comments: The LSS program appears to be very seamlessly managed. The staff is conscientious and committed to having well-respected and dependable scholars across many disciplines conduct thorough reviews. From the LSS COV members' perspective, the Program Officers and the rest of the staff work together extremely well to oversee the decision-making of the funding of the NSF LSS proposals.</p>
<p>2. Responsiveness of the program to emerging research and education opportunities.</p> <p>Comments: Not only does LSS fund many doctoral students' excellent proposals (enhancing their education and research), but most if not all of the grants support doctoral (and in some cases, undergraduate) students' education, allowing the opportunity not only to work on an NSF-funded grant, but to support their educations financially, as well. These are unique and "lifetime" opportunities for most students, preparing them for conducting excellent research and writing successful grants. There are a number of new and exciting areas. For example, one of the dissertation awards is for accountability to citizens in oppressive regimes. A "standard" proposal that was funded is a reconceptualization of civil justice and access to the justice system, and how this can be improved. Notably, much of the LSS-funded projects include collaborations with other programs such as Cultural Anthropology, sociology, Political Science, Science of Technology Studies, social Psychology, Decision Risk management Science, Perception Action Cognition, and Education.</p> <p>The diversity and innovation of the funded proposals (and even many of the unfunded ones) is outstanding. The number of proposals addressing global issues is impressive. The funding of doctoral students' excellent dissertation awards is an effective and relatively inexpensive means of not only encouraging the next generation of scholars, but of allowing great data to be collected (and</p>

published).
<p>3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.</p> <p>Comments: The Program Officers are active at conferences, writing for various newsletters, and visiting numerous universities and communities to describe and advocate for NSF. Although scholars outside of the U.S. are not eligible to receive funding for reviewing NSF proposals, a number of them do so pro bono. Additional attention is given to reach graduate students and assistant professors, to encourage them to apply for NSF funding.</p>
<p>4. Responsiveness of program to previous COV comments and recommendations.</p> <p>Comments: It is highly commendable that LSS has reduced the time it takes to complete reviews at the same time that it has reviewed more applications. Consistent with the two previous COVs we believe there should be one permanent and one rotating program officer instead of two rotating program officers. This would lend more institutional memory to LSS, and LSS is the only SES program without a permanent chair. Institutional memory is important for many reasons, including information on past funding decisions, the budget for LSS, awardees who did not submit their data after funding (and therefore should never receive another NSF grant), and so on. Additionally, while there has been an increase in LSS applications, there is no commensurate increase in funding or staffing. Given the interdisciplinary nature of LSS as a topic, the permanent program officer would, ideally, be someone who is committed to interdisciplinary research.</p>

IV. Questions about Portfolio. Please answer the following about the portfolio of awards made by the program under review.

<p align="center">RESULTING PORTFOLIO OF AWARDS</p>	<p align="center">APPROPRIATE, NOT APPROPRIATE, OR DATA NOT AVAILABLE</p>
<p>1. Does the program portfolio have an appropriate balance of awards across disciplines and sub-disciplines of the activity?</p> <p>Comments: LSS does an excellent job of distributing awards across disciplines and sub-disciplines. Naturally, this must depend on which disciplines and sub-disciplines submit proposals, but even so, the awards are across an impressive number of areas (e.g., political science, sociology, anthropology, law, criminology, criminal justice, economics, decision risk management, and psychology).</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p align="center">Appropriate</p>

<p>2. Are awards appropriate in size and duration for the scope of the projects?</p> <p>Comments: The awards all seemed very appropriate both in terms of size and duration of the projects. It is possible, even likely, that some grantees may need no-cost extensions given what they were trying to accomplish, but this is routine in grants (particularly for people who haven't previously received large grants and don't realize how time-consuming some tasks or access to data will be.) The LSS Program Officers were conscientious in asking applicants to reduce costs and resubmit when proposals were worthy of funding but not necessarily at the cost requested. These resubmissions were always more financially solvent.</p> <p>The funded dissertation awards ranged from \$6,500 to \$25,000. The rejected dissertation applications ranged from \$11,000 to \$29,000. Neither of the early career proposals were funded (one was \$443,000 and the other \$578,000). For the remaining and bulk of the proposals, the "standard" proposals, the funded proposals ranged from \$40,000 to \$350,000, and the unfunded proposals ranged from \$52,000 to \$5,000,000. The LSS program was very judicious in balancing the priority of the topic, the quality of the proposal, and the appropriate funding level for funded projects, projects not funded, as well as allowing resubmittals of proposals with worthy ideas.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Appropriate</p>
<p>3. Does the program portfolio include awards for projects that are innovative or potentially transformative?</p> <p>Comments: The scope and innovativeness of the funded (and even some of the unfunded projects) was extraordinary. Funded standard grants included such diverse projects as eye-witness testimony/identification, a comparison of incarcerated and non-custodial offenders' success, vastly improved homicide data, international anti-trust law impacts, and the careers of lawyers. Funded dissertation grants included research on Nevada judges' sentencing, the impact of written laws in cultural practices, and how to improve official disclosure of children victimized by abuse in China.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>4. Does the program portfolio include inter- and multi-disciplinary projects?</p> <p>Comments: Given that "Law and Social Science" by definition includes many disciplines, it is not surprising that the proposals are not only submitted (and</p>	<p>Yes</p>

<p>funded) from a wide range of disciplines. Additionally, the LSS proposals often include individual scholars who conduct inter-disciplinary work and/or co-investigators from varying disciplines.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>5. Does the program portfolio have an appropriate geographical distribution of Principal Investigators?</p> <p>Comments: The LSS program funds research from institutions/scholars across the United States. The geographical distribution seems consistent, especially given that research/doctorate-granting universities are not equally distributed geographically.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Yes</p>
<p>6. Does the program portfolio have an appropriate balance of awards to different types of institutions?</p> <p>Comments: It is not surprising that four-year colleges are underrepresented among funded institutions or that there is a lack of applications from such institutions, given that scholars from these institutions tend to have high teaching loads and disproportionately less support for writing and running funded research. In light of these circumstances, the extent to which four-year colleges nevertheless receive NSF/LSS funding is laudable. So too is the outreach to four-year educational institutions by the LSS staff. Given both the administrative challenges that such institutions face when running large research projects and the limited number of LSS staff, however, it would be acceptable for LSS staff to give such outreach a lower priority. Instead LSS program officers might consider outreach to HBCUs and HSIs (MSIs) as a way of encouraging proposals from these institutions. The current LSS program officers follow practices committed to outreach to four-year colleges by not agreeing to go to the typical grant-receiving universities unless surrounding smaller and four-year colleges are included in the outreach workshops and presentations.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>YES, within reason</p>
<p>7. Does the program portfolio have an appropriate balance of awards to new investigators?</p>	

<p>NOTE: A new investigator is an investigator who has not been a PI on a previously funded NSF grant.</p> <p>Comments: As expected, a number of LSS awards went to seasoned, highly respected, and prolific scholars with prior NSF funding (e.g., Hagan and Nagin). Yet, impressively, more than four out of five LSS-funded proposals were to new (at least to NSF-funded) PIs. This indicates that LSS has managed to strike a balance between continuing to fund excellent projects by renowned scholars, on the one hand, and ensuring that the LSS program does not become an exclusive “club” that exhibits favoritism toward familiar names, on the other. Rather, LSS funding decisions are driven by the goal of funding the best research, regardless of existing scholarly reputation or prior NSF funding experience, and the result has been funding for a combination of both new applicants and established PIs.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>8. Does the program portfolio include projects that integrate research and education?</p> <p>Comments: The projects are by necessity about research, but they also include many students, particularly graduate students, providing invaluable educational (as well as research) experience. Publications from the studies are clearly educational, and findings from a number of the LSS-funded grants have been reported in the mainstream media (as noted by COV members during our review) as well as in scholarly, peer-reviewed journals.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>9. Does the program portfolio have appropriate participation of underrepresented groups³³?</p> <p>Comments: LSS does an exceptionally good job of achieving participation by women. For standard proposals, the grant rates for male and female PIs are only 0.2% apart. For dissertation grants, female applicants have a noticeably higher success rate than male applicants (35.3% vs. 25.0%).</p> <p>For standard proposals, minority participation is also healthy; the difference between the award rates for minority and nonminority applicants is less than</p>	<p>Yes</p>

³³ NSF does not have the legal authority to require principal investigators or reviewers to provide demographic data. Since provision of such data is voluntary, the demographic data available are incomplete. This may make it difficult to answer this question for small programs. However, experience suggests that even with the limited data available, COVs are able to provide a meaningful response to this question for most programs.

<p>3% (17.1% vs. 19.8%). At the DDRIG level, the award rate for minority applicants lags more seriously behind that of nonminority applicants (33.4% vs. 20%), even though the number of minority DDRIG applicants has risen over the 2010-12 period. Outreach efforts that promote high-quality DDRIG applications from minority members may help to close this gap.</p> <p>MSIs have a lower award rate than non-MSIs for both standard proposals (12.3% vs. 20.1%) and DDRIGs (26.1% vs. 31.2%). However, the number of proposals from MSIs is simply not that high in absolute terms, meaning that variations in the award rate reflect just a difference of two or three awards. Consequently, there is little basis for concluding that MSIs lack appropriate participation.</p> <p>Notably, with the increased number of LSS applications by racial/ethnic minorities, it is likely that there will be a lag time before increases in minority awards are given. More specifically, the average number of submissions before an application is successful is 2.3 times, therefore it may take a few years before the commensurate increase in awards to minority applicants can be seen. The current program officers are engaged with the Racial democracy Crime and Justice Network.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>10. Is the program relevant to national priorities, agency mission, relevant fields and other constituent needs? Include citations of relevant external reports.</p> <p>Comments: The range of projects funded by LSS reflects the extent to which law and legal systems (1) are fundamental in the contemporary world and (2) cut across disciplinary divides. LSS is inherently well positioned to support interdisciplinary research and has in fact done so extensively. LSS is also organized and managed in such a way that it advances both national priorities and the NSF mission (elaborated at http://www.nsf.gov/news/strategicplan/nsfstrategicplan_2011_2016.pdf). It has supported projects that can inform and improve the conduct of foreign policy and the pursuit of national security goals, such as data collection on the real-world impact of transitional justice mechanisms in post-conflict settings.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>11. Additional comments on the quality of the projects or the balance of the portfolio: Both the composition of the review panel and the balance of the portfolio demonstrate very strong support for interdisciplinarity.</p>	

OTHER TOPICS

1. Please comment on any program areas in need of improvement or gaps (if any) within program areas.

Serious consideration should be given to making one LSS program officer permanent, for a variety of reasons, including institutional memory, cultivation of stronger relationships with the law and social science research community, continuity in achievement of program objectives, and articulation of LSS interest in NSF decisions, including but not limited to resource allocation. LSS is the the only programs in SES without a permanent program officer. Only three SES programs (Political Science, STS, and Economics) have more regular proposals submitted than LSS, and only three SES programs (Political Science, Sociology, and STS) have more dissertation proposals submitted than LSS.

2. Please provide comments as appropriate on the program's performance in meeting program-specific goals and objectives that are not covered by the above questions.

A consequence of LSS's heavy support of interdisciplinary projects is not only that it co-funds a substantial number of projects with other programs (e.g., Sociology, Economics, Political Science), but there is also a net outflow from LSS to other programs (i.e., LSS contributes more co-funding to projects in other programs than it receives back in co-funding from other programs). Financial support for LSS should be bolstered or at least maintained to reflect the fact that LSS's strong support for interdisciplinary research means that it is effectively subsidizing other programs within SBE.

3. Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

The LSS performance is remarkable on any standard, but it is particularly remarkable given the workload. One way of saving considerable time would be to have the Review Analysis reports use a "boiler plate" for cases where both the Panel and the Program Officer recommended "do not fund."

4. Please provide comments on any other issues the COV feels are relevant.

LSS is an incredibly well run program. It is hard to imagine a more qualified or dedicated staff.

5. NSF would appreciate your comments on how to improve the COV review process, format and report template.

NSF program staff was accessible and helpful throughout the process. COV members should have direct access to printers; printer access is needed throughout the process, and it is neither efficient nor sensible for COV members to liaison with program staff every time they need to print a piece of paper. COV members are likely to need paper as well as electronic documents.

SIGNATURE BLOCK:

Joanne Belknap
David Law
Isaac Unah

For the Social and Economic Sciences COV
Steven Ruggles, Chair

METHODOLOGY, MEASUREMENT AND STATISTICS

INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program(s) under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged.

I. Questions about the quality and effectiveness of the program's use of merit review process. Please answer the following questions about the effectiveness of the merit review process and provide comments or concerns in the space below the question.

<p>QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCESS</p>	<p>YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE</p>
<p>1. Are the review methods (for example, panel, ad hoc, site visits) appropriate?</p> <p>Comments: The Methodology, Measurement and Statistics (MMS) Program relies on a two-tiered review process for the majority of its proposals. Ad hoc external reviewers are recruited and once these reviews are available then proposals are discussed by panels (where at least two panel members submit additional full reviews). A subset of the regular proposals is also reviewed by other programs within SES (or occasionally within another NSF unit). Data supplied in the MMS narrative indicates that the average number of reviews per proposal is over 7; with a very large majority having 5 or more reviews. We believe the use of both ad hoc and panel reviews is appropriate. The panel discussion is extremely important because of the interdisciplinary nature of the MMS program. Proposals that are not highly regarded within a particular discipline may be highly regarded by the MMS panel (or vice versa).</p> <p>Other types of proposals (e.g., conferences, dissertation awards) are reviewed only by members of the panel. In addition, proposals the panel finds meritorious that may be of interest to the Federal statistical agencies (e.g., those focused on survey methods research) are shared with agency representatives. The Federal statistical agencies provided approximately \$250,000 per year to support such projects during the review period.</p> <p>In summary the COV believes the review methods used by MMS are appropriate given the nature and the goals of the program.</p>	<p>Yes</p>

<p>Data Source: EIS/Type of Review Module</p>	
<p>2. Are both merit review criteria addressed</p> <p>a) In individual reviews? Data provided by the Program Officer in the program narrative indicates that the large majority of reviewers address both criteria. On average more than 5 reviews address both merit review criteria. As explained in the Program's statistical narrative the average number reported by the NSF data system is an underestimate of the degree to which reviewers meet this requirement because some reviewers may address both criteria in a summary rather than in the appropriate place.</p> <p>b) In panel summaries? The two criteria were consistently addressed in all panel summaries examined by the COV.</p> <p>c) In Program Officer review analyses? The two criteria were consistently addressed in all review analyses examined by the COV.</p> <p>Data Source: Jackets</p>	<p>YES</p> <p>YES</p> <p>YES</p>
<p>3. Do the individual reviewers giving written reviews provide substantive comments to explain their assessment of the proposals?</p> <p>Comments: We examined a large number of reviews for the sampled proposals. There is considerable variation in length and level of details of the reviews but overall, we found the reviews to be useful and informative.</p> <p>Recommendation: NSF should consider developing a system for maintaining records of the timeliness and quality of reviews provided. This is now becoming common in journals where associate editors can rate the timeliness and utility of every referee report on a simple 3-point scale. A system like this for NSF might be very helpful in developing an institutional resource that will help program managers with the difficult task of identifying appropriate reviewers.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>4. Do the panel summaries provide the rationale for the panel consensus (or reasons consensus was not reached)?</p> <p>Comments: The panel summaries reviewed by the COV consistently summarized the proposals' strengths and weaknesses and the rationale for the panel's recommendation regarding funding.</p> <p>Data Source: Jackets</p>	<p>Yes</p>

<p>5. Does the documentation in the jacket provide the rationale for the award/decline decision?</p> <p>[Note: Documentation in the jacket usually includes a context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), program officer review analysis, and staff diary notes.]</p> <p>Comments: The review analyses that we examined provided a very clear summary of the ad hoc and panel reviews followed by a careful description of the rationale for the award/decline decision.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>6. Does the documentation to the PI provide the rationale for the award/decline decision?</p> <p>[Note: Documentation to PI usually includes context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), and, if not otherwise provided in the panel summary, an explanation from the program officer (written in the PO Comments field or emailed with a copy in the jacket, or telephoned with a diary note in the jacket) of the basis for a declination.]</p> <p>Comments: As described above the individual reviews are generally useful for the PI. Each PI also receives a context statement summarizing the panel's approach and providing fairly detailed information about the number of proposals reviewed and the number recommended for funding. In addition, our review of the proposals provided in e-Jacket identified several instances in which the program officer provided additional feedback to the PI beyond the review reports, panel summary and context statement. One nice feature is that, where appropriate, decline decisions are also accompanied by suggestions from the program office for improvement (and possible resubmission) of the proposal.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>7. Additional comments on the quality and effectiveness of the program's use of merit review process:</p> <p>No additional comments.</p>	

II. Questions concerning the selection of reviewers. Please answer the following questions about the selection of reviewers and provide comments or concerns in the space below the question.

SELECTION OF REVIEWERS	YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE
<p>1. Did the program make use of reviewers having appropriate expertise and/or qualifications?</p> <p>Comments: MMS reviewers include both ad hoc reviewers and panelists. During the review period 29 individuals served on the panel. These individuals are all methodology researchers and they cover a wide range of social science disciplines (economics, psychology, statistics, geography, political science, sociology). As the MMS program is focused on supporting research that is likely to be useful across multiple disciplines it is extremely important to have this broad representation. Those individuals who served on the MMS panel during the review period and are known to the COV reviewers (more than one-third) are extremely strong methodological researchers. The panel reviewers represent many top academic programs.</p> <p>In all cases we examined the ad hoc reviewers (those who were invited to review and those that provided reviews) seem appropriate. They are experts in different aspects of the subject matter covered by the proposals.</p> <p>Data Source: Jackets</p>	Yes
<p>2. Did the program recognize and resolve conflicts of interest when appropriate?</p> <p>Comments: The review summaries and Form 7 reports indicate that the MMS program director is diligent about following appropriate protocols for identifying conflicts of interest and reporting these when they occur. The number of individuals with conflicts is reported on the review summary. The Form 7 report of reviewers clearly identifies panel members or invited ad hoc reviewers with a conflict of interest.</p> <p>Data Source: Jackets</p>	Yes
<p>Additional comments on reviewer selection: None</p>	

III. Questions concerning the management of the program under review. Please comment on the following:

MANAGEMENT OF THE PROGRAM UNDER REVIEW

1. Management of the program.

Comments: The COV finds that Program Director Dr. Cheryl Eavey, does an outstanding job managing the MMS program. From the quality of the panels to the quality of the review analyses she is extremely effective at every step of the review process. Director Eavey effectively uses her limited resources to maximum effect by partnering with other programs within NSF and by partnering with the Federal statistical agencies where appropriate.

The NSF performance goal is that 70% of proposals have funding decisions within six months of proposal receipt or deadline or target date. Within MMS during the review period 80% of the proposals received decisions within six months easily surpassing the performance goal. Data provided indicates that the average "dwell time" for MMS proposals during the three-year review period is less than six months. The average dwell time for award proposals is longer than the average dwell time for declined proposals. There are specific reasons why one might expect resolution of some MMS awards to take longer than six months. Many MMS proposals are reviewed by disciplinary programs in addition to MMS which can add processing time. In addition, the MMS Program Director seeks funding from other programs (and the Federal statistical agencies) which can add time to the process.

2. Responsiveness of the program to emerging research and education opportunities.

Comments: MMS has a long history of partnering with other programs in NSF. This includes the disciplinary programs in SES and the Statistics and Probability Program in the Division of Mathematical Sciences. Given the increased focus (at NSF and beyond) on interdisciplinary research this puts MMS in an excellent position to take advantage of emerging opportunities through partnerships with other units. Examples during the review period include MMS financial contributions to support a CAREER proposal from the Engineering Directorate and a cyber-infrastructure project (submitted to the Foundation's Software Infrastructure for Sustained Innovation (SI2) competition).

A fruitful partnership that has allowed MMS to have a significant impact on an important research area is its partnership with the Federal statistical agencies. Proposals can be submitted to MMS for consideration by the agencies. These typically focus on survey methodology topics. These proposals receive the usual MMS ad hoc and panel review and then meritorious proposals are further reviewed by a panel of agency representatives. During the review period 12 projects received nearly \$750,000 from the federal agencies to supplement MMS funds.

3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.

Comments: MMS tries to attract a broad array of methodological research proposals. These research proposals, though typically motivated by research in one disciplinary area, will often have significant impact on other disciplines. The data we have reviewed suggests that the program is successful in attracting a wide range of research topics. The Program Director attempts to balance projects in her portfolio across disciplinary areas and across different types of investigators (junior/senior investigators, participants from underrepresented groups). The list of funded projects (provided as an appendix to the programs statistical narrative) suggests good success in this effort.

The Program Director actively seeks to develop an MMS community through the support of workshops and through her participation in other NSF-sponsored activities and her attendance at national meetings. Input from members of that community informs the program offer's prioritization process.

4. Responsiveness of program to previous COV comments and recommendations.

Comments: The Program Director was responsive to the comments and recommendations of the previous COV. Two of the recommendations concerned the COV review process and these were forwarded to appropriate NSF staff. A third recommendation was that NSF find a way to provide increased funding for the Program. This too is outside the control of the Program Director though we note that she works tirelessly to attract funds from other sources. The final recommendation encouraged the Program Director to continue to develop an MMS community and also encouraged some specific research directions. The Program Director did try to encourage the development of a cross-disciplinary methodological community during the review period through the funding of a workshop focused on fMRI analysis for the social and behavior sciences. She hopes to continue to fund other cross-disciplinary workshops in the future and disseminate the papers widely. The Program Director's statistical narrative provides specific examples of projects funded in areas identified by the previous COV (e.g., in space-time modeling and survey research). It remains important however to maintain a balance across methodological areas and the Program Director works hard to achieve this goal.

IV. Questions about Portfolio. Please answer the following about the portfolio of awards made by the program under review.

<p style="text-align: center;">RESULTING PORTFOLIO OF AWARDS</p>	<p style="text-align: center;">APPROPRIATE, NOT APPROPRIATE, OR DATA NOT AVAILABLE</p>
<p>1. Does the program portfolio have an appropriate balance of awards across disciplines and sub-disciplines of the activity?</p>	<p>Yes</p>

<p>Comments: The MMS portfolio supports methodological research across a large number of scientific domains. Among awards where MMS is the primary funding program we find awards that support methodological development in sociology (e.g., analysis of social networks, longitudinal data analysis), psychology (e.g., psychometrics, analysis of response times), geographic and spatial sciences (e.g., point process models), economics (e.g., time series analysis) and statistics (e.g., survey methodology).</p> <p>During the review period MMS was the program within SES that participated as a secondary funder most often (94 proposals). The awards funded in this manner are also well balanced among the various disciplinary programs within SES (Economics, Sociology, and Political Science), other interdisciplinary program within SES (DRMS, LSS), programs in BCS (Cultural Anthropology, Geographic and Spatial Sciences, Perception, Analysis and Cognition) and occasionally programs from outside the SBE Directorate.</p> <p>The COV is especially impressed by the Program Directors ability to achieve an appropriate balance across the full spectrum of social and behavioral sciences.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>2. Are awards appropriate in size and duration for the scope of the projects?</p> <p>Comments: During the review period there are 49 awards for which MMS is the primary funder. The average award amount is \$143,000 with 16 between \$0 and \$100,000, 14 awards between \$100,000 and \$200,000, 10 awards between \$200,000 and \$300,000, 7 awards between \$300,000 and \$400,000 and 2 larger awards (one is ongoing support for the Committee on National Statistics and the other is a large survey project that is partly funded by the Federal statistical agencies). There are also 49 regular awards for which MMS is a secondary contributor. The average MMS contribution is \$53,000 for these proposals. In terms of duration most of the regular MMS awards are two or three year awards. The size and duration of awards appears to be appropriate for the mission and goals of the program.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>YES</p>
<p>3. Does the program portfolio include awards for projects that are innovative or potentially transformative?</p> <p>Comments: The Program Director identifies a number of awards that reviewers have identified as potentially transformative. Of these we</p>	<p>Yes</p>

<p>especially note several projects focused on attempts to approve survey data collection which is the core of much work in the social and economic sciences (SES-1026225, SES-1025645, SES-1067949). The COV reviewers have also examined the portfolio of funded proposals and note numerous state-of-the-art proposals that seem to us potentially transformative. One example is the proposal by Vandererckhove (SES-1230118) that combines nonlinear cognitive process models with traditional structural equation models.</p> <p>Data Source: Jackets</p>	
<p>4. Does the program portfolio include inter- and multi-disciplinary projects?</p> <p>Comments: As has been noted in several other locations in this review it is an explicit goal of MMS to support research projects that are of interest across disciplinary boundaries. Though some of these projects are motivated and funded within a single discipline, MMS funds many inter- disciplinary and multi-disciplinary projects. Examples can be found among MMS primary awards (where for example a project that jointly supports a statistician and a political scientist was funded) and among the many instances in which projects are jointly funded by two or more programs. MMS is a secondary funder for 94 projects during the review period, more than any other program in SES.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Yes</p>
<p>5. Does the program portfolio have an appropriate geographical distribution of Principal Investigators?</p> <p>Comment: MMS has funded programs in a large number of states. A large number of proposals are funded in states that have a large number of Ph.D. granting institutions (e.g., Michigan, North Carolina, New York, California, Illinois, Texas).</p> <p>There are some awards to EPSCoR states (5 during the review period). The funding rate for proposals from PIs in EPSCoR states is significantly lower than the funding rate for proposals from PIs in non-EPSCoR states. Of course, the highest priority is to fund the most meritorious research. It is our understanding that the MMS Program Director seeks EPSCoR support when appropriate.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Yes</p>

<p>6. Does the program portfolio have an appropriate balance of awards to different types of institutions?</p> <p>Comments: The majority of the funded proposals (102 out of 130) are from research-intensive PhD granting institutions (the top 100 research institutions). MMS awards about 10% of its funds to institutions characterized as "business, state and local, foreign, other". These are primarily survey companies and research organizations. The balance of awards across different institution types is as expected.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Yes</p>
<p>7. Does the program portfolio have an appropriate balance of awards to new investigators?</p> <p>NOTE: A new investigator is an investigator who has not been a PI on a previously funded NSF grant.</p> <p>Comments: The MMS funding rate for new investigators during the review period was about 15%. This is a reasonable rate and close to (though a bit below) the NSF average (17-19% during the period).</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Yes</p>
<p>8. Does the program portfolio include projects that integrate research and education?</p> <p>Comments: It is common for MMS supported research projects to include support for undergraduate students, graduate students and postdoctoral researchers. During the three-year review period MMS projects supported an average of 54 graduate students, 7 undergraduate students, and 2 postdoctoral researchers per year.</p> <p>MMS also provides some support for doctoral dissertation research proposals. During the three-year review period MMS supported 9 such awards. MMS was a secondary funder for a CAREER award in the Engineering Directorate (such awards integrate research and education).</p> <p>Given the limited resources available to MMS, this is strong support for research efforts that contribute to training the next generation of scientists.</p> <p>Data Source: Jackets</p>	<p>Yes</p>

<p>9. Does the program portfolio have appropriate participation of underrepresented groups³⁴?</p> <p>Comments: Women were involved in 27% of the MMS proposals. The funding rate for proposals with women involved was 33% which is slightly higher than the 27% overall funding rate for the program. This is also a little higher than the overall funding rate within SES for proposals with women involved which is 30%.</p> <p>Minorities were involved in 9.6% of MMS proposals. The funding rate for proposals with minority involvement was 30% which is a little higher than the 27% overall funding rate for the program. This is also higher than the overall funding rate within SES for proposals with minority involvement which is 23%.</p> <p>It is clear that the MMS review process is fair when it comes to underrepresented groups.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Yes</p>
<p>10. Is the program relevant to national priorities, agency mission, relevant fields and other constituent needs? Include citations of relevant external reports.</p> <p>Comments: MMS supports methodological or statistical research. The funded projects contribute to society primarily through the application of developed methods in allied fields. Examples include a project (SES-0961971) developing improved methods for drawing causal inferences from observational studies which are important to public health and a project (SES-0960763) facilitating US involvement in a transnational database enabling the study of factors influencing income distribution in developed economies.</p> <p>There are at least two ways in which MMS projects directly address important needs of the federal government. First, there are a number of survey research projects that are supported by MMS and the Federal statistical</p>	<p>Yes</p>

³⁴ NSF does not have the legal authority to require principal investigators or reviewers to provide demographic data. Since provision of such data is voluntary, the demographic data available are incomplete. This may make it difficult to answer this question for small programs. However, experience suggests that even with the limited data available, COVs are able to provide a meaningful response to this question for most programs.

<p>agencies. These projects develop methods to enhance the government surveys that play a critical role in a large number of federal programs. Second, MMS provides financial support to the National Academies of Science standing Committee on National Statistics. This body works with a range of federal agencies to support their priorities. The panel and workshop reports generated by the Committee are widely disseminated.</p> <p>Data Source: Jackets</p>	
<p>11. Additional comments on the quality of the projects or the balance of the portfolio: No additional comments.</p>	

OTHER TOPICS

1. Please comment on any program areas in need of improvement or gaps (if any) within program areas.

The COV is extremely impressed by the coverage of the MMS program. Program Director, Eavey, does an excellent job of covering a wide range of methodological research areas and a wide range of disciplines with limited resources. Dr. Eavey continues to express interest and enthusiasm for creating a "Measurement, Methods and Statistics" community. We support this initiative and strongly encourage her to continue her efforts in this area. A workshop focused on fMRI methods which are of interest across the social sciences was funded during the review period. Additional workshops that cover topics of interest across different domains would be valuable especially if the results are widely disseminated.

The COV notes that the increased interest in, and enthusiasm for, "Big Data" in all aspects of science, including the social sciences, provides an opportunity for MMS. This will likely involve projects that incorporate computational expertise (and perhaps partnerships with the CISE Directorate). The COV strongly encourages MMS to embrace this opportunity.

Recommendations: The COV encourages the Program Director to continue efforts to develop a cross-disciplinary MMS community. The COV encourages MMS to participate actively in "Big Data" activity through support of proposals in this broad area and through partnerships with other relevant programs.

2. Please provide comments as appropriate on the program's performance in meeting program-specific goals and objectives that are not covered by the above questions.
No additional comments.

3. Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

Methodological research plays a critical role in social and economic science research and the degree to which this is true will only increase in coming years. There is interest across all disciplines in leveraging the large amounts of data that are becoming available. The National Science Foundation has a gem of a program in MMS, where methodology is developed in a way that insures it benefits disciplinary research in the social sciences and beyond. Dr. Eavey provides outstanding leadership for the MMS program. It would be ideal for NSF to provide additional financial support for the MMS

program. Of course, we recognize that this will be difficult to achieve in the current budget climate. With that being said, we endorse a suggestion made by the previous COV that NSF (and especially SBE) stress and highlight the role of methodological research in the various special initiative programs that it offers and, to the degree that it is feasible, offer special funding tracks for relevant methodological developments. We would also like to encourage NSF to strengthen the ties between research and education by providing more opportunities for postdoctoral positions and CAREER awards in MMS and the social sciences. At the current funding levels these are too expensive to fund.

Recommendations: The COV recommends that NSF find ways to provide additional financial support for the MMS program through either direct funds or through targeted methodology funding in various special initiatives. The COV encourages NSF to provide more opportunities for postdoctoral positions and CAREER awards in MMS and the social sciences more broadly.

4. Please provide comments on any other issues the COV feels are relevant.
No additional comments.

5. NSF would appreciate your comments on how to improve the COV review process, format and report template.

The COV is appreciative of the effort that went into producing the program narrative that we received. The information provided by Program Director, Dr. Cheryl Eavey, and Science Assistant, Steve Deitz, was extremely helpful as we addressed the template questions. They were also extremely generous with their time during our visit and extremely responsive to requests for additional data. The support and training (e.g., the pre-visit Webinar) provided by the SBE Directorate and the SES Division were first rate.

The template provides a useful guide for assessing the program. A couple of items are a bit vague though and more specific information would be helpful. Question 2 in Part III asks about responsiveness of the program to emerging research and educational opportunities. It was not obvious to us as reviewers what was being referred to here. Question 10 in Part IV asks about relevance of the program to "national priorities, agency mission, relevant fields and other constituent needs." Here too it is difficult to discern the intent of the question.

The data provided to reviewers was extremely helpful but could be improved by incorporation of relevant comparative data throughout. For example, it should be standard practice to compare funding rates for different groups (e.g., underrepresented minorities) to the base funding rate in the program, to the funding rates in other programs, and to NSF-wide statistics. Such comparisons would enable more strategic analyses to be carried out both internally and by the COV. Also, more informative graphic displays would be welcome. For one example, information about the distribution of award lengths would be preferable to a bar chart of the average length each year.

SIGNATURE BLOCK:

David Budescu
Hal Stern

For the Social and Economic Sciences COV
Steven Ruggles, Chair

POLITICAL SCIENCE PROGRAM

INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program(s) under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged.

I. Questions about the quality and effectiveness of the program's use of merit review process.

Please answer the following questions about the effectiveness of the merit review process and provide comments or concerns in the space below the question.

<p>QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCESS</p>	<p>YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE</p>
<p>1. Are the review methods (for example, panel, ad hoc, site visits) appropriate?</p> <p>Comments: The number of reviews is very high, an average for all submission of about 8, slightly higher for successful applications. Many of the reviews are very detailed, with assessments of feasibility and impact, and very constructive suggestions.</p> <p>Data Source: EIS/Type of Review Module</p>	<p>Yes</p>
<p>Are both merit review criteria addressed</p> <ul style="list-style-type: none"> a) In individual reviews? b) In panel summaries? c) In Program Officer review analyses? <p>Comments: Both criteria are virtually always addressed in panel summaries and program officer analyses; they are both very often but not always addressed (particularly broader impact) in individual reviews. New guidelines to PIs provide more explicit guidance in addressing broader impact, which should help. APSA might be enlisted in an effort to help scholars better to articulate the broader impact of research for communities beyond the academy.</p> <p>Data Source: Jackets</p>	<p>Yes for panel summaries and program officer analyses; usually yes for individual reviews.</p>

<p>3. Do the individual reviewers giving written reviews provide substantive comments to explain their assessment of the proposals?</p> <p>Comments: Often they are quite detailed, but even the briefest reviews are usually well on point and helpful.</p> <p>Data Source: Jackets</p>	Yes
<p>4. Do the panel summaries provide the rationale for the panel consensus (or reasons consensus was not reached)?</p> <p>Comments: Even though the panel summaries are brief, they are very effective in identifying the key issues – positive and negative – in the proposals. Other programs, however, have a template for panel review summaries that convey the panel assessments of intellectual merit and broader impact more explicitly. Although the Political Science panels are conscientious in addressing both, the program might find it useful for the record to have a more schematic layout for the panel review summaries.</p> <p>Data Source: Jackets</p>	Yes
<p>5. Does the documentation in the jacket provide the rationale for the award/decline decision?</p> <p>[Note: Documentation in the jacket usually includes a context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), program officer review analysis, and staff diary notes.]</p> <p>Comments: The program officer review analyses were excellent, both in providing summaries of the reviewers' reports and the panel discussions and in laying out point on which the officers agree and disagree with reviewers' and panels' assessments.</p> <p>Data Source: Jackets</p>	Yes
<p>6. Does the documentation to the PI provide the rationale for the award/decline decision?</p> <p>[Note: Documentation to PI usually includes context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), and, if not otherwise provided in the panel summary, an explanation from the program officer (written in the PO Comments field or emailed with a copy in the jacket, or telephoned with a diary note in the jacket) of the basis for a declination.]</p> <p>Comments: Investigators receive more and more useful feedback than they do</p>	Yes

<p>in most funding competitions.</p> <p>Data Source: Jackets</p>	
<p>6. Additional comments on the quality and effectiveness of the program's use of merit review process:</p> <p>In the combination of reviews by panels, ad hoc reviewers, and program officers, the NSF peer review process remains the gold standard for impartial and detailed assessment of social scientific research.</p>	

II. Questions concerning the selection of reviewers. Please answer the following questions about the selection of reviewers and provide comments or concerns in the space below the question.

<p>SELECTION OF REVIEWERS</p>	<p>YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE</p>
<p>1. Did the program make use of reviewers having appropriate expertise and/or qualifications?</p> <p>Comments: The combination of panelist reviews and ad hoc reviews provides both inside the subfield and outside the subfield perspectives on the research, which broadens the assessment of intellectual merit and broader impact.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>2. Did the program recognize and resolve conflicts of interest when appropriate?</p> <p>Comments: The program goes out of its way to recognize and resolve conflicts of interest. The program provides very explicit guidelines and examples to make sure that reviewers, panelists, and program officers recused themselves from decisions in instances of conflict. There are several examples in the eJackets of recusals of reviewers, panelists, and program officers.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>Additional comments on reviewer selection:</p>	

<p>The Political Science program has been proactive – commendably so – in recruiting reviewers and panelists from underrepresented groups (particularly women) and from a broad range of institutions. In addition to representation in decision making, participation in NSF's review processes has an educative function. The program's policies serve to broaden the knowledge of the requirements of effective proposal making and effective research.</p>	
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III. Questions concerning the management of the program under review. Please comment on the following:

MANAGEMENT OF THE PROGRAM UNDER REVIEW

1. Management of the program.

Comments: Despite the substantial increase in applications, the Political Science program maintains a dwell time just under six months (5.7), so applicants receive a timely response. The program leadership continues to make extraordinary efforts to develop new constituencies, to respond to needs for training and information, and to be visible to intellectual leaders in the discipline, both current and emerging. The program leadership is considering ways to manage the workload of the dissertation grants program more efficiently, both of which strike us as promising and potentially even more effective (particularly the 1+1 idea of a second round competition for invited resubmissions).

2. Responsiveness of the program to emerging research and education opportunities.

Comments: The program has been instrumental in developing new vehicles and approaches in research and education, including advanced training in genetics and quantitative and qualitative analysis, timesharing platforms for research, and workshops in emerging research areas. The current leadership has been especially eager to cultivate more systematic approaches in qualitative research.

3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.

Comments: Highly appropriate to the task. The program leadership keeps its ear to the ground in the discipline and in cognate disciplines, responds well to good ideas, and cultivates areas that are important to the scientific progress of the discipline but do not yet have a large constituency. It is also very attentive to inclusiveness.

4. Responsiveness of program to previous COV comments and recommendations.

Comments: The previous COV report was very positive, and the program leadership was very open

and responsive to the few concerns that the COV raised.

IV. Questions about Portfolio. Please answer the following about the portfolio of awards made by the program under review.

<p align="center">RESULTING PORTFOLIO OF AWARDS</p>	<p align="center">APPROPRIATE, NOT APPROPRIATE, OR DATA NOT AVAILABLE</p>
<p>1. Does the program portfolio have an appropriate balance of awards across disciplines and sub-disciplines of the activity?</p> <p>Comments: The distribution of submissions by subfield varies from year to year, but over the period of a few years the distribution of awards reflects the distribution of applications.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Appropriate</p>
<p>2. Are awards appropriate in size and duration for the scope of the projects?</p> <p>Comments: The awards are appropriately scaled given the evaluations of the merits of the proposals by panels and program officers.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Appropriate</p>
<p>3. Does the program portfolio include awards for projects that are innovative or potentially transformative?</p> <p>Comments: NSF Political Science supports much of the most innovative work in the field. With multiyear research and publication cycles, the transformative impact of the research is difficult to assess as it occurs, but the potential is there. Political science also supports several platforms that promote innovation by enabling young scholars and mature scholars to try out new ideas and methods.</p> <p>Data Source: Jackets</p>	<p>Appropriate</p>

<p>4. Does the program portfolio include inter- and multi-disciplinary projects?</p> <p>Comments: A number of the proposals in the Political Science portfolio (e.g., TESS) received joint reviews and receive funding from other NSF programs as well (within and beyond SES). Several of the large platform projects (e.g., ANES) have been active in outreach to scholars in cognate disciplines.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	Appropriate
<p>5. Does the program portfolio have an appropriate geographical distribution of Principal Investigators?</p> <p>Comments: The geographic distribution of applications and awards reflects the size of populations and the density of research universities in the several states. NSF Political Science goes out of its way, however, to encourage applications from institutions in smaller states and attends to geographic distribution in making awards.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	Appropriate
<p>6. Does the program portfolio have an appropriate balance of awards to different types of institutions?</p> <p>Comments: Research universities will naturally be the source of most applications for research funding, but the NSF Political Science program is proactive in soliciting submissions from research-active faculty in colleges and universities that are not in the Research I category. It also attends to the distribution across institutional type in making awards.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	Appropriate
<p>7. Does the program portfolio have an appropriate balance of awards to new investigators?</p> <p>NOTE: A new investigator is an investigator who has not been a PI on a previously funded NSF grant.</p> <p>Comments: Unsurprisingly, scholars who have shown the ability previously</p>	Appropriate

<p>to propose and execute research are more likely to receive funding again from NSF Political Science. However, the program officers are proactive in soliciting applications from new scholars and coaching them in the construction of proposals. At the margin, they also tip toward new scholars in making awards.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>8. Does the program portfolio include projects that integrate research and education?</p> <p>Comments: Several of the projects support the development of the research capabilities of graduate students and junior faculty. A large number integrate graduate and undergraduate students into the research activities.</p> <p>Data Source: Jackets</p>	<p>Appropriate</p>
<p>9. Does the program portfolio have appropriate participation of underrepresented groups³⁵?</p> <p>Comments: The Political Science program receives a healthy number of applications from scholars in underrepresented groups, particularly applications from women for regular research grants. The funding rate for scholars in underrepresented groups continues to lag somewhat the funding rate for all proposals, however. The Political Science program is working hard to help scholars in underrepresented groups make effective applications. These efforts range from support for the Bunche Institute to the program's practice of including a substantial proportion of women scholars as reviewers and panelists.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Appropriate</p>
<p>10. Is the program relevant to national priorities, agency mission, relevant fields and other constituent needs? Include citations of relevant external reports.</p>	<p>Appropriate</p>

³⁵ NSF does not have the legal authority to require principal investigators or reviewers to provide demographic data. Since provision of such data is voluntary, the demographic data available are incomplete. This may make it difficult to answer this question for small programs. However, experience suggests that even with the limited data available, COVs are able to provide a meaningful response to this question for most programs.

<p>Comments: NSF Political Science consistently supports research that addresses the national security interests of the United States, that advances the understanding of trade relations and other topics relevant to the economic interests of the United States, and promotes an understanding of democracy in the United States and abroad. Just in the last round, the Political Science program has supported research on political change in the Middle East, on terrorism and violent insurgencies, on people's responses to economic disruption and uncertainty, on the development of electoral processes in new democracies, and on the responsiveness of political institutions to public opinion.</p> <p>Data Source: Jackets</p>	
<p>11. Additional comments on the quality of the projects or the balance of the portfolio: The breadth and quality of the Political Science program portfolio is impressive. Also, the willingness of the program officers to cultivate research in emergent but as yet unproven areas is commendable.</p>	

OTHER TOPICS

1. Please comment on any program areas in need of improvement or gaps (if any) within program areas.

The increasing use of field experimentation requires attention to issues of accumulation of knowledge and reproducibility. NSF might promote the creation of an archive and discussion of best practices. We also see some areas of emergent need for research: e.g., the political implications of rapid urbanization (in Africa and Asia particularly); the development of data on gender issues to enable global comparisons; and the use of new technologies and strategies by authoritarian regimes to control their populations.

2. Please provide comments as appropriate on the program's performance in meeting program-specific goals and objectives that are not covered by the above questions.
3. Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

Political Science, like the other SES programs, is short-staffed.

SIGNATURE BLOCK:

Donna Bahry
 J. Mark Hansen

For the Social and Economic Sciences COV
 Steven Ruggles, Chair

SCIENCE OF ORGANIZATIONS PROGRAM

INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program(s) under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged.

I. Questions about the quality and effectiveness of the program's use of merit review process. Please answer the following questions about the effectiveness of the merit review process and provide comments or concerns in the space below the question.

QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCESS	YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE
<p>1. Are the review methods (for example, panel, ad hoc, site visits) appropriate?</p> <p>Comments: SoO is interdisciplinary by nature. 35% of the reviews were co-reviews (50% of the sampled proposals were co-reviewed). On average, each proposal was reviewed by 7 individuals, which is appropriate given the tendency for multiple panels to be involved in SoO reviews.</p> <p>Data Source: EIS/Type of Review Module</p>	<p>Yes</p>
<p>2. Are both merit review criteria addressed</p> <p>a) In individual reviews?</p> <p>b) In panel summaries?</p> <p>c) In Program Officer review analyses?</p> <p>Comments: Both criteria were addressed for all three. There was a tendency for some individual reviewers to address the criteria in the summary.</p> <p>Data Source: Jackets</p>	<p>Yes Yes Yes</p>

<p>3. Do the individual reviewers giving written reviews provide substantive comments to explain their assessment of the proposals?</p> <p>Comments: The reviewers often varied in terms of how much they justified their evaluation/assessment.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>4. Do the panel summaries provide the rationale for the panel consensus (or reasons consensus was not reached)?</p> <p>Comments: In the case of proposals that received low ratings and were not funded, panel summaries often referred PIs to individual reviews, which is appropriate. It was unclear how multiple panel summaries, in particular mixed summaries, were communicated to PI.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>5. Does the documentation in the jacket provide the rationale for the award/decline decision?</p> <p>[Note: Documentation in the jacket usually includes a context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), program officer review analysis, and staff diary notes.]</p> <p>Comments: The documentation has been very good, especially the program officer review analysis.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>6. Does the documentation to the PI provide the rationale for the award/decline decision?</p> <p>[Note: Documentation to PI usually includes context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), and, if not otherwise provided in the panel summary, an explanation from the program officer (written in the PO Comments field or emailed with a copy in the jacket, or telephoned with a diary note in the jacket) of the basis for a declination.]</p> <p>Comments: Documentation to PI is more than sufficient.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>7. Additional comments on the quality and effectiveness of the program's use of merit review process: None</p>	<p>NO comment</p>

II. Questions concerning the selection of reviewers. Please answer the following questions about the selection of reviewers and provide comments or concerns in the space below the question.

SELECTION OF REVIEWERS	YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE
<p>1. Did the program make use of reviewers having appropriate expertise and/or qualifications?</p> <p>Comments: Research proposals were broad and frequently interdisciplinary, which necessitated a wide breadth of scientific knowledge for assessment. Program officer took great efforts to ensure diverse perspectives, frameworks, and analytical techniques were represented on the panel.</p> <p>Note: We believe the Review/Record form in the e-jacket could be more straightforward, particularly with respect to coding actual roles.</p> <p>Data Source: Jackets</p>	Yes
<p>2. Did the program recognize and resolve conflicts of interest when appropriate?</p> <p>Comments: Program has an elaborate process in place to recognize and resolve conflicts of interests. Hard to imagine additional steps that could reasonably be taken.</p> <p>Data Source: Jackets</p>	Yes
<p>Additional comments on reviewer selection:</p>	No

III. Questions concerning the management of the program under review. Please comment on the following:

MANAGEMENT OF THE PROGRAM UNDER REVIEW
<p>1. Management of the program.</p>

<p>Comments: The management of the program generally follows and meets the DWELL guidelines in notifying PIs within the targeted 6 months period. Declines are notified within 5 months. Awards take longer to process, but it seems PIs were made aware of the status of their proposal within 6 month period.</p>
<p>2. Responsiveness of the program to emerging research and education opportunities.</p> <p>Comments: The program co-reviews and co-sponsors a number of awards. The program appears to be well positioned with respect to participating in and discovering emerging research and education opportunities.</p>
<p>3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.</p> <p>Comments: The funded portfolio attempts to reflect a broad array of methodological and disciplinary research, including research within business schools. There are proactive efforts to inform and receive input from relevant members of the SoO research community.</p>
<p>4. Responsiveness of program to previous COV comments and recommendations.</p> <p>Comments: We noted 3 changes in response to concerns expressed by previous COV. 1 The change in name from IOS to SoO is a step in this direction. The Science of Organizations more clearly communicates the research space and objectives to the community. 2. Change in review template makes it clear to reviewers that review is intended to be both advisory and developmental, which enhances the overall quality of the review. 3. The program has also initiated significant outreach to communicate program goals and objectives. Program should be congratulated for these outreach efforts and encouraged to continue.</p>

IV. Questions about Portfolio. Please answer the following about the portfolio of awards made by the program under review.

<p>RESULTING PORTFOLIO OF AWARDS</p>	<p>APPROPRIATE, NOT APPROPRIATE, OR DATA NOT AVAILABLE</p>
<p>1. Does the program portfolio have an appropriate balance of awards across disciplines and sub-disciplines of the activity?</p> <p>Comments: SoO is interdisciplinary. Statistics indicate that 35% of reviews are co-reviews. SoO is heavily involved in co-awards, with a significant</p>	<p>Appropriate</p>

<p>number of co-awards going to sociology and virtual organizations.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>2. Are awards appropriate in size and duration for the scope of the projects?</p> <p>Comments: The typical research project in SES runs for 2-3 years with a budget of 300k. SoO projects have a similar distribution with respect to time and level of funding. The review analysis documents from sampled proposals indicate that budget reductions are often negotiated with the PI, thereby simultaneously retaining the viability of the project while economizing on program funds.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Appropriate</p>
<p>3. Does the program portfolio include awards for projects that are innovative or potentially transformative?</p> <p>Comments: The NSF defines transformative research as research that generates ideas, discoveries, or tools that radically change our understanding of existing concepts and theoretical frameworks. The SoO portfolio included a number of potentially transformative projects. Funded proposals offered new frameworks and approaches to existing phenomena, new methods, inventive data collection strategies, and applied existing frameworks, methods and data collection strategies in underexplored empirical contexts.</p> <p>Data Source: Jackets</p>	<p>Appropriate</p>
<p>4. Does the program portfolio include inter- and multi-disciplinary projects?</p> <p>Comments: Funded projects exhibited an array of theoretical frameworks and employed a mix of methodologies. And as noted earlier, SoO is heavily involved in co-funding. Such co-funding extends not only within the division and directorate, but to programs outside of SBE as well.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Appropriate</p>

<p>5. Does the program portfolio have an appropriate geographical distribution of Principal Investigators?</p> <p>Comments: Over the 3 year period, there is a small advantage for EPSCoR states, which is reflected in the 3% higher funding rate, but there is also significant variation over time, which most likely reflects variation in the underlying competitive nature of the proposals.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	Appropriate
<p>6. Does the program portfolio have an appropriate balance of awards to different types of institutions?</p> <p>Comments: We do not have a benchmark for defining appropriate behavior. As one would expect, the top research institutions are the most competitive (i.e., 75%). We do note a trend to funding teaching-focused schools. The limited available data indicate some funding of proposals from other entities, such as institutions offering undergraduate degrees or undergraduate and master's degrees.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	Data not available
<p>7. Does the program portfolio have an appropriate balance of awards to new investigators?</p> <p>NOTE: A new investigator is an investigator who has not been a PI on a previously funded NSF grant.</p> <p>Comments: Yes. The funding rates for projects with all new or previously funded PIs are funded at virtually the same rate.</p> <p>Data Source: EIS/Committee of Visitors Module.</p>	Appropriate
<p>8. Does the program portfolio include projects that integrate research and education?</p> <p>Comments: One can imagine integrating research and education by educating students about the outcomes of research, or by educating students about the research process, by involving them in research projects. On this second dimensions, SoO appears to be particularly actively involved in</p>	Appropriate

<p>educating students about the research process.</p> <p>Data Source: Jackets</p>	
<p>9. Does the program portfolio have appropriate participation of underrepresented groups³⁶?</p> <p>Comments: If we focus on women and minorities, women are funded at a rate comparable to overall funding rate (14.3 versus 13.7). The outcomes are less attractive for minorities (2.8 for minorities versus 13.7 overall). However, it is noteworthy that the number of minorities who submit proposals or the number of proposals from minority institutions was significantly lower than the number of proposals received by women, which could account for the lower outcomes. SoO should be encouraged to continue outreach to minorities and minority institutions.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>10. Is the program relevant to national priorities, agency mission, relevant fields and other constituent needs? Include citations of relevant external reports.</p> <p>Comments: One could say that national-level outcomes are in part a function of dynamics occurring within and between organizations. By advancing our understanding of behavior within and between organizations, SoO sponsored research can provide the underpinnings for advanced organizational forms of collaboration and inventiveness appropriate to national problem solving. Moreover, SoO sponsored research can play a key role in achieving NSF's mission as outlined in the agency's current strategic document. SoO provides a point of integration between research and education, by involving students in research with high transformative potential, thereby orienting students to trajectories of discovery that are congruent attracting students to enter STEM related fields and areas. SoO has also funded a number of new organization-related databases, including co-funding a proposal in BCC-SBE/HER, thus operating at the forefront of support for data-intensive, multidisciplinary work. Finally, lessons learned from the study of organizations could be used to not only make NSF a model organization, but extend to means of organizing the broadly-recognized need for multidisciplinary, collaborative research itself.</p>	

³⁶ NSF does not have the legal authority to require principal investigators or reviewers to provide demographic data. Since provision of such data is voluntary, the demographic data available are incomplete. This may make it difficult to answer this question for small programs. However, experience suggests that even with the limited data available, COVs are able to provide a meaningful response to this question for most programs.

Data Source: Jackets	
11. Additional comments on the quality of the projects or the balance of the portfolio: None	

OTHER TOPICS

1. Please comment on any program areas in need of improvement or gaps (if any) within program areas. None.
2. Please provide comments as appropriate on the program’s performance in meeting program-specific goals and objectives that are not covered by the above questions. NONE
3. Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

Given the focus on interdisciplinary research, we were surprised to see the low level of funding dedicated to SoO. We would encourage the agency to re-evaluate this decision.

4. Please provide comments on any other issues the COV feels are relevant.

Preparing for a COV is a time consuming endeavor. We would encourage the foundation to provide a bit more guidance with respect to preparation. During the review, we discovered that reading some of the material was essential while other parts, while interesting, were less relevant for the review.

5. NSF would appreciate your comments on how to improve the COV review process, format and report template.

We believe the Review/Record form in the e-jacket could be more straightforward, particularly with respect to coding actual roles

SIGNATURE BLOCK:

Kathryn Bartol
Ray Reagans

For the Social and Economic Sciences COV
Steven Ruggles, Chair

**SCIENCE, TECHNOLOGY AND SOCIETY PROGRAM ETHICS
EDUCATION IN SCIENCE AND ENGINEERING PROGRAM**

**INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES
AND MANAGEMENT**

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program(s) under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged.

I. Questions about the quality and effectiveness of the program's use of merit review process.

Please answer the following questions about the effectiveness of the merit review process and provide comments or concerns in the space below the question.

<p>QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCESS</p>	<p>YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE</p>
<p>1. Are the review methods (for example, panel, ad hoc, site visits) appropriate?</p> <p>Program officers have been doing an excellent job of organizing and overseeing an effective peer review process in both STS and EESE.</p> <p>Comments:</p> <p>a) The last COV report noted that the recent shift to a panel-only method of reviewing DDRIG proposals (without ad hoc review) seemed to be an improvement but should be monitored. We concluded that the panel-only method is working well. It may be less than ideal, however, to have predominantly junior faculty serving on the DDRIG panel. More senior reviewers may be better able to judge dissertation proposals due to their longer experience as mentors.</p> <p>b) Among both the regular proposals and the DDRIG proposals, some very technical proposals that otherwise seemed to have high intellectual merit were not funded because they failed to address the broader STS community.</p> <p>Recommendations:</p> <p>a) STS should consider having panel members serve the first year of their three year terms on the DDRIG panel and then rotate onto the panel for standard proposals. With staggered terms, this change would result in a mix of experienced and less experienced panel members serving on both panels.</p>	<p>Yes</p>

<p>b) The solicitation should be revised to advise investigators to frame their discussion of intellectual merit to address a broad spectrum of STS scholars and to clarify, in a way that can be appreciated by diverse STS scholars, how their work contributes to the broad field. For example, highly technical proposals that address a specific subfield of STS should at least introduce their projects in ways that can be understood across the broad range of STS scholarship.</p> <p>Data Source: EIS/Type of Review Module</p>	
<p>2. Are both merit review criteria addressed</p> <p>a. In individual STS reviews, 72% of reviews of awarded proposals and 69% of reviews of declined proposals explicitly addressed both criteria, comparable to results from the previous COV report. (In other cases where the review criteria were not addressed explicitly, they were addressed in responses to other questions on the review form.) For EESE, 60% of reviews for awards and 65% of reviews for declines considered both criteria.</p> <p>b. In panel summaries? Panel summaries always addressed both merit review criteria.</p> <p>c. In Program Officer review analyses? Program officers always addressed both merit criteria</p> <p>Data Source: Jackets</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>
<p>3. Do the individual reviewers giving written reviews provide substantive comments to explain their assessment of the proposals?</p> <p>Comments: For both STS and EESE, with few exceptions, substantive comments were provided in the proposal reviews.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>4. Do the panel summaries provide the rationale for the panel consensus (or reasons consensus was not reached)?</p> <p>Comments: Panel summaries for STS and EESE were very thoughtful and quite accurate and clearly identified reasons in those cases where consensus was not reached.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>5. Does the documentation in the jacket provide the rationale for the award/decline decision?</p> <p>[Note: Documentation in the jacket usually includes a context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), program officer review analysis, and staff diary notes.]</p>	<p>Yes</p>

<p>Data Source: Jackets</p>	
<p>6. Does the documentation to the PI provide the rationale for the award/decline decision?</p> <p>[Note: Documentation to PI usually includes context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), and, if not otherwise provided in the panel summary, an explanation from the program officer (written in the PO Comments field or emailed with a copy in the jacket, or telephoned with a diary note in the jacket) of the basis for a declination.]</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>7. Additional comments on the quality and effectiveness of the program's use of merit review process:</p> <p>Average dwell time for STS was 5 months. Average dwell time for EESE was 4.31 months. We are pleased that time-to-decision performance continues to exceed NSF goals. This is impressive especially because program staffing cuts after 2010 greatly increased the workloads of remaining staff.</p>	

II. Questions concerning the selection of reviewers. Please answer the following questions about the selection of reviewers and provide comments or concerns in the space below the question.

<p>SELECTION OF REVIEWERS</p>	<p>YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE</p>
<p>1. Did the program make use of reviewers having appropriate expertise and/or qualifications?</p> <p>Comments: For each general proposal, ad hoc reviews are requested from 4-6 reviewers, and 2 reviews from panelists. On average there were 6.1 reviewers for STS awards and 5.9 reviewers for STS declines between 2010 and 2012. For EESE the number of reviews was lower, with 4.0 reviews per proposal for both awards and declines.</p> <p>Panelists – There were 37 STS panelists, 17 men and 20 women. Diverse geographical regions and institutional types (such as private versus public) are also well represented on the panel. The disciplinary representation is also quite broad, including historians, philosophers, sociologists, anthropologists, ethicists, political scientists, and policy analysts. Notably, many of the panelists are themselves located in interdisciplinary university programs rather than traditional</p>	<p>Yes</p>

<p>departments. On the EESE panel, there were 25 panelists reflecting similar geographic diversity and institutional types.</p> <p>Recommendation: The EESE panel would benefit from including anthropologists and additional sociologists who study ethics. Experience with a large failed contract suggests the benefit of including more expertise in social science methodologies.</p> <p>Data Source: Jackets</p>	
<p>2. Did the program recognize and resolve conflicts of interest when appropriate?</p> <p>Comments: At every stage of the process, the program recognized and resolved conflicts of interest: in selecting reviewers, receiving reviews, assigning proposals to panelists, during the review meetings, and in assigning a program officer to review the panel's summary.</p> <p>Data Source: Jackets</p>	<p>Yes</p>

III. Questions concerning the management of the program under review. Please comment on the following:

<p>MANAGEMENT OF THE PROGRAM UNDER REVIEW</p> <p>1. Management of the program.</p> <p>Comments:</p> <p>a) Permanent and rotator program officers and staff are highly effective and efficient. The STS program covers perhaps the widest disciplinary portfolio in the SES Division. Selecting reviewers requires having a handle on an impressively large number of fields of scholarly interest and individuals within those fields, with whom the program officers do a significant amount of outreach. The quality of reviews – and of decisions – is very high. These same program officers also are engaged at a high level in a number of activities across the foundation, and are making important contributions to those initiatives. The permanent program officer manages two awards for Centers for Nanotechnology in Society with responsibilities in relation to five committees and working groups as well as conducting site visits. The rotator has significant responsibilities in managing the cross-directorate EESE program and (in consultation with the EESE working group) also identifies new areas of innovative ethics research and curriculum development, making a special effort to recruit proposals that push this area's cutting edge.</p> <p>b) The biggest challenge to program management is the staffing cuts. These cuts went against the recommendation of the 2010 COV, which urged an increase from one permanent program officer and two rotators to two permanent and one rotator. Instead, STS was cut to one permanent and one rotator. Staff can keep the program running at this staffing level, but their ability to innovate, perform</p>
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outreach to the STS community, and have time for creative reflection or even analysis and evaluation of their programs is in jeopardy. We worry that this would not be a sustainable situation even without the addition of EESE to the STS portfolio, but with it—and with the rotator devoting about half her time to running EESE—program quality could be at risk. Recent experience also suggests that the increased workload may contribute to burnout among the staff. Increased external scrutiny of STS awards has the potential to further increase the workload of program officers.

c) The 2010 COV enthusiastically endorsed EESE, saying: “We are terrifically impressed with the new cross-disciplinary Ethics Education in Science and Engineering (EESE) Program, which Kelly Joyce of STS founded in 2007. This funds the development of resources for ethics education in science and engineering, especially at the graduate level” and serves to “bring together the fragmented community in the area of ethics and science ... Ethics training is a vital part of most awards with a training component (since the America COMPETES Act of 2007) and the program therefore provides a service to the entire NSF.” We concur in our enthusiasm for EESE. However, there have been significant challenges to implementation due to staff cuts and turnover as well as the unexpected failure of the \$5 million cooperative agreement to establish an online resource center, which resulted in time spent terminating the agreement and determining how to re compete it.

d) There may be issues with the assignment of staff support in administrative clusters in ways that fail to reflect the patterns of interaction between programs that exist and should be promoted. For example, STS has many co-reviews with Sociology and Cultural Anthropology and may be more logically grouped with those programs for purposes of administrative staff support.

Recommendations:

a) To provide continuity and institutional memory in the management of EESE, we strongly recommend that EESE be managed by a permanent program officer rather than a rotator. This should be a new (third) program officer assigned to STS or, minimally, a half-time program officer shared with another program.

b) The division might look at the alignment of work flows within and across administrative clusters.

2. Responsiveness of the program to emerging research and education opportunities.

Comments: STS has sought to support at least one CAREER award per year, but this effort has been compromised by the 27% program budget cut after 2010. STS has been active in pursuing cross-directorate competitions, such as SBE’s Science of Broadening Participation, Interdisciplinary Behavioral and Social Science, and Seed, resulting in \$433,500 in matching funds and leveraging a \$50,000 investment to result in a \$600,000 INSPIRE award.

EESE invested heavily in an emerging opportunity to create an ethics resource center, but the failure of the contracted institution to implement the program has had costs for both EESE and STS. Beyond the cost to the field and the loss of funds to NSF, the rotator has lost time in managing the shutdown of the contract and determining the best means to re compete it. While the rotator has performed this work effectively, this time could have been devoted to the pursuit of other research and education opportunities.

3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.

Comments:

a) The STS program serves a diverse community of researchers working at many interfaces between science, technology and society. The community includes historians, philosophers, and a broad spectrum of social scientists, who are affiliated with an increasing array of academic departments, interdisciplinary degree-granting programs, and professional societies. The range of methodologies used is wide, to serve diverse research interests and approaches, from ethnographic, historical, comparative, and other qualitative methods, to formal logical and mathematical, computational, statistical, and numerical simulation methods used across the social, biological, and physical sciences. The field is not disciplinary, it is multi-disciplinary. The program strongly encourages interdisciplinary research both internally (across distinct STS subfields) and externally (engaging with researchers in other STEM disciplines). It also strongly encourages research on ethical and policy issues associated with STEM research and development. Program planning and prioritization draws not only from the diverse expertise of reviewers, panelists, and proposals, but also from the substantial outreach efforts of program officers, who not only help members of the STS community understand NSF's mission, processes, and procedures, but also gain valuable insight about emerging ideas, trends, and discussions that are on their way to the next generation of proposals.

b) A great blow to the program portfolio has been the 27% cut to funding that appears to have been applied in a disproportionate way to the STS program after 2010. This cut has had multiple consequences. One clear result is that many competitive proposals are not being awarded funding. The effect may often be counter to the NSF and program goals of promoting innovative and transformational research, precisely because novel and transformative projects carry high risks that may lead to greater variation in reviewer scores.

c) The doctoral dissertation grants (DDRIG) have been a particularly valuable part of the STS portfolio, providing tremendous "bang for the buck." DDRIGs also promote transformative research, broaden participation, and include underrepresented groups. In the face of the significant budget cut, STS has appropriately worked hard to protect the DDRIGs.

d) The Small Research Training Grants (SRTGs) have been an important part of the portfolio as well, helping to build an interdisciplinary field and provide training to graduate students. They are especially valuable in the social sciences given that at most universities it is hard for social scientists to compete for larger training initiatives such as IGERTs. It is therefore highly regrettable that the program has had to temporarily discontinue SRTGs in light of the funding cut.

e) EESE has in the past awarded proposals that primarily enhance graduate education and training. To broaden impact and participation from underrepresented groups as well as to encourage institutional transformation.

Recommendations:

a) We strongly recommend restoration of funding to the program sufficient to restore these critical and transformative initiatives.

b) In the meantime, we continue to endorse DDRIGs using the revised systems of reviewing described above. While it has been suggested that funds might be saved by reducing the

<p>competition to once per year, we think such a change would interfere with timely completion of dissertations. This is especially true in STS, where DDRIGs are often used to travel to conduct fieldwork. We recommend continuing the biannual competition. The possibility of reserving the fall review only for revise-and-resubmits should be studied, however.</p> <p>c) We encourage EESE to devote increased attention and outreach efforts to undergraduate education and training through RUI and other foundation-wide initiatives. For example, social justice and environmental justice projects could be integrated into research and training activities for engineers.</p>
<p>4. Responsiveness of program to previous COV comments and recommendations.</p> <p>Comments: The STS program dropped the proviso against medical topics in the solicitation (NSF 12-509) as recommended by the 2010 COV report. Although the number of proposals relating to biomedicine in an STS context is still small relative to the overall size of the STS portfolio, that is expected to change, as STS researchers become aware of the change. It also brings new opportunities to encourage proposals in the area of ethics and values in science broadly construed to include biomedicine and related technology and policy research. The 2010 COV report also recommended that the program continue its efforts to decide how and when new areas of expertise be included on the panel on the basis of solid evidence of community formation including new graduate programs, stellar scholars and scholarship, and transformative and novel approaches. The program continues to monitor two relatively new societies, the Society of Philosophy of Science in Practice (SPSP) and the International Society for the Psychology of Science and Technology (ISPST). SPSP may represent an emergent direction in HPS in which ethics and values themes converge with studies of ethics and values in social studies of science, technology, and biomedicine.</p> <p>Recommendations: We recommend that program officers continue to do outreach with the STS community to clarify that biomedical topics within STS are welcomed by the program.</p>

IV. Questions about Portfolio. Please answer the following about the portfolio of awards made by the program under review.

<p>RESULTING PORTFOLIO OF AWARDS</p>	<p>APPROPRIATE, NOT APPROPRIATE, OR DATA NOT AVAILABLE</p>
<p>1. Does the program portfolio have an appropriate balance of awards across disciplines and sub-disciplines of the activity?</p> <p>Comments: STS eliminated references to the four traditional sub-areas of the program in its most recent solicitation. However, these four areas--HPS, EVS, SSS, and SPS*--continue to be tracked by program officers. Moreover,</p>	<p>Yes</p>

<p>in a change from past practice, program officers have been instructed by the division to make awards at equal rates across these categories. The result is that award rates no longer correspond to submission rates, to the particular detriment of HPS scholars.</p> <p>* Ethics and Values in Science, Engineering, and Technology (EVS) History and Philosophy of Science, Engineering, and Technology (HPS) Social Studies of Science, Engineering, and Technology (SSS) Studies of Policy, Science, Engineering, and Technology (SPS)</p> <p>Recommendations: We believe that strict mandates at the divisional level about the balance of awards across the four sub-areas is unwise because it limits the flexibility of program officers to respond to opportunities and new directions in the field of STS. We recommend that program officers be once again given full control to balance their portfolio.</p> <p>We also recommend that program officers consider whether the time has come to eliminate the use of the four sub-areas for internal tracking purposes. This particular classification is a historical remnant that does not fully correspond to the organization of work in STS today. Moreover, information supplied by proposers about their disciplinary (or interdisciplinary) homes may be not only sufficient but ultimately more useful in tracking and measuring the balance of the portfolio and guiding planning and prioritizing for the future. At the same time, we recognize that the current classification system may have some virtues in monitoring underrepresented perspectives and approaches. We encourage ongoing consideration of potential advantages and disadvantages of various methods for ensuring and measuring broad participation across STS.</p> <p>In the case of the EESE program, balance across directorates is built in since each directorate that contributes has a working group member responsible for managing proposals and awards in that area. It appears that balance is achieved across disciplines represented by the participating directorates.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>2. Are awards appropriate in size and duration for the scope of the projects?</p> <p>Comments: In 2010 prior to the drastic 27% cut applied to STS, awards appeared to be appropriate in size and duration. The decrease in funds had a number of harmful effects on the program as a whole, including a reduced number of awards, the elimination of two categories of awards (SRTGs and professional development fellowships), and smaller award sizes and durations overall in 2011 and 2012. Some innovative multi-year proposals were funded only as single-year pilot or trial projects in both STS and EESE.</p>	<p>Yes</p>

<p>Many projects deemed competitive were not funded.</p> <p>Recommendation: We are concerned that the STS program appeared to bear a disproportionate burden of budget cuts in the SES Division after 2010. The sharp reduction in funding is of concern to the entire STS community and has already resulted in a drop-off in applications. Program officers have done their best to mitigate the effects of the budget cuts, for example by continuing to fund all competitive DDRIGs, but continued funding at current levels will stifle the development of the field. We urge the division to bring funding levels back up to 2010 levels.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>3. Does the program portfolio include awards for projects that are innovative or potentially transformative?</p> <p>Comments: The STS program makes awards to a wide diversity of innovative or potentially transformative proposals. Exemplary projects include:</p> <p>1243575 INSPIRE: A Digital HPS Infrastructure for Understanding Biodiversity The project will result in an infrastructure and research system for a generalizable digital and computational history and philosophy of science (HPS) initially building on a series of biodiversity-related cases. The result will be a research and educational environment based on computational tools and digital sources made widely available to similar projects in all areas of Science and Technology Studies (STS), HPS, and areas of biological research that can benefit from digitized textual sources, especially historical sources. The project involves intrinsically interdisciplinary approaches and methods for case studies; it is robustly integrative, bringing together HPS, informatics, and biology of biodiversity.</p> <p>0957270 Collaborative Research: Assessing Assessments: A Historical and Philosophical Study of Scientific Assessments for Environmental Policy in the Late 20th Century In recent years, large-scale, organized and formalized assessments of the state of scientific knowledge have become an important part of the scientific and policy landscape, particularly in the earth and environmental sciences. While a number of scholars have studied assessment processes from policy and social perspectives, most of their work has focused on how assessments influence (or fail to influence) public policy. However, if assessments are presumed to provide a robust basis for policy, then it is important to understand them. How <i>do</i> scientists assess their colleagues' research, evaluate its reliability, understand its limits and degrees of uncertainty, and come to consensus (or not)? The results of this study will help scientists and policymakers to understand the factors that affect assessment outcomes,</p>	<p>Yes</p>

including potential sources of systematic bias or even error; to use this understanding to make recommendations for how the assessment process may be improved; and, ultimately, to provide a more reliable foundation for science-based policy.

0849109

Mark(er)ing Race: An Ethnographic Study of Human Difference in Contemporary Genetics

An anthropological study of scientists researching human medical genetics and racial ancestry shows that American political concepts of race and ethnicity greatly influence how scientists design studies. Drawing attention to patterns in how scientists think about human genetic diversity can bring conscious awareness to constraints in study designs. Such awareness can contribute to better science by encouraging geneticists to think more deeply about broader causes of illness and to rely less on simple genetic correlations with race and ethnicity. This is especially true when researchers take genetic samples from populations that correspond to preconceived notions of racial categories.

0646591

EESE: IRBs and Internet Research

This empirical analysis offers insight into how IRBs are evaluating (or not evaluating) internet based research in the United States. Many countries use the U.S. model of the IRB and the research team participated in transnational discussions of how to evaluate and protect human subjects in Internet research. The project enhanced the ability of Institutional Review Boards [IRBs] and internet researchers to undertake informed and responsible reflection on the ethical issues associated with internet research and virtual worlds. Beyond publishing their findings in a range of scholarly journals, the investigators founded a new online journal, *International Journal of Internet Research Ethics (ijire.net)*. Building on the IRB research, the PI team created an online Digital Ethics Resource, also funded by NSF, which can be found at internetresearchethics.org.

123773

EESE: Ethics Among Physicists in Cross-National Perspective This innovative project is determining how physicists in three national contexts approach issues of research integrity. Several hundred interviews are being conducted with physicists at universities and research institutes in the United States, China, and the United Kingdom. A long-term objective of this research is to inform science policy, particularly in cultural understandings of research integrity. A central issue is the interaction of industry with science and the ethical impacts this might have on international collaboration. The project will include ethics education for physics students at the undergraduate and graduate levels.

Additional innovative or potentially transformative STS projects include: a CAREER proposal on policy for low-carbon technology investment (ID 1056998), a scholars award for research on gendered innovations (ID

<p>1153160), a post-doctoral fellowship to develop systematic ways of identifying the consequences of environmental policy decisions (ID 1152872), a multi-disciplinary workshop to develop strategies for collecting and translating environmental exposure data into health and policy contexts (ID 1133304), another multi-disciplinary workshop to explore the concept of potentially transformative research (ID 1129067), and a collaborative project that investigates the role that gender plays in the creation of science and technology policy through a study of women's careers in US federal policymaking (ID 1153160).</p> <p>Data Source: Jackets</p>	
<p>4. Does the program portfolio include inter- and multi-disciplinary projects?</p> <p>Comments: The STS program easily demonstrates a strong commitment to interdisciplinary activities. It is, after all, a multidisciplinary program by definition. Many STS awards support collaborative activities convening teams of investigators with expertise from multiple disciplines and different interdisciplinary emphasis to pursue cross-cutting, innovative research problems and methods development. The program also co-funds a number of proposals. Other programs contributed to STS primary proposals, e.g., Law and Social Sciences contributed \$59,276 to two STS primary projects. STS provided funds where another program was the primary, e.g. \$378,500 to three LSS primary proposals. Overall, STS co-funded 28 proposals within SES, 39 proposals with programs elsewhere in SBE, and 87 proposals with programs outside SBE. We are impressed with the range of this inter- and multidisciplinary represented in the portfolio, though we also note the amount of additional work this level of cross-program activity represents for the staff.</p> <p>In the area of EESE most awards were interdisciplinary and related to ethics research and ethics curriculum development and evaluation. Most awards had budgets in the \$300,000 range. There were also exemplary awards that were inter-institutional, and engaging in international contexts. Most projects reinforced the focus on graduate education.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>Yes</p>
<p>5. Does the program portfolio have an appropriate geographical distribution of Principal Investigators?</p> <p>Comments: The geographic distribution of awards is appropriate in the sense</p>	<p>Yes</p>

<p>that it corresponds closely to the geographic distribution of Ph.D. granting institutions. The program does pay particular attention to proposals that review well that are submitted from EPSCoR states. EESE has a higher than NSF mean rate for submissions and awards from EPSCoR states. Of the 18 awards made to EPSCoR states, 15 received co-funding from the EPSCoR program.</p> <p>Recommendation: The program statement reports overall funding for EPSCoR and non-EPSCoR states. We recommend in addition that the program track funding rates for those proposals <i>that review well</i> in these two categories, so that the effectiveness of its efforts to promote geographical diversity in the portfolio can be more fully assessed.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>6. Does the program portfolio have an appropriate balance of awards to different types of institutions?</p> <p>Comments: The majority of proposals come from research intensive Ph.D. institutions, and the distribution of awards matches that pattern. We believe that in relatively new interdisciplinary fields such as STS, it makes sense that most proposals will come from research intensive Ph.D. institutions, these being the ones most likely to contain STS-related programs of their own.</p> <p>Given this pattern in applications, the program has done a good job of funding proposals from outside the research-intensive institutions. However, the funding cut after 2010 appears to have had a disproportionate negative impact on proposals from non-research-intensive institutions, and this is an area of concern.</p> <p>In the case of EESE, most proposals also come from research intensive institutions.</p> <p>Recommendation: For EESE, we believe it would be beneficial given the nature and goals of the program to promote greater involvement of institutions that emphasize undergraduate instruction.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	<p>STS: Qualified Yes</p> <p>EESE: No</p>
<p>7. Does the program portfolio have an appropriate balance of awards to new investigators?</p> <p>NOTE: A new investigator is an investigator who has not been a PI on a previously funded NSF grant.</p>	<p>Yes</p>

<p>Comments: New investigators suffered in 2011 in the immediate aftermath of the 27% funding cut. This decline was reversed in 2012, which was marked by equal success rates for new and experienced investigators. For the three-year period overall the success rates for new investigators was not substantially different from that of experienced investigators.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>8. Does the program portfolio include projects that integrate research and education?</p> <p>Comments: Many regular awards in STS include support for graduate training, and some of the most innovative awards include plans for introducing new curricula or new approaches to graduate training that involve graduate students (including members of underrepresented groups) as members of multi-disciplinary teams. In the case of EESE, the nature of the program integrates research and education.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>9. Does the program portfolio have appropriate participation of underrepresented groups³⁷?</p> <p>Comments: All of the comments in this section are qualified by the low response rates of proposers on questions of gender and minority group status, making any general conclusions dubious.</p> <p>The COV requested additional data from the program to compare funding rates of proposals with and without women involvement. Notably, regular proposals with women involvement were either as likely or more likely to be funded in this three-year period. In addition, over the three year period, 45% of regular proposals involved women. In the case of DDRIGs, proposals with women involvement were more likely to be funded in two of the three years. Over the three year period, 57% of the DDRIG proposals involved women--a welcome sign of women's participation in the future of the field.</p> <p>The previous COV noted that women comprised a higher proportion of applicants than awardees (44% vs. 33%) and recommended that this discrepancy be monitored. In the current review period, women were involved in 45% of regular proposals and 53% of the awards, indicating that</p>	<p>Qualified Yes</p>

³⁷ NSF does not have the legal authority to require principal investigators or reviewers to provide demographic data. Since provision of such data is voluntary, the demographic data available are incomplete. This may make it difficult to answer this question for small programs. However, experience suggests that even with the limited data available, COVs are able to provide a meaningful response to this question for most programs.

<p>there is no cause for concern in this regard.</p> <p>In the case of minority involvement, over the three-year period only 11% of regular proposals had minority involvement and only 4% involved minority-serving institutions. The success rates for regular proposals with minority involvement exceeded that of non-minority proposals in 2010 but was sharply less in 2011 and equal in 2012. (A similar but even more dramatic pattern prevailed in the case of DDRIGs for those years.) Here again we detect the pernicious impact of the 27% funding cut, which appeared to disproportionately affect minority applications.</p> <p>In the case of EESE, funding rates for women, minorities, and minority-serving institutions have varied considerably over the three-year period, but because the numbers are small and the program is new, it is hard to draw conclusions.</p> <p>Recommendations: Rates of participation and success rates for women and minorities in EESE should be monitored carefully in the coming years. Success rates for minority applications to STS should also be monitored carefully to insure that program and foundation goals for a balanced portfolio are met.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>10. Is the program relevant to national priorities, agency mission, relevant fields and other constituent needs? Include citations of relevant external reports.</p> <p>Comments: The program aligns well with the NSF's core values in being visionary, dedicated to excellence, committed to learning and growing, and being broadly inclusive. By studying the links between scientific research and society, STS is well positioned to advance NSF's mission in the service of national priorities. NSF's strategic plan for FY 2011-2016, <i>Empowering the Nation Through Discovery and Innovation</i>, dedicates itself to "innovating for society" by "forging links between fundamental research and society's needs" such as creating a scientifically literate population and engaging stakeholders. STS research directly examines and advances these goals through projects that assess scientific literacy, evaluate alternative models of science in society, and identify patterns and processes of stakeholder involvement in complex, technoscientific research activities.</p> <p>EESE works with the NSF core values related to ethics research and ethics curriculum development and evaluation. To accomplish this there is a focus on inter-institutional cooperation and international engagement. Most projects reinforce the ethical focus on graduate education through courses. They explore new ethical questions in engineering, biology, computer science, and</p>	<p>Yes</p>

<p>other fields. This includes a general framework for the ethics of emerging technologies; issues of privacy and confidentiality in relation to data mining; fields for which there are few resources in ethics education or research; ethical issues related to robotics; evaluation of choices that society faces with regard to natural resource development and utilization (e.g., energy sources) and environmental consequences; ethical issues associated with natural hazards, risk management, and decision-making; and the role of scientists in defining and negotiating the consequences of natural hazards in the face of scientific uncertainties.</p> <p>Data Source: Jackets</p>	
<p>11. Additional comments on the quality of the projects or the balance of the portfolio:</p> <p>A <u>consistent finding</u> is the harmful impact of the disproportionate 27% funding cut on the STS portfolio. In particular, the cut hampered the program’s ability to advance important NSF (and STS) goals with regard to minority involvement, participation of new investigators, and involvement of non-research-intensive institutions. It is a testament to the commitment and management skills of the program officers that they were able to partially mitigate these harmful effects, but we believe that NSF goals cannot be fully met without improved budget support from the division.</p> <p>The ability to pursue EESE projects was hampered in many ways because of the lack of a dedicated, permanent program officer.</p>	

OTHER TOPICS

Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

We propose that disability status should be included among the underrepresented categories tracked by NSF.

SIGNATURE BLOCK:

James Griesemer
 Steven Epstein
 Elaine Englehardt

For the Social and Economic Sciences COV
 Steven Ruggles, Chair

SOCIOLOGY PROGRAM

INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program(s) under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged.

I. Questions about the quality and effectiveness of the program's use of merit review process.

Please answer the following questions about the effectiveness of the merit review process and provide comments or concerns in the space below the question.

QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCESS	YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE
<p>1. Are the review methods (for example, panel, ad hoc, site visits) appropriate?</p> <p>Comments: There are two regular and two doctoral dissertation proposal funding competitions each year; plus one Faculty Early Career Development (CAREER) proposal round annually; and a rolling acceptance of proposals (after applicants discuss proposals with encouraging program officers) for the Early Concept Grant for Exploratory Research (EAGER), Rapid Response Research (RAPID), and for workshops. These are immediately studied for compliance with the Grant Proposal Guide and if found to be compliant, reviews (including ratings and textual assessments) with regard to NSF merit review criteria are solicited. The Program officers then convene advisory panels for each competition, soliciting participation from scholars with broad expertise who meet for two-day meetings to identify strengths and weaknesses (taking advisement from the reviewers) and categorizing the proposals (according to five categories of funding for regular proposals, ranging from High Funding Priority to Do Not Fund; and according to three categories of funding for dissertation proposals, ranging from Fund or Do Not Fund). The average number of reviews per proposal in the regular proposal review system, 9.4 reviews per award and 8.5 reviews per decline.</p> <p>Data Source: EIS/Type of Review Module</p>	Yes

<p>2. Are both merit review criteria addressed?</p> <p>a) In individual reviews?</p> <p>b) In panel summaries?</p> <p>c) In Program Officer review analyses?</p> <p>Data Source: Jackets</p>	<p>a. Yes</p> <p>b. Yes</p> <p>c. Yes</p>
<p>3. Do the individual reviewers giving written reviews provide substantive comments to explain their assessment of the proposals?</p> <p>Comments: The program seeks other reviewers when individuals lack substance. Program summaries are based on the substantive reviews.</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>4. Do the panel summaries provide the rationale for the panel consensus (or reasons consensus was not reached)?</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>5. Does the documentation in the jacket provide the rationale for the award/decline decision?</p> <p>[Note: Documentation in the jacket usually includes a context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), program officer review analysis, and staff diary notes.]</p> <p>Data Source: Jackets</p>	<p>Yes</p>
<p>6. Does the documentation to the PI provide the rationale for the award/decline decision?</p> <p>[Note: Documentation to PI usually includes context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), and, if not otherwise provided in the panel summary, an explanation from the program officer (written in the PO Comments field or emailed with a copy in the jacket, or telephoned with a diary note in the jacket) of the basis for a declination.]</p> <p>Comments: The feedback to the PI thoroughly fulfills both the judgmental and the developmental dimensions of feedback. That feedback is, in virtually all cases, thorough and clear. This is especially important for first time applicants and PIs who have limited institutional resources by which to get alternative feedback. This benefits not only the PI, but the general level of disciplinary scholarship in the long run. We think that the system is stronger because it refrains from the use of boiler-plate language in the review process.</p> <p>Data Source: Jackets</p>	<p>Yes</p>

<p>7. Additional comments on the quality and effectiveness of the program's use of merit review process:</p> <p>The panel system works exceptionally well. The staff does an outstanding job considering their scant resources. Absolutely every jacket read was handled professionally and decisions were well documented. The projects funded represent the breadth of the discipline with the high quality and broad impact research that will advance science and benefit society.</p>	Yes
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II. Questions concerning the selection of reviewers. Please answer the following questions about the selection of reviewers and provide comments or concerns in the space below the question.

SELECTION OF REVIEWERS	YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE
<p>1. Did the program make use of reviewers having appropriate expertise and/or qualifications?</p> <p>Comments: Regular awards always had professional expertise. Dissertation awards were restricted to panelists only, but in cases without appropriate expertise, sufficient care was taken.</p> <p>Data Source: Jackets</p>	Yes
<p>2. Did the program recognize and resolve conflicts of interest when appropriate?</p> <p>Comments: In some cases COI was noted and people recused.</p> <p>Data Source: Jackets</p>	Yes
<p>Additional comments on reviewer selection: Reviewers were selected carefully and appropriately from a methodologically, substantively, and categorically diverse pool.</p>	Yes

III. Questions concerning the management of the program under review. Please comment on the following:

MANAGEMENT OF THE PROGRAM UNDER REVIEW

1. Management of the program.

Comments: There is currently one permanent program director and one rotating program officer. The program is very well managed, but the number of proposals they must review, the length of the days that panels last, and the number of extra-programmatic projects in which they are involved together indicate that this program is running on fumes. How they manage to do so well with so little resources is amazing. We calculated a workload of proposals per year per program officer over the COV program review years, and those data are in the table that follows:

Average number of proposals per program officer per year (2010-12):

Econ	113
DRMS	86
Soc	163
MMS	81
PS	122
LSS	131
STS	171
SoO	36
Mean for all Programs	116

These figures actually understate the normal load for the Sociology Program because a one-year experiment with a single round of dissertation awards suppressed the number of applications in 2012.

The STS program has the highest load, and the Sociology Program is second. However, the Sociology Program is also in charge of managing several large-scale infrastructure projects (the General Social Survey (GSS), the Luxembourg Income Study (LIS), and the School Attendance Boundary Information System (SABINS)). Yes, these projects are supported jointly by other divisions, but the fact remains that the Sociology Program's permanent Program Director conducts most of the management. Overseeing programs such as the GSS require inordinate time burdens. In recent years, the proliferation of interdisciplinary programs and awards has intensified the already heavy burden, straining the program officers near the point of burn-out. The permanent program also participates in cross-directorate activity such as INSPIRE, IGERT, HSD, and the SBE Alliances for Graduate Education and the Professoriate. In addition, 60% of the regular proposals are co-reviewed, requiring management of coordinated efforts; post-award management of more than 250 awards is ongoing; the Sociology Program does an enormous amount of outreach (including organizing workshops) and engages in interdisciplinary research efforts.

We therefore make two recommendations with regard to management of the Sociology Program. The first is to suggest in the strongest way possible that the Program's burden of work be relieved by

the addition of another full-time rotating Program Director with a portfolio emphasizing interdisciplinary programs and projects, including the infrastructural programs such as GSS. We note with chagrin that the burden of work was addressed by the COV in the 2010, 2007, and 2004 report, and we reiterate the same claims even more strongly. Since 2005 the Program has lost support staff several times. A program officer was transferred to STS, and another to LSS. More recently, a position created for either Sociology or Political Science but assigned to Political Science. In 2010 a part-time and short-term rotating officer was assigned to Sociology, but worked from her home campus.

Second, we support the Sociology Program report's statement requesting guidance in setting priorities. The program has obviously handled with aplomb an overburdened set of responsibilities, but the volume of demands that include managing grant applications, coordinating with other directors, managing interdisciplinary projects, etc. make it virtually impossible to prioritize them all. They ask whether, for example, they should continue to focus on operating the disciplinary program, or become more involved in extra-program activities to the detriment of program activities. (We believe, in part, that these questions come from an increasing inability to continue to provide the excellent work with scarcely enough resources or direction on how to make ends meet. While direction may still be required, some of the burden of "getting it all done" can be relieved with increased staffing.)

We are aware that there is an ongoing discussion to halve the dissertation program panels per year (from two to one), but note that this does not significantly decrease the Directors' burden, as the declination of dissertation proposals require the least amount of time and resources to process. We also believe that the Program's contribution to the future of the discipline would be harmed by significantly reducing the dissertation proposal program process. Rather, we insist that the nearly 10-year call for manpower resources to the Sociology Program (i.e., a request made in 3 consecutive COV reports) finally be answered with increased staffing to the Program.

2. Responsiveness of the program to emerging research and education opportunities.

Comments: The Sociology program is highly responsive. It is active in interdisciplinary and outreach programs within NSF and in cooperation with the ASA. It has been active in CAREER, DDRIG, RAPID, REU, and EAGER programs. It has jointly sponsored five alliances among the top 25 producers of under-represented minority doctorates. During this review period, the program initiated a post-doctoral program for the first time (in economic sociology, a rapidly emerging field in sociology). We recommend that they carefully review the experience to assess if post-doctoral support should be expanded.

3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.

Comments: Working to support the best science, they have also worked to ensure minority, gender, career stage, geographic and institutional type diversity. Maintaining a strong portfolio of grants has been the top priority for the program officers. During the review period, the EAGER and RAPID grants were new, and in 2011 and 2012 (the last two COV review period years) the rotating program officers running the Sociology Program (while the permanent Program Director was on leave) did not award grants under these projects. We expect that there will be new priority given to these projects in subsequent years.

During the review period, the program initiated a meeting of the three major ongoing surveys (GSS, ANE, and PSID) and produced a report on *Future Investments in Large-Scale Survey Data Access and Dissemination*. We encourage the division to follow up its recommendations.

In response to the dissertation panel, the program experimented in 2012 with a one-a-year cycle for dissertation grants, leading to a 61% drop in applications, a precipitous decline in effectiveness. They attempted to reduce the number of ad hoc reviewers, but an increase in co-reviewed applications led to an actual increase in reviews. We recommend that the program continue to seek reductions in the number of reviewers for co-reviewed applications by coordinating reviews more closely with other programs.

4. Responsiveness of program to previous COV comments and recommendations.

Comments: The program seriously and diligently responded to recommendations from the last review.

IV. Questions about Portfolio. Please answer the following about the portfolio of awards made by the program under review.

RESULTING PORTFOLIO OF AWARDS	APPROPRIATE, NOT APPROPRIATE, OR DATA NOT AVAILABLE
<p>1. Does the program portfolio have an appropriate balance of awards across disciplines and sub-disciplines of the activity?</p> <p>Comments: The projects supported cross a significant number of subspecialty areas that include criminology, community/urban sociology, comparative/cross-cultural, family/life course, immigration/migration, medical sociology, sociology of the military, organizations/occupations/work, social inequality, social movements, and small groups/group processes, and others. We also note an attention to have a balance between qualitative and quantitative methodologies in the portfolio, a reflection of the program officers' efforts to balance methodologists on the panels.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	Appropriate
<p>2. Are awards appropriate in size and duration for the scope of the projects?</p>	Appropriate (but see comment)

<p>Comments: We note that the duration of awards declined over the three year period under review, but that occurred due to the unique circumstance that the rotating program officers tended to reduce the duration of the grants (while the permanent program officer was on sabbatical), a practice that we do not expect to continue in subsequent years. We support the return to the practice of awarding longer grants to both regular and dissertation proposals.</p> <p>With regard to the size of the grants, we noted that when the size of a project's budget was cut, justification for that cut was noted and available in the jackets.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>3. Does the program portfolio include awards for projects that are innovative or potentially transformative?</p> <p>Comments: Overall, most proposals funded could be classified as normal science. There were some that were more innovative in that they involved new measures of standard concepts. We noted what appears to be the increased use of network methods in substantive analysis and there were also interdisciplinary projects that brought together scholars who are young and/or from underrepresented groups. We also note a project that would create a knowledge-base of sociological theory that would allow for dissemination of and connections among theoretical concepts. These last are potentially transformative to the discipline.</p> <p>We also note an increase in the number of studies on religion, something that we would not have been able to expect 15 to 20 years ago.</p> <p>We note that there was a precipitous decline in the number RAPID or EAGERS proposals funded after 2010 because the permanent program officer who is committed to processing these proposals was on sabbatical in the later years of the COV review period. The rotating program officers on staff after 2010 did not fund proposals under these programs. We expect an increasing number of proposals to be funded under these programs in subsequent years and we encourage and support that increase.</p> <p>Data Source: Jackets</p>	Appropriate
<p>4. Does the program portfolio include inter- and multi-disciplinary projects?</p> <p>Comments: A full 60 percent of the proposals funded by the Sociology Program are also jointly funded by other programs; altogether 173 such proposals were co-funded, and Sociology contributed \$2.4 million to these projects. The Sociology Program co-funds most extensively with the Economics, Law and Social Sciences, Methodology, Measurement and Statistics, Science or Organizations, and Political Science programs within</p>	Appropriate

<p>SES. In BCS, Sociology co-funds most extensively with the Geography and Spatial Sciences program. Outside the SBE Directorate, Sociology co-funds most extensively with the Cross-Directorate Activities program, in addition to the Minority Graduate Education Activities program in the Directorate for Education and Human Resources (EHR). Additionally, the Program managed 35 proposals for the SBE Directorate's Broadening Participation effort, co – supported by EHR.</p> <p>In addition, the Sociology Program also jointly funds and manages the GSS, LIS, LWS, IPUMS, and other infrastructure projects, and the Program has supported projects that contributed to the creation and dissemination of new databases, research tools, and methods.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>5. Does the program portfolio have an appropriate geographical distribution of Principal Investigators?</p> <p>Comments: The program has aggressively pursued geographical diversity because the program officers are aware that many geographic regions continue to be less than well-represented. The funding rates for EPSCoR states declined slightly from 2010 to 2011 but increased in 2012.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	Appropriate
<p>6. Does the program portfolio have an appropriate balance of awards to different types of institutions?</p> <p>Comments: Over the COV review period, research intensive PhD awarding institutions were awarded the bulk of the proposals, relative to other institutions. For dissertation proposals, an increasing proportion went to non-research intensive PhD institutions. The Program continues its outreach efforts, and we support that.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	Appropriate
<p>7. Does the program portfolio have an appropriate balance of awards to new investigators?</p>	Appropriate

<p>NOTE: A new investigator is an investigator who has not been a PI on a previously funded NSF grant.</p> <p>Comments: The majority of regular proposals (59%) and dissertation proposals (51%) awarded during the COV review period included at least one new investigators. Unsurprisingly, the acceptance rate for veteran PIs than for new PIs, however the Program does actively work to aid new PIs in their grant proposal efforts. They give workshops at the ASA and at mini-conferences, they offer publications to assist in proposal writing, and they provide detailed feedback in the review process.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>8. Does the program portfolio include projects that integrate research and education?</p> <p>Comments: The Sociology portfolio contains a considerable number of projects that provide support for undergraduates, graduate students and/or post-doctoral students via standard and non-standard research proposals. In addition, the Sociology program also supports Doctoral Dissertation Improvement Grants (DDRIGs), Research in Undergraduate Institutions (RUIs), and CAREER proposals, all of which reflect targeted efforts to promote the integration of research and teaching. During the fiscal years 2010-2012, Sociology supported 84 undergraduate student positions, 225 graduate student positions, and 31 post-doctoral positions via regular proposals. The graduate student positions supported does not include graduate training included in the 124 students receiving DDRIG awards.</p> <p>Data Source: Jackets</p>	Appropriate
<p>9. Does the program portfolio have appropriate participation of underrepresented groups³⁸?</p> <p>Comments: The Sociology Program has been assertive in enhancing the participation of under-representative groups. The success rate for women in regular awards matched overall applications, and in dissertation awards surpassed the overall rate. For minorities the success rates for both regular and dissertation awards were close to the overall group. However, during this review period, the number of applications from minority PIs and minority-</p>	Inappropriate

³⁸ NSF does not have the legal authority to require principal investigators or reviewers to provide demographic data. Since provision of such data is voluntary, the demographic data available are incomplete. This may make it difficult to answer this question for small programs. However, experience suggests that even with the limited data available, COVs are able to provide a meaningful response to this question for most programs.

<p>serving institutions declined from one year to the next. This may be due to variation in attention given to the issue by rotating program officers.</p> <p>Data Source: EIS/Committee of Visitors Module</p>	
<p>10. Is the program relevant to national priorities, agency mission, relevant fields and other constituent needs? Include citations of relevant external reports.</p> <p>Comments: Most social issues (for example, education, immigration, economic and national insecurity, demography, terrorism, the environment, disasters, crime and criminal justice, marriage and family, social welfare, employment and occupations, the military, health and behavior) have social roots and require social as well as technological solutions. The Sociology Program connects to and contributes to relevant national and NSF priorities as well as ongoing priorities of the discipline. Projects supported by the Sociology Program have demonstrated relevancy to different audiences and communities. NSF-supported research is profiled regularly in congressional briefings. A report submitted to the National Science and Technology Council (<i>Social, Behavioral and Economic Research in the Federal Context</i>, 2009, p. 8) features the GSS as a prime example of infrastructure projects that have great significance in the federal policy context. A few particular projects funded by the Sociology Program that are especially pertinent for national priorities are:</p> <p>Adolescent Ambitions and Adult Outcomes Highlight</p> <p>Military Service and Patterns of Marriage, Cohabitation, and Union Dissolution</p> <p>Differential Neighborhood Organization: A Multi-Level Theory of Crime</p> <p>Feeding the Pipeline: Preparing and Planning for STEM Careers</p> <p>Data Source: Jackets</p>	
<p>11. Additional comments on the quality of the projects or the balance of the portfolio:</p>	

OTHER TOPICS

1. Please comment on any program areas in need of improvement or gaps (if any) within program areas.

The COV review Committee lauds the Program Directors and program staff for maintaining a strong program, a portfolio that broadly represents sub-disciplines and the best of the discipline overall, that gives attention to including new PIs and PIs from underrepresented groups, that maintains a commitment to outreach, and stays committed to the sustenance of large-scale infrastructure projects.

But we reiterate the serious problem of understaffing and fear that such a high quality program cannot be maintained over the long-term, and is indeed on the verge of devolution without the immediate injection of resources in the form of additional staff.

2. Please provide comments as appropriate on the program's performance in meeting program-specific goals and objectives that are not covered by the above questions.
3. Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

Here, we would like to make two recommendations:

- We suggest that attention be paid to imbalances in workloads across programs that result from the year-to-year variations in the numbers of proposal submissions, and in the attention that must be paid to infrastructure projects. The Foundation should consider flexible systems of staff assignment to help address these fluctuations that cannot be predicted from one year to the next.
- We would like to reaffirm the principle that innovation is better fostered by the bottom-up percolation of ideas than by centralized directives or initiatives.

4. Please provide comments on any other issues the COV feels are relevant.
5. NSF would appreciate your comments on how to improve the COV review process, format and report template.

Here we have four comments.

First, there are areas of the COV review website we found confusing. We think more attention should be paid to how to make the web pages more easily navigable.

Second, we believe that the COV review agenda should have more opportunity for big- and long-term thinking. That is, missing from the agenda are opportunities for cross-program discussion that would enable better contributions to the solicitations for agency-wide recommendations.

Third, we are concerned that the Foundation structure may not give sufficient consideration to the role of the permanent Program Officer/Director, particularly their role in preserving the continuities of the program components and infrastructure crucial to the discipline, as well as the data products that are themselves crucial to other disciplines outside of the program.

Fourth, and last, we note that there was some disconnect between what the separate program COVs were doing and had decided, and the division-wide report. Full discussion of the division-wide component was insufficient. Issues discussed as open issues in the full group were presented as consensual recommendations. These include the recommendation to unite the big three surveys into

a new cluster, the increased use of boilerplate language to high- and low-rated proposal, and the recommendation to diversity program review panels by including panelists trained and credentialed outside of the programs' core discipline. There was some opportunity to revise this imbalances in the final report, but it was less than an ideal amount, and the opportunity came about through a less than ideal process.

SIGNATURE BLOCK:

William Roy
Vilna Bashi Treitler

For the Social and Economic Sciences COV
Steven Ruggles, Chair