Directorate for Social, Behavioral, & Economic Sciences

Cheryl Eavey & Deborah Winslow
NSF Program Directors
NSF Grants Conference
November 2 & 3, 2015
DIRECTORATE FOR SOCIAL, BEHAVIORAL, & ECONOMIC SCIENCES

CHERYL EAVEY
& DEBORAH WINSLOW,
PROGRAM DIRECTORS
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Social and Economic Sciences (SES)</td>
<td>$95.87</td>
<td>$97.72</td>
<td>$105.13</td>
<td>$7.41</td>
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<tr>
<td>Behavioral and Cognitive Sciences (BCS)</td>
<td>93.10</td>
<td>94.47</td>
<td>101.79</td>
<td>7.32</td>
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<tr>
<td>National Center for Science and Engineering Statistics (NCSES)</td>
<td>39.73</td>
<td>50.76</td>
<td>54.31</td>
<td>3.55</td>
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<tr>
<td>SBE Office of Multidisciplinary Activities (SMA)</td>
<td>28.14</td>
<td>29.25</td>
<td>30.23</td>
<td>0.98</td>
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<tr>
<td>Total, SBE</td>
<td>$256.84</td>
<td>$272.20</td>
<td>$291.46</td>
<td>$19.26</td>
</tr>
</tbody>
</table>

Totals may not add due to rounding.
SBE KEY PRIORITIES FOR FY 2016

- Enhance research advances in fundamental knowledge across SBE sciences
- Support interdisciplinary research and training
- Participate in relevant cross-directorate and NSF-wide priority areas
SBE Office of Multidisciplinary Activities

Coordinates SBE’s participation in SBE-wide and NSF-wide programs.

- SBE Postdoctoral Research Fellowships (SPRF)
- SBE REU Sites (REU Sites)
- Science of Learning Centers (SLC)
- Science of Science & Innovation Policy (SciSIP)
- Resource Implementation for Data Intensive Research in the Social, Behavioral, & Economic Sciences (RIDIR)
- Interdisciplinary Behavioral & Social Science Research (IBSS)
Student opportunities

- **SBE Postdoctoral Research Fellowships (SPRF)**
  - Two tracks: (1) Broadening participation (SPRF-BP); (2) Encouraging interdisciplinary research (SPRF-IBSS)
  - 12 to 16 a year; salary of $62,000/year, 2 years
  - U.S. citizen or permanent resident
  - Application window: 10 months before to 36 months after PhD
  - Fellow/Mentor team

- **Research Experience for Undergraduates (REU Sites)**
  - Undergraduate research opportunity, coherent intellectual theme
  - Single or multi-disciplinary; up to 3 years, typically $350,000 total

Colby College REU Site:
Religion and Forest Ecology in Ethiopia
(Environmental studies)
More Office of Multidisciplinary Activities

- **Science of Science & Innovation Policy (SciSIP):**
  - Research on how science works; “models, analytical tools, data, and metrics that can be applied to science policy decision making process” – multi-disciplinary or single
  - Examples: standards for data citation & attribution; research on productivity of international partnerships; utility of science visualization; productivity of federal biomedical R&D funding; scientist communication networks.
  - Two deadlines a year (February & September).

- **Science of Learning Centers (SLC)**
  - Supports large-scale, long-term Centers that advance research on the science of learning;
  - Currently: no new centers, but is accepting RAPID, EAGER, & workshop proposals (no deadlines)
FY 2016 SBE 2020 INVESTMENTS

• Activities that derived directly from the “Rebuilding the Mosaic” activity
Interdisciplinary Behavioral and Social Science Research (IBSS)

• Promotes the conduct of interdisciplinary research by teams of investigators in the social and behavioral sciences

• Emphasis on research that
  – Involves researchers from multiple SBE disciplinary fields
  – Integrates scientific theoretical approaches and methodologies from multiple SBE disciplinary fields
  – Yields generalizable insights that will enhance theoretical perspectives and basic knowledge across multiple SBE disciplinary fields
Resource Implementations for Data Intensive Research in the Social, Behavioral, and Economic Sciences (RIDIR)

• Seeks to develop user-friendly large-scale next-generation data resources and relevant analytic techniques to advance fundamental research in SBE areas of study

• The databases or techniques should have significant impacts, either across multiple fields or within broad disciplinary areas, by enabling new types of data-intensive research in the SBE sciences
NATIONAL CENTER FOR SCIENCE AND ENGINEERING STATISTICS (NCSES)

• Nation’s primary source of data and analysis on the science and engineering enterprise

• Designs, supports and directs about 11 periodic surveys, other data collections and research projects

• 30 publications yearly

• Congressionally-mandated publications:
  – *Science and Engineering Indicators*
  – *Women, Minorities and Persons with Disabilities in Science and Engineering*
DIVISION OF BEHAVIORAL & COGNITIVE SCIENCES

• ...supports research to develop and advance scientific knowledge about humans spanning areas of inquiry including brain and behavior, language and culture, origins and evolution, and geography and the environment.
BCS Standing Programs

- Archaeology
- Archaeometry
- Biological Anthropology
- Cultural Anthropology
- Geography & Spatial Sciences
- Linguistics
- Documenting Endangered Languages
- Social Psychology
- Developmental & Learning Sciences
- Cognitive Neuroscience
### BCS Standing Programs: Budgets & Success Rates

<table>
<thead>
<tr>
<th>BCS Programs</th>
<th>Fiscal Year 2015 Budget Allocations</th>
<th>Senior Success Rates (2009-14)</th>
<th>Average Award Size (2009-14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archaeology &amp; Archaeometry</td>
<td>$7,386,940</td>
<td>28%</td>
<td>$147,291</td>
</tr>
<tr>
<td>Biological Anthropology</td>
<td>$4,377,709</td>
<td>27%</td>
<td>$274,534</td>
</tr>
<tr>
<td>Cognitive Neurosciences</td>
<td>$8,154,550</td>
<td>15%</td>
<td>$501,513</td>
</tr>
<tr>
<td>Cultural Anthropology</td>
<td>$3,953,395</td>
<td>12%</td>
<td>$151,965</td>
</tr>
<tr>
<td>Developmental &amp; Learning Sciences</td>
<td>$7,100,917</td>
<td>16%</td>
<td>$430,680</td>
</tr>
<tr>
<td>Documenting Endangered Languages</td>
<td>$2,282,666</td>
<td>32%</td>
<td>$81,080</td>
</tr>
<tr>
<td>Geography &amp; Spatial Sciences</td>
<td>$7,483,356</td>
<td>13%</td>
<td>$278,235</td>
</tr>
<tr>
<td>Linguistics</td>
<td>$6,338,149</td>
<td>29%</td>
<td>$283,953</td>
</tr>
<tr>
<td>Social Psychology</td>
<td>$6,824,781</td>
<td>16%</td>
<td>$305,035</td>
</tr>
</tbody>
</table>
DIVISION OF SOCIAL AND ECONOMIC SCIENCES (SES)

Seeks to enhance our understanding of human, social, and organizational behavior by building social science infrastructure and by developing social disciplinary and interdisciplinary research projects that advance knowledge in the social and economic sciences.
SES STANDING PROGRAMS

- Decision, Risk, and Management Sciences (DRMS)
- Economics
- Law and Social Sciences (LSS)
- Methodology, Measurement, and Statistics (MMS)

- Political Science
- Science of Organizations (SoO)
- Science, Technology, and Society (STS)
- Sociology
### SES Standing Programs: Budget Allocations

<table>
<thead>
<tr>
<th>SES Standing Programs</th>
<th>Fiscal Year 2015 Budget Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision, Risk, and Management Sciences</td>
<td>$6,859,931</td>
</tr>
<tr>
<td>Economics</td>
<td>$23,464,398</td>
</tr>
<tr>
<td>Law and Social Sciences</td>
<td>$5,609,643</td>
</tr>
<tr>
<td>Methodology, Measurement, and Statistics</td>
<td>$4,058,922</td>
</tr>
<tr>
<td>Political Science</td>
<td>$9,123,562</td>
</tr>
<tr>
<td>Science of Organizations</td>
<td>$3,182,492</td>
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<tr>
<td>Science, Technology, and Society</td>
<td>$5,985,241</td>
</tr>
<tr>
<td>Sociology</td>
<td>$8,640,743</td>
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</table>
MMS Mission Statement

• The Methodology, Measurement, and Statistics (MMS) Program is an interdisciplinary program in the Directorate for Social, Behavioral, and Economic Sciences that supports the development of innovative analytical and statistical methods and models for those sciences.

• MMS seeks proposals that are methodologically innovative, grounded in theory, and have potential utility for multiple fields within the social and behavioral sciences.
Funding Mechanisms: Kinds of proposals

Standing programs differ, but most support:

- Doctoral Dissertation Research Improvement grants
- Regular/senior research grants
- CAREER awards
- High risk awards (EAGER, RAPID)
- Training programs (including Scholars)
- Research-focused workshops
- Research Coordination Networks (RCNs)
Senior Award Example
Program: Social Psychology
PI: Hilary Anger Elfenbein, University of California-Berkeley

Accuracy in the Cross-Cultural Understanding of Others’ Emotions

- Researchers investigated nonverbal cues such as facial expressions, vocal tones & body language.

- Army Research Institute incorporated nonverbal education into soldier training based on research.

- Enhances troops’ interpersonal skills providing human solutions in military situations.
NEW METHODS FOR SURVEYS

Researchers examined the impact of using smartphones for survey data collection.

Respondents provided higher quality data when surveyed by texting than by voice interviews; they also reported high satisfaction with text interviews.

Continued methodological development will improve the reliability and cost-effectiveness of data collection in surveys, including those supported by NCSES and SES.

Improved surveys will benefit policy formation and evidence-based decision making, as well as journalism, education, and research.

Conrad, Schober
1026225, 1025645
University of Michigan, New School University
Methodology, Measurement, and Statistics; Sociology; NCSES
Senior Award Example
Program: Perception, Action, & Cognition
PI: Jessica K Witt, Purdue University

Action’s Effects on Perception

- Researchers investigated factors that influence the decision to shoot.
- Evidence suggests when someone holds a gun, they are more likely to perceive nonthreatening objects as guns.
- Research reveals patterns concerning how people assess risks and make decisions in law enforcement and public safety.
INCENTIVIZING BEHAVIOR

Researchers evaluated evidence from controlled observational and field studies of the use of economic incentives for stimulating blood donation.

- On average, offering incentives (t-shirts, paid leave, etc.) increased the number of donors attending blood drives by 15-20%, with no evidence of compromised blood safety.

- This study has important implications for programs that aim to alleviate the chronic shortage of blood donations in the US and around the world.

Sivadasan, Macis, Lacetera
0851602, 0851587
University of Michigan, Case Western Reserve University Economics
Researchers created a synthetic laboratory populated with artificial agents to experiment with theories about crowd behavior and dynamics in a broad range of simulated social and environmental conditions.

The study showed the rapid exchange of nonverbal information in crowds, and demonstrated "scaling," whereby the actions of a single individual can shape the dynamics of an entire crowd.

Findings may inform crowd control efforts important for effective law enforcement, disaster response and event planning.
CAREER awards

- 5 year awards, $400,000 floor (in SBE)
- Career development of outstanding new teacher/scholars.
- Untenured Asst. Prof. (or equivalent), with PhD or equiv.
- Untenured at time of application and the following October 1
- Integrated educational component
- Prestigious & competitive: 3 tries.
- Deadline: July 22, 2016
  (varies yearly)
- Webinar on CAREER site.

Mark Moritz, Ohio State.

Pastoral Management of Open Access:
The Emergence of a Complex Adaptive System
RAPIDs: Rapid Response Research

New Orleans, 2005

- Anthropologist Kate Browne & Sociologist Lori Peek (Colorado State)
- Interviewed extended family network members after Katrina, following them to Texas where they sought temporary refuge
PATHS TO SBE SUPPORT: STANDING PROGRAMS

• Review the disciplinary and interdisciplinary program websites
  – Each is available via NSF -> SBE -> BCS or SES

• Check for dates, special rules and criteria

• Some have regular (‘senior’) and DDRIG competitions

• Co-review is often a possibility
Beyond SBE: SBE working with other directorates

- Ecology & Evolution of Infectious Diseases (EEID).
  - Annual competition, inter-agency competition (NIH, USDA, US-Israel Binational Science Foundation)
  - Large team projects that propose predictive modeling of disease transmission

- Interaction of Food, Energy, & Water (FEW)
  - Interdisciplinary work on linked systems
  - Monitor the NSF web site for future activities (INFEWS)
Beyond SBE: SBE working with other directorates

• Critical Resilient Interdependent Infrastructure Systems and Processes (CRISP)
  – Collaboration of SBE with Engineering and CISE
  – foster an interdisciplinary research community of engineers, computer and computational scientists and social and behavioral scientists that creates new approaches and engineering solutions for the design and operation of infrastructures as processes and services
  – enhance the understanding and design of interdependent critical infrastructure systems (ICIs) and processes that provide essential goods and services despite disruptions and failures from any cause, natural, technological, or malicious
Beyond SBE: SBE working with other directorates

• Software infrastructure for Sustained Innovation (SI2)
  – Collaboration of CISE with multiple NSF directorates, including SBE
  – Is a long-term investment focused on catalyzing new thinking, paradigms, and practices in developing and using software to understand natural, human, and engineered systems.
  – NSF expects that this investment will result in robust, reliable, usable, and sustainable software infrastructure that is critical to achieving the CIF21 vision and will transform science and engineering while contributing to the education of next generation researchers and creators of future cyberinfrastructure.
What does a program support? Is your idea appropriate?

- Email program officers
- Read the Grant Proposal Guide
- Check for specific solicitations
- Look at abstracts of previously supported awards in each program
Behavioral and Cognitive Sciences (BCS)

Important Announcements

SBE Leadership Opportunity - NSF is asking for your assistance in identifying potential candidates for the position of Division Director for the Social and Economic Sciences Division (SES) of the Social, Behavioral & Economic Sciences Directorate (SBE). See the Dear Colleague Letter for additional information.

A brief guide NSF’s Technical Reporting Requirements is now available to inform Principal Investigators about the information that should be included in annual, final, and project outcome reports. As of March 18, 2013, all NSF reports must be submitted through Research.gov. PIs who have not had experience with the reporting modules in Research.gov may find the Getting Started Guide useful.

A new Strategic Plan for the Division of Behavioral and Cognitive Sciences (BCS) has been released to guide the division’s pursuits and activities. The goals of the division align with and flow from the new NSF Strategic Plan and the foundation’s goals to Transform the Frontier, Innovate for Society, and Perform as a Model Organization.

About BCS

The Division of Behavioral and Cognitive Sciences (BCS) supports research to develop and advance scientific knowledge about humans, spanning areas of inquiry including brains and behavior, language and culture, origins and evolution, and geography and the environment. In addition to the core program areas, BCS sponsors several additional crosscutting and NSF-wide funding opportunities.

Programs and Funding Opportunities

What Has Been Funded (Recent Awards Made Through This Program, with Abstracts)

<table>
<thead>
<tr>
<th>Award Number</th>
<th>Award Title</th>
<th>Start Date</th>
<th>Principal Investigator</th>
<th>Institution</th>
<th>Amount Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1039269</td>
<td>Developmental Research on Social, Emotional, and Behavioral Development: Predicting and Preventing Disruptive Behavior</td>
<td>07/01/2012</td>
<td>Smith, John</td>
<td>University of California, Berkeley</td>
<td>$250,000</td>
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<tr>
<td>1039270</td>
<td>Developmental Research on Social, Emotional, and Behavioral Development: Predicting and Preventing Disruptive Behavior</td>
<td>07/01/2012</td>
<td>Johnson, Jane</td>
<td>Stanford University</td>
<td>$300,000</td>
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<td>1040271</td>
<td>Developmental Research on Social, Emotional, and Behavioral Development: Predicting and Preventing Disruptive Behavior</td>
<td>07/01/2012</td>
<td>Smith, John</td>
<td>University of California, Berkeley</td>
<td>$250,000</td>
</tr>
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Key: N = National | O = Other | R = Reserve | U = Unknown

For more information, visit the NSF website at: http://www.nsf.gov/od/ors/orsgawds/BCS/BCSProgramGuide.pdf
Only the tip of the iceberg!

Remember!
Check the web site: www.nsf.gov.
Call the program officer.