DIRECTORATE FOR SOCIAL, BEHAVIORAL AND ECONOMIC SCIENCES (SBE)

$246,190,000
-$24,700,000 / -9.1%

SBE Funding

(Dollars in Millions)

	FY 2017 Actual	FY 2018 (TBD)	FY 2019 Request	Change over FY 2017 Actual	
				Amount	Percent
Social and Economic Sciences (SES)	$97.87	-	$86.68	-$11.19	-11.4%
Behavioral and Cognitive Sciences (BCS)	94.75	-	84.95	-9.80	-10.3%
National Center for Science and Engineering Statistics (NCSES)	51.19	-	51.19	-	-
SBE Office of Multidisciplinary Activities (SMA)	27.08	-	23.37	-3.71	-13.7%
Total	**$270.89**	**-**	**$246.19**	**-$24.70**	**-9.1%**

About SBE

The goals of SBE are to promote the understanding of people and their lives by supporting research that advances fundamental knowledge about human behavior and social institutions; to encourage research that addresses important societal problems and questions in the national interest; to work with other scientific disciplines to ensure that basic research and solutions to problems build upon the best disciplinary and multidisciplinary science; and to provide mission-critical statistical information about the Science and Engineering (S&E) enterprise in the United States and the world through the National Center for Science and Engineering Statistics (NCSES). SBE supports research across a diverse range of sciences that include anthropology, archaeology, economics, geography, linguistics, neuroscience, political science, psychology, sociology, and statistics. In addition, the directorate combines these disciplinary sciences in interdisciplinary activities linking them to each other and to other science and engineering fields. SBE plays a role as a major partner across the agency due to the relevance of the social, behavioral, and economic sciences in NSF priority investments.

SBE seeks to invest in the next generation of scientists who will be able to capitalize on the growing availability of massive amounts of different types of data to advance knowledge about human behavior—for example, to use and combine data from surveys, administrative records, brain imaging, and biospecimen analysis, as well as output from behavioral, environmental, and geographic sensors. As young scientists embark on their careers, they bring novel and far reaching ideas into play that can transform the future and seed the next harvest of discoveries in the social, behavioral, and economic sciences.

SBE provides approximately 68 percent of the federal funding for basic research at academic institutions in the social, behavioral, and economic sciences.

Major Investments

SBE Major Investments

(Dollars in Millions)

Area of Investment	FY 2017 Actual	FY 2018 (TBD)	FY 2019 Request	Change over FY 2017 Actual Amount	Change over FY 2017 Actual Percent
CAREER	$11.70	-	$7.37	-$4.33	-37.0%
INFEWS	4.50	-	2.50	-2.00	-44.4%
NSF I-Corps™	0.49	-	0.50	0.01	2.4%
NSF Research Traineeship[1]	1.44	-	-	-1.44	-100.0%
Risk and Resilience[2]	3.19	-	-	-3.19	-100.0%
SaTC	4.30	-	4.00	-0.30	-7.0%
Understanding the Brain	27.78	-	24.00	-3.78	-13.6%
BRAIN Initiative	*7.43*	*-*	*6.17*	*-1.26*	*-17.0%*
NSF's Big Ideas					
NSF INCLUDES[3]	*0.43*	*-*	*-*	*-0.43*	*-100.0%*

Major investments may have funding overlap and thus should not be summed.

[1] In FY 2019, NRT funding is provided through CISE and EHR.

[2] Risk and Resilience topics will continue to be funded through SBE core programs in FY 2019.

[3] In FY 2019, NSF INCLUDES funding is provided through the EHR account.

SBE Funding for Facilities

SBE Funding for Facilities

(Dollars in Millions)

	FY 2017 Actual	FY 2018 (TBD)	FY 2019 Request	Change over FY 2017 Actual Amount	Change over FY 2017 Actual Percent
Total	**$0.40**	**-**	**$0.40**	**-**	**-**
National Nanotechnology Coordinated Infrastructure (NNCI)	0.40	-	0.40	-	-

For detailed information on individual facilities, please see the Facilities and the Major Research Equipment and Facilities Construction chapters.

Funding Profile

SBE Funding Profile			
	FY 2017 Actual Estimate	FY 2018 (TBD)	FY 2019 Estimate
Statistics for Competitive Awards:			
Number of Proposals	4,311	-	4,300
Number of New Awards	1,031	-	920
Funding Rate	24%	N/A	21%
Statistics for Research Grants:			
Number of Research Grant Proposals	3,010	-	3,000
Number of Research Grants	607	-	540
Funding Rate	20%	N/A	18%
Median Annualized Award Size	$113,847	-	$113,800
Average Annualized Award Size	$138,611	-	$138,600
Average Award Duration, in years	2.6	-	2.6

People Involved in SBE Activities

Number of People Involved in SBE Activities			
	FY 2017 Actual Estimate	FY 2018 (TBD)	FY 2019 Estimate
Senior Researchers	1,482	-	1,300
Other Professionals	427	-	400
Postdoctoral Associates	167	-	100
Graduate Students	1,521	-	1,400
Undergraduate Students	1,139	-	1,000
K-12 Teachers	-	-	-
K-12 Students	-	-	-
Total Number of People	**4,736**	**-**	**4,200**

Program Monitoring and Evaluation

Workshops and Reports:
- In 2017, the National Academies of Sciences, Engineering, and Medicine (the National Academies), at the request of NSF, appointed an expert committee to examine whether SBE research furthers the mission of NSF and those of other federal agencies and advances the work of business and industry. In its report, *The Value of Social, Behavioral, and Economic Sciences to National Priorities: A Report for the National Science Foundation[1],* the expert committee concludes that the SBE sciences advance the missions of NSF and other federal agencies, and it highlights the many contributions of the SBE sciences to meeting national needs. It presents examples of how SBE research is used by business and industry and has enhanced the U.S. economy. In FY 2018, SBE initiated a strategic planning process that will address the committee's recommendations and will solicit input from the research community, other federal agencies, the National Science Board, and industry.
- In 2016, the National Academies, Committee on National Statistics (CNSTAT), at the request of the National Science Foundation's NCSES, convened a panel to review, assess, and provide guidance on

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[1]www.nap.edu/catalog/24790/the-value-of-social-behavioral-and-economic-sciences-to-national-priorities

NCSES's approach to measuring the S&E workforce population in the U.S. Given the evolving data needs of NCSES stakeholders, a priority for the panel was to develop a framework for measuring the S&E workforce that provides flexibility to examine emerging issues related to this unique population, while at the same time allowing for stability in the estimation of key trends. In January of 2018, the Academy panel issued its consensus report, *Measuring the 21st Century Science and Engineering Workforce Population: Evolving Needs[2]*, with findings, recommendations, and priorities for improving the relevance, accuracy, timeliness, and cost-effectiveness of S&E workforce data for the next decade and beyond.

Committees of Visitors (COV):
- In FY 2020, COVs will review BCS and SMA.

The Performance chapter provides details regarding the periodic reviews of programs and portfolios of programs by external COVs and directorate Advisory Committees. Please see this chapter for additional information.

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[2]www.nap.edu/catalog/24968/measuring-the-21st-century-science-and-engineering-workforce-population-evolving

DIVISION OF SOCIAL AND ECONOMIC SCIENCES (SES)   **$86,680,000**
                                                 -$11,190,000 / -11.4%

SES Funding

(Dollars in Millions)

	FY 2017 Actual	FY 2018 (TBD)	FY 2019 Request	Change Over FY 2017 Actual Amount	Change Over FY 2017 Actual Percent
Total	**$97.87**	**-**	**$86.68**	**-$11.19**	**-11.4%**
Research	**87.66**	**-**	**79.69**	**-7.97**	**-9.1%**
CAREER	2.46	-	3.74	1.28	52.1%
Education	**1.80**	**-**	**0.50**	**-1.30**	**-72.2%**
Infrastructure	**8.41**	**-**	**6.49**	**-1.92**	**-22.8%**
NNCI	0.40	-	0.40	-	-
Research Resources	8.01	-	6.09	-1.92	-23.9%

SES Summary

SES supports research and related activities that improve understanding of economic, social, and political institutions and how individuals and organizations behave within them. SES funds activities investigating risk assessment and decision-making by individuals and groups; the nature and development of science and technology and their impact on society; methods and statistics applicable across the social, economic, and behavioral sciences; and broadening participation in the social, behavioral, and economic sciences. Discipline-based programs include economics, political science, and sociology, while interdisciplinary programs support research in fields such as decision-making and risk management; law and social sciences; methods, measurement, and statistics; science of organizations; and science, technology, and society. In many of its programs, SES is the major, if not the only, source of federal funding for fundamental research, making important investments in the data resources and methodological advances that produce transformative research. In addition, SES research contributes to better understanding of issues related to national security, terrorism, and economic, social, and behavioral well-being.

In general, 74 percent of the SES portfolio is available for new research grants and 26 percent is available for continuing grants.

DIVISION OF BEHAVIORAL AND COGNITIVE SCIENCES (BCS)   **$84,950,000**
                                                                                    -$9,800,000 / -10.3%

BCS Funding
(Dollars in Millions)

	FY 2017 Actual	FY 2018 (TBD)	FY 2019 Request	Change Over FY 2017 Actual Amount	Percent
Total	**$94.75**	**-**	**$84.95**	**-$9.80**	**-10.3%**
Research	**90.38**	**-**	**83.51**	**-6.87**	**-7.6%**
CAREER	8.23	-	3.63	-4.60	-55.9%
Education	**2.87**	**-**	**0.44**	**-2.43**	**-84.7%**
Infrastructure	**1.50**	**-**	**1.00**	**-0.50**	**-33.3%**
Research Resources	1.50	-	1.00	-0.50	-33.3%

BCS Summary

BCS supports research and related activities that advance fundamental understanding in the behavioral, cognitive, anthropological, neuroscience, and geographic sciences. Strong core programs are complemented by active involvement in competitions that support collaborative and cross-disciplinary projects that increase understanding of mind, brain, and society. The division seeks to advance scientific knowledge and methods focusing on human cognition and behavior, including perception, thought processes, language, learning, and social behavior across neural, individual, family, and group levels. BCS supports activities focusing on human variation in groups, society, and biology, and how these variations and related patterns develop and change across time and space. The division aims to increase basic understanding of geographic distributions and relationships, as well as the capabilities to explore them, with an emphasis on interactions among human and natural systems. BCS research is helping to prepare for and mitigate the effects of natural and human-initiated disasters, predict and address how people respond to stressors, improve methods for effective learning, enhance the quality of social interaction, and anticipate and respond to critical issues in areas such as national security, terrorism, and global change.

In general, 77 percent of the BCS portfolio is available for new research grants and 23 percent is available for continuing grants.

NATIONAL CENTER FOR SCIENCE AND ENGINEERING $51,190,000
   STATISTICS (NCSES) $0 / 0.0%

NCSES Funding

(Dollars in Millions)

	FY 2017 Actual	FY 2018 (TBD)	FY 2019 Request	Change Over FY 2017 Actual	
				Amount	Percent
Total	**$51.19**	**-**	**$51.19**	**-**	**-**
Infrastructure	51.19	-	51.19	-	-

NCSES Summary

NCSES was established within the National Science Foundation by Section 505 of the America COMPETES Reauthorization Act of 2010 (P.L. 111-358). The Act provides NCSES with the legislative mission to "…serve as the central federal clearinghouse for the collection, interpretation, analysis, and dissemination of objective data on science, engineering, technology, and research and development." NCSES is mandated to collect statistical data on research and development trends, the science and engineering workforce, U.S. competitiveness, and the condition and progress of the Nation's STEM education; to support research using the data it collects and on methodologies in areas related to the work of the Center; and to support the education and training of researchers in the use of its own and other large-scale, nationally representative data sets.

As one of the thirteen principal federal statistical agencies, NCSES has primary responsibility for statistics regarding the S&E enterprise. NCSES designs, supports, and directs a coordinated collection of periodic national surveys and performs a variety of other data collections and research, providing policymakers, researchers, and other decision-makers with high quality data and analysis on R&D, innovation, the education of scientists and engineers, and the science and engineering workforce. The work of NCSES involves survey development, methodological and quality improvement efforts, data collection, analysis, information compilation, dissemination, web access, and customer service to meet the statistical and analytical needs of a diverse user community. It prepares two congressionally mandated biennial reports—*Science and Engineering Indicators* and *Women, Minorities, and Persons with Disabilities in Science and Engineering*.

SBE OFFICE OF MULTIDISCIPLINARY ACTIVITIES (SMA)　　　　　　　**$23,370,000**
-$3,710,000/ -13.7%

SMA Funding
(Dollars in Millions)

	FY 2017 Actual	FY 2018 (TBD)	FY 2019 Request	Change Over FY 2017 Actual Amount	Percent
Total	**$27.08**	**-**	**$23.37**	**-$3.71**	**-13.7%**
Research	**18.56**	**-**	**17.42**	**-1.14**	**-6.1%**
Education	**7.44**	**-**	**5.95**	**-1.49**	**-20.0%**
Infrastructure	**1.08**	**-**	**-**	**-1.08**	**-100.0%**
Research Resources	1.08	-	-	-1.08	-100.0%

SMA Summary

SMA provides a focal point for programmatic activities that cut across SBE and NSF disciplinary boundaries. SMA houses three programs: Science of Science and Innovation Policy (SciSIP), Research Experiences for Undergraduates (REU) Sites, and SBE Postdoctoral Research Fellowships (SPRF). SMA will play a critical role in several crosscutting NSF investments in FY 2019: UtB; cybersecurity, via SaTC; innovation, via I-Corps™; interdisciplinary research and training, via activities such as the SPRF-Fundamental Research (SPRF-FR) and Broadening Participation (SPRF-BP) tracks; and the science of learning core program. Co-funding with other divisions in SBE and with other directorates is typical for SMA. While all SBE divisions pursue interdisciplinary work, SMA assists with seeding multidisciplinary activities for the future, such as SBE's Robust and Reliable Science funding activity initiated with a Dear Colleague Letter, which conducted its first competition in FY 2017. All areas of SBE sciences are represented in the SMA portfolio.

In general, 64 percent of the SMA portfolio is available for new research grants and 36 percent is available for continuing grants.