



# **NSF Support of Social, Behavioral and Economic Sciences**

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**Economic Sciences**

**Arizona State University, 2009**

# Outline

- Basics of the National Science Foundation
- Opportunities
- Procedures
- Separating Awards from Declinations
- Appendix of program information



# NSF in a Nutshell

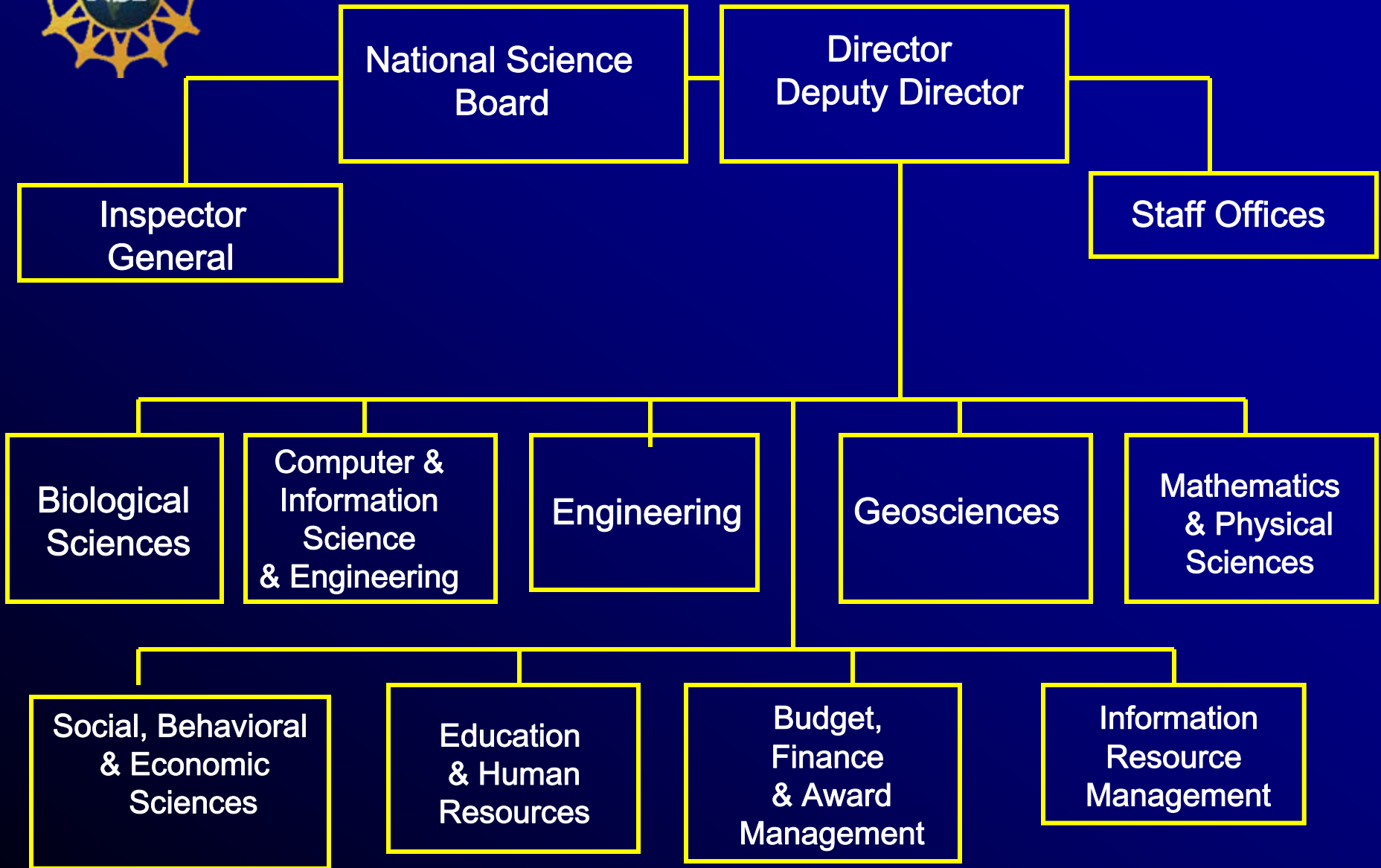
- Independent Agency
- Supports basic research
- Uses grant mechanism
- Low overhead; highly automated
- Discipline-based structure
- Cross-disciplinary mechanisms
- Use of Rotators/IPAs
- National Science Board

# Why You Want NSF Funding

- Funds curiosity-driven research
- Pays full overhead (no match)
- May provide summer salary support
- Uses the grant mechanism
- (Why wouldn't you?)



# National Science Foundation





**Office of the Director**

**Directorate for Social,  
Behavioral & Economic  
Sciences**

**Social and Economic  
Sciences**

**Behavioral and Cognitive  
Sciences**

**Science Resources Statistics**

# Opportunities

- Unsolicited competitions
- Special solicitations
  - e.g. Science of Science & Innovation Policy
  - Dynamics of Coupled Natural & Human Systems
- Rapid response research (RAPID)
- Early concept grants for exploratory research (EAGER)
- CAREER grants
- Dear Colleague Letter
- Doctoral dissertation improvement grants

# Where to Start?

- [www.nsf.gov](http://www.nsf.gov)
- Check awards by program, keyword, etc. ([www.nsf.gov/awardsearch/](http://www.nsf.gov/awardsearch/))
- Read solicitation carefully (if not unsolicited competition)
- Download *Grant Proposal Guide*



# Social and Economic Sciences

## FY09 Program Allocations (millions of dollars)

- Cross-Directorate Activities \$3.8
- Decision, Risk, & Management Sciences \$7.52
- Economics \$25.81
- Innovation and Organizational Sciences \$3.37
- Law and Social Science \$5.08
- Methodology, Measurement & Statistics \$4.03
- Political Science \$9.95
- Science and Society \$8.99
- Sociology \$9.46





# SES Target/Deadline Dates

DDIGs may differ

## **January 15 & August 15**

Law and Social Science

Political Science

Sociology

## **January 16 & August 16**

Methodology, Measurement, and Statistics

## **January 18 & August 18**

Decision, Risk, & Management Sciences

Economics

## **February 1 & August 1**

Science and Society

## **February 2 & September 3**

Innovation and Organizational Sciences



# Behavioral and Cognitive Sciences

## FY09 Program Allocations (millions of dollars)

- Archaeology & Archaeometry \$6.9
- Cultural Anthropology \$3.7
- Cognitive Neuroscience \$7.6
- Developmental & Learning Sciences \$6.6
- Geography & Spatial Sciences \$7.0
- Linguistics \$5.9
- Documenting Endangered Languages \$2.1
- Perception, Action, & Cognition \$7.0
- Physical Anthropology \$4.1
- Social Psychology \$6.4



# BCS Target/Deadline Dates

DDIGs may differ

**January 14 & July 14**

Cognitive Neuroscience

**January 15 & July 15**

Developmental & Learning Sciences

Linguistics

Social Psychology

**January 15 & August 15**

Cultural Anthropology

Geography & Spatial Sciences

January 20 and August 20

Physical Anthropology

February 1 & August 1

Perception, Cognition and Action

July 1 & December 1

Archaeology

# Social, Behavioral & Economic Sciences Programs

## Disciplinary

- Cultural Anthropology
- Physical Anthropology
- Archaeology
- Linguistics
- Social Psychology
- Economics
- Sociology
- Political Science

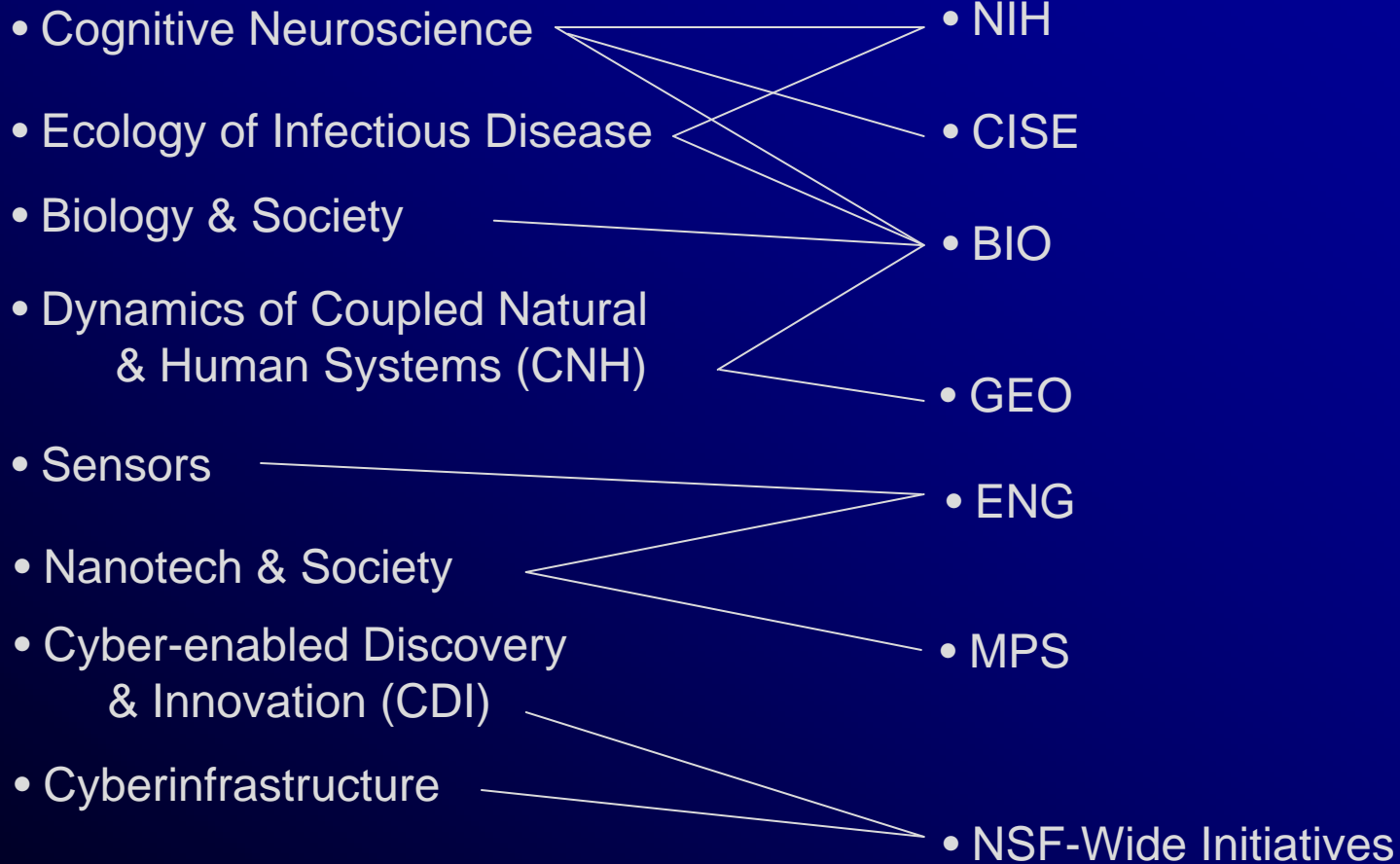
## Inter-Disciplinary

- Cognitive Neuroscience
- Developmental & Learning Sciences
- Documenting Endangered Languages
- Perception, Action & Cognition
- HOMINID
- Geography & Spatial Sciences
- Environmental, Social & Behavioral Science
- Decision, Risk & Management Sciences
- Science of Science & Innovation Policy
- Innovation & Organizational Sciences
- Methodology, Measurement & Statistics
- Science & Society
- Law & Social Sciences

# Social, Behavioral & Economic Sciences Joint Funding

## Joint-Funded Programs

## Funding Partners



# Doctoral Dissertation Improvement Awards

Check web for Target/Deadline Dates

- Archaeology
- Cultural Anthropology
- Decision, Risk, & Management Science
- Economics
- Geography & Spatial Sciences
- Law and Social Science
- Linguistics
- Physical Anthropology
- Political Science
- Science and Society
- Sociology



# Faculty Early Career Development (CAREER) Program

- Untenured faculty (or comparable)
- Single scholar award
- \$400,000, 5-years minimum award
- Three proposals lifetime limit
- July 1 deadline
- High Prestige/High Expectations



# Rapid Response Research (RAPID)

- Research when data are ephemeral
- \$200,000 maximum; 1 year
- 5 page project description
- Internal review required; external optional
- *Contact program officer first*

# Early-concept grants for exploratory research (EAGER)

- Exploratory work on untested, potentially transformative ideas
- High-risk, high-potential payoff
- \$300,000 maximum; 2 years
- Eight page description
- Internal review required/ external optional
- *Contact program officer first*

# Dear Colleague Letter

## Example: Integrating HSD Goals into Core SBE Programs

- **Complexity Science**
- **Large-scale Interdisciplinary Research**
- **Infrastructure**

# Special Program: Science of Science & Innovation Policy

- **Understanding:**

develop usable *knowledge* and *theories*

- **Measurement:**

improve and expand science *metrics, datasets* and *analytical models and tools* that are replicable and generalizable

- **Community development:**

cultivate a *community of practice* focusing on SciSIP across the academy, the public sector and industry both nationally and internationally

**Program Officer: Julia Lane**



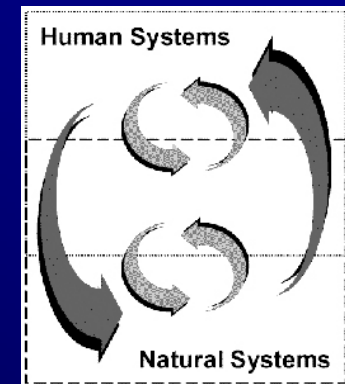
# Special Program: Science of Learning Centers

- Managed by SBE with NSF-wide funding
  - Multidisciplinary
  - Large scale
  - 10 years of funding, if progress warrants
- 6 Centers currently funded
  - Cohort 1: Boston U., Carnegie-Mellon, U. of Washington
  - Cohort 2: Gallaudet, Temple, UCSD
- Developing a network of centers
  - Workshops
  - Student activities
  - International linkages
  - Opportunities for supplements

**Program Officer: Soo-Siang Lim**

# Special Program: Dynamics of Coupled Natural and Human Systems (CNH)

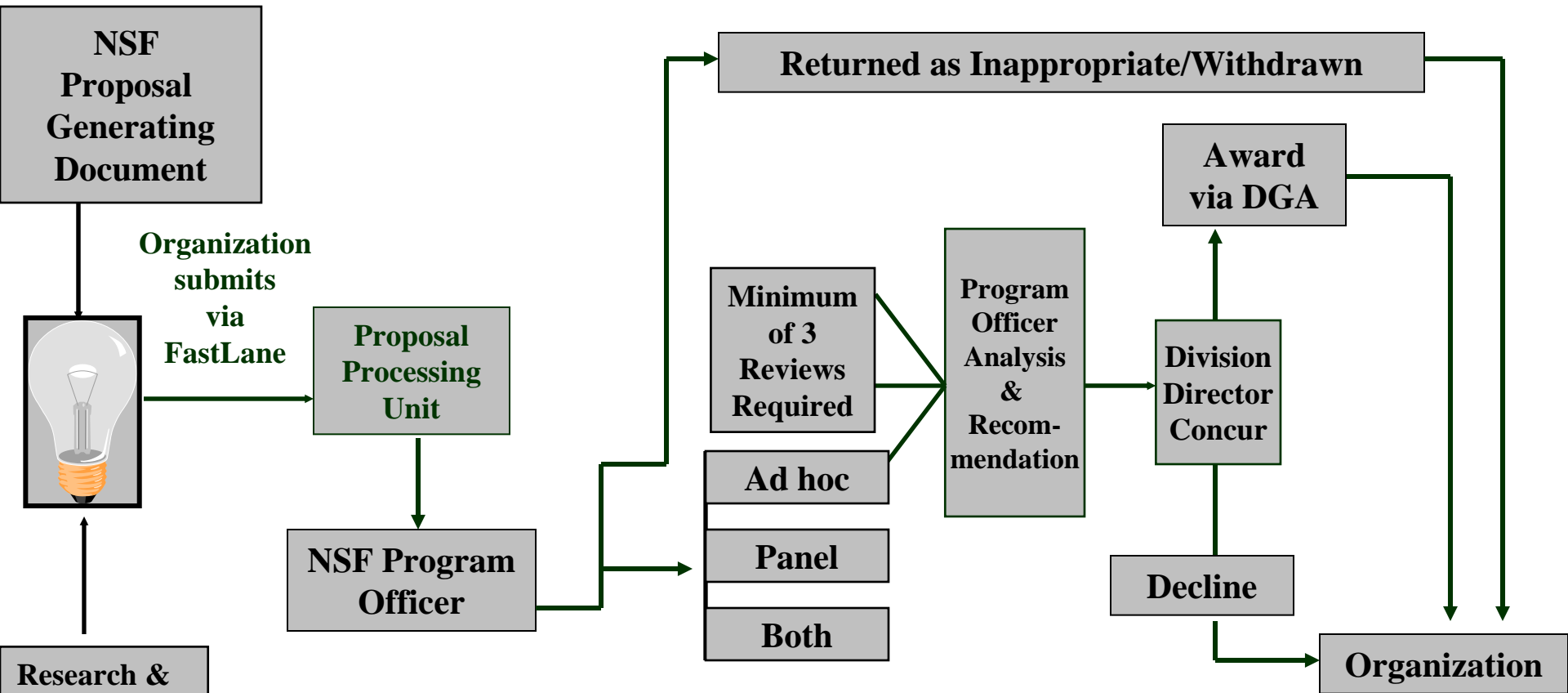
- Funds quantitative, interdisciplinary analyses of relevant human and natural system processes and complex interactions at diverse scales
- First permanent inter-directorate program



**Program Officer: Tom Baerwald**



# Proposal Process



Proposal received by NSF

Div. Dir. Concur

Award

4 months

30 days

DGA Review & Processing of Award

Proposal Preparation Time

Review of Proposal

P.O. Recommend

DGA Review & Processing of Award



# NSF Sources of Reviewers

- Program Officer's knowledge
- References listed in the proposal
- Google
- Community of Science and other databases
- Reviewer's recommendations
- Investigator's suggestions





# Human Subjects

- No award for a project involving human subjects can be made without prior Institutional Review Board (IRB) approval/exemption of the research activity.
- IRB approval is not needed at the time of proposal submission.



# Funding Decisions

- Program Officer recommendation with:
  - advice from panel
  - input from ad-hoc reviews
- Feedback to PI
- Informal and formal notification
- Scope of work and budget discussions



# Two Funding Criteria

- Intellectual merit
- Broader impacts



# Intellectual Merit

- NSF funds basic research
- Intellectual merit means increasing knowledge through developing and examining basic theories or methods



# Broader Impacts

- Promote teaching, training and learning
- Broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)
- Enhance the infrastructure for research and education, such as facilities, instrumentation, networks and partnerships
- Disseminate results broadly to enhance scientific and technological understanding
- Benefit society



# Budget Tips

- **Amounts**
  - Reasonable for work -- Realistic
  - Well Justified -- Need established
  - In-line with program guidelines
- **Eligible costs**
  - Personnel
  - Equipment
  - Travel
  - Other Direct Costs, Subawards
  - Facilities & Administrative Costs



# Myths about NSF

- Only funds scholars at elite graduate institutions
- Only funds "famous" academics
- Once declined, you are likely always to be declined
- Only funds "normal science"
- Advisory committees make funding decisions



# Reasons for Declinations

- “Trust-me” proposal
- Not feasible
  - Expertise gaps
  - Insufficient funding
  - Too ambitious
- Incremental contribution
- Purely descriptive, not theory-based





## NSF vs. NIH

- NSF tends to be smaller
- NSF is more open to risky, exploratory, paradigm-challenging work
- NSF stresses basic research
- NSF has no scoring system, percentile system
- NSF program officers make funding recommendations



# Advice

- Learn to get beyond rejection
- Team up
  - Collaborate
  - Ask colleagues to comment on proposals
- E-mail or call Program Officer with specific questions
- Encourage dissertation improvement grant proposals (check program first)



Useful to submit, even if ultimately declined

- Revise and resubmit
- Discover other funding sources
- Forces thinking
- Build relationships
- Receive reviews from experts



# QUESTIONS??

Contact Mark Weiss  
(703) 292-7272  
[mweiss@nsf.gov](mailto:mweiss@nsf.gov)

OR

Find Program Officer at  
[WWW.NSF.GOV](http://WWW.NSF.GOV)

# Program Information

- The following slides are for your reference
- They provide a brief sense of SBE Program and Program Officer names.



# Cross-Directorate Activities

- Serves both divisions – SES and BCS
- Administers and coordinates programs to increase underrepresented groups in science and engineering
  - Research Experiences for Undergraduates
  - Minority Postdoctoral Fellowships
- Provides information on cross-Foundation/cross-cutting programs

**Program Officer: Fahmida Chowdhury**

# Division of Social and Economic Sciences (SES)

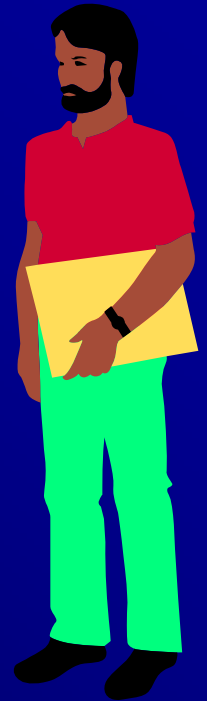
- Supports research to develop and advance scientific knowledge focusing on economic, legal, political and social systems, organizations, and institutions
- Supports research on the intellectual and social contexts that govern the development and use of science and technology





# Decision, Risk, and Management Sciences

- Supports research that explores fundamental issues in judgment and decision making, risk analysis, management science, and organizational behavior
- Research must be relevant to an operational or applied context, grounded in theory, and based on empirical observation or subject to empirical validation



**Program Officers: Robert O'Connor, Jacqueline Meszaros and Jon Leland**





# Economics



- **Supports:**

- Both empirical and theoretical economic analysis as well as work on methods for rigorous research on economic behavior
- Research designed to improve the understanding of the processes and institutions of the U.S. economy and of the world system of which it is a part
- Almost all subfields of economics including: econometrics, economic history, finance, industrial organization, international economics, labor economics, public finance, macroeconomics, and mathematical economics

**Program Officers: Dan Newlon, Nancy Lutz, Andrew Feltenstein**



# Innovation and Organizational Change

- Supports research which uses theory combined with empirical validation
- Looks to expand the concepts, models and methodologies of change in organizations and institutions
- In FY06, IOC is particularly interested in studies that shed light on how best to organize for scientific knowledge creation when researchers must share critical resources, such as major instruments or IT infrastructure.



**Program Officer: Jacqueline Meszaros**



# Law and Social Science

- Supports social scientific studies of law and law-like systems of rules, institutions, processes, and behaviors
- Topics can include, but are not limited to
  - research designed to enhance the scientific understanding of the impact of law
  - human behavior and interactions as these relate to law
  - the dynamics of legal decision making
  - the nature, sources, and consequences of variations and changes in legal institutions

**Program Officer: Susan Haire**



# Methodology, Measurement, and Statistics

- Seeks proposals that are interdisciplinary in nature, methodologically innovative, and grounded in theory, such as:
  - Models and methodology for social and behavioral research
  - Statistical methodology/modeling directed towards the social and behavioral sciences
  - Methodological aspects of procedures for data collection



Program Officer: R. Saylor Breckenridge



# Political Science

- **Supports scientific research that advances knowledge and understanding of citizenship, government, and politics**
- **Substantive areas include, but are not limited to:**
  - American government and politics
  - comparative government and politics
  - international relations
  - political behavior
  - political economy
  - political institutions
- **Supports Doctoral Dissertation Research Improvement Grants**



**Program Officers: Brian Humes and Brian Schaffner**



# Science and Society

**S&S considers proposals that examine questions that arise in the interactions of engineering, science, technology, and society.**

**There are four components:**

- 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)**

**The components overlap, but are distinguished by the different scientific and scholarly orientations they take to the subject matter, as well as by different focuses within the subject area.**

**Program Officers: Fred Kronz, Laurel Smith Doerr, Steve Zehr**



# Sociology

- **The Sociology program supports theoretically-grounded research on systematic patterns of social relationships that examine the causes and consequences of human behavior, social structure and social change. Studies range from micro to macro levels of interaction.**
- **Topics include, but are not limited to:**
  - ✓ Stratification, labor markets, mobility, social change
  - ✓ Organizations, networks, economic and workplace change
  - ✓ Crime, delinquency, social organization and social control
  - ✓ Race, ethnicity, social identity/interactions, culture, education
  - ✓ Family, gender, population, migration, immigration
  - ✓ Social movements, political processes, globalization and more
- **The Program supports research that uses the range of social science methodologies — experimental, quantitative, qualitative and the combinations of multiple methods—for original data collection and secondary data analysis.**

**Program Officers: Pat White and Jan Stets**



# Division of Behavioral and Cognitive Sciences

- Supports research to develop and advance scientific knowledge focusing on human cognition, language, evolution, social behavior, and culture
- Supports research on the interactions between human societies and the physical environment







# Archaeology

## Funds:

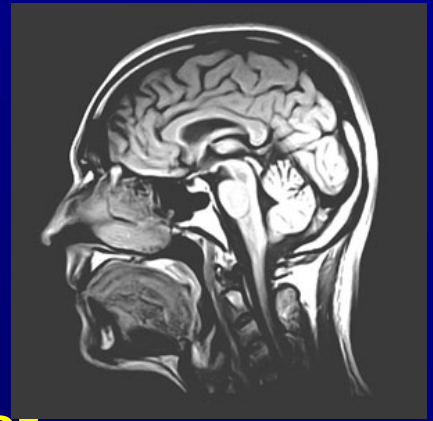
1. Archaeological research that contributes to an anthropological understanding of the past
2. Anthropologically significant archaeometric research

**Program Officer: John Yellen**



# Cognitive Neuroscience

- Program supports highly innovative and interdisciplinary proposals
- Proposals should aim to advance a rigorous understanding of how the human brain supports:
  - thought
  - perception
  - affect
  - action
  - social processes
  - and other aspects of cognition and behavior, including how such processes develop and change in the brain and through evolutionary time.



**Program Officer: Ping Li and Stacia Friedman-Hill**



# Cultural Anthropology

- Promotes basic scientific research on the causes and consequences of human social and cultural variation
- Supports social scientific research of theoretical importance in all theoretical and empirical subfields

**Program Officer: Deborah Winslow and Susan Penfield**



# Developmental and Learning Sciences



- Supports studies that increase our understanding of cognitive, social, and biological processes related to children and adolescents' learning in formal and informal settings
- Supports research on learning and development that:
  - incorporates multidisciplinary, multi-method, microgenetic, and longitudinal approaches
  - develops new methods and theories
  - examines transfer of knowledge from one domain to another
  - assesses peer relations, family interactions, social identities, and motivation
  - examines the impact of family, school, and community resources
  - assesses adolescents' preparation for entry into the workforce
  - investigates the role of demographic and cultural characteristics in children's learning and development

**Program Officer: Amy Sussman**



# Documenting Endangered Languages

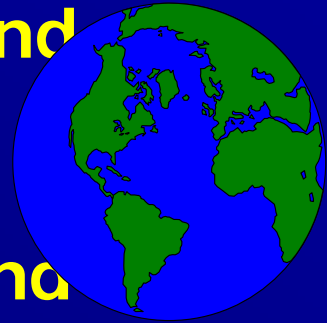
- Responds to loss of world's languages
  - Research grants
  - Fellowships in partnership with NEH
- Data collection, preparation of grammars & dictionaries
- Requires creation of archives
- Training & Workshops

**Program Officer: Susan Penfield**



# Geography and Spatial Sciences

- Supports research on human, physical, and biotic systems on the Earth's surface, as well as their related subfields
- Investigations into the nature, causes, and consequences of human activity within particular "places and spaces" are encouraged
- Both international & domestic projects which may contribute to related fields are also funded



**Program Officers: Tom Baerwald, Scott Friendschuh & Kenneth Young**



# Linguistics

- Supports scientific research of all types that focus on human language as an object of investigation
  - the syntactic, semantic, phonetic, and phonological properties of individual languages and of language in general
  - the psychological processes involved in the use of language
  - the development of linguistic capacities in children
  - social and cultural factors in language use, variation, and change
  - the acoustics of speech and the physiological and psychological processes involved in the production and perception of speech
  - the biological bases of language in the brain

**Program Officer: Joan Maling and Eric Potsdam**



# Perception Action and Cognition

- Supports basic research on human cognitive and perceptual functions
- Topics include, but are not limited to:
  - Attention
  - Memory
  - Spatial Cognition
  - Language Processing
  - Perceptual and Conceptual Development
  - Visual, Auditory, and Tactile Perception
  - Reasoning
- Research supported by the program encompasses a broad range of theoretical perspectives such as Symbolic Computation, Connectionism, and Dynamical Systems

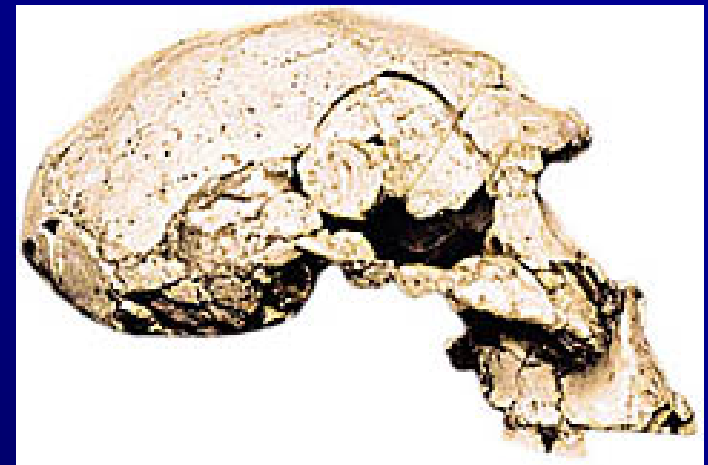
**Program Officer: Betty Tuller and Vincent Brown**





# Physical Anthropology

- Supports basic research in areas related to:
  - Human Evolution
  - Anthropological Genetics
  - Human Adaptation
  - Skeletal Biology
  - Primate Biology
  - Ecology and Behavior
- Grants are often characterized by:
  - An underlying evolutionary framework
  - A consideration of adaptation as a central theoretical theme
  - Generalizable Results
- Serves as a bridge between the social and behavioral sciences and the natural and physical sciences



**Program Officer: Jean Turnquist**



# Social Psychology

- Supports research on human social behavior, including cultural differences and development over the life span
- Among the many research topics supported are:
  - attitude formation and change
  - social cognition
  - personality processes
  - interpersonal relations and group processes
  - the psychophysiological correlates of social behavior

**Program Officers: Amber Story, Kellina Craig – Henderson and Gil Clary**