



Behavioral and Social Sciences and Education



*The National
Academies of*

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ENGINEERING
MEDICINE

The National Academies of Sciences, Engineering, and Medicine provide nonpartisan, objective guidance for decision makers on a range of pressing issues. As we have done since our founding in 1863, we marshal the energy and intellect of the nation's critical thinkers to respond to policy challenges with science, engineering, and medicine at their core.

Through consensus studies—a meticulous process of information collection, evidence analysis, and deliberation—we provide blueprints for progress. By shining a light on subjects and facilitating dialogue across disciplines, our workshops and other convening activities advance understanding of critical issues. The needs of the nation—and therefore the topics we study—change over time, but our commitment to providing sound advice that can be put to work for the public good does not.

MANY OF THE COMPLEX POLICY CHALLENGES facing our country—from maintaining a globally competitive workforce to guarding against terrorism—depend on understanding human and social behavior. The behavioral and social sciences continually advance that understanding. These disciplines have already influenced policies and practices to make air travel safer, to encourage more retirement saving, and to support people in moving from welfare to work, among many other contributions. And these fields are producing enormous quantities of new knowledge and data that will continue to inform challenges in areas ranging from education to national security.

The National Academies Division of Behavioral and Social Sciences and Education (DBASSE) advances the behavioral and social sciences and their application. Our work helps sponsoring organizations, policy makers, and other decision makers harness evidence and insights from these disciplines to improve policy and practice. We appoint panels of experts who examine the best available evidence on a question, deliberate to reach consensus, and issue reports that outline what the evidence reveals and the best path forward. We convene experts and practitioners at workshops and other venues to share research across disciplines, spark new ideas, and advance the conversation around national issues. We oversee original research and conduct activities that promote the scientific enterprise, such as the annual Henry and Bryna David lecture which features policy-relevant research by a prominent behavioral and social sciences researcher.

Our work has

- strengthened how science is taught and learned in the nation's K–12 schools;
- improved the ways states and the federal government measure poverty;
- guided the federal government's research agenda on crime and criminal justice;
- spurred new initiatives to prevent mental and behavioral disorders in young people;
- identified behavioral and social science findings to improve the work of U.S. intelligence analysts;
- revealed the unreliability of lie-detector use for employment security screening;
- illuminated the consequences of the growth of incarceration, informing a national discussion;
- shaped federal, state, and local policy agendas and intervention efforts around early childhood development.

In addition to DBASSE, the National Academies includes divisions focused on the life sciences, physical sciences and engineering, health and medicine, policy and international affairs, and transportation. We can enlist experts not only from across the behavioral and social sciences but also from other fields. This diversity of knowledge is increasingly important for solutions to complex problems that cross disciplinary boundaries.



PROVIDING TRUSTED ADVICE

Consensus Studies in DBASSE

Our consensus studies examine how findings and insights from the behavioral and social sciences can be harnessed to improve policy and practice. For each study, we bring together experts from multiple disciplines to review a body of evidence with fresh eyes and openness to insights from other fields. These study committees survey the landscape of relevant research, hold public meetings to gather information, and deliberate to reach consensus, which results in a shared understanding of what the evidence reveals and advice for moving forward. The results of each study are presented in a report published by the National Academies Press, often accompanied by short summaries, public discussion meetings, videos, and social media outreach that explain the findings to various audiences.

During studies, we shield committee deliberations and conclusions from outside influence and make certain each report undergoes rigorous peer review to assure that our advice is grounded in the best available evidence. Our process ensures that reports reflect the facts and the expertise of the scientific community.



Examples of DBASSE Studies That...

APPLY BEHAVIORAL AND SOCIAL SCIENCE TO DEFENSE AND NATIONAL SECURITY ISSUES

The primary function of intelligence analysts is to make sense of information about the world, but the way analysts do that work will look profoundly different a decade from now. Technological changes will bring both new advances in conducting analyses and new risks related to technologically based activities and communications around the world. The Intelligence Community (IC) will need to make sustained collaboration with researchers in the social and behavioral sciences a key priority if the IC is to adapt to them in the most productive ways, says ***A Decadal Survey of the Social and Behavioral Sciences: A Research Agenda for Advancing Intelligence Analysis***. This report provides guidance for the development of a 10-year research agenda and identifies key opportunities for research to strengthen intelligence analysis.

IMPROVE AND EXTEND ECONOMIC MEASUREMENT AND DATA

During the past decade, interest in measuring subjective well-being—how people feel about their experiences and how satisfied they are with their lives—has grown among policy makers, researchers, the media, and the general public. This interest has sprung from concerns that traditional economic measures, such as the gross domestic product (GDP), do not by themselves adequately reflect a population's well-being and quality of life. ***Subjective Well-Being: Measuring Happiness, Suffering and Other Dimensions of Experience*** examines methods of measuring people's subjective well-being and explores how such measures could inform policy.



Examples of DBASSE Studies That...

PROVIDE ADVICE ON RESEARCH DESIGN AND PRIORITIES FOR RESEARCH

Citizens and consumers face an increasing need to integrate information from science with their personal values as they make important decisions about medical care, the safety of foods, and many other issues. But the most effective approaches for communicating information about science to the public, especially concerning contentious issues, are not well-understood. **Communicating Science Effectively: A Research Agenda** offers an agenda for research that can inform and improve efforts to communicate about science effectively. This report is being used by the National Academies, private foundations, and nonprofit organizations to encourage science communication practitioners to partner with researchers to learn more about how science is understood, perceived, and used. Subsequently, the Standing Committee on Advancing Science Communication Research and Practice was established at the National Academies to foster multidisciplinary connections in order to strengthen the field of science communication.

SHAPE EDUCATION PRACTICE AND POLICY

Science, engineering, and technology permeate nearly every aspect of modern life. Some knowledge of science and engineering is required to understand many major public policy issues, to thrive in many of today's jobs, and to make informed everyday decisions—all of which makes effective science education for the nation's students imperative. **A Framework for K-12 Science Education: Practices, Cross-cutting Concepts, and Core Ideas** identifies the key scientific practices, concepts, and ideas that all students should learn by the time they complete high school. A consortium of states used the report as the basis for the development of the *Next Generation Science Standards*, which are now shaping the science education of K–12 students in more than two dozen states.



ADVISE REGULATORY AGENCIES

Recent advances in mining practices have improved the safety and health of underground coal miners, but preventing mine disasters and preparing miners to survive in the event of emergencies remains a priority. **Improving Self-Escape from Underground Coal Mines** provides guidance to the Office of Mine Safety and Health Research (within the National Institute for Occupational Safety and Health [NIOSH]) about ways to improve self-escape preparations for mining personnel. NIOSH has taken steps to implement the report's recommendations in a number of areas, including the assessment of responses, improvement of relevant technology and safety culture, use of decision science, and training.

APPLY BEHAVIORAL AND SOCIAL SCIENCE TO SOCIETAL ISSUES

Changing patterns of immigration and their evolving effects on American society continue to fuel public policy debates playing out at the national, state, and local levels.

The Integration of Immigrants into American Society analyzes evidence about the integration and well-being of U.S. immigrants in a range of areas, such as education, occupation, health, and language. A subsequent report, **The Economic and Fiscal Consequences of Immigration**, assesses the effects of immigration on employment and wages for different subgroups of the population, federal and state government budgets, and long-run economic growth. Cited by hundreds of news outlets ranging from *The New York Times* to *PBS* to *The Atlantic*, these reports mark an influential contribution to the nation's conversation about immigration policy. Both reports will serve as fundamental resources for researchers, policy makers, the media, and the general public for years to come.



Examples of DBASSE Studies That...

EVALUATE GOVERNMENT PROGRAMS

Several years after the District of Columbia enacted legislation giving control of public schools to the mayor, the city needed to understand the reform's impacts and whether the city's public schools were heading in the right direction. ***An Evaluation of the Public Schools of the District of Columbia*** examines whether the law brought intended improvements to oversight of the schools and to learning conditions and outcomes for students, identifying areas that are working well and those that need additional attention. The city has initiated an audit of education data and has established a research-practice partnership, two key report recommendations.

PROVIDE ADVICE ON STATISTICAL METHODS, SURVEYS, AND DATA SOURCES

U.S. federal government statistics—for example, on the unemployment rate or the rate of violent crime—provide critical information used by policy makers, businesses, and the public to guide key decisions. Many federal statistics are based on sample surveys, but these surveys are often unable to fulfill growing demands for more timely and detailed information.

A pair of reports—***Innovations in Federal Statistics: Combining Data Sources While Protecting Privacy*** and ***Federal Statistics, Multiple Data Sources and Privacy Protection: Next Steps***—propose a new paradigm for federal statistics by combining administrative and private sector data with surveys to enhance the timeliness, detail, and relevance of federal statistical programs. These reports have served as the foundation for initiatives by the Office of Management and Budget for the federal statistical system and were also used and cited by the Commission on Evidence-Based Policymaking in its report to Congress.



APPLY BEHAVIORAL AND SOCIAL SCIENCE TO ENVIRONMENTAL ISSUES

Climate change is expected to place new stresses on societies around the world—for example, from heat waves and droughts that may exceed a nation's capacity to respond—and these stresses could create security risks for the United States. At the request of the U.S. Intelligence Community, a study committee examined the evidence and proposed a strategy for developing indicators that could be used to assess climate-related threats to U.S. national security, detailing their recommendations in ***Climate and Social Stress: Implications for Security Analysis***. Multiple agencies in the United States and other nations have shown interest in using the approach recommended in this report to inform future decisions.

INFORM LEGAL PRACTICE AND POLICY

After decades of stability, the United States saw its incarceration rate more than quadruple in the past 40 years. How has this increase affected society at large, communities, families, and individuals? ***The Growth of Incarceration in the United States: Exploring Causes and Consequences*** examines research and analysis on this question, finding evidence of a number of unwanted consequences. This report recommends changes in sentencing policy, prison policy, and social policy that could reduce the nation's reliance on incarceration. Often referred to as a landmark study, this report has been used to call for reexamination of incarceration policies in editorials and op-eds in places such as *The New York Times* and *The Wall Street Journal*.



Examples of DBASSE Studies That...

IMPROVE PUBLIC SAFETY

The Safety Measurement System (SMS) is an algorithm developed and used by the Federal Motor Carrier Safety Administration (FMCSA) to identify high-risk truck and bus companies—those whose vehicles have more frequent violations discovered during roadside inspections, which suggests a higher likelihood of being involved in future crashes. **Improving Motor Carrier Safety Measurement** reviews the SMS and assesses the quality of the data used. This report also considers whether other approaches to selecting high-risk motor carriers for interventions might have advantages over the SMS. Based on the report's recommendations, FMCSA has begun to develop a new model that could replace the SMS. At the agencies' request, a standing committee has been created at the National Academies to advise them in this task.

PROVIDE INTERNATIONAL PERSPECTIVES ON POLICY

Although the United States spends more on health care than any other nation, a growing body of research shows that Americans are in poorer health and live shorter lives than people in many other high-income countries. **U.S. Health in International Perspective: Shorter Lives, Poorer Health** takes a comprehensive look at multiple diseases, injuries, and behaviors across the life span, comparing the United States with 16 peer nations—affluent democracies such as Australia, Canada, Japan, and many Western European countries—and offering insights on factors that may be responsible for the nation's health disadvantage. This report has been widely cited in public debates about health practice and policy in the United States.



APPLY BEHAVIORAL AND SOCIAL SCIENCE TO HEALTH AND HUMAN DEVELOPMENT ISSUES

Although bullying has long been tolerated by many as a rite of passage among children and adolescents, recognition has grown that it is a serious public health problem rather than a normal part of childhood. **Preventing Bullying Through Science, Policy, and Practice** examines evidence on the consequences of bullying as well as the context, scope, and impact of the problem. This report—along with an accompanying suite of information resources on how to recognize and prevent bullying—has been widely used by policy makers, parents, educators, health care providers, and others concerned with the care of children.

INFORM GOVERNMENT SPENDING DECISIONS

Life expectancy in the United States has risen significantly over the past century, but not equally; people who are better educated and earn higher incomes live longer, on average, than those with less education and lower incomes. This difference has an impact on how much people at various income levels draw in government benefits, such as Social Security and Medicare, over their lifetimes. **The Growing Gap in Life Expectancy by Income: Implications for Federal Programs and Policy Responses** provides the first comprehensive estimates of how lifetime government benefits are affected by differences in income and life expectancy. This report also examines how commonly proposed entitlement reforms, such as raising the eligibility age for Social Security, would affect the benefits gap. This in-depth analysis has assisted government decision makers, economists, and researchers.



ADVANCING THE DISCUSSION

Workshops and Other Convening Activities

In addition to consensus studies, the National Academies convenes workshops, symposia, and other events that bring together researchers, practitioners, and sponsoring organizations to advance the discussion related to behavioral and social sciences and their implications for policy and practice. In a space free from partisan pressures, participants share their own research and experience and also look beyond them—making connections within and across disciplines, sharpening questions, sparking new ideas, and exploring possible solutions.

WORKSHOPS AND SYMPOSIA bring together a range of individuals to discuss and share their expertise on a topic or timely issue. Workshops can help participants understand the state of evidence in a field or around a particular issue, connect varied communities and disciplines that may not otherwise talk to each other, and/or raise the profile of an issue and catalyze movement around it. Some workshops focus on specialized areas, while others tackle broad questions. We appoint a planning committee from relevant fields and sectors to select expert presenters, identify panel topics, and decide on the best format for addressing key issues. We then invite participants from stakeholder groups, such as researchers, policy makers, and practitioners, as well as the general public. A publication summarizing the presentations and discussions is often produced.



FORUMS AND ROUNDTABLES meet the need for ongoing dialogue among stakeholders around complex issues. Leaders in government and industry, scientists and other experts from academia, practitioners, representatives of public interest groups, and consumers meet regularly over months or years to explore a subject over time. These diverse perspectives produce fresh insights and help to build shared understanding. Current roundtables and forums are exploring subjects such as children’s well-being; undergraduate STEM education; and aging, disability, and independence.

STANDING COMMITTEES provide a venue for ongoing input to a sponsoring organization(s). A standing committee is appointed either to oversee a program of studies in a general field of science, technology, medicine, or public policy, or to provide a source of independent, long-range, scientific and technical planning advice for a specific federal government mission. Current standing committees are considering how to advance science communication, reduce counterfeiting, and measure the safety of bus and trucking companies.

EXPERT MEETINGS enable an outside organization to get immediate scientific advice from knowledgeable individuals. Organized by staff, these meetings provide an opportunity to interact with experts and learn about specific scientific and technical issues. No published product results from such meetings.



The work of DBASSE is carried out by standing units, each of which has a specific area of focus described below.

BOARD ON BEHAVIORAL, COGNITIVE, AND SENSORY SCIENCES

BBCSS monitors advances in the behavioral, cognitive, and sensory sciences and studies how developments in these fields can enhance public policy and practice.

Phone: 202-334-2394

<http://nationalacademies.org/bbcss>

BOARD ON CHILDREN, YOUTH, AND FAMILIES

Administered jointly with the Health and Medicine Division, BCYF mobilizes expertise from multiple disciplines to analyze the best available evidence on critical issues facing children, youth, and families.

Phone: 202-334-1935

<http://nationalacademies.org/bcyf>

BOARD ON ENVIRONMENTAL CHANGE AND SOCIETY

BECS mobilizes behavioral and social sciences to identify equitable and effective solutions to the challenges at the intersection of environmental change and society.

Phone: 202-334-3218

<http://nationalacademies.org/beccs>

BOARD ON HUMAN-SYSTEMS INTEGRATION

Using a systems approach, BOHSI applies human factors and human-centered design principles to improve individual and organizational performance.

Phone: 202-334-3357

<http://nationalacademies.org/bohsi>

BOARD ON SCIENCE EDUCATION

BOSE investigates how science is learned and can effectively be taught from early childhood to adulthood, in both schools and informal settings.

Phone: 202-334-2164

<http://nationalacademies.org/bose>

COMMITTEE ON LAW AND JUSTICE

CLAJ strives to improve governmental decision making and public policy and to promote the understanding and dissemination of research in matters involving law and justice.

Phone: 202-334-3730

<http://nationalacademies.org/claj>

COMMITTEE ON NATIONAL STATISTICS

CNSTAT strives to improve the statistical methods and information upon which public policy decisions are based, fostering better measures to promote a fuller understanding of important social topics, such as the economy, public health, crime, education, poverty, and other public policy issues.

Phone: 202-334-3096

<http://nationalacademies.org/cnstat>

COMMITTEE ON POPULATION

CPOP brings the knowledge and methods of the population studies—which shed light on the size, territorial distribution, and composition of populations—to bear on major issues of science and public policy, such as aging, health, and immigration.

Phone: 202-334-3167

<http://nationalacademies.org/cpop>

OFFICE OF TESTING AND ASSESSMENT

OTA serves as a point of contact for anyone seeking information on DBASSE's current or past work related to testing and assessment or who has an inquiry about future work.

Phone: 202-334-2300

<http://nationalacademies.org/OTA>

STANDING COMMITTEE ON ADVANCING SCIENCE COMMUNICATION RESEARCH AND PRACTICE

This unit was established to foster multidisciplinary connections in order to strengthen the field of science communication.

Phone: 202-334-2300

<http://nationalacademies.org/AdvancingSciCom>

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