

WHY SOCIAL SCIENCE ?

Because Nearly Every Challenge We Face Requires Understanding the Causes and Consequences of Human Behavior

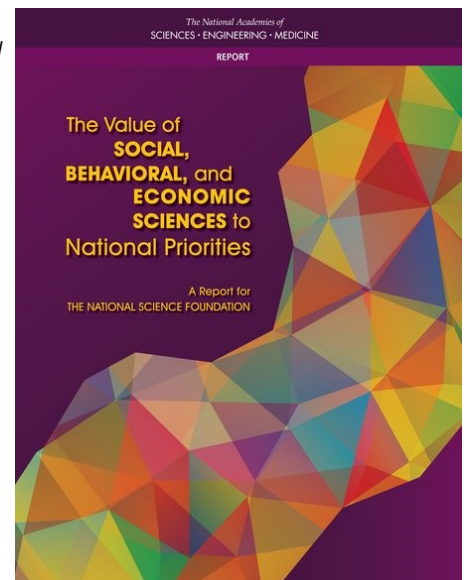
July 5, 2017

This week, we're highlighting the recent report from the National Academies of Sciences, Engineering, and Medicine, [The Value of Social, Behavioral, and Economic Sciences to National Priorities](#). Produced at the request of the National Science Foundation (NSF), the report assesses the contributions of the social, behavioral, and economic (SBE) sciences to issues of national importance. **Passages from the section "Why Support Research in the Social, Behavioral, and Economic Sciences?" are excerpted below.** We encourage you to read the report in its entirety, which is [available for free](#) on the National Academies website.

Every month the Gallup Poll asks a representative sample of Americans "What do you think is the most important problem facing the country today?" The main problems identified include jobs, unemployment, the economy, health care, and race relations. Issues such as these have clear social, behavioral, and economic aspects that need to be better understood, and SBE research can contribute to understanding and addressing them. Moreover, many other problems that at first glance appear to be issues only of medicine or engineering or computer science have social and behavioral components, such as patients' understanding of medical information and community responses to proposed highway development...

Consider, for example, the challenge of immunizing the population against infectious diseases, such as measles and influenza. Medical science has developed many effective vaccines, and when they are administered to the appropriate numbers of people they control the spread of the disease. Recent outbreaks of measles, such as those in California and Minneapolis, occurred because not enough parents had their children vaccinated for measles because they did not believe or did not accept the value of vaccination. These outbreaks show that individual beliefs and social influences can disrupt vaccination programs and place communities at risk. They also demonstrate that there is a role for SBE science in helping to understand the social and behavioral dynamics of vaccination decisions and using that understanding to develop more effective public health and public information strategies. That is, in addition to the biology of a disease, vaccination efforts require dealing with individuals' and groups' beliefs and decisions about vaccination.

Or consider the task of designing road systems. It may seem to be a relatively straightforward matter, but trying to forecast and understand the decisions that people make about using those road systems play an important role in their design. For example, most drivers will find the shortest possible route to their destination, to minimize their driving time. When a new road is built to alleviate congestion, drivers will take that route if it offers the possibility of less time on the road. But if too many drivers choose the new route, traffic increases and it is no longer faster. This paradox explains why



roads that are built to improve traffic flow can quickly become congested, and points to the importance of accounting for human preferences and decisions.

Because gaining a complete understanding of many problems and proposing feasible solutions requires collaboration between SBE and other sciences, SBE disciplines are increasingly working with other fields. For instance, meeting many of the challenges recognized in a 2008 report of the National Academy of Engineering, Grand Challenges for Engineering, will require collaboration with SBE sciences. Meeting the challenge to secure cyberspace, for example, will require research on how people interact with computers, the internet, and information in ways that increase the risk of cybersecurity breaches. Research is also needed to understand the behaviors and social influences on those who commit cybercrimes, such as hackers and saboteurs in organizations. Some interdisciplinary efforts are addressing these issues with combined expertise in computer science, law, business, policy, economics, and social and behavioral sciences...

SBE sciences enable the prediction of many kinds of outcomes with greater certainty, including the success or failure of corporate strategies, economic policies, and legislative agendas. But while people readily recognize a need for experts from medical research, physics, or biology, when thinking about predicting or explaining human behavior people tend to use “common sense” derived from their own accumulated experiences and anecdotes. Although some people may believe that research knowledge is needed, some who could benefit from SBE research may be not be aware that sophisticated tools and insights from SBE sciences are available to improve understanding and decision making.

Moreover, common sense can at times be too simple an explanation or just plain wrong. It is commonly believed, for example, that successful people are successful mainly because they are smarter, have worked harder, or are in some other sense more deserving of success than unsuccessful people. However, social science research (including some funded by NSF) shows that a large fraction of observed differences in success derive from other factors—such as place of birth, random accidents of timing, and the dynamics of competitive markets—that are entirely outside the control of the individuals themselves.

Moreover, some findings from social, behavioral, and economic research can fail to persuade people precisely because they do not fit with what people already believe to be true. In fact, research in cognitive science has shown that people are more likely to ignore, misremember, forget, or explain away information that does not fit their preconceived notions, such as about how the world works or why people act as they do.

Many leaders of business and industry have long recognized that intuition and common sense are not sufficient, and they use knowledge, tools, and methods from SBE research to understand markets, develop innovations, and inform decisions. Federal, state, and local governments also have begun to recognize the utility of the SBE sciences to both the formulation of policy and the testing of which policies do or do not work in practice.

For more examples of the contributions of the social, behavioral, and economic sciences and to read the authoring committee’s recommendations to NSF, read the [full report](#).

*This report was produced by the **Committee on the Value of Social, Behavioral, and Economic Sciences to National Priorities**, chaired by Alan I. Leshner, CEO Emeritus of the American Association for the Advancement of Science.*

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