When social science leads to social change

The health consequences of diet, the patterns that epidemics take, the effectiveness of welfare programs – these are a few of the many achievements made possible by advances in social science research. In fact, much of the applied research under way today in medicine, psychology, education, economic development, regulatory policy, electoral politics, and foreign policy relies on previous groundbreaking achievements in basic social science theory, methods, and research.

Center Fellows have made significant contributions to improving the human condition by advancing our understanding of behavior and society in two ways: indirectly, through advances in basic theory and methods of statistical analysis that make possible valid, reliable applied policy research; and directly, by using the results of social science research and methods to devise specific programs and policies in a range of fields.

Basic Research
Advances in basic research, for example, have made it possible for researchers working in applied areas to:

• develop survey research methods and statistical procedures used for consumer surveys
• conduct public opinion polls on important issues
• create sampling techniques to draw valid inferences to large populations based on small samples drawn at random from the larger population
• develop methods of scientific experimentation and measurement which are the prerequisites for conducting research into the cause of diseases and the effectiveness of proposed treatments.

Such advances in basic theory, research methods, and techniques of statistical analysis have given us the tools to:

• understand the health consequences of diet, smoking, drinking, exercise, and other aspects of our lifestyles
• monitor the health of a population
• track patterns of disease and epidemics
• measure public opinion and likely voting behavior on a wide range of local, national, and international issues
• monitor fluctuations in crime rates
• assess the effectiveness of programs related to housing, welfare and the environment
• gather comprehensive information about the U.S. population from the decennial census
• measure rates of unemployment, economic growth, fluctuations in standards of living, and patterns of income disparity.
Indeed, basic research by Center Fellows provides the foundation for applied research and analysis of all aspects of contemporary life.

**Direct Applications**

In other cases, social science research has directly resulted in important policy applications. The following examples from medicine, child development, electoral politics, education, and crime prevention illustrate such work.

**Medicine**

At the Center in 1976-77, while working on a project on the evaluation of behavior therapy, psychiatrist Stewart Agras of the Stanford University Medical School conceived the idea of an entirely new medical specialty. He then founded the first Behavioral Medicine program in a leading American medical school at Stanford University. The specialty is now taught in most other major medical schools in the country.

In 1990-91, Agras joined psychiatrist Christopher G. Fairburn of Oxford University and psychologist G. Terence Wilson of Rutgers University to investigate treatments for eating disorders. Their aim was to assess the clinical effectiveness of various approaches to the treatment of binge eating. Their collaboration culminated in an NIMH-funded five-year study of treatment for bulimia nervosa. The researchers compared the effects of two distinctly different forms of therapy in the treatment of the disorder; the project has resulted in development of detailed new, scientifically-based treatment protocols for this devastating disorder.

Medical researcher and physician James Fries of the Stanford Medical School spent the 1978-79 fellowship year working with an interdisciplinary team of experts on aging. With this group Fries developed his concept of “the compression of morbidity.” The concept emphasizes concrete measures that individuals and their physicians can take to compress or limit the period of time at the end of the life course when people are likely to suffer from chronic and disabling illnesses. Fries and his colleagues have been able to calculate how many additional months or years of health a person is able to gain through regular exercise, weight loss, diet, moderation in drinking, and other lifestyle choices. His article is one of the most widely cited research papers in the field of medical science research, and it provides the foundation for an entirely new approach to clinical practice in geriatric medicine.

A number of Center Fellows have made notable contributions to the economics of health care. Stanford economist Victor Fuchs wrote his award-winning book, *Who Shall Live?,* while a Fellow in 1978-79. Fuchs called attention to the necessity of choice at both individual and social levels, and demonstrates that we cannot have all the health or all the medical care that we might like to have. His work provided the foundation for subsequent studies and policies related to the economics of health care delivery in the United States and other advanced industrial societies throughout the world.

Anticipating significant developments in health care delivery by more than a decade, sociologist David Mechanic of Rutgers University wrote his visionary volume, *The Growth of Bureaucratic Medicine,* while a Center Fellow in 1974-75. Mechanic foresaw the implications for the organization of medical care, especially primary care, of the growing bureaucratization of health care as seen from the perspectives of patients, health professionals, and health policymakers.
Philip Lee is professor of medicine at the University of California, San Francisco, and former Assistant Secretary of Health, Education, and Welfare in the Clinton Administration. While a Fellow in 1980-81, Lee conceived and developed three major health policy initiatives for UCSF: programs in child health policy, reproductive health, and the humane care of the dying. All three have become the basis for establishing similar programs in medical centers throughout the country.

The work of Center Fellows has also made pioneering contributions to our understanding and treatment of other medical and psychiatric conditions, including alcoholism, depression, anxiety disorders, and phobias.

Controlling Aggression in Youngsters
During the 1986-87 fellowship year psychologist Daniel Olweus of the University of Bergen in Norway developed an intervention and training program for use in schools to prevent bullying by school children. It is now being adopted in schools throughout Western Europe and the United States.

Vanderbilt psychologist Kenneth Dodge devoted the 1989-90 fellowship year to planning a project aimed at preventing aggression in children. This $45-million NIMH-funded project supported collaboration between Dodge and colleagues from other fields to develop programs to manage and treat conduct disorders in children and adolescents. During the 1995-96 fellowship year Professor Dodge returned to the Center to analyze the data from this project and develop intervention programs for schools and communities based on what he had learned.

Electoral Politics
One of the most impressive projects in the public policy domain linked to the Center is work on Deliberative Polling™ done by political scientist and moral philosopher James Fishkin. The project was conceived by Professor Fishkin while he was a Fellow in 1987-88. The purpose of Deliberative Polling is to discover what public opinion would be if respondents were effectively motivated to behave more like ideal citizens; that is, if they were given access to accurate and complete information about issues, time to hear and weigh opposing points of view, and then an opportunity to come to considered judgments. Fishkin invites a random sample of the population to a single site for a weekend of discussions. In advance of their enrollment in the Deliberative Poll, participants are asked to complete a questionnaire about their views on the issues at hand. They are provided with advance briefing materials; then, during the weekend, they discuss the issues in randomly assigned groups led by trained moderators. In plenary sessions, they may also question panels of experts, politicians, and decision-makers about points that emerge from their discussions. After two to four days of this process, they complete the same questionnaire instrument again.

So far, twenty Deliberative Polls have been carried out, twelve in the United States, five in Britain, two in Australia, and one in Denmark. Nine of these events have employed national random samples; the others have been local or regional. All of these experiments have been televised, and in some, Jim Lehrer of the “The NewsHour with Jim Lehrer” has served as moderator. The result? Deliberation has consistently produced more balanced views, reduced polarization, and resulted in genuine changes in voting behavior.
For many years the Center has hosted researchers specializing in education. Much of their research has directly influenced classroom practices in America’s primary and secondary schools. For example, Center Fellows have made major contributions to:

- our understanding of the effect of classroom size on students’ academic achievement
- measuring the effects of school choice on academic achievement
- understanding how racial segregation, social class, and affirmative action affect academic achievement
- devising teaching strategies for neutralizing the effects of gender and racial stereotypes on classroom learning
- measuring the impact of standardized testing on academic performance
- devising methods for improving basic math and reading skills among elementary school children
- harnessing the power of the Internet for use in classrooms.

Center scholars have also produced research that has affected practices in other arenas.

In 1988-89, political scientist Robert Putnam of Harvard University completed his book *Making Democracy Work*. This book became the basis for a number of significant federal policy initiatives aimed at buttressing the foundations of civic society in America.

In 1991-92 Stanford economist Paul Milgrom worked on laying the foundation for a new theory of auctions. The work he accomplished at the Center led to devising rules used in the Federal Communications Commission’s sale and allocation of radio bands by competitive bidding, an auction that earned the Federal government millions of dollars in revenue.

During 1994-95 economist Timothy Smeeding of Syracuse University and sociologist Lee Rainwater of Harvard wrote a series of reports on income distribution based on the Luxembourg Income Study. These reports have become an integral part of ongoing discussions in Washington and the media about welfare, unemployment, social programs, and tax reform in the United States and Western Europe.

Center Fellows have made important contributions to understanding crime and how best to prevent it – studying the deterrent effects of the death penalty, who commits crimes and why, the connections between crime and poverty, genetic bases of criminality, and reasons for the recent decline in rates of criminality in the United States.

We are justifiably proud of the record of contributions Center Fellows have made in translating basic research into public policy across a wide range of issues. We will continue to support and encourage such research in the future.
Bibliography

Coleman, James Samuel. 1964. *Introduction to Mathematical Sociology.*
Gage, N.L. 1972. *Teacher Effectiveness and Teacher Education; the Search for a Scientific Basis.*
Nagel, Ernest. 1961. The Structure of Science; Problems in the Logic of Scientific Explanation.
Olweus, Dan. 1993. Bullying at School: What We Know and What We Can Do.
Rein, Martin. 1976. Social Science and Public Policy.
Stein, Morris. 1955. The Thematic Apperception Test; an Introductory Manual for its Clinical Use with Adults.