

KNOWLEDGE IN ACTION: Confronting Social Problems

Harvard social scientists merge methodologies and cross disciplines to grapple with many of today's most pressing societal issues—from neighborhood youth violence to the impact of globalization to the national obesity epidemic. The courses they teach, like "Economics of Social Problems," "Crime and Disorder in the City," and "Racial and Ethnic Politics in the United States," help students to understand the causes of poverty, violence, class divisions, and other contemporary American challenges. The research projects they lead, often with undergraduate and graduate student teams, illuminate their respective fields and yield real-world results.

On the following pages, Harvard social scientists from the Faculty of Arts and Sciences departments of government, sociology, economics, history, and psychology discuss some of their most relevant, revealing, and resonant projects. In written and spoken word, these scholars in the world answer four questions:

What motivates their current research; which of their projects best addresses contemporary American challenges; what empirical approaches and/or quantitative methodologies do they employ; and how do the results of their work translate into application and real-life practice?



Gary King creates statistical and analytical tools to probe public opinion

Gary King wonders how many calories you burn daily. The David Florence Professor of Government would also like to know how much you spent last year on consumer goods and how many people you interacted with yesterday as indicated by data collected on your cell phone. Soon, social science researchers like King will have the technological means to obtain a plethora of such personal information. King predicts that this unprecedented access will challenge our cultural concepts of privacy, redefine our notion of usable knowledge, and transform the field of social science.

“We are at a moment in history when we are beginning to learn thousands of times more than we have ever known about the social, political, and economic worlds,” King says. “As a result, social scientists are switching from just studying the issues confronting us to solving actual problems.” At the Institute for Quantitative Social Science, which he directs, King and his colleagues create statistical and analytical tools to evaluate vast pools of information. “We use known facts to make inferences and learn about the facts we don’t have,” King says. Then, affiliates of this scientific community collaborate on large-scale, interdisciplinary research projects designed to further our understanding of complex social issues and improve the well-being of populations around the globe.

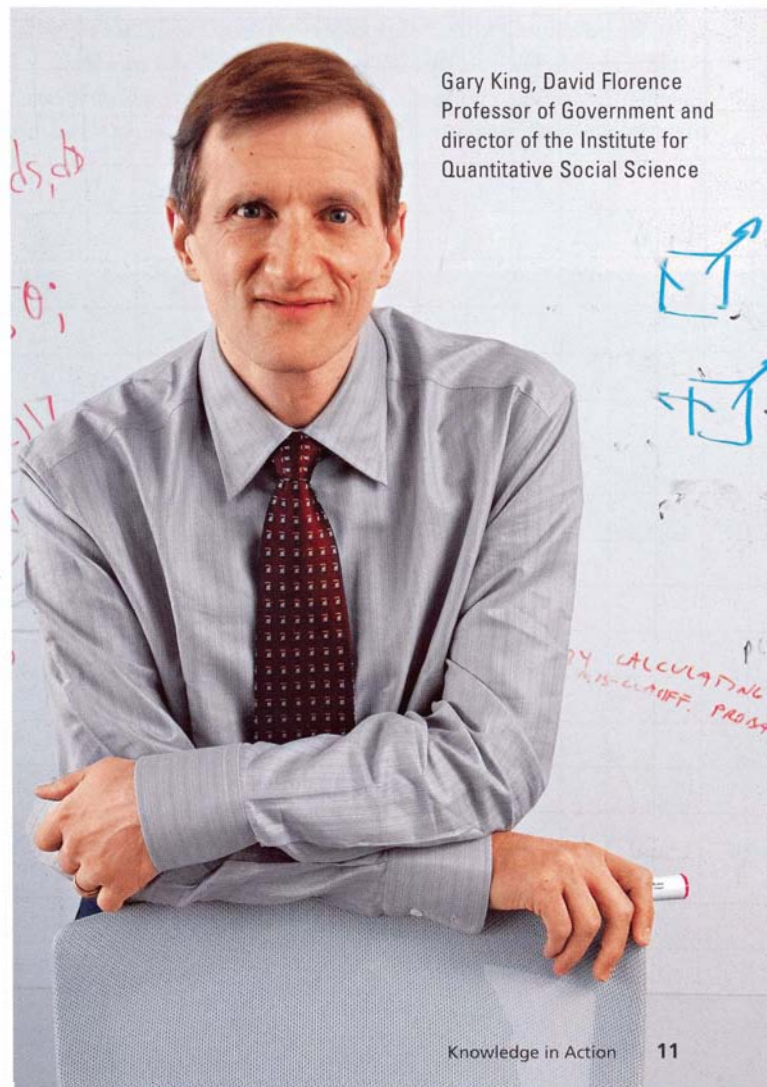
King’s own work translates expanding knowledge into action in an array of settings. For example:

- To evaluate the success of Mexico’s “Seguro Popular de Salud” (Universal Health Insurance) program, intended to protect the 50 million people in that country previously without coverage, King led a project team that implemented what may be the largest randomized health policy experiment ever conducted.
- To address the problem of legislative redistricting—“the most conflictual issue in American politics”—King proposed a set of fairness standards that prevent “partisan gerrymandering,” the practice of redrawing in-state district lines to favor the political party in power. Over the past 20 years, King’s standards have determined outcomes in a multitude of legislative redistricting cases, including one argued before the Supreme Court.
- To increase the reliability of public opinion polls, King and a project team created “anchoring vignettes” that offset the “interpersonal incomparability” issues often plaguing such survey research. King estimates that surveys administered in 100 countries now incorporate his vignettes.

One of King’s current projects elucidates the American political scene: “Long before survey research defined ‘public opinion’ as whatever people say on public opinion polls, a different notion of public opinion was of central importance. Newspaper editorials and Sunday morning pundits offered the only ways of tapping

into the activated public. Now, we’ve found another way to measure and track opinions, in this case about President Bush and each of the 2008 presidential candidates.

“Our team figured out how to download all English-language blog postings from among the approximately 100 million blogs worldwide every day. We invented a categorization scheme to sort this unedited text, and developed a technology that automatically extracts content, according to these categories, on a daily basis, presenting it graphically. We can tell you the fractions of bloggers with views that are extremely negative, negative, neutral, positive, or extremely positive about the President and each of the candidates by the minute, hour, or day. People will be able to use our methods and statistical algorithms to understand any unstructured text—from congressional speeches to company documents to emails. In fact, Harvard recently filed a patent application for this technology.”



Gary King, David Florence Professor of Government and director of the Institute for Quantitative Social Science

Nicholas Christakis examines the impact of social networks on individuals' health

“What does it mean both for individual health and the health of populations that people are embedded in sociologically and mathematically complex social networks? My research group explores the idea that because people are interconnected, their health is also interconnected. We develop new data and apply methods borrowed from biostatistics, econometrics, demography, epidemiology, and network science to study a variety of sociomedical issues, ranging from how illness in one spouse affects the risk of death in the other to a neighborhood's effects on residents' health.

“Recently, we examined whether obesity—a serious public health and individual problem—evinces epidemic properties. We wanted to understand whether obesity could spread from person to person, what the possible mechanism of any such spread might be, and whether there is evidence for so-called ‘hyperdyadic effects.’ We found that exercise or eating behaviors may spread from person to person via a kind of social contagion. Additionally, some of our results suggest that norms, as well as behaviors, may be shared: as individuals gain weight, others to whom they are connected appear to change their ideas about acceptable body size and then gain weight themselves. In these ways, social networks can augment the rise in obesity in America.

“As an empirically oriented social scientist and physician, I try to understand, and therefore to influence, the realities we face, particularly with respect to social problems. By advancing knowledge of social phenomena, we may be able to improve the public's health. For me, this is a practical as well as a moral issue. Surely, a hallmark of a well-functioning, civilized society is the extent to which it can make people not just materially secure, not just educated, and not just safe, but also healthy.”

Nicholas A. Christakis, professor of sociology, professor of medical sociology at Harvard Medical School, and attending physician at Mount Auburn Hospital, Cambridge, Massachusetts



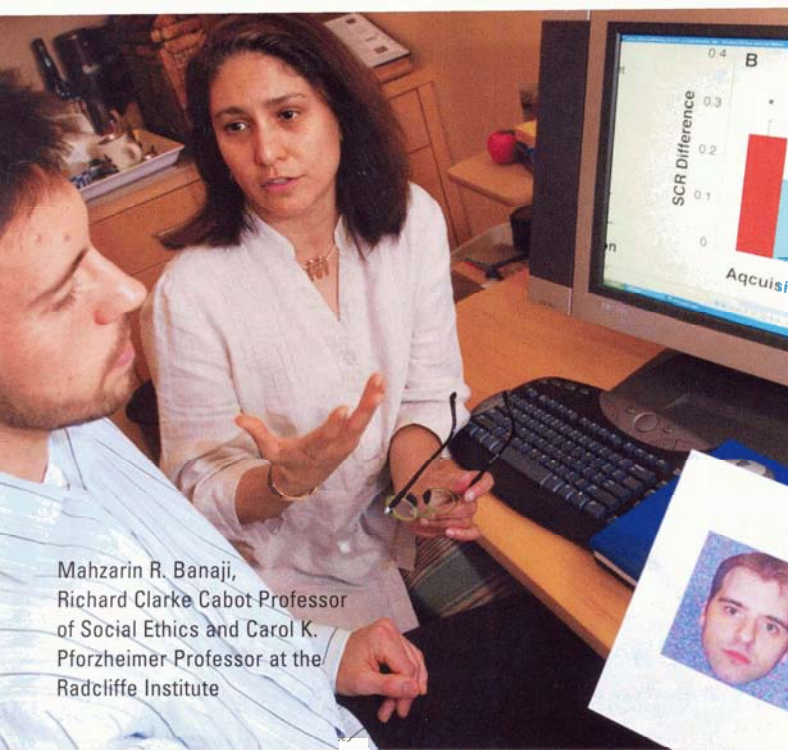
Institute for Quantitative Social Science (IQSS)

At IQSS, faculty, students, and staff confront major social and health problems through seven interdisciplinary programs:

- **Program on Quantitative Methods**—develops innovative methods and software to unify methodological subfields in the social sciences
- **Health Policy Program**—marshals the efforts of political science, economics, and sociology scholars to address U.S. public health problems
- **Program on Survey Research**—offers University-wide expertise and information in survey design, administration, and analysis
- **Center for Geographic Analysis**—fosters research crossing boundaries of the social sciences, humanities, environmental sciences, landscape design, and public health
- **Program on Demography**—aims to produce a model explaining empirical facts determined by demography in the social, economic, and political realms
- **Program on Political Economy**—complements a PhD program and focuses on political and economic institutions and behaviors within a theoretical framework
- **Boston Research Consortium**—creates an intra-University collaborative of Harvard faculty and students conducting research on and about Boston and the Greater Boston area

IQSS also offers undergraduates opportunities to work side by side with faculty members on their current research projects. Through the Undergraduate Scholars Program, students participate in developing innovative tools and methods and discovering new knowledge that helps solve some of the world's most pressing problems.

For more information, visit <http://www.iq.harvard.edu>.



Mahzarin R. Banaji,
Richard Clarke Cabot Professor
of Social Ethics and Carol K.
Pforzheimer Professor at the
Radcliffe Institute

Mahzarin Banaji uncovers contradictions between our conscious thoughts and unconscious beliefs

“I am interested in the human mind as it operates in a social world. My motivation is like that of all scientists—a desire to understand important aspects of reality, the thrill of discovery, the possibility that new knowledge can be applied to improving the condition of living beings. I study the inconsistencies between consciously intended thoughts and feelings and less conscious, automatic aspects of the mind. Seeking to understand how contradictory representations of social knowledge live side by side in a single mind, I ask such questions as ‘Why are there such disparities in the way we think? How early do they emerge, and are they malleable? How do they play out in our interactions with others?’

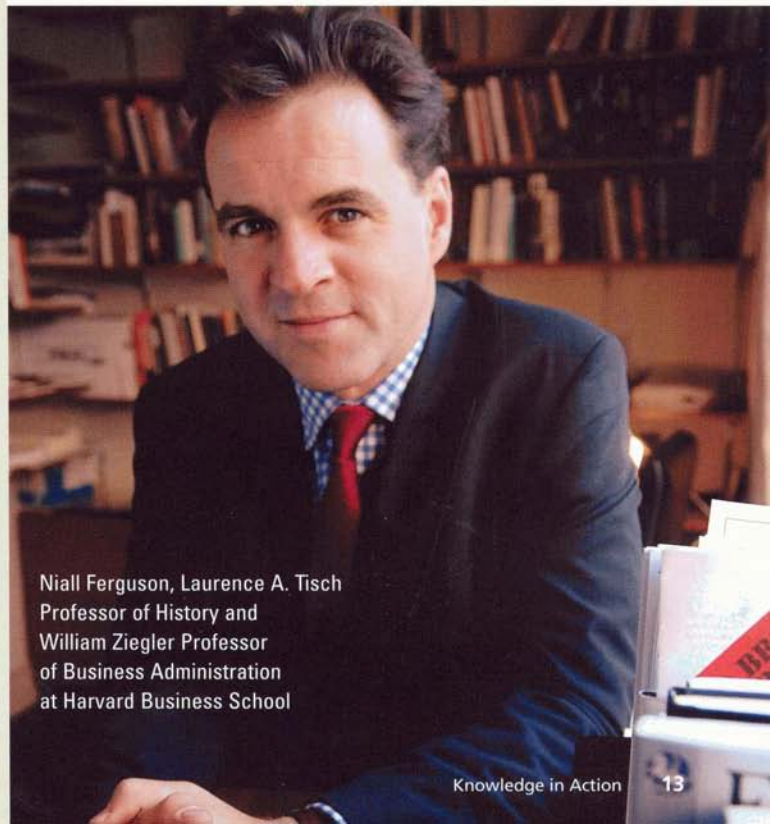
“Working with adults and young children, I use indirect methods to infer cognition and emotion: How long does a baby look at a familiar face? How rapidly do adults pair the concepts of ‘elderly’ and ‘good’? Using measures of behavior and the brain, we learn about how our minds work—outside our conscious awareness—to influence our behavior.

“Focusing on the psychological mechanisms involved in how one individual judges another, my research addresses issues at the center of contemporary American life, such as stereotypes and prejudice. Despite a commitment to fair treatment, we often end up not only being biased in our judgments of others but also of ourselves. My research reveals how we are influenced by knowledge of the categories to which people belong, such as their height and weight, religion, gender, age, class, nationality, language, skin color, and ethnicity.”

Niall Ferguson illuminates historic upheavals by analyzing financial markets

“My research is motivated by the feeling that historians have tended to underestimate the importance of financial markets in modern history, and that the great upheavals of our times can be illuminated by looking at the prices of securities, exchange rates, and other market data. These offer invaluable clues as to the expectations of contemporaries. How did people in the past conceive of, and choose among, the various futures open to them? If investors anticipated war or a revolution, for example, they tended to sell a country’s bonds in the expectation of higher government deficits and inflation, or to buy defense company stocks.

“I have two tracks of research: qualitative (memoranda, letters, and diaries) and quantitative (securities prices, exchange rates). To understand these sources better, I spend a lot of time talking with financial market practitioners. I am keen on subverting established historical narratives with a sense of what might have been. Currently, I’m working on the great economic and geopolitical crisis of the 1970s. Understanding what went wrong then—from stagflation to Vietnam—might shed some light on our own time. Losing a war abroad, losing faith in a President, watching the dollar drop, and the price of oil soar—it has a familiar ring.”



Niall Ferguson, Laurence A. Tisch
Professor of History and
William Ziegler Professor
of Business Administration
at Harvard Business School

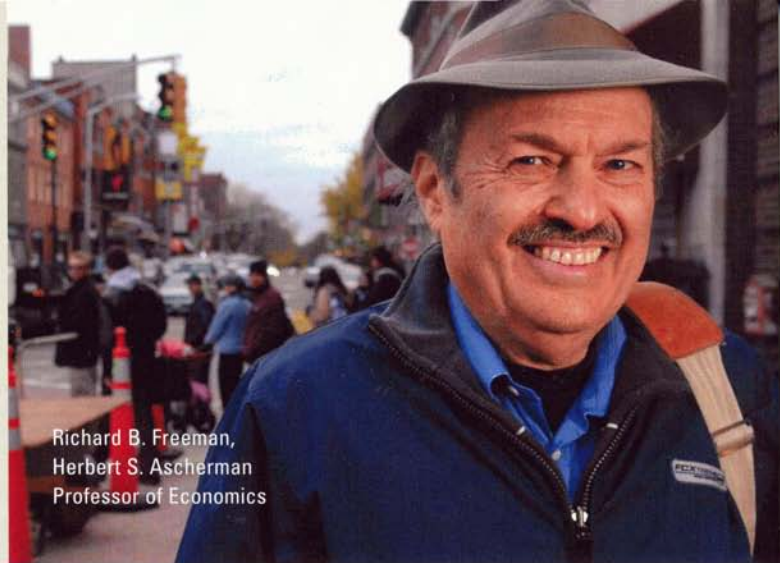
Daniel Carpenter investigates the reputations and power of large, national organizations

“In university settings, the world I inhabit, the fundamental currency is that of reputation. My research reflects my fascination with reputational currents, particularly in the realm of political organizations. I’m interested in how organizations—like the Mayo Clinic or the U.S. Army—try to shape their reputations, and how those reputations feed back to shape and constrain the organization itself. In politics—and particularly in popular understanding of American institutions—many convenient myths need debunking.

“My recent project on the Food and Drug Administration (FDA) addresses one significant organization on the contemporary American scene. Pharmaceuticals and medical devices cannot be marketed in the United States without express authorization from the FDA, making the organization central to science, medicine, and the commercial interface between them. I’ve designed this project to involve core issues of political science: power (how the FDA governs and is influenced by drug companies), representation (how different American health interests fare in the regulatory process), and complex choices (how the FDA approves drugs and removes others from the market).

“Believing that the distinction between quantitative and qualitative methods in social science is overdrawn, I blend a combination of research practices—primary-source archival research, mathematical models, and statistical analyses. Much quantitative research relies on deeply subjective judgments and interpretations. It is difficult, if not impossible, for statistical research alone to clarify and reveal causality mechanisms in human society. Qualitative techniques, such as ethnography and historiography, are crucial for building intuition, tracing out the mechanisms by which relations between variables exist and endure, and, perhaps most important, imparting a sense of contingency to what comes out of a statistical or mathematical model.”

Daniel Carpenter,
Allie S. Freed Professor
of Government, director of
the Center for American
Political Studies, and
Radcliffe Fellow 2007–2008



Richard B. Freeman,
Herbert S. Ascherman
Professor of Economics

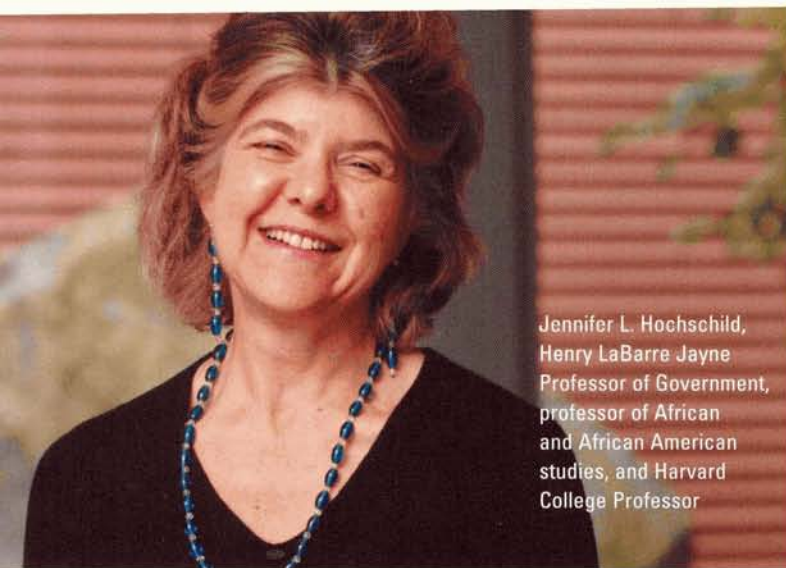
Richard Freeman assesses the impact of globalization on labor and business

“I’m concerned with the large changes that suddenly occur in economies and societies, events that lie outside the marginal calculations economists understand well. Such changes occur more frequently than we would expect from normal distributions, but are still rare and hard to understand. Right now, the world economy has to absorb nearly 1.5 billion workers from China, India, and other newly successful economies. My research is galvanized by an effort to understand the ways diverse organizations—from unions to occupational associations to businesses that engage their **workers through teams, employee involvement, and financial incentives—plus science and technology**, can help us through this **phase of globalization**.

“To expand the reach of those interested in creating a more ‘shared capitalist’ economy, I work closely with businesses involved in profit-sharing and employee ownership. I have also been developing a new model for unions to represent workers, one that uses the Internet and lies outside traditional collective bargaining. Throughout my work, I use surveys, statistical analyses of large data sets, some experimental economics, and simulations—the ‘whole shebang’ of modern research tools. Along with teaching, I like to share my work with labor groups, businesses in Europe, China, and Korea, and at the University through Harvard Law School’s Labor and Worklife Program.”

Center for American Political Studies (CAPS)

Led by an interdisciplinary group of political scientists, sociologists, economists, and historians, CAPS fosters discussion, research, outreach, and pedagogy about all aspects of modern U.S. politics. Using historical analysis, social surveys, modeling, and other cutting-edge methodologies, CAPS affiliates investigate research topics ranging from patterns of electoral politics to the causes and results of public policies to the military and American public life. The center supports faculty initiatives along with conferences, graduate student dissertation fellowships, and undergraduate thesis research. For more information, visit <http://caps.gov.harvard.edu>.



Jennifer L. Hochschild,
Henry LaBarre Jayne
Professor of Government,
professor of African
and African American
studies, and Harvard
College Professor

Jennifer Hochschild focuses on the dynamics between citizens' perceptions and policy outcomes

"Many political scientists want to know why something happened. I tend to be much less interested in causation and much more interested in consequences. It's the 'so what?' question that interests me. I use history to create models that suggest likely directions for the future.

"This fall, I've developed a series of lectures on citizens' perceptions and the impact those perceptions have on political dynamics and policy outcomes. If people believe that Saddam Hussein was directly involved in the 9/11 attacks, for instance, did that have a causal impact on our going to war in Iraq, and what's the relationship between being at war and changing people's beliefs? Or is that misperception just evidence of people's partisanship or broader values? What is that dynamic between citizens who believe something that is incorrect and politicians, who are supposed to be leading the country, but who are also responsive to public opinion?

"My research on racial politics also focuses, at least partly, on the degree to which people's perceptions resemble objective circumstances in their lives. From a black perspective, many things feel like discrimination, inequality, or injustice, while, to a fair number of whites, these same things simply feel like individual situations that can be explained in many different ways. Is there any way of understanding what counts as discrimination and what doesn't, differentiating between evidence of genuine inequality and evidence of bad luck or poor choices? Much of my work has been driven by that question, of wanting to know the 'right answer' as a way of trying to get a handle on these difficult and sensitive political disputes. In the back of my mind remains the hope that a clearer understanding of racial dynamics will improve the quality of those dynamics—although, of course, racial interactions aren't just about perceptions of facts!"

Bruce Western connects incarceration rates with growing race and class inequality

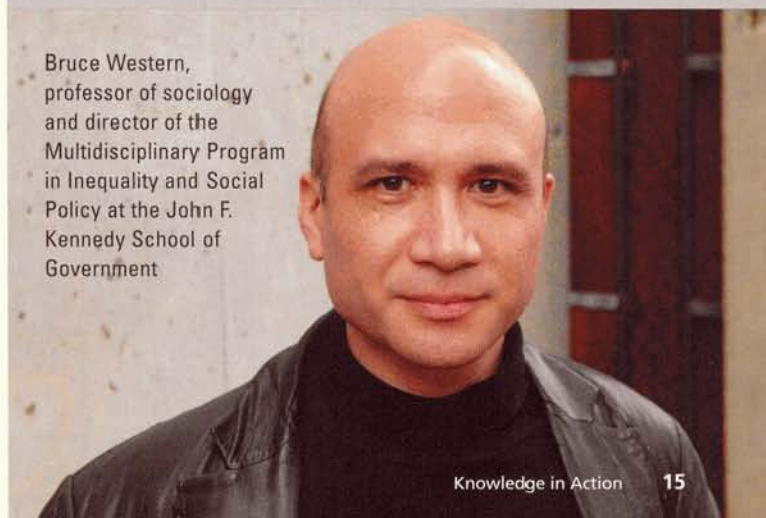
"Most of my empirical research tries to explain important trends in social inequality and the effects of political institutions on patterns of inequality in the United States and abroad. For example, my work on the growth of the American penal system tries to come to grips with the causes and consequences of the new and pervasive presence of the criminal justice system in poor urban communities.

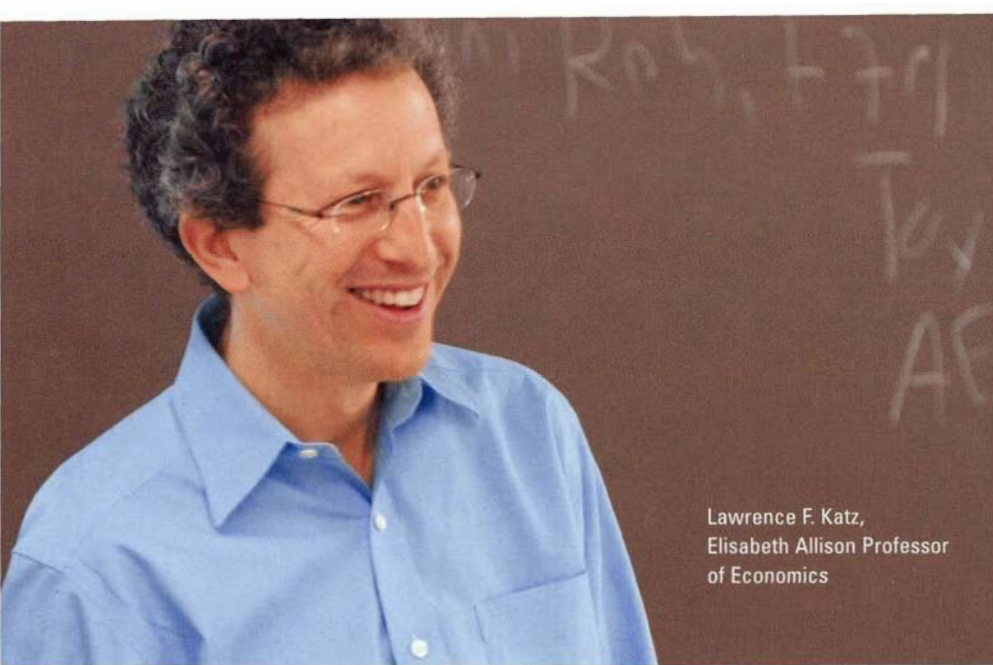
"I've asked what role incarceration plays in growing race and class inequality in America. The increasing incarceration of young black men in the 1980s and 1990s deepened divisions among African Americans, and those with less education are increasingly separated from those with higher education. I've also analyzed the economic effects of mass incarceration: our assessment of the economic well-being of poor young men is too optimistic because so many are in prison and not counted in the usual statistics. When these men come out of prison, their economic opportunities are damaged by the experience of incarceration and the stigma of a criminal record.

"As a quantitative sociologist, I rely heavily on statistical and demographic methods. This approach has involved analyzing survey data collected by government statistical agencies, implementing field experiments that measure people's reactions to controlled interventions in the job-search process, and collecting and analyzing new survey data of employers and parolees.

"To translate and integrate the results of my research, I talk and work with people in government and other agencies. Right now, I'm finishing a study on a prisoner-reentry program for the district attorney in Brooklyn, New York. The research suggests that some strategies are working extremely well, so we're talking about the possibilities for expanding these promising measures."

Bruce Western,
professor of sociology
and director of the
Multidisciplinary Program
in Inequality and Social
Policy at the John F.
Kennedy School of
Government





Lawrence F. Katz,
Elisabeth Allison Professor
of Economics

Lawrence Katz reveals the links between better neighborhoods and quality of life

“My research is motivated by an effort to understand the economic and social factors that create patterns of opportunity and those that create barriers: What can we do to enable the greatest number of people to live their lives to their fullest potential? Because most people’s life circumstances are determined by how well they, or their partners, do in the labor market, I study what determines the distribution of wages, looking at interplays in market forces, policies, and institutions. I try to document, as systematically and as dispassionately as possible, the basic facts about wage inequality and economic segregation in different communities. You have to measure and understand the facts, and put them in historical perspective—deciding whether what you’re seeing are just correlations or actually causal relationships—before you can start thinking about solutions.

“Social scientists have often asked: ‘How does the neighborhood where you grew up affect your life outcomes?’ When we look at raw correlations, we see that people who grow up in poor neighborhoods don’t fare as well economically or educationally and have many more health problems and shorter life spans. But are these outcomes the result of living in a particular area, or a series of unfortunate, individual circumstances that would exist regardless of the environment?

“In the early 1990s, we set up a large-scale, randomized social experiment to answer this question. ‘Moving to Opportunity’ gave vouchers to families living in public housing projects in some of the country’s highest-poverty neighborhoods—in Baltimore, Boston, Chicago, Los Angeles, and New York—so they could move to private housing in low-poverty neighborhoods. Families that received these vouchers, through a lottery, were most interested in moving out of very high-crime areas.

“Our preliminary findings show that moving to better neighborhoods doesn’t immediately translate into standard economic outcomes, like higher earnings, but it does have a significant long-range effect on the mental health of women and girls. There’s a very high incidence of depression among people living in poor neighborhoods. Moving to safer neighborhoods works as well as Prozac in terms of improving one’s outlook on life. Overall, girls seem to thrive in new middle-class neighborhoods—they’re doing better in school, their health is improving, they’re less involved in crime, and they’re making new friends—while boys are having a tougher time adjusting.”

Christopher Winship teams with ministers and police to reduce youth violence

“For years, sociologists waged a methods war, debating whether quantitative or qualitative research was better. Fortunately, that war is now over, and people realize that different methods are good for answering different kinds of questions. Sometimes, these methods can complement one another. Since majoring in math and sociology in college, I have been a strong public proponent of multiple, mixed methods of research, as well as providing students with opportunities to do hands-on, activity-based learning in the field.

“I’m interested in how people figure out processes and institutions for what I call ‘messy moral problems’—situations where the right thing to do is not at all obvious. For the last decade, I’ve been heavily involved with the Boston TenPoint Coalition, working with local ministers and the police department on the critical and difficult problem of youth violence. In 1992, when the effort began, the parties were highly antagonistic. The police saw their job as doing justice and making sure the right people were arrested; the ministry saw their role as protecting the civil rights of individuals in the black community and providing a safe house for their congregation. Then, later during the nineties, these diverse actors coalesced around the same goal: ‘keeping the next kids from getting killed.’ Now, when someone is arrested, police, ministers, and others often will meet and debate the appropriate outcome for this person, which results in a joint recommendation to the court.

“The remarkable aspect of the Boston story is how police and ministers changed their understanding of their own goals in fundamental ways. How do we take the best practices that we’ve seen in Boston and redeploy them everywhere today? How do we build processes, institutions, and interventions that will substantially reduce youth violence in the future?”

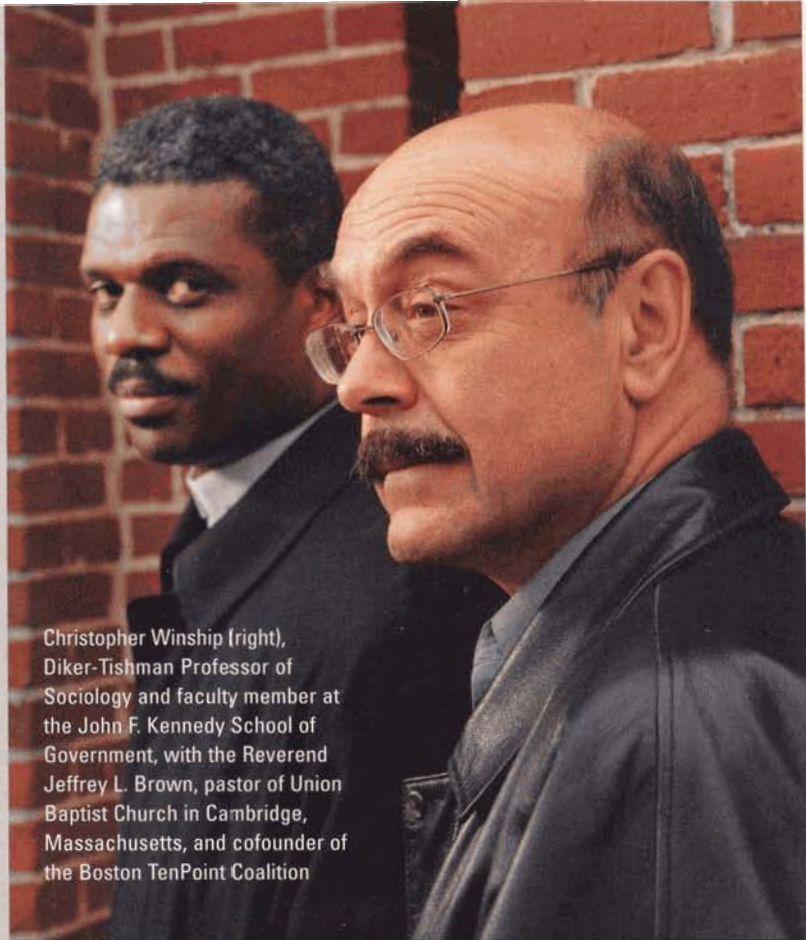
Robert Sampson explores urban environments to explain the sociology of cities

“My research aims to understand and explain how the social world works, with a particular focus on cities. I study urban crime, immigration, concentrated inequality, health disparities, city politics, and neighborhood effects to explore the city’s social structure over time. Crossing disciplinary boundaries, I investigate these topics holistically to ask: How do disparate social phenomena interact and produce the dynamic entity that cities reflect?”

“For me, interdisciplinary approaches offer the correct way to proceed scientifically. I have directed large-scale community surveys, network studies of organizations, and systematic social observation of city streets. A collective enterprise, my research involves undergraduate and graduate students. In one study, we videotaped over 15,000 street blocks to observe and code key aspects of the physical and social environment (for example, graffiti, trash, fighting, and housing quality).”

“Over the past 20 years, I have also worked on a major research project tracking stability and change within the lives of a group of men born in Boston during the Great Depression and followed to age 70. This longitudinal study shows how, for many men, turning points can redirect life trajectories and challenge the notion that ‘childhood is destiny.’”

“Although I consider myself a basic researcher, I’m glad when important aspects of our work are translated into concrete actions. Currently, my colleagues and I apply insights about community-police partnerships gleaned from our Project on Human Development in Chicago Neighborhoods to promote a new vision for government-community collaborations in several cities around the world. In the long run, changing how people think is perhaps the most policy-relevant thing we academics can do.”



Christopher Winship (right), Diker-Tishman Professor of Sociology and faculty member at the John F. Kennedy School of Government, with the Reverend Jeffrey L. Brown, pastor of Union Baptist Church in Cambridge, Massachusetts, and cofounder of the Boston TenPoint Coalition



Robert J. Sampson, Henry Ford II Professor of the Social Sciences and chair of the Department of Sociology