



UC BERKELEY
SOCIAL SCIENCE
MATRIX



SOCIAL SCIENCE MATRIX

Social Science for Berkeley and Beyond

matrix.berkeley.edu





A LETTER FROM THE DIRECTOR

Welcome to Matrix!

Matrix is short for Social Science Matrix, a new research center established to seed and incubate cutting-edge, cross-disciplinary social science from across the UC Berkeley campus and beyond.

Unlike most research centers, Matrix does not have a single topical focus. Rather, we provide a framework for researchers to engage and collaborate around issues that demand multi-disciplinary approaches, problems like climate change, human rights, race and inequality, immigration, and other globally significant topics.

Matrix is meant to serve as an incubator, where researchers have the freedom to take risks on early-stage initiatives. We have the unique ability to tap into UC Berkeley's "brain trust" and coordinate research groups capable of addressing questions from across the social-science disciplines.

Since our inception in 2013, Matrix has organized dozens of research teams, conferences, and events, and we have connected hundreds of students and faculty members. Our programs have brought together economists, political scientists, historians, sociologists, linguists, demographers, psychologists, and experts from many other domains, and created a space for them to orient their conversation toward the kinds of questions that do not fit neatly within a single discipline. Together with our partners—including D-Lab, which provides training in analyzing and organizing data—we are helping UC Berkeley become a leading center for social science in the digital age.

Matrix has also initiated our own unique research to better understand how a public institution like UC Berkeley can best support the social sciences in the modern era. Through the Matrix Director's Seminar, a meeting of minds of many of UC Berkeley's outstanding social scientists, we explore the past, present, and future of social science and the institutions that support it. And we are leading the development of the Berkeley Research Network Graph, a stunning data visualization designed to illuminate collaborations and showcase the work of researchers across the university.

Matrix already has achieved much, but we are only getting started. We developed this prospectus to help you, our community of supporters, understand what Matrix does and why our unique model is essential for helping UC Berkeley remain a leading source of ideas and insights for the 21st century. If you are interested in learning more about Matrix, we encourage you to visit our website, <http://matrix.berkeley.edu>.

Sincerely,

A handwritten signature in black ink that reads "William F. Hanks". The signature is written in a cursive, flowing style.

William Hanks

Faculty Director, Social Science Matrix

OUR MISSION

Social Science Matrix is UC Berkeley's new flagship institute for social science research. Our mission is captured in our name: we provide an organizational framework—a “matrix”—that supports cross-disciplinary projects pursued by hundreds of social scientists across the UC Berkeley campus research landscape and beyond. With Matrix as a catalyst, UC Berkeley's social scientists have unique potential to generate solutions to global challenges.

Matrix is a “lean” start-up incubator

Matrix is designed to foment relentless innovation, with the aim to generate new forms of scientific inquiry and design more effective forms of social intervention. We encourage risk-taking through sponsored research projects that investigate emerging trends in contemporary social science. We foster collaboration and project development across the social sciences and link them to natural sciences, engineering, and the professional schools, by providing program coordination for teams of researchers and events around questions that demand new approaches and methods. We offer administrative support for grant applicants and for grants and contracts management.

Matrix produces breakthrough research

New forms of computational modeling, new theories of cognition, and an exponential increase in data streams have created unprecedented opportunity for today's social scientists. Our aim is to push social science beyond the conventional division of academic labor that has segregated micro from macro scales of analysis, behavioral from interpretative approaches, formal models from descriptive methods, experimental protocols from observational strategies, and historical inquiry from presentist perspectives. At Matrix, we believe that social science at its best is both empirically committed and relentlessly self-reflexive.

Matrix builds bridges to the outside world

The world's challenges do not unfold within academic boundaries or timescales. In business, government, and civil society, there is an acute need for timely and actionable knowledge about the social world, whether related to scarcity, environmental dynamics, market transparency, inequality and governance, social dislocation, or cultural hybridization on a global scale. Matrix is motivated by the belief that the study of social life requires collaboration between the University and society at large. This is why we have taken as our motto: ‘Social Science for Berkeley and Beyond.’



MATRIX RESEARCH TEAMS

BRIDGING SOCIAL SCIENCE DISCIPLINES TO TAKE ON GLOBALLY SIGNIFICANT RESEARCH QUESTIONS

How can economists better understand climate change? How is the notion of race changing in the era of big data? What are the causes and consequences of polarization in Europe? What are the implications of algorithms and robotics for economics and labor?

These are just a few of the important questions that have been explored by Matrix Research Teams, through which students and faculty members from across ranks and disciplines work together to explore or develop questions of social-science import.

Matrix sponsors three types of research teams:

- **Research teams** are two-semester collaborations meant to spur a tangible outcome, such as a conference or co-publication. Research teams typically have between 4-10 faculty members and graduate students (and in some cases undergrads) from multiple disciplines. They receive a \$5000 stipend.
- **Prospecting Teams** meet for a single semester, and are primarily intended for faculty to define a research program. They receive a \$1000 stipend.

- **Pop-Ups** are single-session events, like dinners or gatherings in our space, designed to build community and gauge community interest in a specific topic.

The purpose of research teams is to provide a space where social-science researchers—including graduate students and faculty—are encouraged to take risks and explore new, cross-disciplinary approaches to the major challenges of the 21st century.





SOCIAL SCIENCE MATRIX RESEARCH TEAM PORTFOLIO (AS OF FALL 2015)

A Polarizing Europe: A Cross-Disciplinary Investigation into Post-Cold War Extremism
Algorithms as Computation and Culture
Behavior Measurement & Change
Biomedical and Social Science Collaborative
Climate Change Economics Roundtable
Crime, Community Support, and Policing
Deploying Interdisciplinary Data Science to Understand the Global Impact of Climate Change
Data / Science / Inquiry
Developing Tools and Collaborations in Prosopographical and Historical Social Network Research Environments
Designated Emphasis in European Studies
Electoral Violence in Developing Countries
Emergence and Aggregation
Envisioning Radical Experiments in Social Science and Clinical Medicine
Framing Rights and Immigration
Global Studies: A New Interdisciplinary Major at UC Berkeley
Governing After Political Transitions in the Global South
Health and Governance Collaborative
The Human Right to Water
Human Rights and the University
The Impact of Human Rights in a Global Age
Imperial Declines
Integrating Social and Biophysical Epistemologies, Data, and Methods
Metaphor, Across Data Sets and Methodologies
The Neuroscience of Decision-Making
The Neuroscience of Price Bubbles
The Politics of Biology and Race in the Twenty-First Century
Prosopography and Historical Social Networks
Public Service Delivery Initiative
Race, Data, and Inequality
Re-Representing the Earth Through Landscape, Infrastructure, and Data
Risk Management and Resiliency in Latin American Cities
Social Death: Race, Risk, and Representation
Superintelligence and the Social Sciences
Synching Sounds: A Phonological Phenomenon
Tupí-Guaraní Language and History Group
Work and Politics in the Digital Era



CLIMATE CHANGE

UC Berkeley is home to some of the world's leading experts on climate change, including economists, political scientists, geographers, engineers, and other scholars. Yet while these top minds are all focused on the same high-level challenge and operating from the same campus, they often work in specialized “silos” and have few opportunities to interact.

That's where Social Science Matrix comes in. From our newly renovated space at the top of Barrows Hall, on the southern end of the UC Berkeley campus, we have the unique ability to provide funding, structure, and physical space for UC Berkeley's climate change researchers to come together and explore diverse dimensions of one of the most urgent

human challenges of the 21st century.

Matrix sponsored and coordinated the Climate Change Economics Roundtable, where top climate-change economists like Solomon Hsiang—author of the *American Climate Prospectus*—gathered to share research and ideas while exploring new methods for understanding the near- and long-term economic impacts of climate change.

We also hosted a summer workshop on Data Science and Climate Economics, in which students worked with faculty members to measure potential impacts of climate change that have not yet been studied in many countries, including labor supply, mortality, in-utero and early-life heat stress, hospital admissions, agricultural yields, international migration, and energy demand

and supply.

Meanwhile, Matrix sponsored a research team composed of linguists and psychologists who explored how the use of metaphor in language shapes dialogue around climate change and other issues. Thanks to Matrix support, this team connected with a researcher at UC Merced who studies the language used in the climate change debate, and the group is now organizing a conference and publishing a volume.

Matrix is playing a crucial role by helping these climate-change initiatives in their early stages. In the long term, such research has potential to shift the debate about climate change among key decision-makers from government and industry around the world.



RACE AND INEQUALITY

Since 2013, Matrix has convened multiple teams of scholars from across the social-science disciplines—including political science, economics, African-American studies, and Ethnic Studies—to critically examine issues related to race relations and inequality.

For example, we sponsored a research team focused on “Crime, Community Support, and Policing,” which integrated methods from political science, psychology, and development economics to explore how police departments can transform relationships with local communities, particularly in areas where trust and confidence in the police is low.

“Being able to tap those community attitudes is really important,” said Jack Glaser, who co-organized this initiative. “It’s important to police chiefs; they really care about community attitudes. It’s an area where scholars, policy people, the practitioners, and the community can all get together and work toward the same goal.”

Matrix also supported a research team that looked at the complex and evolving connection between

biological science and race in the age of DNA. Drawing upon the fields of ethnic studies and public health—two traditionally disconnected fields of study—this group examined whether biotechnologies are reinforcing the concept of race as a category.

A Matrix research team dedicated to “Race, Data, and the Social Sciences” is turning the lens on the social-science research community to consider how commonly used methodologies, including the statistical analysis of “big data,” are subject to racial bias. Part of the group’s goal is to develop practical solutions that will help scholars identify and isolate possible sources of racial bias in their analyses.

“Working with Matrix provided us with the opportunity to speak across disciplines, which has been very helpful, because each discipline has its conventions,” says Lisa Garcia Bedolla, Chancellor’s Professor in the Graduate School of Education. “Our goal is to provide researchers with tools that will move them toward not doing harm with the research they produce. Berkeley has a public mission, and so we have to be sure that the research we produce from all the data at our disposal advances that mission.”



HUMAN RIGHTS

Since the Free Speech Movement in the 1960s, UC Berkeley has been a hub for pioneering human rights research and practice. Social Science Matrix is carrying forward this tradition by helping a new generation of human rights researchers convene and align their efforts.

Matrix supported the Human Rights Program, a new research center, to collaborate with the Human Rights Center (based in the School of Law) and develop an interdisciplinary architecture that could most effectively support human rights research at Berkeley. This group has already organized events and workshops, and they are in the process of drafting a strategic plan and establishing internships with local human rights organizations.

“It was extremely helpful to have a forum in which to bring together stakeholders from across campus and beyond to discuss the relationship between the university and human right practice,” says Lynsay Skiba, Executive Director of the UC Berkeley Human Rights Program. “We forged new connections with human rights organizations off campus and caught up on the great human rights work of individuals and entities here at UC Berkeley. We also gained new



insights into the potential future roles for the Human Rights Program at a time of transition for the program. We received great suggestions from our participants, including experts we were able to bring from the East Coast, thanks to Matrix support.”

Matrix has also sponsored a research team focused on “The Human Right to Water,” which explored how the United Nations’ Human Right to Water and Sanitation can be most effectively implemented. Part of this group’s goal is to translate the principles laid out by the United Nations into concrete and realistic policy mechanisms.

The group forged a relationship with the United Nations Special Rapporteur for the Right to Water and Sanitation, and invited her to speak and collaborate. The researchers have plans to use Matrix funding to invite the new Special Rapporteur to continue developing a broadly usable framework.

“The Matrix research team helped us initiate the first systematic, empirical study of the human right to water and sanitation,” says Isha Ray, Professor in the Energy and Resources Group. “Implementation of this right has only just started, so this is an ideal time to launch an interdisciplinary multi-year effort....



Ultimately, [our] research program could answer fundamental questions yet to be answered about equity, participation, and development resulting from a rights-based approach to water.”

GLOBAL ISSUES

From the rise of extremist terrorists to democratic shifts toward far-left and far-right governments, Europe has seen a startling rise in polarization in recent years. Social Science Matrix funded a research team dedicated to examining the political, economic, and social dynamics of extremism in Europe since the end of the Cold War. This group is now planning a conference for Spring 2016.

“Our research team members hail from a dozen European countries and various disciplines, which provides a wealth of perspectives,” says Professor Jeroen DeWulf, Director of the Institute of European Studies, who led the initiative. “Many members are visiting scholars, and we hope this collaboration helps them to share their expertise and more fully engage with the Berkeley community.”

Working with the Center on the Politics of Development, Matrix sponsored a research initiative focused on Electoral Violence

in Developing Countries, which brought together a network of interdisciplinary faculty and graduate students to study the relationship between violence and democratic elections in developing countries. Topics include measuring and assessing election-related violence, fraud, and vote-buying, and determining the impacts of intervention.

Matrix also supported the development of a new Designated Emphasis in European Studies, the first graduate program of its kind at the university, and we are helping develop a new undergraduate major in Global Studies.

“The Matrix research team helped us initiate the first systematic, empirical study of the human right to water and sanitation.”



EXAMINING THE ROLE OF TECHNOLOGY IN SOCIETY

The rise of digital technologies and “big data” has profound implications for nearly every facet of society in the 21st century. Social Science Matrix has supported a range of cross-disciplinary research teams who are investigating the implications of algorithms and big data in fields such as health care, labor, economics, and politics. We also support researchers who are working to develop new technology-based methods for gathering social data and running experiments using technology.

Algorithms as Computation and Culture

This Matrix-funded research initiative engaged a team of computer scientists, anthropologists, historians, sociologists, and other scholars to study the social implications of algorithms, the chains of “if-then” logic by which computers make calculations. Algorithms are increasingly being used for crucial decisions, such as analyzing credit applications, making medical diagnoses, and cultivating news feeds, and yet the logic behind them is often opaque.

“There is a growing interest coming from other fields in the ‘politics of algorithms,’ recognizing that they are consequential to society as a whole, and raise issues of discrimination and inequality, information access, and the shaping of public discourse,” explains Jenna Burrell, Associate Professor in UC Berkeley’s School of Information. “[The Matrix research team] provided structure for cross-disciplinary conversations. Even within our interdisciplinary school, we often don’t have many of these opportunities.”

Based on the work of this group, Burrell was invited to speak at the Data and Civil Rights Conference in Washington DC, and the participants published research with the Social Science Research Network; *Interface; Information, Communication & Society*; and other publications.

This research also inspired new Matrix initiatives, including “Work and Politics in the Digital Era,” a research team led by sociologist Marion Fourcade, is exploring the ripples that digital technologies are having upon our traditional “analog” understanding of work and society—and what it could mean for policy-makers and institutional leaders.

Another Matrix research team is dedicated to understanding the



impact that superintelligence, or advanced artificial intelligence, could have on diverse dimensions of human society. This group has a publication under review and they are pursuing funding for a conference on superintelligence in Fall 2016.

Behavior Measurement & Change

In the past, social scientists seeking to measure attitudes or behaviors were largely limited to collecting data through surveys or experiments conducted in artificial laboratory settings. But thanks to the rise of mobile devices and other data-driven sensors, today’s researchers have the ability to measure human behavior “in the wild” on an unprecedented scale.

Add in the capabilities of today’s mobile devices to send out triggered messages based on an array of inputs, and social scientists can not just measure, but experimentally motivate change in people’s behavior.

To explore these emerging opportunities—and their far-reaching implications—Social Science Matrix sponsored a research team on “Behavior Measurement and Change.” This initiative brought together researchers from diverse fields such as psychology, sociology, economics, public health, and engineering to explore how modern digital tools and methodologies can be harnessed



“Social Science Matrix has provided a framework to bridge these disciplinary boundaries.”

to measure—and change—human behavior.

The team included a researcher who is developing an app to measure and improve the care of HIV patients, and a team of transportation engineers, who developed an app-based tool to assess the quality of the experiences of bus-riders in San Francisco, with the goal of promoting increased usage of public transportation.

The research team was instructive for co-founder Shachar Kariv, Professor and Chair of the UC Berkeley Department of Economics, who co-authored a paper in *Science* that demonstrated how data from online financial software can generate real-time insights into consumer spending in relation to income; his research relied upon ten months worth of transactions of about 75,000 users of Check, a financial software brand.

The interdisciplinary nature of the Matrix research team was vital for promoting the sharing of ideas, says Joan Walker, Professor of Engineering at UC Berkeley. “When you go out and talk to people in related fields, you realize that they are using different methodologies and language than you tend to use,” she says. “The research team helps us push us out of our set ways and think about things more creatively. It’s a lot

of work, but it makes you question where your methods come from—and makes you understand what assumptions you’re making.”

This successful initiative led to a new Matrix research team dedicated to “Hacking Measurement,” which developed new approaches and training related to measuring social data in all its forms. This group had a goal to improve measurement tools for use in resource-constrained settings, such as developing nations, by reducing the need for surveys and other self-reporting methods. Potential usages include monitoring the use of public goods, such as latrines, water pumps, or hand washing stations; using satellite imagery and geospatial mapping to improve farming; enhancing humanitarian responses to natural disasters; and tackling environmental challenges such as deforestation or desertification.

Participants in this research group developed their own basic tools for real-time data collection, and the project led to a credit course delivered through the UC Berkeley School of Information. “This research team is very cross-disciplinary, and it is letting people from across disciplines join forces,” explains Dav Clark, a data scientist with

UC Berkeley’s D-Lab, who led the research team. “It’s a first whack at something that the university should be offering as part of training the next generation of scientists.”

CHALLENGING THE ORTHODOXIES OF HEALTH CARE

Matrix provides a space for researchers who are working to bridge knowledge and methodologies from the health and social sciences.

For example, we sponsored the Biomedical and Social Science Collaborative (BMSSC), which explored how experiments are conducted in the health and social science disciplines—and how each field could learn from the other. Researchers collaborated in conceiving research designs, pre-analysis plans, and experiments that could improve how health care is delivered in developing nations.

Following on this successful project, the Health and Governance Collaborative brought together researchers from the UC Berkeley and the UCSF School of Medicine—including experts in public health, biostatistics, epidemiology, health policy and management, clinical medicine, economics, political science, business, and other

domains—to examine how social-science methodologies can be applied to better understand the behavior of governments, organizations, health workers, communities, and individual patients.

Matrix also sponsored a research team working on “Envisioning Radical Experiments in Social Science and Clinical Medicine”. This initiative, led by Professor Nancy Scheper-Hughes, brought together scholars from multiple disciplines (including public health, clinical medicine, anthropology, sociology, history, geography, information, economics, comparative literature, public policy, and social work), as well as physicians, psychiatrists, patients, and community members, with a goal to create “a collaborative crucible for a new form of medical practice.” The initiative resulted in the development of a new protocol that medical practitioners can use to assess social factors contributing to patients’ health.

SUPPORTING NEW RESEARCH METHODOLOGIES

Social Science Matrix serves as a testing ground for the development and refining of research methodologies that have potential to be applied across domains.

Prosopography

Matrix has provided research funding to Berkeley Prosopography Services (BPS), which uses probabilistic models to ascertain the social relationships among people about whom little is known, and to assess when references to a certain name are referring to the same person.

Prosopography is an important tool for the study of all kinds of past societies; the word stems from the Greek *prosopoeia*, or “face created,” suggesting how this methodology enables researchers to “put a face on” individuals about whom little is known based on their connections with other people.

With Matrix’ support, the leaders of BPS are developing a customizable toolkit that will help researchers from a variety of fields gain a greater understanding into the relationships among people and populations from the past and present alike.

Merging Biology with Linguistics

Matrix sponsored a team of researchers from linguistics, computational phylogenetics, and lowland South American archaeology and ethnography. Their goal: to

develop insights into the linguistic and social history of the indigenous Tupí-Guaraní-speaking peoples, who live across much of lowland South America.

By applying algorithms used by evolutionary biologists to track changes in species over time, the group developed a model for how the Tupí-Guaraní languages have evolved. Together with archaeological findings and ethnographic materials, their research provided unprecedented insight into the centuries-long migration of the Tupí-Guaraní peoples.

“Social Science Matrix has provided a framework to bridge these disciplinary boundaries,” said Lev Michael, Professor of Linguistics, who led this research team. “It has proved attractive to our archaeological colleagues to understand that they are not just working with linguists, but are participating in an institution that is intended to foster these interdisciplinary dialogues.”





Synching Sounds: A Phonological Phenomenon

Matrix sponsored a research team of faculty and graduate students from different disciplines—including psychology, linguistics, and Slavic Studies—to probe the implications of “agreement by correspondence,” a linguistic peculiarity that leads people to change similar sounds in words to be more like each other.

Participants published papers resulting from their work together, and two graduate student participants are writing dissertations on the topic. The research team culminated in May 2014 at an international symposium at UC Berkeley that brought together top researchers from MIT, Stanford, as well as universities in South Africa, England, Canada.

“It was the right idea at the right time with the right people,” says Sharon Inkelas, who led the Matrix research team. “We are building a theory around principles that are not language specific. It’s a way of taking linguistics out of its silo.”

“The research team helped us get conversations among people from fields that normally don’t talk to each other,” says UC Berkeley Professor Irene Bloemraad. “It was a very generative space for people to go beyond what they usually read and the conversations they normally have.”

Framing Rights and Immigration

Ask Californians whether they think immigrants should have a path to citizenship, and the answer will depend heavily on how the question is framed. This important finding—described in recent research by a team of UC Berkeley sociologists—was at the heart of “Framing Rights and Immigration,” a Social Science Matrix research team that brought together scholars from the fields of sociology, law, political science, education, philosophy, and Latino/Latin American Studies.

In the months following their Matrix-funded work, this group has continued to meet at the School of Law, and they published an academic paper in *Social Forces*, one of the major journals in the discipline.

“The research team helped us get conversations among people from fields that normally don’t talk to each other,” says UC Berkeley Professor Irene Bloemraad. “It was a very generative space for people to go beyond what they usually read and the conversations they normally have.”

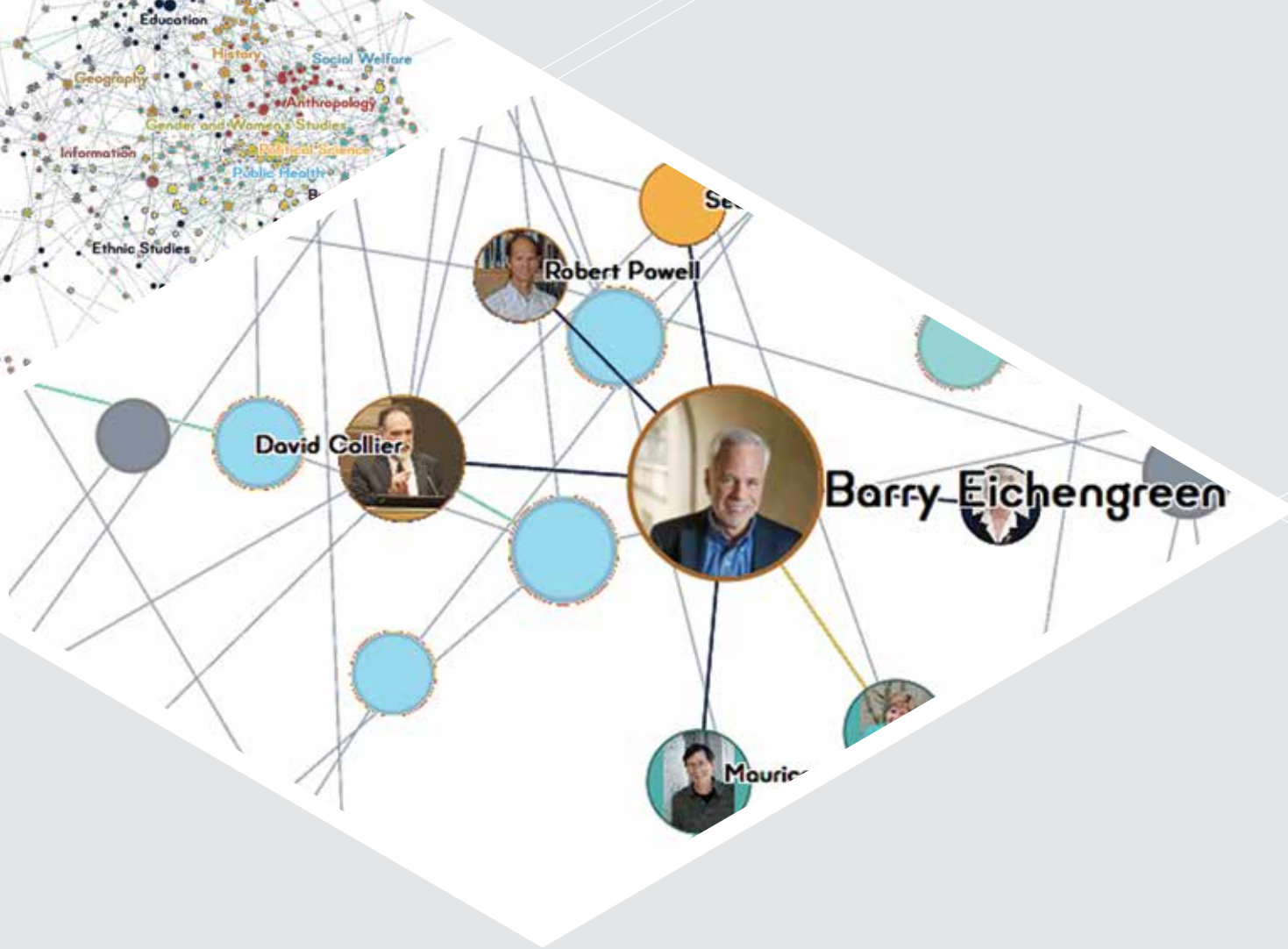
The Neuroscience of Decision-Making

Important gaps remain in our understanding of how the human brain makes decisions, and researchers have struggled to translate scientific knowledge into practical usages.

To promote better understanding of the links between biology and decision-making, Matrix sponsored a team of researchers from the Haas School of Business, UC San Francisco, and other units to explore the intersection of neurology, psychology, economics, and political science.

Among the questions this research team considered: how do we incorporate the role of emotions, language, and memory in current models of decision-making? What are the roles of hormones, neurotransmitters, and genes in decision-making? What are the emerging techniques and methods—e.g. fMRI, behavioral modeling, lesion studies, or animal models—that can shed light on these questions?

Assistant Professor Ming Hsu, who organized this initiative, says the Matrix funding helped find “fruitful directions” for thinking about these and other questions. “It has been a challenge to get these ideas from bench to bedside,” Hsu says. “We want to create better incentives and align interests to bridge the science and commercial applications in ways that include everyone.”



“The way universities function and how research is conducted is changing. Berkeley is all about openness and transparency, so this is the perfect place to explore what that means in a research context. We’re starting with the social sciences, but it would be great if we could expand this project to other disciplines in the future.”

MATRIX RESEARCH

BERKELEY RESEARCH NETWORK GRAPH

Social Science Matrix is leading the development of the Berkeley Research Network Graph, an unprecedented interactive tool for identifying and visualizing the patterns of interdisciplinary research collaborations among social-science researchers at UC Berkeley. When completed, this interactive visual network map will illuminate which researchers and institutions are working together in which topical areas.

“We’ve reached out across the Berkeley campus to get a lot of data sets that are open but might not otherwise be easily accessible,” says Elaine Sedenberg, a Ph.D. student from Berkeley’s School of Information who is leading the data gathering and analysis effort to develop the Network Graph. “We’re interested in, what does the research landscape look like? What are the topics people are working on, how do people collaborate, and how has that changed over time?”

The data used to develop the graph relate to an array of academic connections, including records of dissertations co-advised, grants co-awarded, courses co-taught, and articles co-published by members of Berkeley’s faculty. The graph is a dynamic, searchable tool that appears as a morphing web of nodes, each representing an individual, group, or institution, all connected through their various collaborations.

Matrix is sponsoring the Network Graph to build a stronger foundational understanding of the current collaborations taking place at Berkeley, which in turn will help foster new connections among students and faculty members from different domains. The Graph will be updated on an ongoing basis

and will illuminate the impact of interdisciplinary research centers; it will be a valuable tool for faculty, students, and staff to navigate the Berkeley social science landscape and identify new potential collaborators and advisors.

At the same time, the Graph represents a cutting-edge approach to organizing and presenting data about large, complex organizations. It has potential to serve as a model for other visualizations of organizations that could be developed in the future by social scientists across the UC Berkeley campus.

“Other campuses can claim that they are interdisciplinary, but this lets us prove it,” Sedenberg explains. “The way universities function and how research is conducted is changing. Berkeley is all about openness and transparency, so this is the perfect place to explore what that means in a research context. We’re starting with the social sciences, but it would be great if we could expand this project to other disciplines in the future.”

MATRIX DIRECTOR’S SEMINAR

How are digital technologies and the abundance of data upending social-science research? How should today’s research institutions adapt to this new landscape? How do social scientific ideas germinate and disperse across and through disciplines? How does Social Science Matrix compare with other research institutes that have evolved since the post-World-War-II expansion of collaborative research?

Led by Professor William Hanks, the Matrix Director’s Seminar brings together an eclectic mix of scholars from a variety of disciplines to discuss these and other crucial questions that are shaping social-science research for the 21st century.

The Director’s Seminar provides a space for intensive and sustained dialogue about how the landscape of social research is changing, with a view to informing the strategy, programs, and multi-year plans of Matrix and the social-science disciplines at UC Berkeley.

BAY AREA SOCIAL RESEARCH ARCHIPELAGO (BASRA)

Matrix is sponsoring the development of the Bay Area Social Research Archipelago (BASRA), an initiative with a goal to better understand where, how, and for what purposes social science is currently practiced around the San Francisco Bay Area.

How social scientific knowledge is generated—and who is paying for it—has changed dramatically over the past few decades. Prior to the 1960s, social research was primarily the domain of academic and government researchers. Today, in the era of Big Data, a significant amount of social science takes place outside these venues, whether in Silicon Valley firms trying to make sense of social relationships or corporations deploying anthropologists to understand the cultural attributes of consumer markets.

Through a focused examination of the social-science landscape in the Bay Area, Social Science Matrix seeks to strengthen the bridges between UC Berkeley and public- and private-sector institutions that employ social scientists, thereby creating professional opportunities for grad students and faculty members while creating opportunities to expand our impact in addressing real-world challenges for the 21st century.

MATRIX SERVICES

RESEARCH DEVELOPMENT

Applying for research funding can be a daunting task. Although UC Berkeley has a supportive grant management office, Matrix provides additional services that are customized for the social science community. Our research development team helps with every aspect of the grant process, including identifying, securing, and managing grants and other funding.

Matrix manages approximately \$10 million in funding for UC Berkeley's social-science researchers. "We are dedicated to supporting interdisciplinary and collaborative projects across the social sciences, including through administration of research funding," says Eva Seto, Associate Director for Research Development. "Matrix staff have backgrounds in the social sciences; we are not only administrators, but we approach projects as fellow researchers. The goal of Matrix services is to reduce the burdens of

managing grants and helping PI's maintain focus on their research activities."

Matrix provides a full range of research services and resources to support social scientists working at UC Berkeley. Matrix can provide help with:

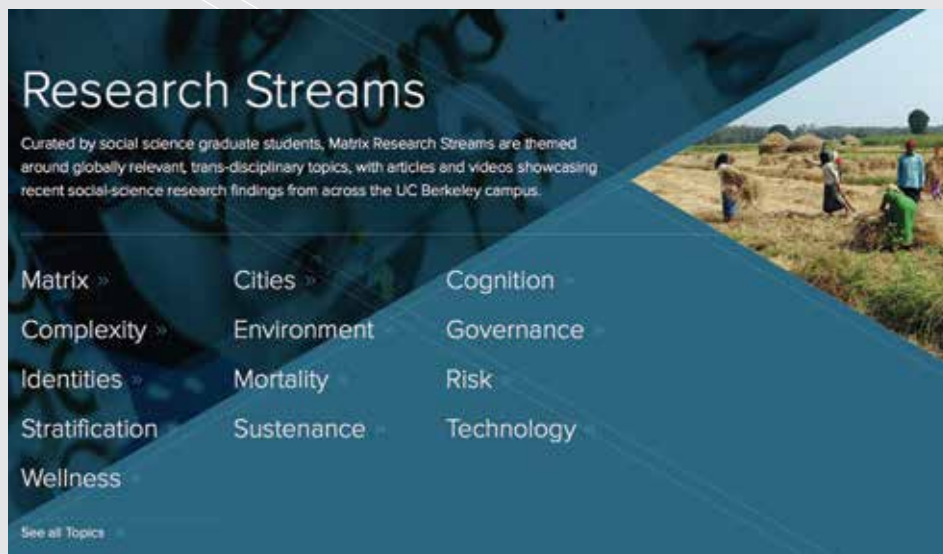
- Facilitating research for PI's, including all aspects of research administration.
- Identifying research funding opportunities.
- Contacting program officers.
- Assisting with proposal writing and building a research team.
- Acting as a liaison between PI's and Campus Shared Services, the central Sponsored Projects Office at Berkeley, as well as sponsoring agencies.
- Serving as an organizational home for research projects, providing administrative review as necessary, and helping to promote and disseminate findings.

COMMUNICATIONS

Through our website and other media channels, Matrix helps get the word out about the exciting, groundbreaking social-science research emerging from across the UC Berkeley campus.

The Matrix website has been designed to serve as a portal to social science at Berkeley, where interested parties can look to see what is new and exciting both in the disciplines and at their many edges. Our website is written almost entirely by social-science graduate students, who gain valuable experience of writing about social science in lay language.

To affirm our commitment to breaking down the walls between disciplines, our site's content is organized into "research streams" that are thematically focused around trans-disciplinary topics, including: Cities, Cognition, Complexity, Environment, Governance, Identities, Mortality, Risk, Stratification, Sustenance, Technology, and Wellness. Matrix Research Streams feature recent research highlights, faculty profiles, and more.



"Matrix manages approximately \$10 million in funding for UC Berkeley's social science researchers."

MATRIX-AFFILIATED CENTERS

Social Science Matrix partners with a range of interdisciplinary research centers operating across the UC Berkeley campus. We provide these centers with access to a robust platform of support, and offer administrative services, research development, communications, and other resources, depending on each particular center's needs.

Berkeley Center for Economics and Politics

The Berkeley Center for Economics and Politics (BCEP) brings together scholars working in the field of political economy to advance research on such issues as governance, political institutions, development, conflict, and politics in weakly institutionalized societies.

Berkeley Population Center

The Berkeley Population Center promotes interdisciplinary research and collaboration focused on all aspects of population studies. Signature themes include reproduction and HIV; health disparities; inequalities and opportunities; behavioral economics; and formal demography.

Center for Catastrophic Risk Management

The Center for Catastrophic Risk Management (CCRM) is dedicated to advancing interdisciplinary solutions to avoid and mitigate the impacts of catastrophic events, and to help public- and private-sector institutions better coordinate when responding to large-scale disasters.

Center for Effective Global Action

The Center for Effective Global Action (CEGA) is a hub for research on global development, integrating empirical economic analysis with expertise in agriculture, public health, education, engineering, and the environment.

Center for Science, Technology, Medicine, & Society

The Center for Science, Technology, Medicine, & Society (CSTMS) is a cross-disciplinary hub for research, teaching, and outreach on the histories and implications of scientific research, biomedicine, and new technologies, from geo-engineering to synthetic biology.

Center on Economy and Morality, a Matrix Affiliate

The Center on Economy and Morality, a Matrix Affiliate (EMMA) investigates how emerging technologies such as financial data mining affect people's conduct in their everyday lives, and how they are shaping wealth inequality and the nature of moral hierarchies in society.

Center on the Economics and Demography of Aging

The Center on the Economics and Demography of Aging (CEDA) comprises a group of mathematical and statistical demographers who apply their skills in such research areas as biodemography, demographic modeling and forecasting, and intergenerational transfers.

Center on the Politics of Development

The Center on the Politics of Development (CPD) promotes the study of the politics and governance of low-income societies. In collaboration with faculty and graduate students, the CPD identifies central policy dilemmas, develops solutions, and advocates for sustainable changes to the governance structure of developing communities.

Competition Policy Center

With a focus on issues related to marketplace competition and regulation, the Competition Policy Center bridges the gap between academic analysis and policy formation, with an eye toward shaping U.S. competition policy.

Consortium for Data Analytics in Risk

Founded through a partnership with State Street Global Exchange, the Consortium for Data Analytics in Risk (CDAR) is focused on applying advanced data-science techniques to manage and mitigate economic and financial risk.

Experimental Social Science Laboratory (XLab)

The Experimental Social Science Laboratory (XLab) is an interdisciplinary laboratory for conducting experiment-based investigations into issues of interest to social scientists, with 36 computers available for in-lab behavioral and economic research.

Human Rights Program

Through its interdisciplinary research and teaching initiatives, the Human Rights Program (HRP) at UC Berkeley investigates the political, historical, legal, economic, social, psychological, and representational dynamics of human rights.

Institute of European Studies

The Institute of European Studies seeks to enrich America's understanding of Europe—its people, developments, and challenges—through the generation and dissemination of distinguished scholarship. As the University's focal point for the study of Europe, IES brings disciplines together to create new cross-disciplinary understandings of issues related to Europe and its constituent nations.

Interdisciplinary Center for Healthy Workplaces

The Interdisciplinary Center for Healthy Workplaces brings together scholars from multiple domains—including public health, public policy, environmental design, architecture, engineering, computer science, nutrition, law, and economics—to find solutions to improve the health and wellness of employees in a wide range of workplace environments.

Mobile Experimental Laboratory

UC Berkeley's Mobile Experimental Social Science Laboratory (Xm Lab) exists to help researchers use mobile devices and other sensors as a radical new platform for conducting social science experiments.



“Berkeley has a public mission, and so we have to be sure that the research we produce from all the data at our disposal advances that mission.”

OUR TEAM



Carla Hesse

Matrix is supported by Carla Hesse, Executive Dean of the UC Berkeley College of Letters & Science. Professor Hesse is a prize-winning scholar with 20 years of experience teaching at Berkeley. She holds the Peder Sather Chair in the Department of History, and in 2007 won the prestigious Aby Warburg Prize. She earned her M.A. and Ph.D. from Princeton University and her B.A. from UC Santa Cruz. Social Science Matrix represents part of her effort to advance a broader institutional re-imagining of the social sciences for the 21st century.



Christian Gordon

Christian Gordon serves as the Senior Director of Development for the UC Berkeley College of Letters & Science Social Sciences division. He brings extensive experience in campaign planning and execution, with a special emphasis on strategic planning, major gifts, innovative stewardship, alumni and donor relations, and volunteer management. He previously worked for San Francisco State University; Simon Business School, at the University of Rochester; Curry College; and Boston University. He holds a Masters Degree in Education from Boston University and a Bachelor's Degree from Grand Valley State University.



William Hanks

Bill Hanks is Director of Social Science Matrix and holds the Berkeley Distinguished Chair in Linguistic Anthropology. He brings extensive experience in theoretical engagement in the question of interdisciplinarity and translation of ideas between contexts. He holds a double PhD in Linguistics and in Anthropology from the University of Chicago, and has spent his career operating in the spaces between and across disciplines, both studying the processes and challenges of translation, and in facilitating the process. He has directed more than 25 dissertations.



Mia Sara Bruch

Mia Bruch serves as Associate Director of Programs for Social Science Matrix. Her training in both the academic and private sectors provides her with the background to help steward the intellectual and professional development of the institute and to administer Matrix programs. Mia received her Ph.D. in history from Stanford University, where she won both the Lieberman Prize and the Centennial Teaching Award. As a consultant, she worked with such organizations as the TED Conference, the Atlantic Council, and the Aspen Institute, as well as with *New York Times* bestselling authors.



Eva Seto

Eva Seto serves as Associate Director of Research Development for Social Science Matrix. Her education and many years of experience working in research institutes on the Berkeley campus provide Matrix with knowledge about the social-science landscape on campus, as well as the management skills to help successfully administer the programs, centers, and projects of Matrix. Eva earned her M.A. and B.A in Economics from UC Berkeley.



Chuck Kapelke

Chuck Kapelke serves as Communications Manager for Matrix. He has 15 years of experience as a communications professional. His writing has appeared in publications such as *Fortune*, *Boston Magazine*, *Continental Inflight*, and *Rolling Stone*, and he has written articles and produced videos for dozens of organizations, including the Great Place to Work Institute, Monitor 360, and Isaacson-Miller. He holds a BA in anthropology from Harvard College.

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