



UC BERKELEY  
SOCIAL SCIENCE  
**MATRIX**



# **MATRIX@SIX**

Social Science for Berkeley and Beyond

[matrix.berkeley.edu](http://matrix.berkeley.edu)



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## Letter From the Director: Matrix@Six

Since our founding in 2013, Social Science Matrix has played a unique role on the UC Berkeley campus. Unlike most research centers, Matrix does not have a single topical focus. Rather, we help researchers from different academic fields come together and collaborate around issues that demand multi-disciplinary approaches, challenges like climate change, human rights, racial inequality, and the social impacts of emerging technologies.

We serve as an incubator and accelerator for early-stage research—a valuable but often neglected role on university campuses. Over the past six years, we have convened 67 research teams, groups of scholars from diverse disciplines and academic ranks whose collaborations have addressed emerging social science questions. These teams have gone on to produce an array of papers, conferences, and large-scale initiatives that have realized important real-world impacts.

Matrix research teams have, for instance, laid the groundwork for campus initiatives on immigration and adolescent health; they have developed an implementation framework for the United Nations' Human Rights to Water and Sanitation; and they led to The Berkeley Interdisciplinary Migration Initiative. Our approach to incubation has also been mindful of advancing graduate-student research, which represents the future of the field. In addition to sponsoring research teams led by graduate students, Matrix has hosted three cohorts of Dissertations Fellows, doctoral students who receive stipends, research support, and office space.

Matrix also serves as an active center for the social science community within and beyond Berkeley. From our headquarters at the top of Barrows Hall, we have hosted hundreds of conferences, workshops, symposia, book discussions, and distinguished lectures by prominent scholars. In addition to supporting a network of 25 affiliated centers across campus, Matrix has forged relationships with external institutions. Last year, we initiated a bilateral grant program that enables collaboration between scholars from UC Berkeley and Sciences Po in Paris; this year, we have launched an exchange with Freie Universität, Berlin, which provides Erasmus+ mobility funding for faculty, graduate students, and staff.

As a key part of our mission, we have pursued our own rigorous research to better understand how a public institution like UC Berkeley can best support the social sciences of tomorrow. We crafted our mission on the basis of our own independent research. To define a shared vision that could guide both our long-term ambitions and day-to-day operations, we spent four years in the Matrix Director's Seminar studying the idea of "interdisciplinarity" and the institutional forms it has taken, while also studying comparable social science institutes across the nation. We have also developed the Matrix Research Network, an unprecedented visualization of diverse connections among social scientists across the campus that identifies potential areas for cross-disciplinary collaboration.

This report provides an overview of the activities Matrix has carried out between 2013–2019. We are proud of everything we have accomplished and look forward to a productive future. Indeed, as the world's challenges grow more complex, the role of Matrix—as a convener of dialogue and a hub for innovative research—will become more vital than ever before.

Sincerely,

A handwritten signature in black ink that reads "William F. Hanks". The signature is fluid and cursive, with the first name "William" and last name "Hanks" clearly legible.

**William F. Hanks**, Faculty Director, Social Science Matrix



## Matrix's Mission

Social Science Matrix is UC Berkeley's flagship institute for social science research. Our purpose is captured in our name: we provide an organizational framework—a “matrix”—that supports cross-disciplinary projects pursued by more than 500 social scientists across the Berkeley campus research landscape and beyond. With Matrix as a catalyst, UC Berkeley social scientists have unique potential to generate effective solutions to global challenges like mobility, behavior change, social resilience, and governance.

### Matrix is a “lean” start-up incubator

Matrix is designed to foment persistent 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 topics and trends in contemporary social science. We foster collaboration and project development by providing program coordination for seminars and events around questions that demand diverse perspectives and methods. We accelerate research by offering administrative support for grant applicants 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's Origins

Social Science Matrix traces its origins back to 2012, when Carla Hesse, Dean of the Social Sciences Division, recognized the need for new research infrastructures to support emerging scholarship. She envisioned two complementary entities. The first would be a center dedicated to data-intensive methods of analysis; this later became D-Lab. The second would be a research institute devoted to the advancement of pluridisciplinary inquiry; this would become the Institute for Integrative Social Science (IISS), subsequently renamed Social Science Matrix.

In January 2013, Professor William F. Hanks agreed to serve as the founding director. With his dual doctorate in linguistics and anthropology, Hanks stood out as a pioneering scholar capable of leading the fledgling, cross-disciplinary venture. To ensure the institute's responsiveness to the UC Berkeley social science community, Hanks consulted with faculty across the division, asking how the new institute might positively impact and help further their research. In the process, Hanks learned that social scientists at Berkeley faced significant obstacles in administering grants and research teams, and making their work accessible to colleagues in related disciplines; he also discovered that faculty wanted to better understand the changing frontiers of social science research both nationally and globally. These conversations helped coalesce Hanks's vision for the new institute. Matrix would play a vital community-building function, not only by facilitating connections between advanced researchers working on similar issues from different disciplinary perspectives, but also by making their research and its position within the larger UC Berkeley research landscape comprehensible. Matrix could also advance the division by developing collaborations with leading universities around the world. For research teams and affiliated centers, Matrix would provide administrative support, freeing faculty and advanced graduate students to concentrate on their research. To move ahead, Hanks convened a panel of scholars from each of the twelve departments of the Social Sciences Division. Collectively they discussed pathways forward, inaugurating what would become the Director's Seminar. And to concretize the social science research landscape, Hanks devised the Matrix Research Network, an unprecedented data visualization of collaborations across the division.

From the start, Matrix was conceived as an incubator for early-stage research, cross-disciplinary projects that would not ordinarily receive grant support because they do not fit into existing funding priorities or research paradigms. Among Matrix's first initiatives was the Research Team program (formerly called "Matrix Seminars"), which provides seed funding and meeting space to groups of scholars from different fields of study who jointly explore emerging questions in the social sciences. Rather than limiting the scope of interdisciplinarity to the convergence of two or three

disciplines, Matrix Research Teams draw on theories and methodologies from across the social sciences. To launch the program, the first year's teams were invited to participate, but in subsequent years research teams have been selected from a peer-reviewed application process. After the first year, to ensure Matrix supported risk-taking work, Hanks instituted "prospecting teams," semester-long projects that nurture research at the earliest stages.

Hanks and Hesse also envisioned Matrix as a research accelerator. Deviating from the compliance orientation and single-topic focus that defines most research units, Matrix would collaborate with the full social science community, assisting researchers at every stage of grant management by removing administrative roadblocks. Once scholars organize around a particular research agenda, Matrix staff consult with faculty to design proposals, find funding, manage the grant, and produce appropriate deliverables. As affiliated centers or stand-alone groups, researchers organize their events at Matrix headquarters, testing out different organizational structures to reach targeted local, national, and international intellectual communities.

Within Matrix's first year, plans were made to remodel the top floor of Barrows Hall into a contemporary research center that could accommodate evolving research collaborations and be easily reconfigured to meet the needs of various research groups. Designed to serve as a hub for active scholarly discourse, Matrix's lecture hall and seminar room are scaled for more intimate intellectual exchanges; the center's modular workspaces make physically manifest its adaptability and responsiveness to various forms of assembly. The leaders of Matrix also wanted its architecture to visualize its mission. Indeed, Matrix's headquarters, opened in January 2015, signal the aspirations of social science research to achieve real-world impacts. The windows that perforate the façade provide panoramic views of the campus set against the horizons of the Bay Area. This perspective serves as a constant reminder of Matrix's motto: *"Social Science for Berkeley and Beyond."*



# Researching Social Science

Social Science Matrix conducts its own research in order to better understand the evolving frontiers of social science at Berkeley and beyond. True to our commitment to social science that is both self-reflexive and empirical, we use social science to understand the social science landscape at Berkeley. Our continuous and rigorous study of interdisciplinary social science inquiry informs everything we do.

## Matrix Research Network Graph

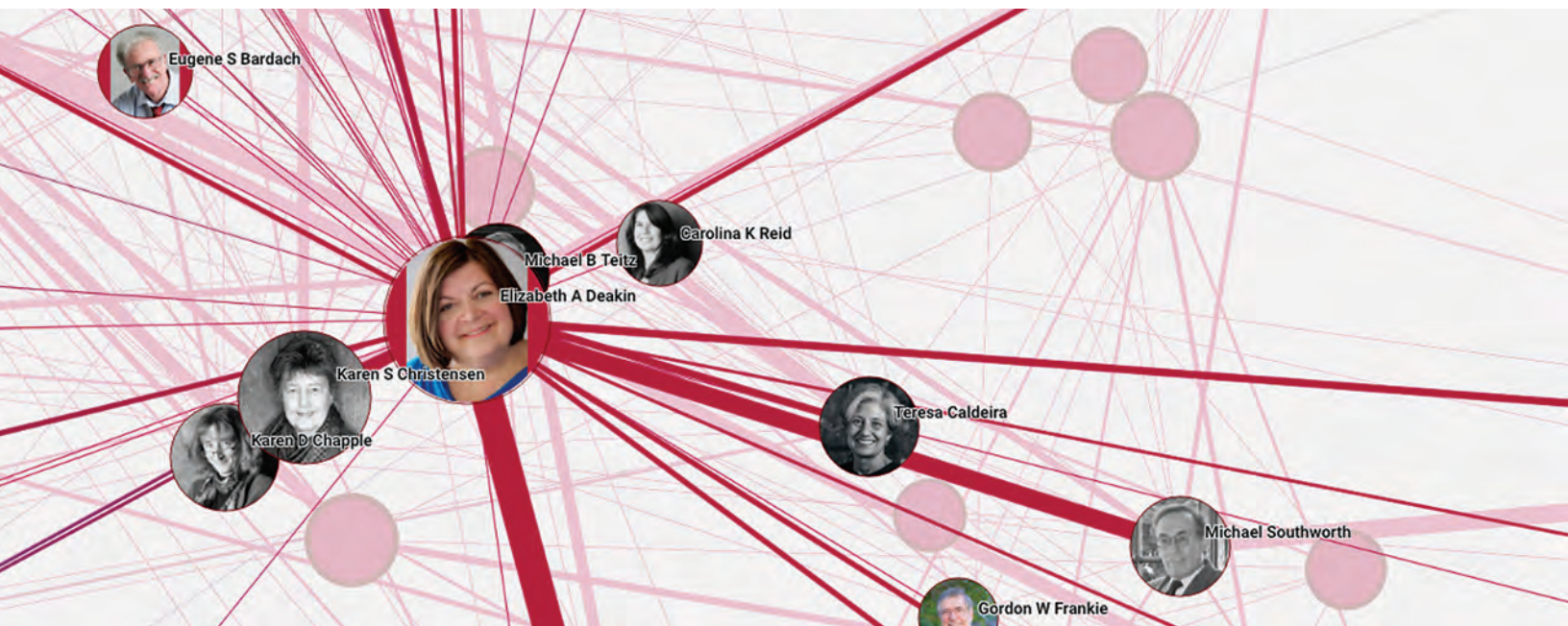
Encompassing over 550 social science faculty and researchers on the campus, working in a myriad of topical, methodological, and theoretical specializations, UC Berkeley has extraordinary intellectual resources. Within the Division of Social Sciences alone, there are 278 faculty and some 900 graduate students. Outside the division, there are as many faculty distributed across the professional schools and other colleges. This combination of scale and dispersion represents both a vast horizon of potential and a challenge. The challenge lies in the opacity of the research landscape: it is extremely difficult to know the full range of what is being done in Berkeley social sciences.

Conceptualized by William F. Hanks, the goal of the Matrix Research Network is to render this research landscape visible, not through the lens of departments, divisions, or research centers, but through networks of collaboration. The faculty in the network are linked to one another based on three different forms of collaboration: co-advising doctoral students, serving as co-principal investigators on grants, and co-authoring publications. At the level of individual social scientists on campus, we have rich profiles of 688 faculty based on publicly available data, including selected publications, social media

and YouTube channels, and other web-based content.

The Matrix Research Network showcases the phenomenal quality and scope of social science at Berkeley, while making it more readily available to the Berkeley community itself, and to all who wish to learn what is happening in research here. The Network is an interactive tool for research bearing on the Berkeley social science landscape, and serves as a gateway to the many communities of researchers whose work defines that landscape. For any faculty member looking for potential collaborators or moving into a new area of research, the Network is searchable by key terms. This tool provides an invaluable resource, especially for new faculty and external scholars wanting to locate colleagues with common interests and expand their scholarly networks.

Beyond these practical objectives lies the ambition that the Network might serve as a predictive instrument, a mechanism for reading the research landscape's propensity to shift. Our intuition at Matrix is that the Berkeley Social Sciences Division is brimming with collaborations, many of them across different social sciences or linked to STEM (science, technology, engineering and mathematics) and humanities fields in novel ways. Historically, some collaborations have grown into enduring cross-disciplinary fields, such as behavioral economics, cognitive neuroscience, psycholinguistics, and linguistic and biological anthropology. Other fields are either so new that they have not yet grown proper names or so ephemeral that they may never attain institutionalized recognition. To be able to read this dynamically changing research landscape would entail a radical shift in our perspective: we would be able to perceive the shifting boundary zones among disciplines, to measure trends within





and among them, and to identify areas of research on the threshold of growth. From the perspective of university administration, the potential of the Matrix Research Network to forecast disciplinary changes and render the university's vast, protean research landscape visible raises fascinating questions. Such a tool might fundamentally change the way the university manages recruitments, separations, and retirements.

### Matrix Director's Seminar

At William F. Hanks's initiative, the Director's Seminar helped Matrix develop into a research center that reflected the self-determination and self-awareness of Berkeley's social science community. Drawing on the expertise of faculty in each of the twelve departments of the Social Sciences Division, this seminar convened biweekly and ran for four years. Participants in the seminar served as the director's think tank and helped inform Hanks's vision for Matrix. The seminar began by examining the historical conceptualization of interdisciplinarity in post-World War II America and the institutional forms it has taken in infrastructure-heavy social science institutes. The seminar then proceeded to assess the present, grappling with both the changing facets of cross-disciplinary inquiry today and the ways in which entrenched funding models constrain and dampen new research. Asked to envisage an alternative, transdisciplinary future, seminar participants considered how Matrix could usher in a new framework with programs that would draw on the unique strengths of the UC Berkeley social science community. We at Matrix are deeply grateful to our thought partners from this program, without whom we would not be where we are.

## Director's Seminar Participants, 2013–2018\*

**Patricia Baquedano-Lopez**  
Associate Professor,  
School of Education

**Mia Bruch**  
Associate Director,  
Social Science Matrix

**Cathryn Carson**  
Associate Professor, History

**Catherine Crump**  
Assistant Clinical Professor  
of Law, Berkeley Law

**Whitney Davis**  
Professor, History of Art

**Paul Duguid**  
Adjunct Professor,  
Information

**Marion Fourcade**  
Professor, Sociology

**Daniel Fischer**  
Associate Professor,  
Anthropology

**Nils Gilman**  
Executive Director,  
Social Science Matrix

**William F. Hanks**  
Professor, Anthropology  
and Linguistics

**Carla Hesse**  
Professor, History and Social  
Sciences Division Dean

**Sharon Inkelas**  
Professor, Linguistics

**Jennifer Johnson-Hanks**  
Associate Professor,  
Demography and Sociology

**Shachar Kariv**  
Professor, Economics

**Tom Laqueur**  
Professor, History

**Tania Lambrozo**  
Professor, Psychology

**Beatrice Manz**  
Professor, Ethnic Studies

**Justin McCrary**  
Professor, Law

**Scott McDonald**  
Adjunct Professor of  
Marketing, Columbia  
Business School

**John McKee**  
Associate Dean, College  
Relations, Letters & Sciences

**Beth Piatote**  
Associate Professor,  
Ethnic Studies

**Terry Regier**  
Professor, Linguistics

**Istvan Rev**  
Visiting Senior Fellow  
2016-2017; Professor,  
History, Central European  
University

**Nathan Sayre**  
Professor, Geography

**Eva Seto**  
Associate Director,  
Social Science Matrix

**Lynsay Skiba**  
Associate Director,  
Social Science Matrix

**Laura Sterponi**  
Associate Professor  
of Language, Literacy,  
and Culture

**Michael Watts**  
Professor, Geography

**Steven Weber**  
Professor, School of  
Information

*\*Titles here denote ranks and affiliations during tenure as member of the Director's Seminar*

# Matrix by the Numbers

67

MATRIX RESEARCH TEAMS SPONSORED (2013-2019)

700+

FACULTY AND GRADUATE STUDENTS IN MATRIX RESEARCH TEAMS

300+

PUBLIC EVENTS AT MATRIX SINCE 2015

\$2 M

OVERHEAD RETURNED TO THE UNIVERSITY ANNUALLY FROM GRANTS ADMINISTRATION

25

MATRIX AFFILIATED RESEARCH CENTERS

158

GRANT PROPOSALS PROCESSED THROUGH MATRIX BETWEEN 2015-2018

13

DOCTORAL STUDENTS WHO HAVE SERVED AS MATRIX DISSERTATION FELLOWS

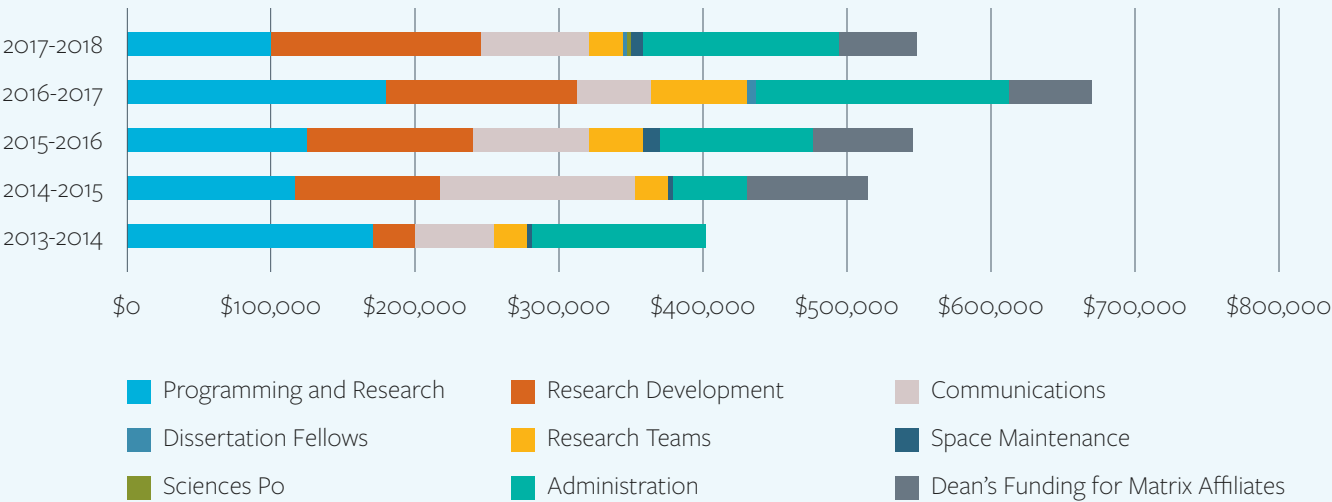
668

FACULTY PROFILED IN THE MATRIX RESEARCH NETWORK, A DATA VISUALIZATION HIGHLIGHTING COLLABORATION ON CAMPUS

\$551 K

OPERATING EXPENSES OF SOCIAL SCIENCE MATRIX (FY 2017-2018)

## Matrix’s Expenses



# Interrogating Research

Ideas attain value when they reach a community and achieve a social impact. Because the research and writing process can be solitary, active intellectual exchange enriches research and ensures it is both responsive and responsible to a broader intellectual community. Even the most senior scholars benefit from the opportunity to workshop their in-progress articles, book chapters, and essays. As part of Matrix's mission to catalyze impactful research, we provide a forum for advanced researchers to receive substantive feedback from both established peers and emerging scholars. By engaging deeply with each other's thinking, we build a supportive community of thinkers who are invested in how pluridisciplinary perspectives evolve and elevate scholarly discourse.

## Matrix Pro Seminars

Since 2014, Matrix has been organizing “pro seminars” for high-level visiting scholars to have deep-dive discussions of their in-progress work with UC Berkeley faculty. For these pro seminars, Matrix invites faculty interlocutors from across campus whose research relates to the topic of the pre-circulated paper.

## Matrix Monograph Series with UC Press

Social Science Matrix launched a joint venture with the University of California Press (UC Press) in April 2017. Still in development, this series seeks to bring scholarly work

on critical topics to a wider audience in a timely manner. In keeping with Matrix's goal of supporting innovative and collaborative social science research, the series aims to transcend disciplinary constraints to pursue multidisciplinary, self-aware, and data-driven research. By distributing the books through UC Press Luminos Open Access, the initiative seeks to move innovative research beyond the boundaries that have typically constrained scholarly publishing. With Matrix staff serving as part of the editorial team, scholars also receive sustained critical engagement with their writing during the editorial process.



## Matrix Pro Seminars 2014-2019

### March 5, 2019: “The War on Voting Rights”

John Shattuck, Professor of Practice, Fletcher School of Law and Diplomacy, Tufts University; President Emeritus, Central European University; and Senior Fellow, Carr Center for Human Rights Policy, Harvard Kennedy School

### November 16, 2018: “Even a Moon Shot Needs a Flight Plan: Genetics and Ethics in the Obama Administration”

Alondra Nelson, Professor of Sociology at Columbia and President of the Social Science Research Council (SSRC)

### September 6, 2018: “Populists in Power: Populism and Representation in Illiberal Democracies”

Zsolt Enyedi, Pro-Rector for Hungarian Affairs at Central European University

### February 1, 2018: “Populism, Nationalism, and Brexit”

Craig Calhoun, President of the Berggruen Institute and Centennial Professor at the London School of Economics

### April 9, 2018: “Trump’s First Year: How Resilient is Liberal Democracy in the US?”

John Shattuck, Professor of Practice, Fletcher School of Law and Diplomacy, Tufts University; President Emeritus, Central European University; and Senior Fellow, Carr Center for Human Rights Policy, Harvard Kennedy School

### May 3, 2017: “Harnessing the Hope of Social Science”

Helga Nowotny, former President of the European Research Council; Professor emerita of Social Studies of Science, ETH Zurich

### September 17, 2015: “Framing a New Science Policy”

Kenneth Prewitt, Carnegie Professor of Public Affairs at Columbia University, former President of the Social Science Research Council (SSRC), and former Director of the United States Census Bureau

### May 7, 2014: “The History and Future of CASBS”

Margaret Levi, Director of the Center for Advanced Study in the Behavioral Sciences (CASBS)

# Incubating Research

Breakthrough research does not emerge fully formed; it is the product of years of trial and error. This is especially true for research that stretches or challenges boundaries between disciplines and that seeks to address issues of major global significance. In nurturing emerging scholarship, Matrix embraces the failure of certain lines of inquiry as means of finding successful solutions. Underlying this commitment is the conviction that risk-taking research enlivens academic discourse with an entrepreneurial spirit and that pluridisciplinary exploration revitalizes scholarship by reasserting the interconnectedness of knowledge forms that have been divided by disciplinary strictures. At the heart of Matrix's mission is the hope that paradigm-changing social science research can not only transcend but also alter the established 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.

## Matrix Research Teams

The Matrix Research Team program encourages social-science researchers—including graduate students and faculty—to take risks and explore new, cross-disciplinary approaches to the major challenges of the 21st century. Matrix sponsors two types of research teams: Project Teams are two-semester collaborations meant to spur a tangible outcome, such as a conference or co-publication; these teams receive a \$5000 stipend and typically have between 4-10 faculty members and graduate students (and in some cases undergrads) from multiple disciplines. Prospecting Teams receive a \$1500 stipend, meet for a single semester, and are primarily intended for researchers to define and explore an emerging research concept. Research teams of both kinds are selected each year

## Matrix Research Teams 2013-2019

*Matrix is particularly proud of its sponsorship of graduate student-led research. Research teams led by graduate students are indicated with \**

### 2018-2019

#### PROSPECTING TEAMS

- » Berkeley Black Geographies\*
- » Causal Conversations
- » Child Marriage and Youth Empowerment
- » Comparing the Politics of Computer Vision in the United States, China, and Europe\*
- » DNA of Media Accounts on Genetic Ancestry Testing\*
- » Gender and Technology\*
- » I Regret to Inform You That Your Private Information Has Been Compromised\*
- » Masculinity and Capitalism
- » Native/Immigrant/Refugee
- » Queer Ecologies\*

#### PROJECT TEAMS

- » Berkeley Infrastructure Initiative: Collaborative, Interdisciplinary Policy Research in the Public Interest
- » Climate Economics
- » Community Conversations on Sexual Violence and Harassment: Narratives of Activism, Inclusion, Confidentiality, Accountability, and Healing
- » Investigating the Socio-ecological Impacts of Cannabis Production
- » Seeing Like a Valley: Locating the Moral Visions of Silicon Valley Culture

### 2017-2018

#### PROSPECTING TEAMS

- » Expert Language, Native Language: Toward a Framework for Translation in Clinical (Mis)communication\*
- » Origin of States\*

- » Working, Learning, and Earning in the Age of Intelligent Machines: Considering the Implications of Computation, Intensive Automation, Big Data, and Platforms

#### PROJECT TEAMS

- » Continent Divided: Building Bridges, Finding Truth
- » Demystifying the Black Box of Computational Text Analysis Workflows: From Static Textual Archives to Visualizations and Reports of U.S. Congressional Activity\*
- » How Courts Use Open-Source Methods to Gather Evidence of War Crimes and Pursue Prosecution
- » Migration, Racialization, and Gender: Comparing Filipino Migration to France and the United States

### 2016-2017

#### PROSPECTING TEAMS

- » Assembling Critical Theory and Practices in Design and the Social Sciences\*
- » Migration, Racialization, and Gender
- » Political Economy and Society Curriculum
- » Rethinking Identity and Linguistic Diversity in an Age of Immigration\*

#### PROJECT TEAMS

- » Coordinated Learning around Geospatial Information, Analysis, and Technologies
- » Examining the Global Reach of Algorithms
- » The Future of the Humanities and Humanistic Social Sciences PhD at Berkeley
- » How Do New Data-Driven Econometric Impact Estimates Challenge Numerical Model Driven Climate Policy Recommendations?

through an application process that includes review by a panel of faculty from throughout the division. In addition to funding, Matrix teams are granted access to our offices, meet in our space, and receive assistance with administering funding, research development, and communications.

*\*A complete list of Matrix Research Teams, including proposal abstracts as well as names and departmental affiliations of team members, is provided in the appendix.*

## Matrix Dissertation Fellows

The Matrix Dissertation Fellows Program supports students who are in the critical stage of writing their dissertations and drafting job talks and applications. Students receive stipends, access to space, and academic support. Fellows are nominated by the chairs of the 12 departments in the Division of Social Sciences.

## Matrix Dissertation Fellows 2016-2019

### 2018-2019

**Brittany Birberick**

Anthropology

**Ingrid Haegele**

Economics

**Tenzin Mingyur Paldron**

Rhetoric, Designated Emphasis  
in Gender & Women's Studies

**Julia Nee**

Linguistics

### 2017-2018

**Gabriel Mendes Borges**

Demography

**Ann Elena**

**Stinchfield Danis**

Anthropology

**Jeff Vance Martin**

Geography

**Derek Kane O'Leary**

History

### 2016-2017

**Robert Connell**

African American Studies

**Joshua Kalla**

Political Science

**Zachary Levenson**

Sociology

**Fuifuilupe Niumeitolu**

Ethnic Studies

**Jennifer Smith**

Comparative Ethnic Studies

» Network on Adolescent Well-being and Development (NAWD)

» Resilience and Transcommunity Knowledge-Sharing in Agroecosystems at the Base of the Himalaya

» Questioning the Evidence on the Integration of Immigrants in Europe

### 2015-2016

#### PROSPECTING TEAMS

» Deploying Interdisciplinary Data Science to Understand the Global Impact of Climate Change

» Global Studies: A New Interdisciplinary Major at UC Berkeley

» Human Rights and the University

» The Impact of "Human Rights" in a Global Age

» Social Death: Race, Risk, and Representation\*

» Superintelligence and the Social Sciences\*

» Work and Politics in the Digital Era

#### PROJECT TEAMS

» Climate Change Economics

» Developing Tools and Collaborations in Prosopographical and Historical Social Network Research Environments

» Metaphor, Across Data Sets and Methodologies

» A Polarizing Europe: A Cross-Disciplinary Investigation into Post-Cold War Extremism

» Race, Data, and Inequality

» Re-representing the Earth Through Landscape, Infrastructure, and Data\*

### 2014-2015

#### PROSPECTING TEAMS

» Algorithms as Computation and Culture

» Crime, Community Support, and Policing

» Envisioning Radical Experiments in Clinical Medicine

» Electoral Violence in Developing Countries

» The Establishment of a Designated Emphasis in European Studies

» Neuroeconomics Interventions to Reduce Asset-Price Bubbles Associated with Animal Spirits

» Prosopography and Historical Social Networks

» Risk Management and Resiliency in Latin American Cities

#### PROJECT TEAMS

» The Human Rights to Water and Sanitation

» The Politics of Biology and Race in the Twenty-First Century

» Technology for Measurement (T4M)

### 2013-2014

#### RESEARCH TEAMS

» Behavior Measurement and Change

» Data, Science, and Inquiry

» Emergence and Aggregation

» Framing Rights and Immigration

» Imperial Declines

» The Neuroscience of Decision-Making

» Socionatures

» Synching Sounds: A Phonological Phenomenon

» Tupí-Guaraní Language and History Group

# Research Team Case Studies

## Supporting Climate Change Research

In 2015, Matrix began providing seed funding, space, and administrative support to help three researchers—David Anthoff, from the Energy and Resources Group, Max Auffhammer, from the Department of Agricultural and Resource Economics & International Area Studies, and Solomon Hsiang, from the Goldman School of Public Policy—collaborate on a Matrix research team focused on the economics of climate change.

We supported a summer seminar called “Data Science and Climate Change,” in which researchers and students from diverse disciplines met to determine how modern data science techniques could be applied to quantify the effects of climate change on various dimensions of society, from global agricultural productivity to the prevalence of vector-borne diseases and violent conflicts in low-income countries. This program evolved into the Climate Change Economics Roundtable, a year-long initiative in which students and faculty investigated the impacts of climate change on labor supply, mortality, later-life outcomes, hospital admissions, agricultural yields, migration, and other variables.

Later, we sponsored these researchers’ efforts to address the question of how empirical, data-driven econometric estimates can be used more effectively to inform policymaking. In January 2018, we hosted the Advanced Workshop in Climate Economics, with support from SAGE Publications and Sara Miller McCune. This two-day conference brought together leading climate economists from around the world for two days of research presentations and dialogue around methodology, modeling, and future collaborations.

The members of this Matrix team have already published research and made significant progress in estimating impacts, designing policy instruments, and shaping international agreements on climate policy. At the same time, they have built a community of scholars from UC Berkeley and other institutions who are bridging expertise from a wide range of fields. “The research we do here is not ‘ivory tower’ research,” said Anthoff. “It is being disseminated and picked up by real-world policymakers.”

## Building a Cross-Disciplinary Network of Researchers on Adolescent Health

As an example of how Matrix serves as an incubator for cross-disciplinary research, we sponsored the Network on Adolescent Well-being and Development (NAWD), which drew together researchers from a wide array of domains to explore innovative approaches for research into key issues related to adolescent health, including technology and adolescent well-being, violence prevention, and reproductive health.

Building upon their work at Matrix, the group’s members launched the Youth and Inequalities Initiative, which established a series of Research Practice Policy Partnerships (RP3s) that have enabled experts from Berkeley to work alongside school districts, teachers, community-based organizations, government agencies, policymakers, and youth. This initiative was one of six collaborative projects to receive funding from the UC Berkeley Vice Chancellor for Research in 2016.



*We have continued to meet and have grown into a Vice Chancellor for Research-funded initiative, and we are building on our network to connect with the campus strategic plan. A recent conference across units, a new brief on early child marriage and girls empowerment, and multiple publications were furthered by our group. Social Science Matrix provided the structure and process for us to solidify and grow our network of faculty in very meaningful ways. It has also provided a model for us: we have continued to run incubation spin-off groups that grew from our initial group. Matrix is a critical mechanism for the Berkeley social science community and key to our efforts to collaborate across units in ways that are highly relevant to the current draft strategic plan and research enterprise more broadly.”*

—EMILY OZER, Professor in the UC Berkeley School of Public Health



# Accelerating Research

Protracted grant applications and complicated funding administration often hinder or delay the implementation of breakthrough research. Matrix accelerates innovative social science research by offering development and administrative support to researchers who need help managing grants and contracts. Although UC Berkeley has a centralized grant administration office, Matrix provides additional services that are customized for the social science community. Having advanced degrees and social science research backgrounds, Matrix's staff approaches each project with a research mindset.

The Matrix research development team helps with every aspect of the grant process, including identifying, securing, and managing grants and other funding. The goal of Matrix services is to both reduce the burdens of managing grants and help PI's maintain focus on their research activities. Matrix manages approximately \$10 million in funding annually for UC Berkeley's social-science researchers. Our administration of grants generates roughly \$2 million in overhead per year that is returned to the university.

## IMPACT CHART: Research Teams Incubated and Accelerated with Matrix Support

Prospecting Team	Project Team	Outcome
Migration, Racialization, and Gender (2016-2017)	Migration, Racialization, and Gender: Comparing Filipino Migration to France and the United States (2017-2018)	Convened scholars from the U.S. and France; led to a new international symposium on Philippine diasporas
Algorithms as Computation and Culture (2014-2015)	Examining the Global Reach of Algorithms (2016-2017)	Organized a colloquium series and conference
	Network on Adolescent Well-being and Development (NAWD) (2016-2017)	Led to Innovation4Youth (i4y), a community-based research center, as well as a large-scale research program funded by Vice Chancellor for Research (VCR)
Deploying Interdisciplinary Data Science to Understand the Global Impact of Climate Change (2015-2016)	Climate Change Economics (2015-2016) How Do New Data-Driven Econometric Impact Estimates Challenge Numerical Model Driven Climate Policy Recommendations? (2016-2017) Climate Economics (2018-2019)	Numerous publications and policy impacts; two international workshops funded by SAGE (Spring 2018; Fall 2019)
A Polarizing Europe: A Cross-Disciplinary Investigation into Post-Cold War Extremism (2015-2016)	Questioning the Evidence on the Integration of Immigrants in Europe (2016-2017) Continent Divided: Building Bridges, Finding Truth (2017-2018)	Organized a conference and invited many distinguished speakers to campus for public events
Prosopography and Historical Social Networks (2014-2015)	Developing Tools and Collaborations in Prosopographical and Historical Social Network Research Environments (2015-2016)	Led to the creation of a customizable toolkit to help understand relationships among groups of people, past, and present
	The Human Rights to Water and Sanitation (2014-2015)	Forged partnership with UN Special Rapporteurs; drafted first-ever implementation framework and mapping project
	Technology for Measurement (T4M) (2014-2015)	Organizers launched new course in the UC Berkeley School of Information
	Framing Rights and Immigration (2013-2014)	Led to creation of Berkeley Interdisciplinary Migration Initiative (BIMI), a research network funded by the VCR



## Matrix Affiliated Centers

Social Science Matrix partners with a range of interdisciplinary research centers operating across the UC Berkeley campus. We provide our affiliated centers with access to a robust platform of support, and offer administrative services, research development, communications, and other resources, depending on each center's needs. As of May 2019, our current roster of affiliated centers includes:

**Berkeley APEC Study Center (BASC):** This center conducts multidisciplinary research on political, economic, and business trends in the Asia-Pacific, especially related to the Asia-Pacific Economic Cooperation (APEC) forum. BASC works in partnership with Berkeley's Institute of East Asian Studies.

**Berkeley Center for Economics and Politics (BCEP):** This center brings together scholars from the field of political economy, with a goal to advance research related to governance, political institutions, development, conflict, and politics in weakly institutionalized societies.

**Berkeley Center for the Study of Religion (BCSR):** BCSR advances creative and critical scholarship on religion; faculty research, public programming, and graduate training drive new approaches to the study of religion and its intellectual and material contexts.

**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.

**Cannabis Research Center (CRC):** This new center brings together scholars from law, environmental science, political science, and other domains to explore the environmental and social impacts of the legalization and regulation of cannabis production and consumption in California and other regions.

**Center for Catastrophic Risk Management (CCRM):** This center is dedicated to advancing interdisciplinary solutions to avoid and mitigate the impacts of catastrophic events. Among the CCRM's signature initiatives is the Resilient and Sustainable Infrastructure Networks (RESIN) project, which develops new approaches to improve resilience and sustainability in critical infrastructure systems.

**Center for Democracy, Toleration, and Religion (CDTR):** Founded in 2006 at Columbia University and led by Professor Karen Barkey, CDTR conducts research and training on the interfaces of and tensions between religion, toleration, and democracy around the world.

**Center for Effective Global Action (CEGA):** The Center for Effective Global Action is a hub for research on global development and brings a scientific lens to this important field, integrating empirical economic analysis with expertise in agriculture, public health, education, engineering, and the environment.

**Center for Long-Term Cybersecurity (CLTC):**

This center supports dialogue among industry, academia, policy, and practitioners, with an aim to foster research programs, technologies, and recommendations based around a future-oriented conceptualization of cybersecurity.

**Center for Science, Technology, Medicine, & Society (CSTMS):**

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 (EMMA):**

This center investigates how emerging technologies such as financial data mining affect people's conduct in their everyday lives, as well as how they are shaping wealth inequality and the nature of moral hierarchies in society.

**Center on the Economics and Demography of Aging (CEDA):**

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, including fiscal accounting.

**Center for the Neural Mind & Society (CNMS):**

Led by renowned scholar and writer George Lakoff, this center has a mission to advance research at the intersection of neuroscience, cognitive linguistics, neural computation, and experimental embodied cognition.

**Center on the Politics of Development (CPD):** The CPD promotes the study of the politics of developing societies by advancing collaboration among faculty and graduate students at UC Berkeley and connecting their research to central policy dilemmas.

**Citrin Center for Public Opinion Research:** The Citrin Center engages in nonpartisan, multidisciplinary research across a wide range of topics, and seeks to shed light on some of the most important long-term issues facing California and the nation. The Berkeley IGS Poll is housed within the Citrin Center.

**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 (CDAR):** Founded through a partnership with State Street Global Exchange, CDAR is focused on applying advanced data-science techniques to manage and mitigate economic and financial risk.

**Experimental Social Science Laboratory (XLab):**

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.

**Global Metropolitan Studies (GMS):** Global Metropolitan Studies addresses major transformations in cities around the world, and aims to change how we study cities. The center is a community of scholars across disciplines at Berkeley who investigate the challenges and politics of the new urban century.

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

**Institute of European Studies (IES):** Through interdisciplinary public events, research programs, grant opportunities, and community outreach, IES seeks to enrich America's understanding of Europe—its people, developments, and challenges—at Berkeley and throughout the state of California.

**Interdisciplinary Center for Healthy Workplaces:** This center develops research based on a model and framework that investigate various aspects of the relationships between work environment factors, need satisfaction, and health and well-being.

**Mobile Experimental Laboratory (XMobile):** 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.

**Peder Sather Center for Advanced Study:** The primary mission of the Peder Sather Center for Advanced Study is to strengthen and foster research collaborations between faculty at UC Berkeley and a consortium of Norwegian academic institutions. The Center's funding enables UC Berkeley faculty to conduct exploratory and cutting-edge research in tandem with leading researchers from the Norwegian higher education institutions in collaboration with The Norwegian Research Council.

**Social Science Data Laboratory (D-Lab):** Since our founding, Matrix was designed to serve as a partner institution to D-Lab, which provides services, support, and a venue for teaching students and faculty how to leverage the latest tools for research design and experimentation in data-intensive social science. D-Lab provides cross-disciplinary resources for in-depth consulting and advising, access to staff support, and training and provisioning for software and other infrastructure needs. Networking with other Berkeley centers and facilities and with the university's departments and schools, D-Lab offers services to researchers across the disciplines and underwrites the breadth of excellence of Berkeley's graduate programs and faculty research. D-Lab builds networks through which Berkeley researchers can connect with users of social science data in the off-campus world. Matrix has partnered directly with D-Lab on a variety of projects, including the Matrix Research Network.

# Disseminating Research

Interaction between scholars and society at large enriches social science inquiry. As part of Matrix's mission to serve as a hub for cross-disciplinary inquiry and social science research, we provide a platform for scholars to organize both campus- and public-facing events and to disseminate and broadcast their research findings. Since our founding, Matrix has hosted hundreds of scholarly events, including lectures, conferences, symposia, panel discussions, and book talks. Our annual Matrix Open House, an event that honors the entire UC Berkeley social science community, also highlights the recent publications of faculty in the Social Sciences Division. As campus citizens and colleagues, we make our space available to the campus community for no fee beyond cost. Matrix is committed to providing a place for researchers to build and expand their community.

*A list of past Matrix sponsored and hosted events can be found in the appendix.*

## Matrix Distinguished Lectures

Each year, Matrix invites a pioneering social scientist to deliver a Matrix Distinguished Lecture. Open to the public, these lectures provide an opportunity to learn about particular topics from scholars who have attained international recognition as trailblazing intellectual figures.

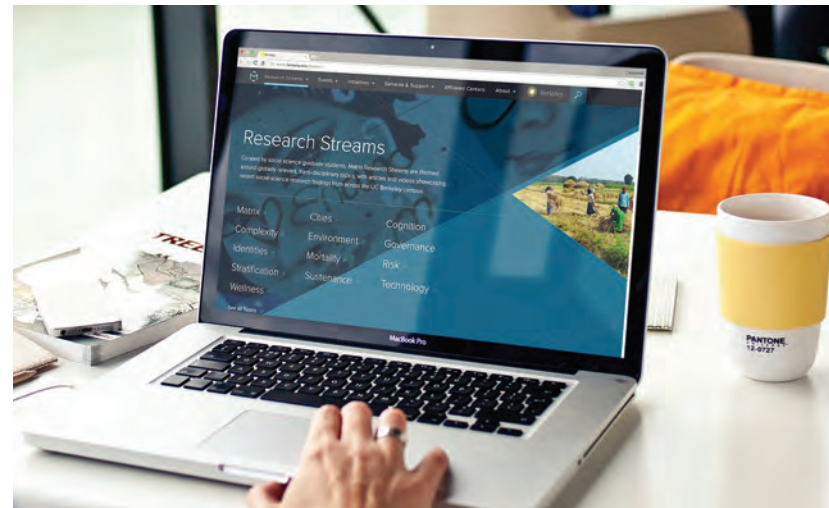
## Matrix Open House

The Matrix Open House is an annual gathering that is open to the UC Berkeley social science community. It provides an opportunity for faculty and graduate students to gather

in our space, reflect on the past year, and learn about Social Science Matrix Research Teams and other programs. In 2018, we merged the Matrix Open House with Social Sciences Fest, an annual celebration of the research, teaching, and service conducted by social science faculty.

## Matrix Website

Matrix's website communicates our investment in promoting and supporting the work of UC Berkeley's social scientists. Designed as an online research forum, the website showcases articles and videos about the work undertaken at Matrix and elsewhere on campus, including our current and upcoming events. Articles on the site are organized into broader transdisciplinary topics, such as climate and mobility. Beyond its specific content, the website was designed to express Matrix's mission. The Research Network Graph will also launch here.



## Matrix Distinguished Lectures 2015-2019

### March 4, 2019: “The Rise of Illiberal Governance: Comparing Viktor Orban and Donald Trump”

John Shattuck, Professor of Practice, Fletcher School of Law and Diplomacy, Tufts University; President Emeritus, Central European University; and Senior Fellow, Carr Center for Human Rights Policy, Harvard Kennedy School

### November 15, 2018: “The New Research Compact: Social Science Partnerships for the Common Good”

Alondra Nelson, President of Social Science Research Council, Professor of Sociology and former Inaugural Dean of the Social Sciences at Columbia University

### January 31, 2018: “Cosmopolitanism and Belonging”

Craig Calhoun, President of the Berggruen Institute and Centennial Professor at the London School of Economics

### May 2, 2017: “An Orderly Mess”

Helga Nowotny, Professor emerita of Science and Technology Studies, ETH Zurich; founding member, European Research Council

### January 29, 2015: “Economic, Social and Technological Forces Shaping Market Research, and the Applied Social Science”

Scott McDonald, CEO and President of the Advertising Research Foundation and Adjunct Professor of Marketing at Columbia Business School

# Integrating a Global Research Community

Because the world's most pressing challenges demand the creation of global research communities, Matrix has committed itself to fostering research exchanges between social scientists at UC Berkeley and other leading universities. Our efforts to build international partnerships with external institutions have grown significantly in the past two years. These initiatives advance our mission to increase collaborations between scholars working in different fields, and will help the next generation of social scientists come out of the gates with international and cross-disciplinary exposure.

## Matrix-Sciences Po Collaboration Grants

In 2017, Matrix launched a grant program with Sciences Po, a premier university based in Paris, France. Sciences Po and UC Berkeley are two of the world's leading centers of research in the social sciences; both are home to renowned experts in public health, urban development, security, environmental policy, and other pressing 21st-century issues. The purpose of the grants is to encourage collaboration between scholars from the two institutions, as Matrix-Sciences Po Collaboration Grants enable graduate students and faculty members to work together on a cross-institutional basis. Each proposal is evaluated by faculty review boards from the two partner institutions; proposals are selected on the basis of their potential to lead to ongoing partnerships; contribute to their home departments, schools, or programs; and create opportunities for graduate students to participate. To date, four teams of scholars have been selected to receive grants.



## Matrix-Sciences Po Collaborations 2018-2019

### The Hissène Habré Trial: A New Model for Prosecuting International Crimes in National Courts?

**ABSTRACT:** Accused of atrocities committed while in power in Chad from 1982 to 1990, Hissène Habré eluded prosecution for nearly two decades. After multiple attempts before different international fora, Habré's victims finally secured prosecution before a novel judicial mechanism born out of an agreement between Chad, Senegal, and the African Union: the Extraordinary African Chambers established with Senegalese judiciary in Dakar (EAC). The EAC was the first domestic court of its kind to apply local criminal procedure alongside international criminal law, operationalized by mostly local judicial actors. On May 30, 2016, Habré was convicted of various crimes against humanity and acts of torture. With the conviction preserved on appeal in April 2017, the trial's legacy and its impact on thousands of victims cannot be overestimated. This was the first time in history that a former head of state was prosecuted by another state for crimes against humanity, torture, and war crimes based on universal jurisdiction. This collaborative team examined the role of national courts in providing accountability for these international crimes. Their book is forthcoming, published by Oxford University Press.

**COLLABORATING FACULTY:** Eric Stover, Adjunct Professor in Law and Public Health and Faculty Director, Human Rights Center, UC Berkeley; Kim Thuy Seelinger, JD, Lecturer in Law and Director, Sexual Violence Program, Human Rights Center, UC Berkeley; Horatia Muir Watt, Professor of Law, Paris and Co-Director, Global Governance Studies Program, Sciences Po; Jeremy Perelman, Assistant Professor of Law, Sciences Po; Sharon Weill, PhD, Senior Lecturer and Associate Researcher, Sciences Po

### The Social Life of the Sediment Balance: A Social and Geomorphic Approach to the Transformation of River Systems and Deltas

**ABSTRACT:** Interdisciplinary scholarship on river systems and society is usually concerned with water flows, but rarely with sediment balance. Sediments, however, are essential component of river systems. Hydroelectric dams, canals, navigation, sand and gravel mining, and other human uses alter sediment fluxes, often with detrimental consequences on the river morphology and ecology as well as on coastal land, including the retreat of many river deltas of the world. *continues on page 18...*

## Matrix-Sciences Po Collaborations 2018-2019 (continued)

This project aims to investigate the nexuses of social and natural processes behind the modification of sediment balance in rivers.

**COLLABORATING FACULTY:** G Mathias Kondolf, Professor of Environmental Planning and Geography, UC Berkeley; Giacomo Parrinello, Assistant Professor of Environmental History, Centre for History, Sciences Po

### Diasporic Identities: Southeast Asian Incorporation Experiences in Europe and America—The Post-Refugee Generations

**ABSTRACT:** Over the last four decades since the initial mass resettlement of refugees from Vietnam, Laos, and Cambodia in 1975, principally in the US and France, the Southeast Asian communities in Europe and the US have registered a demographic shift with the emergence of diaspora-born generations with different experiences, access, mobility, ties to the ancestral homeland, and notions and claims to citizenship and belonging in multiple contexts. Despite the long history of migration to France, dating back to the colonial period, there is little scholarly attention paid to the Vietnamese, Cambodian, and Laotian communities in France. Despite the resurgent attention to immigration issues in Europe in recent years, the integration experiences of these earlier but relatively recent refugee

communities in Europe have not been studied. To develop critical insights that would be relevant to the current refugee situations in Europe, and the intensifying debates engendered by demographic and cultural shifts both in the US and in France, the researchers on this team began ethnographic research on post-refugee generations of Southeast Asians in France, with particular attention to the Sino-Vietnamese community.

**COLLABORATING FACULTY:** Khatharya Um, Associate Professor and Coordinator of Asian American and Asian Diaspora Studies in the Department of Ethnic Studies, and Faculty Academic Director for Study Abroad at UC Berkeley; Hélène Le Bail, Assistant Research Professor, CNRS-CERI (Centre de Recherches Internationales) Sciences Po, Paris

### Political Representation in India: The Berkeley-Sciences Po Indian Legislators Project

**ABSTRACT:** With a goal to understand the profiles of national and state legislators and the changing nature of political representation in India, this project brought together scholars from UC Berkeley and Sciences Po who have each developed unique research approaches to understanding Indian politics. This project integrated previous major data collection efforts by the Principal Investigators on the nature of political representation in India, in particular, on the sociological backgrounds and responsiveness to constituents of national and state legislators in India. The goal of the group was a more comprehensive understanding of the ways in which social background does, and does not, affect the manner by which Indian politicians engage with their constituents and serve as effective representatives.

**COLLABORATING FACULTY:** Jennifer Bussell, Gruber Assistant Professor in the Department of Political Science and the Goldman School of Public Policy, UC Berkeley; Thad Dunning, Robson Professor of Political Science at UC Berkeley and Director, Center on the Politics of Development, UC Berkeley; Christophe Jaffrelot, Senior Research Fellow at CERI, Sciences Po; Jusmeet Singh Sihra, Doctoral Student at CERI, Sciences Po



### Erasmus+ Mobility Grants/Freie Universitaet Berlin

Starting in 2019, Social Science Matrix has developed a new relationship with Freie Universität, Berlin (FUB), a premier research university in Berlin, Germany. Sponsored by the European Union's Erasmus+ program, the program supports collaborative research and training exchanges between the two universities. This mobility funding has been made available to UC Berkeley graduate students, faculty, and staff members.

### Scholars at Risk

Matrix has also been proud to support Scholars at Risk, a vitally important organization that enables UC Berkeley faculty to offer protection to colleagues who become entangled in difficult and potentially dangerous political situations. Scholars at Risk identifies scholars in need of help and works with North American and European universities in trying to find research and teaching opportunities for them.

# Appendix

## Matrix Research Teams 2013–2019

*Listed below are abstracts and lists of participants from past Matrix Research Teams, based upon team organizers' initial proposals. Note that all researchers are affiliated with UC Berkeley unless otherwise indicated.*

### 2018–2019

#### PROSPECTING TEAMS

##### Berkeley Black Geographies

Berkeley Black Geographies proposes an intervention into the colonial canon of academic disciplines. This prospecting group examined the ways that many disciplines utilize Black radical thought and geographic methods in order to mobilize rigorous and meaningful theory and praxis for interdisciplinary projects while countering the anti-Black and colonial histories that traditionally structure academic disciplines. The research proposed several principles: first, that Black geographies are always poetic, political-economic, and material; second, that Black geographies point to the planetary circulation of anti-Black violence; and third, that black geographies make possible a capacious form of liberationist praxis. The central findings of the Berkeley Black Geographies project will further academic discourse on Black lives and equitable spatial, social, and economic development.

**TEAM LEADS:** Kaily Heitz, Doctoral Student, Geography; Jane Henderson, Doctoral Student, Geography; Kerby Lynch, Doctoral Student, Geography **TEAM MEMBERS:** Ree Botts, Doctoral Student, African American Studies; Anna Brand, Professor, College of Environmental Design (CED); Sharad Chari, Professor, Geography; C.N.E. Corbin, Doctoral Student, Environmental Science, Policy, and Management; Sherine Ebadi, Doctoral Student, Geography; Gill Hart, Professor, Geography; Malika Imhotep, Doctoral Student, African American Studies; Jake Kosek, Professor, Geography; Jovan Lewis, Professor, Geography/African Diaspora Studies; Sandra Makusa, Doctoral Student, CED/Public Health; Michael J Myers II, Doctoral Student, African American Studies; Rachel Roberson, Doctoral Student, Education; Tonika Sealy-Thompson, Doctoral Student, Performance Studies; Luis Tenorio, Doctoral Student, Sociology; Yesenia Trevino, Doctoral Student, Ethnic Studies; William Walker, Undergraduate Student, CED

##### Causal Conversations

Massive increases in amounts of data, changes in its qualitative character (e.g., data collected in real-time), and the advent of increasingly computationally intensive analytic algorithms, have multiplied the possibilities for non-experimental (i.e.,

observational) research. Much of that research highlights prediction yet remains agnostic about cause, a successful strategy as long as the causal structures undergirding the phenomena remain stable. At least two concerns arise. First, paraphrasing Kant, practical action or public policy without an understanding of cause is blind. Second, methodological discussions rarely reach empirical researchers, in part because those discussions are often too formal and thus too insular. This Matrix Prospecting Team addressed both concerns by interviewing key scholars of causality from statistics, philosophy, and several social sciences to allow each to convey to empirical researchers key insights on causality in an accessible, conversational way.

**TEAM LEAD:** Samuel R. Lucas, Professor, Sociology

**TEAM MEMBERS:** Martin Eiermann, Doctoral Student, Sociology; Véronique Irwin, Doctoral Student, Sociology; Johann Koehler, Doctoral Student, Jurisprudence and Social Policy Law; Santiago Molina, Doctoral Student, Sociology; Anjali Verma, Researcher, Jurisprudence and Social Policy

##### Child Marriage and Youth Empowerment

Child marriage refers to a union—formal or informal—in which one or both members of a couple marry before the age of 18. Annually, an estimated 15 million girls marry before their 18th birthdays. Evidence shows that marriage below the age of 18 increases risks related to health, education, opportunity, and well-being. It increases girls' exposure to partner violence throughout their lives and promotes poverty. Child marriage takes place in every region across the globe, including within the US, and the causes, consequences, and prevalence vary among and within countries. This Matrix Prospecting Team sought a broader and deeper understanding of child marriage and the complex set of social factors that shape adolescence in order to promote well-being during this pivotal life phase and pave the way to successful transitions to adulthood. Looking beyond raising the age of marriage toward understanding which outcomes matter most for equitable relationships and well-being, and how to achieve and sustain those outcomes in the short and long term, researchers drew on transdisciplinary perspectives to design approaches that can contribute to sustained changes from adolescence to adulthood, especially as they relate to the quality of education and health.

**TEAM LEAD:** Erin Murphy-Graham, Associate Professor, Education **TEAM MEMBERS:** Alison Cohen, Researcher, School of Public Health & Graduate School of Education; Julianna Deardorf, Professor, School of Public Health; Natalie Morris, Specialist, Bixby Center for Population, Health, and Sustainability; Diana Pacheco, Doctoral Student, Graduate School of Education; Paige Passano, Specialist, Bixby Center for Population, Health, and Sustainability; Ndola Prata,

## APPENDIX (continued)

Professor, School of Public Health; Ahna Suleiman, Researcher, Center for the Developing Adolescent; Alice Taylor, Doctoral Student, Graduate School of Education

### Comparing the Politics of Computer Vision in the United States, China, and Europe

Computer vision, empowered by new forms of data aggregation and the neural network architectures responsible for deep learning, is now disrupting many aspects of civil society such as security, policing, and social media use. In the near future, it may also lead to the widespread automation of service retail and deployment of self-driving cars. As this technical infrastructure reorganizes traditional industries, it poses a series of political and regulatory problems such as automated surveillance, decline in user agency, and algorithmically mediated social discrimination. This Matrix Team studied the emerging comparative political economy of computer vision. The three case studies examined by the team—the United States, China, and Europe—offer different paradigms for integrating this technology into civil society.

**TEAM LEAD:** Thomas Gilbert, Doctoral Student, Interdisciplinary Field Studies **TEAM MEMBERS:** Shazeda Ahmed, Doctoral Student, School of Information; Renata Barreto, Doctoral Student, Berkeley Law; Sarah Dean, Doctoral Student, Electrical Engineering and Computer Science; Roel Dobbe, Doctoral Student, Electrical Engineering and Computer Science; Nitin Kohli, Doctoral Student, School of Information; Nasser Zakariya, Professor, Rhetoric

### DNA of Media Accounts on Genetic Ancestry Testing

*MIT Technology Review* labeled 2017 as the year “consumer DNA testing blew up.” Companies like FamilyTreeDNA, AncestryDNA, and 23andMe now make up a multibillion-dollar industry that dominates both popular and academic discourse. While existing literature on genetic ancestry tests (GAT) attributes consumer participation to a desire for identifying biological relatives, confirming genealogy, and learning about health dispositions, the effect of mainstream media and advertising has been neglected. By systematically examining diverse media, including not just talk shows, documentaries, articles, and advertisements but also forum reactions to the media content, this Matrix Prospecting Team examined the relationship between knowledge transmission and consumer participation.

**TEAM LEADS:** Armando Lara-Millan, Assistant Professor, Sociology; Skyler Wang, Doctoral Student, Sociology  
**TEAM MEMBERS:** Margaret Eby, Doctoral Student, Sociology;

Meghna Mukherjee, Doctoral Student, Sociology; Maya Earle, Student, University of California, San Francisco (UCSF) Department of Nursing

### Gender and Technology

In spite of recent efforts to recruit and retain women, gender inequality remains a defining feature of the tech industry. Being situated in the Bay Area, a conurbation virtually synonymous with the tech industry, UC Berkeley produces a large number of tech workers. This Matrix Research Team formalized a network of scholars researching different facets of gender inequalities in tech, facilitating collaboration between researchers from various disciplines and institutions as well as exploration of different research methodologies.

**TEAM LEADS:** Sigrid Luhr, Doctoral Student, Sociology; Krista Schnell, Doctoral Student, Sociology **TEAM MEMBERS:** Jenna Burrell, Professor, School of Information; Chloe Hart, Doctoral Student, Sociology; Anne Jonas, Doctoral Student, School of Information; Charis Thompson, Professor, Gender & Women’s Studies; Katie Wullert, Doctoral Student, Sociology; Alison Wynn, Doctoral Student, Sociology; Christianne Corbett, Doctoral Student, Sociology, Stanford University; Shelley Correll, Professor, Sociology, Stanford University

### I Regret to Inform You That Your Private Information Has Been Compromised

Privacy is one of the most important issues of our time. All things being equal, we assume that most people prefer privacy; it is a foundational right enshrined in the “penumbras” of the 1st, 3rd, 4th, 5th, 9th, and 14th amendments of the United States Constitution as well several state constitutions (including CA, MA, and WA) and the Universal Declaration of Human Rights. Despite our preference for privacy, police officers wear body cameras, customer loyalty programs track purchases, and the Transportation Safety Administration performs full body scans. This paradox illuminates the deep ambivalence in modern society about privacy, and represents a largely untapped area of research in the social sciences. Although scholars across campus have begun researching topics and issues related to privacy from various disciplinary perspectives, there is little cohesion about the theories and methods informing this emerging field. This Matrix Prospecting Team has worked to create a privacy-focused community of social scientists at UC Berkeley; their research has addressed issues of “Digital Citizenship” as well as “Data Privacy Literacy.”

**TEAM LEAD:** Naniette H. Coleman, Doctoral Student, Sociology  
**TEAM MEMBERS:** Gloria Ashaolu, Executive Director of Black Recruitment and Retention Center; Julia Bernd, Researcher, International Computer Science Institute (ICSI); Pauline

Dupray, Doctoral Student; Martin Eiermann, Doctoral Student, Sociology; Amit Elazari, Doctoral Student, School of Law; Lisa Ho, Campus Privacy Officer; Chris Hoofnagle, Professor, School of Law and School of Information; Jen King, Doctoral Student, School of Information; Krista Schnell, Doctoral Student, Sociology; Elena Elkina, President, Women in Security and Privacy; Amanda Lee, Student, Wellesley College

## Masculinity and Capitalism

Masculinity, once an unmarked category, is increasingly up for discussion, especially in arenas in which it is recognized as problematic. In this historical moment, there is a striking increase in inequality among men across many scales. Manufacturing has been relocated to low-wage regions and many of the jobs have simply disappeared because of automation. Girls and women in the global south have become targeted as the privileged objects of desire for nonprofit “investors,” low-wage employers at home, and care-seeking employers in the global north. All of these arenas tend to exclude men, so that in many cases poor men are coded as waste, too “difficult” or “unreliable” for the privilege of exploitation. Meanwhile, in the upper echelons of financial capitalism, elite men continue to predominate, fueling profitable market “bubbles” through rhetorics of masculine performance and excusing market crises through narratives that reference uncontrollable male hormones. This Matrix Team studied the relationship between masculinity and the changing contours of the sphere of production that traditionally defined it, finding that these varied discourses require not just new empirical investigations, but new categories.

**TEAM LEAD:** Raka Ray, Professor, Sociology **TEAM MEMBERS:** Sharad Chari, Professor, Geography; Leslie Salzinger, Professor, Gender and Women’s Studies; James Vernon, Professor, History

## Native/Immigrant/Refugee

Who is a refugee, who is an immigrant, and who is a native? These are critical questions at a time when nation-states are tightening and manipulating their borders and criminalizing mobility. From the U.S. administration’s refusal of refugees from Muslim countries to the emergence of a new class of “climate refugees” affecting indigenous peoples of the Arctic as well as U.S. citizens in Puerto Rico, and from the nativist turn in the United States and Europe to the proposed border wall between the U.S. and Mexico that would cleave indigenous nations in two, we see critical questions for scholars of immigration, refugee studies, nationalism, and indigeneity. Refugees, immigrants, and natives—whether indigenous persons or not—are typically constructed as separate legal and social categories, and thus studied in isolation from one

another. This Matrix Prospecting Team examined how these communities, and the fields of studies developed to examine them, converge, displace, and shape each other. Among the topics discussed were how discourse and policy produce categories that determine the corresponding legal entitlements and cultural claims based on membership in these categories.

**TEAM LEADS:** Bonnie Cherry, Doctoral Student, Jurisprudence and Social Policy; Beth Piatote, Professor, Native American Studies; Leti Volpp, Professor, Law, Center for Race and Gender **TEAM MEMBERS:** Thomas Biolsi, Professor, Ethnic Studies; Irene Bloemraad, Professor, Sociology; Karl Britto, Professor, French and Comparative Literature; Brian DeLay, Professor, History; Jeroen Dewulf, Professor, German; Daniel Fisher, Professor, Anthropology; Cybelle Fox, Professor, Sociology; Deniz Gokturk, Professor, German; Seth Holmes, Professor, Environmental Science, Policy, and Management; Taeku Lee, Professor, Political Science; Christina Mora, Professor, Sociology; Christian Paiz, Professor, Ethnic Studies; Khatharya Um, Professor, Ethnic Studies; Michael Omi, Professor, Ethnic Studies; Sarah Song, Professor, Law

## Queer Ecologies

The Queer Ecologies Prospecting Team examined how historically exclusionary and hierarchical ideas of race, sex, and gender are both replicated and disrupted by contemporary laboratory and fieldwork practices, as well as theoretical innovations, in animal behavior sciences. Animal behavior sciences—such as studies of mate choice and sexual display—are cultural, social, and political practices. As scientists work to understand animal behavior along the lines of agency, choice, sex, pairing, and bonding, we are also often co-producing understandings about ourselves and our social worlds that have significant consequences for who counts as human, who has the right to “pair,” and what kinds of behaviors count as “normal.” This Matrix Research Team cross-pollinated theories, research questions, and political debates between social and natural scientists, generating a research agenda that takes seriously the practices, instruments, field experiences, communications, media representations, and political alliances that constitute the very laboratories and scientific communities in which knowledge of “queer animals” and “queer ecosystems” is being produced.

**TEAM LEADS:** Damian Elias, Associate Professor, Environmental Science, Policy, and Management (ESPM); Ashton Wesner, Doctoral Student, ESPM **TEAM MEMBERS:** Erin Brandt, Doctoral Student, ESPM; Ignacio Escalante, Doctoral Student, ESPM; Kaitlyn Gaynor, Doctoral Student, ESPM; Benjamin Kessler, Doctoral Student, ESPM; Melina Packer, Doctoral Student, ESPM; Christine Rivera, Researcher, ESPM; Christine Wilkinson, Doctoral Student, ESPM

## APPENDIX (continued)

### PROJECT TEAMS

#### **Berkeley Infrastructure Initiative: Collaborative, Interdisciplinary Policy Research in the Public Interest**

[Global Metropolitan Studies co-sponsored]

Each year more than \$4 trillion dollars is spent on infrastructure globally. By 2025, global infrastructure spending is predicted to reach \$9 trillion. Key governmental and non-governmental actors with strong ideological views—whether neoliberal, conservative, or progressive—often compete over infrastructure provision, thereby clouding public discourse and guiding it towards paths and policy outcomes that may be less advantageous to the public interest. New and expanded research is therefore needed to guide public infrastructure policy, investment, and delivery amidst changing domestic and international landscapes. Widespread social benefit will, however, only be realized if infrastructure investments are planned in a manner that prioritizes equitable access and reduces externalities that place disproportionate burdens on already disadvantaged groups. Thus, objective, empirically-guided knowledge is needed on how to equitably provide

and effectively deliver infrastructure services. To address these issues, this Matrix Project Team launched the Berkeley Infrastructure Initiative (BI2), which has brought together faculty and students with a shared interest in the planning, governance, finance, design, development, economics, and environmental effects of infrastructure. Examining transportation, housing, water, sanitation, information and communication technology, energy, school and community facilities, and public parks, the group has taken a multi-sectoral focus that is both domestic and international in scope.

**TEAM LEADS:** Karen Trapenberg Frick, Professor, City and Regional Planning; Jeff Vincent, Researcher, Institute of Urban and Regional Development **TEAM MEMBERS:** Charisma Acey, Professor, City and Regional Planning; Robert Cervero, Professor, City and Regional Planning; Karen Chapple, Professor, City and Regional Planning, IGS/Center for Community Innovation; Dan Chatman, Professor, City and Regional Planning; Brandie Nonnecke, Researcher, CITRIS/Banatao Institute; Alison Post, Professor, Political Science/Global Metropolitan Studies; Daniel Rodriguez, Professor, City and Regional Planning; Joan Walker, Professor, Civil and Environmental Engineering



## Climate Economics [SAGE co-sponsored]

Policymakers who drive decisions related to the economics of climate change have traditionally relied upon numerical integrated assessment models, which make assumptions about the relationship between increasing temperatures and economic output to estimate the costs of climate change in each sector of the economy. These estimates are currently the only source of information used in official U.S. regulatory analysis, and are used to inform climate policy like the EPA's Clean Power Plan. In recent years, however, many economists have started to use empirical, data-driven econometric estimates to measure the impacts of climate change, and in some cases these assessments challenge the previous estimates. The new estimates rely on historical variation in weather to understand how economic processes are affected by changes in climate; they require fewer assumptions and tend to be more transparent than integrated assessment techniques. In most cases, these studies have not been integrated into the regulatory process, and questions remain about how the new estimates should be incorporated into the existing models. Addressing this gap is of the highest scientific and policy relevance.

**TEAM LEADS:** David Anthoff, Assistant Professor, Energy and Resources Group (ERG); Max Auffhammer, Professor, Department of Agricultural and Resource Economics (ARE) & International Area Studies; Sol Hsiang, Professor, Goldman School of Public Policy **TEAM MEMBERS:** Ian Bolliger, Post-Doctoral Fellow, ERG; Tamma Carleton, Doctoral Student, ARE; Hannah Druckenmiller, Doctoral Student, ARE; Frank Errickson, MS/Doctoral Student, ERG; Hal Gordon, Doctoral Student, ARE; Andy Hultgren, Doctoral Student, ARE; Jonathan Kadish, Doctoral Student, ARE; Larry Karp, Professor, ARE; Peilei Lau, Doctoral Student, ARE; Catherine Ledna, Doctoral Student, ERG; Jonathan Proctor, Doctoral Student, ARE; Lisa Rennels, Doctoral Student, ERG; Cecilia Springer, Doctoral Student, ERG; Deirdre Sutula, Doctoral Student, ARE; Valeri Vasquez, Masters/PhD track, ERG; Matt Woerman, Doctoral Student, ARE; Catherine Wolfram, Associate Dean, Haas School of Business

## Community Conversations on Sexual Violence and Harassment: Narratives of Activism, Inclusion, Confidentiality, Accountability, and Healing

Incidents of sexual violence and sexual harassment (SVSH) have been a focus of national headlines this year as a social and political movement swept the country. Sexual violence is a multilayered issue affecting many aspects of our lives. Existing research has shown the need for interventions to address

violence at every level of the socio-ecological model. Expertise in psychology, sociology, law, and community dynamics are necessary to prevent further trauma and recidivism as well as to promote healing. All of these areas are the topics of social science research. Sexual violence requires an interdisciplinary solution, because it is an interdisciplinary problem. While UC Berkeley administrators and practitioners have made efforts to improve SVSH support, procedure, and policy, there is little connection between the administrators and practitioners working to reduce SVSH on campus and the researchers who carry out our academic mission. For example, campus psychologists and advocates who work with survivors to facilitate a healing process have no formalized engagement with the world-class campus faculty in sociology, social work, public health, and clinical sciences. To address these issues and to provide a platform from collaboration around issues of violence prevention, this Matrix Project Team convened panel discussions among on-campus practitioners and researchers across different disciplines.

**TEAM LEAD:** Sharon Inkelas, Professor, Linguistics/Special Faculty Advisor to the Chancellor on Sexual Violence and Sexual Harassment **TEAM MEMBERS:** Sarah Gamble, PATH to Care Center Public Health; Rodolfo Mendoza-Denton, Professor, Psychology/Executive Associate Dean for Diversity in L&S Psychology; Laura Nelson, Professor, Korean Studies/Gender and Women's Studies, Anthropology/City and Regional Planning; Julie Shackford-Bradley, Restorative Justice Center; Leti Volpp, Professor, School of Law

## Investigating the Socio-ecological Impacts of Cannabis Production

The recent legalization and regulation of cannabis production and consumption in California presents an unprecedented change in public policy that may have profound impacts on the environment and communities across the state. At this moment of change there is a critical need for scholarship on cannabis-producing communities and their relation to the natural environment. This Matrix Project Team has formed an interdisciplinary research team to study the socio-ecological impacts of cannabis production in California, focusing on three core areas: policy and regulation, environmental impacts, and the social relations and agricultural practices of cannabis-producing communities. Recognizing that regulation affects farmers' decisions and ultimately the environment, and that scientific information on the ecological impacts of cannabis also influences farmer practices and regulation, the team has sought to understand cannabis agriculture in all its complexities. Composed of faculty, postdoctoral researchers, and graduate students from the College of Letters and Science, College of

## APPENDIX (continued)

Natural Resources, and School of Law, this Matrix team has used innovative interdisciplinary techniques to understand the many ways cannabis affects communities and the environment. The center for cannabis research established by this team has become a hub for cannabis research in California.

**TEAM LEADS:** Van Butsic, Professor, Environmental Science, Policy, and Management (ESPM); Theodore Grantham, Professor, ESPM; Eric Biber, Professor, School of Law

**TEAM MEMBERS:** Hekia Bodwitch, Postdoctoral Researcher, ESPM; Justin Brashares, Professor, ESPM; Stephanie Carlson, Professor, ESPM; Phoebe Parker Shames, Doctoral Student, ESPM; Michael Polson, Postdoctoral Researcher, ESPM; Mary Power, Professor, Integrative Biology; Nathan Sayre, Professor, Geography; Jennifer Carah, Researcher, The Nature Conservancy; Josue Medellin-Azuara, Professor, Environmental Engineering, University of California, Merced

### Seeing Like a Valley: Locating the Moral Visions of Silicon Valley Culture

Like modern states, the industrial region known as Silicon Valley has developed through attempts to regularize, rationalize, and codify the world. These ways of knowing have favored emerging technologies and new modes of organization. But what are the effects of this developing view to the world? This Matrix Project Team brings UC Berkeley affiliates in contact with others studying or intervening in Silicon Valley to understand the place of the Valley in shaping not just new technological practices, but new moral visions. Experimenting with practices for theoretically-informed events and interventions, the researchers convened an international group of scholars, policymakers, technologists, journalists, artists, and activists to explore these moral visions. This series of public encounters included field trips and bi-monthly salons and promoted an active public intellectual culture within and beyond UC Berkeley. A novel experiment in documenting, analyzing, and challenging the moral visions of Silicon Valley, the researchers were also concerned to locate moral visions to explore this space theoretically.

**TEAM LEAD:** Morgan G. Ames, Researcher, Center for Science, Technology, Medicine, and Society (CSTMS) **TEAM MEMBERS:** Shazeda Ahmed, Student, School of Information; Margo Boenig-Liptsin, Researcher, Division of Data Science; Jenna Burrell, Professor, School of Information; Charlotte Cabasse, Researcher, Berkeley Institute of Data Science (BIDS); Marion Fourcade, Professor, Sociology; R. Stuart Geiger, Researcher, BIDS; Anne Jonas, Student, School of Information; Massimo Mazzotti, Professor, History; Nick Merrill, Student, School of Information; Dierdre Mulligan, Professor, School of Information; Richmond Wong, Student, School of Information

## 2017-2018

### PROSPECTING TEAMS

#### Expert Language, Native Language: Toward a Framework for Translation in Clinical (Mis)communication

This Matrix prospecting team explored challenges in clinical communication, analyzing conversations between patients and physicians via the lens of linguistics and anthropology. This project was inspired by conversations around the word “treatable” and its complex, context-dependent meanings that often result in misunderstandings between involved parties. While qualitative research and perspective pieces have described the presence and importance of clinical miscommunication, this group of researchers sought to define a concrete theoretical framework based in linguistic anthropology to model why such misunderstandings arise and how to address them. By modeling the language of physicians and the language of patients as separate expert and native languages, the group recognized the importance of translation within medical communication, as well as other areas where expert communication may fail. Ultimately, this project aimed both to better clinical communication and therefore health outcomes, and to develop theoretical frameworks that can ground future research on expert knowledge and communication challenges across disciplines.

**TEAM LEADS:** Jason Batten, Doctoral Student, School of Medicine, Stanford University; Bonnie Wong, Doctoral Student, Anthropology **TEAM MEMBERS:** William Hanks, Professor, Linguistics and Anthropology; Sara Hartley, Lecturer, UC Berkeley; Alexandra Paxton, Researcher, Institute of Cognitive and Brain Science; Audrey Shafer, Professor, School of Medicine, Stanford University; David Magnus, Professor, Center for Biomedical Ethics, Stanford University

#### The Origin of States

State formation marks a critical step in the development of human societies for two reasons: first, it is widely accepted in economics that the state has tremendous influence on human welfare, and there is a growing understanding of the importance of the historical state for the success of the contemporary one; and second, changes to economic processes are fundamental to this transition, be it in the form of food production, technological progress, or economies of scale in cities and armies. Why did some human populations transition from living in scattered groups of hunter-gatherers to gathering in cities governed by a centralized state, while others did not? This Matrix Prospecting Team contributed to

this question by providing an avenue to test state-formation theories from various disciplines using quantitative methods developed in economics, statistics, and computer science. This project broke new ground, being among the first large-scale quantitative data collection efforts to incorporate archaeological findings from more than 2,000 sites across the globe. The researchers also worked on an automated computer program that generates site-specific quantitative data from thousands of academic publications in archaeology. By incorporating existing datasets compiled by archaeologists, geologists, and climate scientists, the research team was also able to explore how changes in early societies are associated with their environment and changes therein.

**TEAM LEADS:** Ernesto Dal Bó, Professor, Political Science, Haas School of Business; David Schönholzer, Postdoctoral Associate, Political Economy **TEAM MEMBERS:** Yunhao Jerry Zhang, Doctoral Student, Computer Science

### **Working, Learning, and Earning in the Age of Intelligent Machines: Considering the Implications of Computation Intensive Automation, Big Data, and Platforms**

Will intelligent machines replace or complement human labor—substitute for or augment human intelligence? Are we on the road to a robotic dystopia or can we put ourselves on a trajectory toward an innovative approach to learning, accelerated productivity, new human capabilities, and inclusive prosperity? How will the economic surplus or bounty resulting from the productivity gains of intelligent machines be shared among workers and citizens? How might technologies and the policy decisions ensure equitable sharing of the benefits? Can computation-intensive automation generate productivity growth sufficient to sustain real rising incomes? Or, will innovations with platform technologies, big data, and computation-intensive automation, including AI and machine learning, displace work and workers? In attending to these and other related questions, this Matrix Prospecting Team sought to define a digital-era strategy for sustaining productivity growth and expanding both equitable employment and real incomes of the community.

**TEAM LEADS:** John Zysman, Faculty Emeritus, Berkeley Roundtable on the International Economy **TEAM MEMBERS:** Ken Goldberg, Professor, College of Engineering; Shankar Sastry, Professor, College of Engineering; Costas Spanos, Director, CITRIS; Laura Tyson, Professor, Haas School of Business

## **PROJECT TEAMS**

### **Berkeley Infrastructure Initiative: Collaborative, Interdisciplinary Policy Research in the Public Interest** [Global Metropolitan Studies co-sponsored]

Each year more than \$4 trillion dollars is spent on infrastructure globally. By 2025, global infrastructure spending is predicted to reach \$9 trillion. Key governmental and non-governmental actors with strong ideological views—whether neoliberal, conservative, or progressive—often compete over infrastructure provision, thereby clouding public discourse and guiding it towards paths and policy outcomes that may be less advantageous to the public interest. New and expanded research is therefore needed to guide public infrastructure policy, investment, and delivery amidst changing domestic and international landscapes. Widespread social benefit will, however, only be realized if infrastructure investments are planned in a manner that prioritizes equitable access and reduces externalities that place disproportionate burdens on already disadvantaged groups. Thus, objective, empirically-guided knowledge is needed on how to equitably provide and effectively deliver infrastructure services. To address these issues, this Matrix Project Team launched the Berkeley Infrastructure Initiative (BI<sup>2</sup>), which has brought together faculty and students with a shared interest in the planning, governance, finance, design, development, economics, and environmental effects of infrastructure. Examining transportation, housing, water, sanitation, information and communication technology, energy, school and community facilities, and public parks, the group has taken a multi-sectoral focus that is both domestic and international in scope.

**TEAM LEADS:** Karen Trapenberg Frick, Faculty, City and Regional Planning; Jeff Vincent, Researcher, Institute of Urban and Regional Development **TEAM MEMBERS:** Charisma Acey, Professor, City and Regional Planning; Robert Cervero, Professor, City and Regional Planning; Karen Chapple, Professor, City and Regional Planning; Dan Chatman, Professor, City and Regional Planning; Brandie Nonnecke, Researcher, CITRIS/Banatao Institute; Alison Post, Professor, Political Science; Daniel Rodriquez, Professor, City and Regional Planning; Joan Walker, Professor, Civil and Environmental Engineering

### **Continent Divided: Building Bridges, Finding Truth**

Building upon the robust framework created through the previous two Matrix Prospecting Teams—“A Polarizing Europe” (2015) and “Questioning the Evidence on the Integration of Immigrants in Europe” (2016)—this research group identified key lines of inquiry in Europe’s ongoing

## APPENDIX (continued)

struggle to provide a unified front in the face of mounting political division, socioeconomic upheaval, the political repercussions of Brexit, and the rise of a pan-European Populist Right. Taking a more holistic approach to questions concerning the interconnected nature of immigration and polarization both in Europe and abroad, researchers focused on the implications of the trending issue of “fake news.” The results of recent political elections have made clear the repercussions of the dissemination of “fake news” and a general trend towards more politicized, target-oriented journalism. But the aftershock of “fake news” has lasting effects on the way we come to envision the world around us: dramatically shifting the direction of transatlantic relationships, and manipulating our understanding of domestic and foreign politics alike. Increasing anti-intellectualism in public discourse, threats to an established recourse to free press, the fear of new forms of cyberterrorism, and the spread of so-called “fake news” have created new and alarming challenges to the very foundation of European democracy. Division along austere ideological lines is testing our ability to engage in productive dialogue, radicalizing decision making, and alienating both former and future allies. News today also no longer depends on traditional methods for its dissemination. Instead, social media and increasingly individualized digital resources tailor our immediate access to information based on customer interest. Attending to the line between academia and activism, researchers on this Matrix Project Team considered how the study of diverse disciplines—from new media studies to political history—might help establish coping mechanisms for renegotiating the value of facts in an increasingly post-truth discursive atmosphere.

**TEAM LEADS:** Jon Cho-Polizzi, Doctoral Student, German and Medieval Studies; Jeroen Dewulf, Faculty, German

**TEAM MEMBERS:** David Clay Large, Emeritus Professor, History; Maelia Dubois, Doctoral Student, History; Christine Gerhardt, Professor, Environmental Humanities; Deniz Göktürk, Professor, German; Katerina Linos, Professor, Law; Akasemi Nzinga Newsome, Associate Director, Institute of European Studies; José F.A. Oliver, Researcher; Kumars Salehi, Doctoral Student, German; Spero Simeon Z. Paravantes, Senior Researcher; Kyle Thomson, Doctoral Student, Romance Languages and Literatures; Melike Akkaraca Kose, Visiting Professor, Political Science, Kocaeli University; Kiene Brillenburg Wurth, Professor, Comparative Media, Utrecht University; Martin Nettesheim, Professor, European Law, Tübingen University; Zachary Shore, Professor, History, Naval Postgraduate School; Philipp Trein, Senior Researcher, Institute for Political, Historical, and International Studies, University of Lausanne; Helene Yèche, Professor, Linguistics, Poitiers University



### Demystifying the Black Box of Computational Text Analysis Workflows: From Static Textual Archives to Visualizations and Reports of U.S. Congressional Activity

Computational text analysis workflows are long and complex. Too few scholars know how to critically evaluate the multiple decisions a researcher might make (implemented in programming scripts) in preparing, processing, and analyzing data; fewer still know how to carry their own research through such workflows. This Matrix Project Team worked to render the whole process transparent and understandable by designing and documenting a complete workflow. Starting with basic, digital scans of the Congressional Record, the researchers developed programming scripts and pedagogical materials (in the form of Jupyter notebooks) to model the process of textual data acquisition, cleaning, chunking, data-basing, analysis, and visualization, which characterize the research process from beginning to end. In addition to creating materials helpful to anyone who wants to understand or implement a text analysis workflow, the group developed a research-ready database enabling a wave of scholarship into the behavior of the U.S. Congress.

**TEAM LEADS:** Nick Adams, Postdoctoral Researcher, Berkeley Institute for Data Science (BIDS); Scott Paul McGinnis, Doctoral Student, History **TEAM MEMBERS:** Ben Gebre-Medhin, Doctoral Student, Sociology; Cristina Gomez-Vidal, Doctoral Student, Sociology; Cody Hennessy, Staff, UC Berkeley Libraries; Laura Nelson, Postdoctoral Researcher, BIDS; Terri Tanaka, Lecturer, Near Eastern Studies; Niek Veldhuis, Professor, Near Eastern Studies



### How Courts Use Open-Source Methods to Gather Evidence of War Crimes and Pursue Prosecution

Increasingly, human rights investigations rely on open-source intelligence (OSINT) to identify, document, and verify human rights atrocities. These open sources—such as publicly available Facebook posts, YouTube videos, and tweets—provide important information about human rights violations and perpetrators. However, analyzing, verifying, and corroborating these sources to support legal accountability is time consuming and requires expertise. Additionally, there is currently no international standard for using open-source investigations for legal accountability. Organized as a Matrix Project Team, researchers at the Human Right Center at UC Berkeley developed a white paper on how courts have successfully used open source to improve the outcomes of their cases.

**TEAM LEADS:** Alexa Koenig, Executive Director, Human Rights Center **TEAM MEMBERS:** Mayra Feddersen, Doctoral Student, Jurisprudence; Andrea Lampros, Staff, School of Law; Stefanie Le, Doctoral Student, Journalism and International Studies; Eric Stover, Professor, School of Law

### Migration, Racialization, and Gender: Comparing Filipino Migration to France and the United States

Building upon the work of the Prospecting Team, “Migration, Racialization, and Gender: A comparison of Filipino Migration to France and the United States,” (Fall 2016) this Matrix Project Team pursued a comparative transnational study of Filipino migration to both countries. The Philippines plays a major role in international migration as a leading sending country of

professional and low-skilled workers to various parts of the world. In 2013, almost 10 percent of the Philippine population lived abroad and approximately half of them were contract workers. Although the Philippines is not unique in supplying labor overseas, its highly institutionalized labor-export process and the occupational diversity of its overseas labor force distinguish it from other labor-exporting countries. The scholarship on Filipino migration to both the United States and France shows that these phenomena are highly racialized, gendered, and classed processes. Filipinos have immigrated to the US and France as laborers, especially health care providers and domestic workers, but also as family members of immigrants, and as spouses/fiancées of national citizens. Despite their contributions, these migrants have been and continue to be marginalized and vulnerable in both French and American societies.

**TEAM LEADS:** Catherine Ceniza Choy, Professor, Ethnic Studies **TEAM MEMBERS:** Darren Arquero, Doctoral Student, Ethnic Studies; Abigail De Kosnik, Professor, New Media Studies; Kathleen Gutierrez, Doctoral Student, South and Southeast Asian Studies; Sine Hwang Jensen, Doctoral Student, Ethnic Studies; Theresa Salazar, Librarian, Bancroft Library; Stephanie Syjuco, Professor, Art Practice; Leti Volpp, Professor, Law; Jenifer K. Wofford, Artist and Educator, UC Berkeley and University of San Francisco (USF); Asuncion Fresnoza-Flot, Researcher, Sociology, Radboud University, Netherlands; Lillian Galedo, Executive Director, Filipino Advocates for Justice; Dawn Mabalon, Professor, History, San Francisco State University (SFSU); Steve McKay, Professor, Sociology, UC Santa Cruz; Eric Pido, Professor, Asian American Studies/Ethnic Studies, SFSU; Gwenola Ricardeau, Professor, Sociology, University of Lille; Evelyn Rodriguez, Professor, Sociology, USF; Robyn Rodriguez, Professor, Asian American Studies/Sociology, UC Davis; James Sobredo, Professor, Ethnic Studies, Sacramento State University; Rose Cuisson Villazor, Professor, UC Davis Law; Valerie Francisco, Professor, Sociology, San Francisco State University

### 2016-2017

#### PROSPECTING TEAMS

#### Assembling Critical Theory and Practices in Design and the Social Sciences

The social sciences have long been interested in the processes and products of art, media, and design, exploring how material objects and media infrastructure are shaped by and give rise to cultural norms, historical values, and social systems. Throughout the twentieth century, artistic and design practices

## APPENDIX (continued)

have similarly drawn on social theory, intervening in debates around topics such as labor, education, and politics. Yet today, despite the ubiquity of technology and media systems throughout society, we too often see little conversation. Over the past two decades, theoretical analysis and practices under the broad rubric of “critical” and “speculative” design have proliferated, aiming to question utilitarian norms and take on social questions about technology, media, communities, and institutions. This Matrix Prospecting Team explored how critical and social theory, cultural studies, and art practice have informed these new approaches and to what extent they have diverged, asking how designers take on new social projects and how social scientists understand and undertake critique. Bringing together researchers from information management and systems, science and technology studies, new media, and design research, the group considered what happens when the social sciences and design-based fields separate their attempts to “question the evidence” into disciplinary silos.

**TEAM LEADS:** Anne Jonas, Doctoral Student, School of Information; Richmond Wong, Doctoral Student, School of Information **TEAM MEMBERS:** Morgan Ames, Post-Doctoral Scholar, Center for Science, Technology, Medicine, and Society; Jenna Burrell, Associate Professor, School of Information; Paul Duguid, Adjunct Professor, School of Information; R. Stuart Geiger, Post-Doctoral Fellow, Berkeley Institute for Data Science; Anna Lauren Hoffmann, Post-Doctoral Scholar, School of Information; James Pierce, Researcher/Instructor, Jacobs Institute for Design Innovation

### Migration, Racialization, and Gender

This Matrix Prospecting Team studied contemporary migration and the racialization of migrants to France and the United States through a comparative transnational study of Filipino migration to both countries. Filipinos have immigrated to the US and France primarily as workers, family members of immigrants, and spouses/fiancées of national citizens. However, France and the United States have handled issues of migration, labor, intimacy, and race in dramatically different ways. Despite the significance of Filipino migrants to both countries, they continue to be stereotyped as foreign-labor competitors and model minorities, commodified as human resources, or dismissed as invisible migrants.

**TEAM LEAD:** Catherine Ceniza Choy, Professor, Ethnic Studies **TEAM MEMBERS:** Darren Arquero, Doctoral Student, Ethnic Studies; Jennifer Duque, Doctoral Student, Ethnic Studies; Kathleen Gutierrez, Doctoral Student, Southeast Asian Studies; Leti Volpp, Professor, Law; Rose Cuison Villazor, Professor, Law, UC Davis; Lillian Galedo, Executive Director, Filipino Advocates for Justice, Oakland; Dawn Mabalon, Professor,

History, San Francisco State University; Steve McKay, Professor, Sociology, UC Santa Cruz; Gwenola Ricardeau, Professor, Sociology, University of Lille; Robyn Rodriguez, Professor, Asian American Studies, UC Davis

### Political Economy and Society Curriculum

Within the International and Area Studies Teaching Program (IASTP), Political Economy is the largest interdisciplinary major, consisting of approximately 450 majors. This major has served several generations of Cal students exceptionally well, and has grown accordingly, also helping fill in some of the campus’s unsatisfied student (and parental) demand for economics training—albeit with a qualitative focus. This prospecting team brought together faculty and graduate students from a range of departments and professional schools to address the intellectual and pedagogical challenges of moving the major forward. Members of the group explored comparable undergraduate programs at peer institutions, identified the unique strengths and opportunities that Berkeley’s Political Economy major should exploit, and drafted recommendations for changes to the existing major and for the creation of additional tracks within the program.

**TEAM LEADS:** Max Auffhammer, Professor, Department of Agricultural and Resource Economics (ARE) & International Area Studies; Alan Karras, Associate Director, International and Area Studies **TEAM MEMBERS:** Leo Arriola, Associate Professor, Political Science; Crystal Chang, Lecturer, Global Studies; Alain de Janvry, Professor, ARE; Brad DeLong, Professor, Economics; Barry Eichengreen, Professor, Economics; Robin Einhorn, Professor, History; Federico Finan, Professor, Economics; Neil Fligstein, Professor, Sociology; Marion Fourcade, Professor, Sociology; Amy Gurowitz, Lecturer, Political Science; Khalid Kaidr, Lecturer, Public Policy; Jonah Levy, Associate Professor, Political Science; Rich Lyons, Professor, Haas School of Business; Edward Miguel, Professor, Environmental and Resource Economics; Jamie O’Connell, Lecturer, Law; Kate O’Neill, Associate Professor, Environmental Science, Policy and Management; Alison Post, Associate Professor, Political Science; Raka Ray, Professor, Sociology; Robert Reich, Professor, Public Policy; Gerard Roland, Professor, Economics; Christina Romer, Professor, Economics; Emmanuel Saez, Professor, Economics; Daniel Sargent, Associate Professor, History; Nathan Sayre, Professor, Geography; Clare Talwalker, Lecturer, Institute for South Asia Studies; Laura Tyson, Professor, Economics; Stephen Vogel, Professor, Political Science; Kim Voss, Professor, Sociology



## Rethinking Identity and Linguistic Diversity in an Age of Immigration

In what ways does the process of immigration enable or constrain the transformation and preservation of language and identity? Today we are witnessing an increased movement of people, their languages, values, ideas, and cultural ways of being around the world. This ever-changing flow brings forth many concerns with regard to the integration of immigrants into their host country and at the same time the preservation of their native heritage. These concerns are closely tied to notions of identity and language. This Prospecting Team investigated the dynamic interaction between language, identity, and immigration, considering how researchers might help promote cross-cultural understanding, particularly in the ways different social science disciplines address issues pertaining to immigration. Participants explored the ways that immigration enables and/or constrains the transformation and preservation of language and identity.

**TEAM LEAD:** Maryam Moeini Meybodi, Doctoral Student, Graduate School of Education **TEAM MEMBERS:** Jessica Adams, Doctoral Student, Education; Patricia Baquedano López, Professor, Education; Gabriela Borge, Doctoral Student, Education; Maedeh Golshirazi, Doctoral Student, Human Development and Cognition; Richard Kern, Professor, French, Berkeley Language Center; Claire C. Kramsch, Professor, German; Peng Yin, Doctoral Student, Education

## PROJECT TEAMS

### Coordinated Learning around Geospatial Information, Analysis, and Technologies

Analytical approaches and technologies for working with geospatial data and information are at the heart of a number of academic courses and programs from a diverse set of schools and units at UC Berkeley. Many of these courses are part of the Geospatial Information Science and Technology (GIST) undergraduate minor and the GIST graduate certificate program, which are joint efforts of the College of Environmental Design, College of Natural Resources, and the Division of Social Sciences. New courses in the School of Public Policy, Civil Engineering, the School of Information, and the pilot undergraduate Data Science Education Program, among others, have expanded the options for learning in this area. Additionally, research units such as the Geospatial Innovation Facility (GIF), Social Sciences Data Lab (D-Lab), the Digital Humanities Program, and the Earth Sciences and Map Library have developed training materials and workshops for the campus community on specific geospatial tools, technologies, and methods. This Matrix Project Team addressed the rapid expansion of learning opportunities in this area, drawing participants from these programs and departments to critically discuss the content, format, and cross-disciplinary support mechanisms for future courses and workshops.

## APPENDIX (continued)

**TEAM LEADS:** Maggi Kelly, Professor, Environmental Science, Policy, and Management (ESPM) **TEAM MEMBERS:** Geoff Boeing, Doctoral Student, City & Regional Planning; Carl Boettiger, Professor, ESPM; Alicia Cowart, Professor, Geography; Iryna Dronova, Professor, Landscape Architecture & Environmental Planning; Patty Frontiera, Researcher, D-Lab; Solomon Hsiang, Professor, Public Policy; David O’Sullivan, Professor, Geography; Jenny Palomino, Doctoral Student, ESPM; Kathleen Pera, Staff, City & Regional Planning; Susan Powell, GIS and Map Librarian; Alexey Pozdnukhov, Professor, Civil & Environmental Engineering; John Radke, Professor, Landscape Architecture & Environmental Planning; Charlotte Smith, Professor, Public Health; Jon Stiles, Researcher, D-Lab; Nancy Thomas, Executive Director, Geospatial Innovation Facility; Christina Tobolski, Undergraduate Advisor, College of Natural Resources; Claudia von Vacano, Director, Digital Humanities; Paul Waddell, Professor, City & Regional Planning; Jennifer Wolch, Professor, College of Environmental Design

### Examining the Global Reach of Algorithms

Building on the success of the 2014-2015 Prospecting Team “Algorithms as Computation and Culture,” this Matrix Project Team explored the increasingly important and multifaceted roles that algorithms play in politics, media, science, organizations, and identity in everyday life. A foundational concept in computer science, algorithms—loosely defined as a set of rules to direct the behavior of machines or humans—have shaped infrastructures, practices, and daily lives globally. As a result, understanding the implications of their development and deployment has become ever more pressing, both in academia and public discourse. There has been a growing academic literature taking algorithms as an object of cultural inquiry, as well as various conferences and workshops focused on studying algorithms from a more social scientific or humanistic perspective. In response to this growing interest, researchers on this team considered algorithms as an object of study, examining their roles in computation, culture, and construction of the self. In addition to a yearlong colloquium series, the group of social scientists, computer scientists, and humanities scholars organized a conference on the topic of algorithms in culture.

**TEAM LEADS:** Morgan G. Ames, Researcher, Center for Science, Technology, Medicine, and Society (CSTMS); Gretchen Gano, Researcher, CSTMS; Massimo Mazzotti, Professor, History **TEAM MEMBERS:** Sadia Afroz, Researcher, Computer Science; David Bates, Professor, Rhetoric; Jenna Burrell, Professor, School of Information; Charlotte Cabasse, Researcher, Data Science; Marion Fourcade, Professor, Sociology; R. Stuart Geiger, Researcher, Data Science; Eric Giannella, Doctoral Student, Sociology; Björn Hartmann, Professor, Computer

Science; Anna Lauren Hoffman, Researcher, School of Information; Anne Jonas, Doctoral Student, School of Information; Caitlin Rosenthal, Professor, History; Michael Carl Tschantz, Researcher, Computer Science; Richmond Wong, Doctoral Student, School of Information; Deborah Wood, Doctoral Student, History; Fernando Perez, Researcher, Data Science, Lawrence Berkeley National Laboratory

### The Future of the Humanities and Humanistic Social Sciences PhD at Berkeley

Humanities and humanistic social sciences PhD training has strained to keep pace with accelerating changes in the technologies and professional cultures of employment, both within and beyond academia. In examining these issues, many researchers have either been inadequately equipped methodologically or lacking in perspective professionally. Humanists that have come at the “PhD question” have often failed to assess PhD preparation objectively through statistical analysis; social scientists that have approached the question have frequently failed to appreciate the significance of informal traditions that inform graduate student development. In both of these broad cases, academic analysis has not been supplemented by non-academic expertise and perspective. This Matrix Project Team therefore brought academic humanists and social scientists together with extramural professionals for a thorough analysis of contemporary PhD training at Berkeley. These conversations enabled the group to appropriately analyze the professional health of the PhD and to propose evidence-driven reforms of humanities and humanistic social sciences graduate apprenticeship at UC Berkeley. As a result, academic leadership will be better poised to support curricula that will meaningfully reposition UC Berkeley graduates at the forefront of emerging forms of labor both in terms of their scholarly reflection and critical participation.

**TEAM LEADS:** Anthony Cascardi, Dean, Division of Arts and Humanities; Claudia von Vacano, Director, Digital Humanities **TEAM MEMBERS:** Patricia Berger, Professor Emerita, History of Art; Cathryn Carson, Associate Dean, Division of Social Sciences; Abigail T. De Kosnik, Associate Professor, Department of Theater, Dance, and Performance Studies; Kathleen Donegan, Associate Professor, English; Maelia Dubois, Doctoral Student, History; Ben Gebre-Medhin, Doctoral Student, Sociology; Nilofar Gardezi, Lecturer, English; Timothy Hampton, Professor, French and Comparative Literature; Christopher L. Hench, Postdoctoral Researcher, Berkeley Institute for Data Science; Todd Hickey, Associate Professor, Classics; Andrea Horbinski, Doctoral Student, Art; Erica Lee, Doctoral Student, History; Margaretta Lovell, Professor, History of Art; Jordan Mursinna, Graduate Student Researcher, Center for Science, Technology, Medicine, &

Society (CSTMS); Greg Niemeyer, Associate Professor, Art Practice; Maura Bridget Nolan, Associate Professor, English; Nicholas Paige, Professor, French; John Paulas, President, PhD Matters; AnnaLee Saxenian, Dean, School of Information; Brandon Schneider, Lecturer, Italian Studies; Rolla Selbak, Filmmaker; Francesco Spagnolo, Adjunct Professor, Music; Shannon Steen, Associate Professor, Theater, Dance, and Performance Studies; Alan Tansman, Professor, East Asian Languages and Cultures; Laura Ruberto, Professor, Humanities, Berkeley City College

### How Do New Data-Driven Econometric Impact Estimates Challenge Numerical Model-Driven Climate Policy Recommendations?

There are currently two streams of evidence on the economic impacts of climate change in the field of climate economics: 1) estimates derived from integrated assessment models and 2) estimates derived from data-driven, econometric studies. Model-driven estimates have been around for over two decades and currently are the only source of information that is used in official U.S. regulatory analysis. Newer econometric studies have started to question the model-based results, but have not been incorporated into the regulatory process at this point. There are also major conceptual questions about how these newer econometric studies could be incorporated into numerical models, so that a new generation of impact estimates can inform the regulatory process in the US. Unifying these two strands of evidence is one of the most pressing research needs in the area of climate economics. This Matrix Project Team tackled three specific questions within this broad field: first, how do modern, empirical, data-driven, econometric impact estimates compare to older estimates derived from integrated assessment models? Second, how can econometric impact estimates be incorporated into integrated assessment models, i.e. how can the new data-driven evidence be incorporated into the older analytical tool used in the policy process? Third, what can the modern econometric studies learn from the approaches taken in integrated assessment models, i.e. are there best practices in the older work that have not been used in econometric studies that should not be dismissed?

**TEAM LEADS:** David Anthoff, Assistant Professor, Energy and Resources Group (ERG); Max Auffhammer, Professor, Department of Agricultural and Resource Economics (ARE); Solomon Hsiang, Associate Professor, Goldman School of Public Policy **TEAM MEMBERS:** Helene Benveniste, Master's Student, ERG; Tamma Carleton, Doctoral Student, ARE; Cecilia Han Springer, Doctoral Student, ERG; Jonathan Kadish, Doctoral Student, ARE; Larry Karp, Professor, ARE; Eli Lazarus, Master's Student, ERG; Jonathan Proctor, Doctoral Student,

ARE; James Rising, Post-Doctoral Fellow, ERG; James Sallee, Professor, ARE; Jeffery Shrader, Post-Doctoral Fellow, Haas School of Business

### Network on Adolescent Well-being and Development (NAWD)

Recent reports from Lancet, UNICEF, and the World Health Organization (WHO) all highlight the need to transform how we frame and promote adolescent health. The dominant approach to adolescent health is organized around specific problems such as pregnancy, sexually-transmitted infections, or violence, lacking an integrative development lens and sufficient attention to how contexts—families, schools, neighborhoods, and beyond—shape health and behavior. In response to the need for integrative approaches, developmentally informed scientists across disciplines are now seeking to identify innovative approaches to promoting adolescent health, particularly with respect to interventions and policies that promote positive development that can yield benefits across diverse outcomes. These approaches are particularly needed for improving the wellbeing and life trajectories of young people who experience marginalization due to poverty, racism, and other structural barriers. UC Berkeley has tremendous potential to respond to this call to transform research and interventions in adolescent health, and to serve as an international leader in an interdisciplinary re-shaping of the field. There are numerous faculty and students across campus whose work is relevant to the contexts and factors that shape adolescent development, drawing on expertise in diverse fields such as psychology, medicine, economics, neuroscience, social welfare, sociology, public health, education, policy, and information science. The possibilities are exciting but all of the “players” on the all-star UCB team are already busy with existing commitments. It takes structure and vision to stretch them to work together collaboratively beyond our own research programs. To address the situation, this Matrix Project Team provided a structure and process to bring scholars across disciplines and departments together on feasible short-term first steps to establish a research agenda and develop funding proposals to support medium and long-term goals. The team organized monthly in-person lunch meetings, with ongoing collaborative work in between these meetings, to undertake a writing project and the development of funding proposals.

**TEAM LEADS:** Emily Ozer, Professor, Community Health Sciences, Public Health **TEAM MEMBERS:** Sarah Accomazzo, Post-doc, Social Welfare; Jennifer Ahern, Professor, Public Health; Coco Auerswald, Professor, Public Health; Jessica Burleigh, Master's Student, Social Welfare, Public Health; Ronald Dahl, Professor, Public Health; Julianna Deardorff,

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Professor, Public Health; Jeffrey Edleson, Professor, Social Welfare; Rachel Gartner, Doctoral Student, Social Welfare; Denise Herd, Professor, Public Health; Nehaa Khadka, Student, Public Health; Erin Murphy-Graham, Professor, Graduate School of Education; Amber Piatt, Researcher, Public Health; Ndola Prata, Professor, Public Health; Valerie Shapiro, Professor, Social Welfare; Jennifer Skeem, Professor, Social Welfare, Public Policy; Paul Sterzing, Professor, Social Welfare; Susan Stone, Professor, Social Welfare; Ahna Suleiman, Researcher, School of Public Health

### Questioning the Evidence on the Integration of Immigrants in Europe

Building on the work of the 2015-2016 Prospecting Team, “A Polarizing Europe,” this project team focused on the ways various actors use data to make arguments about immigration and integration in contemporary Europe. An elusive concept, integration is analyzed, interpreted, and depicted in diverse ways, in various forums, to different ends. We encounter the term in the popular media, political discourse and campaigns, film and literature, the courts and other government institutions, and in think tanks and academia. In all of these spaces, a wide range of data is employed to support different narratives about the integration or non-integration of European populations. Drawn from many sources, this data comprises educational and professional outcomes, marriage and domestic life, participation in civil society, religious observance, criminal or terrorist behavior, and national allegiance. It includes statistical analysis from various sources, and a wide array of images and narratives. Such data, broadly defined, is powerful. It allows actors in politics, laws, academia, media, popular culture, and the arts to make arguments about who is or is not integrated, what a given country—or Europe as a whole—is or is not, and what should or should not be done. Data is divisive. And as Europe faces an ongoing and unprecedented influx of migrants from the Syrian Civil War, among others, there is increasing pressure to evaluate Europe’s capacity to integrate immigrants. In analyzing the different stories that are told about the integration of immigrants and their descendants, the researchers in this team examined how data is gathered, analyzed, and presented to make certain arguments about the recent history of immigration in Europe.

**TEAM LEADS:** Jeroen Dewulf, Professor, German; Elena Kempf, Doctoral Student, History **TEAM MEMBERS:** Betsy Cooper, Researcher, School of Information; Sheer Ganor, Doctoral Student, History; Deniz Göktürk, Associate Professor, German; Kate Jastram, Lecturer, Law; Cristina Mora, Associate Professor, Sociology; Akasemi Nzinga Newsome, Researcher, Institute for European Studies; Abigail Stepnitz, Doctoral Student,

Jurisprudence and Social Policy; Sarah Stoller, Doctoral Student, History; Karina Vasilevska-Das, Doctoral Student, Anthropology

### Resilience and Transcommunity Knowledge-Sharing in Agroecosystems at the Base of the Himalaya

Disastrous events and environmental shocks disproportionately affect rural and poor populations. A hotspot for natural disasters with over 80% of the rural population dependent on agriculture and home-produced food, the Nepali Himalayas are especially vulnerable to earthquakes. Enhancing resilience and adaptive capacity can improve post-shock outcomes for both human and ecological communities. Considerable evidence suggests that diversified agroecosystems and agricultural practices are more resilient to economic and climate variability and change as compared to monocrop systems that rely heavily on external inputs and market demand. Diversified farming systems may protect natural resources, maintain or even increase agrobiodiversity, and strengthen farmer resilience to climate variability, natural disasters, or economic crises. This Matrix Research Team assessed agroecological resilience by examining vulnerabilities in socio-ecological systems. In partnership with local communities and non-governmental groups, they identified actions that can be taken to create a more sustainable future for people and the land. To increase understanding of how diverse and changing farming systems and livelihoods interact with post-shock community resilience, the researchers used a mixed-methods and participatory approach, conducting extensive fieldwork near the epicenters of the 2015 earthquakes in Nepal. The team expanded upon more traditional methods of data collection through a series



of knowledge-sharing platforms where communities are active participants in their own research and share data (i.e., strategies for increased resilience with neighbors).

**TEAM LEADS:** Robin Marsh, Researcher, Institute for Societal Issues; Isha Ray, Associate Professor, Energy and Resource Group; Inger Maren, Researcher, University of Bergen, Norway Plant; Dinesh Paudel, Faculty, Sustainable Development, Appalachian State University **TEAM MEMBERS:** Jessica DiCarlo, Student, Development Practice; Katie Epstein, Master's Student, Energy and Resources Group; Naya Paudel, Researcher, ForestAction Nepal Environmental Governance; Jeff Romm, Professor, Environmental Science, Policy and Management; Elizabeth Allison, Professor, California Institute of Integral Studies; Dil Bahadur Khatri, Researcher, ForestAction Nepal

## 2015-2016

### PROSPECTING TEAMS

#### Deploying Interdisciplinary Data Science to Understand the Global Impact of Climate Change

Quantifying the social and economic impacts of climate change is challenging and technical, however measurement of these effects is critical to designing global and national climate policies. Researchers in this Matrix Prospecting Team met to determine how modern data science techniques can best be applied to quantifying the effects of climate change on various dimensions of modern society, from global agricultural productivity to the prevalence of vector-borne diseases and violent conflicts in low-income countries.

The team developed a general framework for analyzing climate impacts and for integrating empirical results into large policy models. Researchers worked to apply data science to climate change impacts. Ultimately the research team sought to integrate their findings into the Global Climate Prospectus, a global interdisciplinary effort to synthesize the global impact of climate change over the coming century by linking climate models with empirical research of human responses to climate changes, thus offering policymakers a quantitative assessment crucial to the design of climate change policy.

**TEAM LEAD:** Solomon Hsiang, Associate Professor, Goldman School of Public Policy **TEAM MEMBERS:** Maximilian Auffhammer, Professor, Agricultural & Resource Economics (ARE); David , Professor, Energy & Resources Group (ERG); Edward Miguel, Professor, Economics; James Rising, Postdoctoral Fellow, ERG; Francis Moore, Postdoctoral Fellow, ARE; Michael Greenstone, Professor, Economics, University of Chicago; Amir Jina, Postdoctoral Fellow, Energy Policy Institute at University of Chicago; Ashwin Rodes, Postdoctoral Fellow, Energy Policy Institute at University of Chicago

#### Global Studies: A New Interdisciplinary Major at UC Berkeley

A new interdisciplinary major called Global Studies is planned as part of a major restructuring of the International and Areas Studies Teaching Programs (IASTP) at UC Berkeley. Housed within the Social Sciences Division of the College of Letters and Sciences, Global Studies will incorporate five existing IASTP majors—Development Studies, Latin American Studies, Middle Eastern Studies, Asian Studies, and Peace and Conflict Studies—and will also include courses and topics about other world regions (e.g., Africa, Europe) and from other units across campus (e.g., the Goldman School of Public Policy, the School of Public Health, the College of Natural Resources). The new major is envisioned to involve a matrix of areas and themes that students will choose from in formulating their curriculum. This Prospecting Team convened an interdisciplinary group of faculty, post-doctoral scholars, and graduate students to explore the challenges and opportunities of the new Global Studies major. Focusing on the intellectual identity and pedagogical mission of the major in order to guide and inform subsequent programmatic planning rather than curriculum, the team sought to foster dialogue across all the disciplines and campus units pertaining to Global Studies.

**TEAM LEADS:** Nathan Sayre, Assistant Professor, Geography **TEAM MEMBERS:** Leo Arriola, Professor, Political Science; Teresa Caldeira, Professor, City and Regional Planning; Gillian Hart, Professor, Geography; You-tien Hsing, Professor, Geography; Edward Miguel, Professor, Economics; Nancy



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Peluso, Professor, ESPM, Southeast Asian Studies; Alison Post, Professor, Political Science; Raka Ray, Professor, Sociology; Michael Watts, Professor, Geography

### Human Rights and the University

Long a center of human rights scholarship and innovation, UC Berkeley is today home to a wide range of human rights initiatives. The School of Law, where human rights doctrine and advocacy have been taught since the late 1960s, is now the home of the Human Rights Center and the International Human Rights Clinic, and it counts among its faculty some of the country's preeminent human rights practitioners and scholars. In the College of Letters & Science, faculty members and students have long been leaders in human rights scholarship and activism. Related work is also being done at the graduate schools of journalism, public policy, and social welfare on issues including poverty, discrimination, armed conflict, and state-sponsored abuses. The Human Rights Program (HRP) is among the recent additions to this research and advocacy landscape. This Matrix Prospecting Team convened UC Berkeley stakeholders from across campus to identify and foster opportunities for coordination between human rights projects on campus, inviting also the participation of Bay Area human rights practitioners. With a particular focus on the role and future development of the HRP, the team explored the interdisciplinary architecture that could most effectively support human rights research at Berkeley and proposed mechanisms to bridge Berkeley human rights research and human rights practices outside the academy.

**TEAM LEAD:** Lynsay Skiba, Director, Human Rights Program

**TEAM MEMBERS:** Sandra Bass, Director, Public Service Center; Melissa Candell, Student, Human Rights; Mark Danner, Professor, Graduate School of Journalism; Laurel Fletcher, Professor, Berkeley Law; Alexandra Havrylyshyn, Doctoral Student, Jurisprudence and Social Policy; Alexa Koenig, Professor, Berkeley Law; Thomas Laqueur, Professor, History; Saira Mohamed, Professor, Law; Kent Puckett, Professor, English; Debarati Sanyal, Professor, French; Daniel Sargent, Professor, History; Alan Tansman, Professor, East Asian Languages and Cultures; Brad Adams, Executive Director, Human Rights Watch, Asia Division; George Andreopoulos, Professor, Center for International Human Rights, John Jay College of Criminal Justice (CUNY); Susan Belinda Christian, Chair, San Francisco Human Rights Commission; María Domínguez, Local Organizer, Ella Baker Center for Human Rights

### The Impact of “Human Rights” in a Global Age

Between 2010 and 2012, a so-called “Arab spring” proliferated across countries in Africa and the Middle East. Heralded by Western media as the triumph of human rights, citizens in Egypt, Tunisia, and Libya, among others, vied for political participation and social justice. The terms of these movements, however, reflected a far more diverse and older set of civil and group rights than was reflected by “human rights” language. Though understood within the dominant language of “human rights,” these movements in fact embodied alternative models of rights and citizenship, which challenged the hegemony of individual claims. As this example demonstrates, current human rights thinking in both the popular political and academic realms limits as much as it expands. Since the late twentieth century, “human rights” has become the predominant paradigm for framing inequality and injustice, which facilitates unprecedented levels of attention for oft-underreported issues. But, as the language of human rights becomes more and more dominant, subsuming other struggles under this framework collapses their nuance, and threatens to yield narrower conceptions of equality and access. In the example of the Arab spring, the unique tenets of these movements and the underlying philosophies from which they emerged were re-narrated in a language that misrepresented or shielded these claims. Recently, there has been considerable interest in human rights across disciplines. The work by international lawyers and political scientists is now being complemented by a plethora of new perspectives, in academic disciplines from anthropology to comparative literature, which have begun to grapple with both the political meaning and daily negotiation of “human rights.” However, there have been few studies on the relationship between “human rights” and other conceptions of “rights.” Moreover, even within prominent academic forums of human rights debate, there has been comparatively little dialogue between disciplines. This Prospecting Team examined the pervasive language of human rights in our so-called “global age” and, in particular, how “human rights” as a language for inequality and injustice has shaped mobilization around these issues.

**TEAM LEADS:** Lasse Heerten, Postdoctoral Fellow, Human Rights Program; Zain Lakhani, Postdoctoral Fellow, Human Rights Program **TEAM MEMBERS:** Pheng Cheah, Professor, Rhetoric; Tabitha Kanogo, Professor, History; Tom Laqueur, Professor, History; Stefan Ludwig-Hoffman, Associate Professor, History; Saba Mahmood, Associate Professor, Anthropology; Saira Mohamed, Assistant Professor, Law; Stefania Pandolfo, Associate Professor, Anthropology; Debarati Sanyal, Professor, French; Daniel Sargent, Associate Professor, History; Stephen Small, Associate Professor, African American Studies



### Social Death: Race, Risk and Representation

First coined in 1985 by sociologist Orlando Patterson, the term “social death” refers to the condition of people not accepted as fully human by wider society. This Matrix Team convened scholars from diverse disciplines—including African American studies, geography, sociology, and ethnic studies—to track the different iterations of social death, both as theory and material practice. Researchers focused on the guiding question: to what extent does social death remain a useful analytic through which to understand the multitudinous processes of racialized death and dispossession in the modern era? In exploring interdisciplinary approaches to social death, a theory foundational to the study of racial slavery, political economy, and social ordering, the group charted renewed scholarly interest in social death, prompted, in part, by recent high-profile reminders. The team began by investigating the theoretical link between racialization and death and then focused on the topics of risk (incarceration, environment, and health) and representation (performance and visual culture).

**TEAM LEADS:** Brittany Meché, Doctoral Student, Geography

**TEAM MEMBERS:** Jamal Batts, Doctoral Student, African American Studies; Kenly Brown, Doctoral Student, African American Studies; Jessica Compton, Doctoral Student, Sociology; Sarah Cowan, Doctoral Student, History of Art; Natalia Duong, Doctoral Student, Performance Studies;

Jake Kosek, Professor, Geography; Amy Martinez, Doctoral Student, Ethnic Studies; Michael J. Myers II, Doctoral Student, African American Studies; Kathleen Powers, Doctoral Student, Rhetoric; Divya Sundar, Doctoral Student, City and Regional Planning; Joshua Williams, Doctoral Student, Theater and Performance Studies; Jared Sexton, Professor, African American Studies, University of California, Irvine

### Superintelligence and the Social Sciences

Superintelligence (or even merely advanced artificial intelligence) may revolutionize the social, political, economic, and biological structures of the 21st century. Superintelligence refers to biological or artificial or hybrid agent(s) capable of general purpose intelligence beyond that of the smartest non-enhanced humans. Even if superintelligence is not achieved, highly intelligent AI, which already exists today, has the potential to revolutionize social, political, economic, and biological structures. While this can potentially be a boon for humanity, like ending hunger and cancer, it is important to attempt to avoid potential pitfalls, as several scientists and engineers have pointed out (including Steve Wozniak, Ray Kurzweil, and Elon Musk). The preparation for the possibility of superintelligence will require cooperation between engineers and scientists, who have the technical knowledge, and social scientists and humanities scholars, who

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have the knowledge of the structures that can be affected. This Prospecting Team provided STEM researchers, social scientists, and humanities scholars the opportunity to interact, identify research issues, and collaborate in ways that can also be beneficial to humanity.

**TEAM LEADS:** Mahendra Prasad, Doctoral Student, Political Science; Thomas Gilbert, Doctoral Student, Sociology

**TEAM MEMBERS:** Sebastian Benthall, Doctoral Student, School of Information; David Birke, Doctoral Student, Economics; Paul Christiano, Doctoral Student, Computer Science; Cecile Fortuny, Doctoral Student, Vision Science; Katja Grace, Doctoral Student, Philosophy, Carnegie Mellon; Nick Hay, Doctoral Student, Computer Science; Rengyee Lee, Doctoral Student, Political Science; Patrick LaVictoire, Researcher, MIRI

### Work and Politics in the Digital Era

Focusing on the question of work and politics in the digital era, this Matrix Prospecting Team explored a variety of interrelated topics: the high-tech economy as a site of transformation for employment relations; the emergence of new work spaces, new labor market performances, and new labor politics; and the implications of these for the regulatory state. The work contract has become more flexible, from those who found start-ups to those who work in the so-called gig economy, which has led to greater atomization than older models of factory or office work. New work spaces have been adapted for new forms of interaction, both real and virtual. For example, new types of real spaces include makers-fairs, hackathons, incubators, accelerators, meet-ups, hacker hotels, high-tech live-work spaces, and even new neighborhoods, which parallel in some sense the classic proletarian neighborhoods. On the other hand, there are virtual spaces, such as blogs, online forums, and platforms, where for instance interest groups, freelancers, and MTurk workers post about their experiences. Little scholarly work has described the landscape of these spaces, who sponsors them, and how they function as networks that are useful to workers in both the short and long term. Labor market fitness and performance is meanwhile being “algorithmicized” on several fronts. First, job recruitment increasingly depends on measures of the self, collected and distributed by data aggregators. For instance, employers routinely use credit scores to assess the trustworthiness of job applicants; some are beginning to employ additional evaluative measures designed through personal analytics technologies. Second, job performance is also being tracked in ways not previously available. Tackling these complicated issues, researchers on this team also explored the reconceptualization of the role of the state as a regulator and an enforcer. By addressing the dynamic impacts of artificial intelligence and virtual workplaces on the labor market, this prospecting team

also created a bridge for UC Berkeley faculty—and professionals from across the Bay Area—to broadly explore how digital technologies are transforming modern work and politics.

**TEAM LEADS:** Marion Fourcade, Professor, Sociology

**TEAM MEMBERS:** Jenna Burrell, Professor, School of Information; Cathryn Carson, Professor, History; Carol Christ, Director, Center for Studies in Higher Education (CSHE); Ruth Collier, Professor, Political Science; Martin Kenney, Professor, Human Ecology; John Zysman, Professor, Political Science

### PROJECT TEAMS

#### Climate Change Economics

Economic evaluations of climate change are increasingly playing an important role in the debate about appropriate policies that target climate change. Recent examples include the highly influential Stern Review and recent regulatory impact assessments by the federal government. The field of climate change economics is by now large and diverse, both in terms of topics as well as methods, and often researchers specialized in one area have little knowledge of the wider research landscape. Examples of topics include the cost of mitigation, the damages caused by climate change and valuation of damages, the role of abatement in lowering damages and the associated abatement costs, design of policy instruments (e.g. taxes vs permit systems, second best policies in a world with existing economic distortions), international agreements on climate policy, risk assessment, and questions of distributional ethics. The set of social science methods employed in the field is also large: empirical econometric studies, computable general equilibrium models, integrated assessment models, and purely theoretical work. A comprehensive evaluation of climate change policy needs to draw on all these topics and methods. Preliminary discussion by the lead faculty of this Project Team suggested that many of the approaches currently used by different disciplines are not theoretically consistent with one another. Although a significant number of faculty, post-docs, and doctoral students at UC Berkeley work on economic aspects of climate change, due to the interdisciplinary nature of the problem, these individuals are located in different units on campus, use different methodologies, and work on a wide range of aspects of the climate problem. This Project Team formed a weekly climate change economics roundtable in order to provide a central hub for all climate economics researchers on campus to meet, exchange ideas, and start new research projects.

**TEAM LEADS:** David Anthoff, Assistant Professor, Energy and Resources Group (ERG); Max Auffhammer, Professor, Department of Agricultural and Resource Economics (ARE) & International Area Studies; Solomon Hsiang, Associate

Professor, Goldman School of Public Policy **TEAM MEMBERS:** Patrick Baylis, Doctoral Student, ARE; Ceren Baysan, Doctoral Student, ARE; Kendon Bell, Doctoral Student, ARE; Tamma Carleton, Doctoral Student, ARE; Frank Errickson, MS/Doctoral Student, Energy & Resources Group (ERG); Jonathan Kadish, Doctoral Student, ARE; Jonathan Proctor, Doctoral Student, ARE; James Rising, Post-Doctoral Fellow, ERG; Daniel Tregeagle, Doctoral Student, ARE; Valeri Vasquez, Masters/PhD track, ERG; Fiona Wilkes, Doctoral Student, ARE; Frances Moore, Assistant Professor, Agricultural and Resource Economics, UC Davis

## Developing Tools and Collaborations in Prosopographical and Historical Social Network Research Environments

Prosopography is the practice of identifying individuals mentioned in texts and setting them in their social contexts: families, social/professional groups, etc. Prosopography is encountered in many humanities research agendas where a fundamental task is the extraction and identification of persons from records across all areas of human endeavor. As its goal is the reconstruction of social contexts, increasingly computed as social networks, prosopography also belongs to the realm of social science. And in the physical and life sciences, prosopography and the computation of social networks support the study of the history of the creation and dissemination of scientific knowledge, and the history of research collections. As a Prospecting Team in 2014, the Berkeley Prosopography Services (BPS) team invited members of established campus and external Digital Humanities' prosopography projects to explore common approaches employed across domains, to identify reusable components of the BPS toolkit, and elicit user-driven needs for future expansion of BPS. As a Project Team, researchers delved deeper into each of these issues, dedicating each session to in-depth work on each of those specific topics. Ultimately this team advanced a toolkit to help researchers from Near Eastern Studies and other fields to gain understanding into the relationships among people and populations from the past.

**TEAM LEADS:** Laurie Pearce, Lecturer, Near Eastern Studies; Patrick Schmitz, Associate Director for Research IT and Strategy **TEAM MEMBERS:** Christopher Bravo, Doctoral Student, Classics; Quinn Dombrowski, Research IT; Todd Hickey, Associate Professor, Classics; Micaela Langelotti, Postdoctoral Fellow, Center for Tebtunis Papyri; Ray Larson, School of Information; Yiming Liu, Doctoral Student, School of Information; Clifford Lynch, Executive Director, Coalition for Networked Information; Talia Prussin, Doctoral Student, Ancient History and Mediterranean Archaeology; Patrick

Schmitz, Associate Director for Research IT and Strategy; Davide Semenzin, software developer; Niek Veldhuis, Professor, Near Eastern Studies; Adam Anderson, Doctoral Student, Harvard University; Mark Depauw, Katholieke Universiteit, Leuven (BE), Trismegistos; Carrie Schroeder, Professor, University of Pacific; Lisa Snyder, UCLA, Specialist in Modeling and Visualization; Michael Zellman-Rohrer, Doctoral Student, Classics; Bridget Almas, Tufts University

## Metaphor, Across Data Sets and Methodologies

The Berkeley campus was the source of the ongoing wave of studies on metaphor, language, and cognition, which began in 1980 with George Lakoff and Mark Johnson's *Metaphors We Live By*. This effort revolutionized research on metaphor and made it a hot interdisciplinary topic. Sessions on metaphor are regularly convened at conferences in linguistics, computer science, cognitive science, psychology, education, and even mathematics. Metaphor studies have in the last couple of decades become a hot topic in a wide range of disciplines, from corpus linguistics to lab psychology to political science to natural language processing to cross-cultural cognitive and linguistic comparison, and more recently beyond language to co-speech gesture and visual metaphor. We know a lot more about what metaphor is—as a human cognitive capacity—and how it is manifested socially and linguistically, than we did 20 years ago. Because of this continued investment in metaphor studies, the Berkeley campus has unique potential to be the place where these varied strands of research come back together—to assess what has been achieved, and how, for example, lab results should have an impact on corpus linguists' work or vice versa, and how all of these are relevant to social science issues, such as the political and rhetorical relevance of metaphor usage. This Research Team explored how the field of metaphor studies has spread across disciplines, from linguistics and lab psychology to political science and natural language processing, and how it can be useful in the context of challenges like climate change.

**TEAM LEADS:** Eve Sweetser, Professor, Linguistics; Mahesh Srinivasan, Assistant Professor, Psychology **TEAM MEMBERS:** Andrew Bartnof, Doctoral Student, Education; Till Bergmann, Doctoral Student, Cognitive & Information Sciences; Chelsea Coe, Doctoral Student, Political Science; Oana David, Doctoral Student, Linguistics; Ellen Dodge, Researcher, International Computer Science Institute, Berkeley; Ruthe Foushee, Doctoral Student, Psychology; Jisup Hong, Doctoral Student, International Computer Science Institute, Berkeley; Anna Jurgensen, Doctoral Student, Linguistics; George Lakoff, Professor, Linguistics and Cognitive Science; Patricia Lichtenstein, Doctoral Student, Cognitive &

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Information Sciences; Teenie Matlock, Professor, Cognitive and Information Sciences, UC Merced; Stephan Meylan, Doctoral Student, Psychology; Elise Stickles, Doctoral Student, Linguistics; Bodo Winter, Doctoral Student, Cognitive & Information Sciences, UC Merced

### A Polarizing Europe: A Cross-Disciplinary Investigation into Post-Cold War Extremism

Mass media outlets frequently deploy the term “extremism.” We observe the rise to prominence of political extremist parties in local, national, and European elections; the radicalization of social and religious groups within and across countries; the horrors wrought by lone actors. Whether incarnate in national, social, political, religious, or individual forms, it appears an inescapable feature of highly developed democracies throughout Europe. The term ‘extremism’ has become commonplace and unitary. Yet, its manifestations are numerous, diverse, and complex. In many instances, Europe is polarized and polarizing at the moment that it seeks to further integrate. Outstanding amid the ongoing fallout from the European Financial Crisis have been the turns to the far

political left and right in many European countries. Moreover, extremism takes many forms beside the political. It manifests in social and religious movements, popular media and the arts, and individuals’ actions. Around these phenomena, anxieties about ongoing economic and human hardship, the contours of the multi-ethnic European state, and the future of the European project seem to intermingle. In other words, political extremism reveals a raft of questions. At once, these are societal, national, and continental; economic, political, and sociological. All have intricate historical roots. In order to disentangle this complex story and move beyond monolithic explanations, this Project Team considered both the theoretical and empirical terms to understand the variegated forms of extremism within Europe so as to understand its causes and implications for European citizens, the nation-state, ethnic and/or religious minority groups, and the project of European Union.

**TEAM LEADS:** Jeroen Dewulf, Professor, German; Derek O’Leary, Doctoral Student, History **TEAM MEMBERS:** Jon Cho-Polizzi, Doctoral Student, German; Bradford DeLong, Professor, Economics; Patrick Donnelly, Doctoral Student, Political Science; Renate Holub, Adjunct Professor,



Interdisciplinary Studies; Elena Kempf, Doctoral Student, History; Ignacio Navarrete, Professor, Spanish & Portuguese; David Oppenheimer, Professor, Law; Kumars Salehi, Doctoral Student, German; Agnieszka Smelkowska, Doctoral Student, History; Nicholas Ziegler, Professor Emeritus, Political Science; Christoph Kalter, Postdoctoral Visiting Scholar, FU Berlin, History; Marianne Riddervold, Postdoctoral Visiting Scholar, ARENA Center for European Studies, University of Oslo

## Race, Data, and Inequality

The eugenics movement is the most obvious example of the use of social science research and data to justify existing, and deepening, racial inequalities. Informed by eugenics, the data and research produced at the turn of the 20th century by the new social science disciplines—including sociology, anthropology, psychology, and political science—was used to claim the physical and mental inferiority of African Americans and new immigrants, to justify the forcible removal to Native American youth to distant boarding schools, and support the expansion of the American empire. During and after World War II, much of this scholarly work was discredited, to the point that social science research instead was used to support the argument in favor of school desegregation in *Brown vs. Board of Education*. Yet the role of social science in U.S. society's understanding of the meanings behind racial differences remained contradictory. On the one hand, work in social psychology and sociology demonstrated the pernicious effects of segregation on individuals' life chances across a variety of measures. On the other, the behavioral revolution in the social sciences led to a privileging of survey-based observational research as the "gold standard" for generalizable scholarly work. But few of these new surveys contained enough respondents of color to include an analysis of racial differences within those statistical studies. The recent expansion of big data within the social sciences could be seen as a potential way of addressing information inequality. New ways of visualizing large quantities of data allow us to contextualize individuals in ways that were impossible before. Big data can also help scholars map structural factors onto individual outcomes, something social scientists have long struggled to do. New computing capacities, however, make possible levels of surveillance and data gathering that have never before existed. Given the historic tensions between policing agencies and low-income communities of color, these technologies have the potential to increase levels of restriction and criminalization within these neighborhoods in troubling ways. Focusing on this new data environment, the goal of this Project Team was to use cross-disciplinary conversation to deepen scholars' understandings of the tradeoffs they are making when they use a particular type of data and/or method. By pushing social

scientists to consider the assumptions they are making with their work, the team sought to move data-driven social science towards a more transparent, and potentially transformative, future.

**TEAM LEADS:** Lisa García Bedolla, Professor of Education and Political Science **TEAM MEMBERS:** Cybelle Fox, Professor, Sociology; Nikki Jones, Professor, African American Studies; Natalee Kehaulani Bauer, Doctoral Student, Education; Sunmin Kim, Doctoral Student, Sociology; Taeku Lee, Professor, Political Science and Law; Zeus Leonardo, Professor, Education; Mara Loveman, Professor, Sociology; Michael Omi, Professor, Ethnic Studies; Janelle Scott, Professor, Education and African American Studies; Na'ilah Suad Nasir, Professor, Education and African American Studies; Tina Trujillo, Professor, Education; Chris Zepeda-Millán, Professor, Ethnic Studies

## Re-representing the Earth Through Landscape, Infrastructure, and Data

Infrastructure lies at the material intersection of earth and technology. Infrastructural development utilizes data processing technologies in an effort to transform the earth according to a certain set of dominant values, thus creating a landscape that represents those values in its very appearance. Because it commands landscape's material expression, infrastructure—whether roads, dams, and fences, or transoceanic cables, server farms, and satellites—reproduces the very ideals and metrics by which the earth becomes represented as landscape. In fact, landscape itself works as a representational infrastructure; it diagrams the spatial forms by which we can even imagine—and imagine transforming—the earth. Through both its representational and material power, infrastructure filters the kinds of data available to us, constantly remaking the world in its own image: quantifiable, submissive, knowable. Imaging the earth through diverse representational technologies, including mapping, painting, aerial and space photography, and remote sensing, further reproduces the encoding of landscape by and as infrastructure. Exponentially accelerated in our digital era, this representational and material recursivity is nowhere more powerfully expressed than in the contemporary relation between networked infrastructural landscapes and the production, aggregation and analysis of geospatial data by sensing systems circumscribing and inscribed into the earth. Focusing on California's hydraulic infrastructure, this project team interrogated the production and representation of the earth through an inquiry into the nature of data. Beginning with the contention that the earth is always already expressed as landscape, mediated by and represented through cultural and economic ideals, the researchers sought to creatively and

## APPENDIX (continued)

confidently reimagine the role of data for the future of the earth. With the goal to facilitate qualitatively driven cross-disciplinary social scientific insights into otherwise technical problems, the team investigated the relationship between the earth and technology, critically examining the production of the earth through relations between landscape, infrastructure, and data.

**TEAM LEADS:** Phillip Campanile, Doctoral Student, Geography

**TEAM MEMBERS:** Alexander Arroyo, Doctoral Student, Geography; David Bates, Professor, Rhetoric; Hannah Birnbaum, Doctoral Student, City and Regional Planning; Zahra Hayat, Doctoral Student, Anthropology; Juliet Lu, Doctoral Student, Environmental Science, Policy, and Management; Anthropology; Jake Kosek, Professor, Geography; Julia Sizek, Doctoral Student, Anthropology, Native American Studies; Michael Watts, Professor, Geography; Aaron Young, Doctoral Student, City and Regional Planning

### 2014-2015

#### PROSPECTING TEAMS

##### Algorithms as Computation and Culture

While algorithms are a foundational concept in computer science, there has been increasing interest about the roles algorithms play in politics, media, science, organizations, and everyday life. As algorithms become more prevalent and visible in contemporary life, issues around their development and deployment will continue to rise, both in academia and public discourse. In recent years, there has been a growing academic literature taking algorithms as an object of cultural inquiry, as well as many conferences and workshops focused on studying algorithms from a more social scientific or humanistic perspective. In response to this growing approach to algorithms as culture, this Prospecting Team proposed that studying algorithms requires an interdisciplinary approach, seeing them as both computation and culture. Their meetings brought together computer scientists, social scientists, and humanities scholars interested in the interdisciplinary study of algorithms.

**TEAM LEAD:** Sebastian Benthall, Doctoral Student, School of Information; Jenna Burrell, Associate Professor, School of Information **TEAM MEMBERS:** Charlotte Cabasse-Mazel, Researcher, Berkeley Institute for Data Science; Coye Cheshire, Associate Professor, School of Information; Nicholas D'Avella, Postdoctoral Researcher, Program in Science and Technology Studies; Laura Devendorf, Doctoral Student, School of Information; Paul Duguid, Adjunct Professor, School of Information; Stuart Geiger, Doctoral Student, School of Information; Eric Giannella, Doctoral Student, Sociology;

Massimo Mazzotti, Associate Professor, History; Nick Merrill, Doctoral Student, School of Information; Helene Miale, Lecturer, Rhetoric; Deirdre Mulligan, Associate Professor, Law; Caitlin Rosenthal, Assistant Professor, History; Michael Tschantz, Researcher, International Computer Science Institute; Richmond Wong, Doctoral Student, School of Information; Cynthia Dwork, Distinguished Scientist, Microsoft Research; Amy Johnson, Doctoral Student, MIT HASTS

##### Crime, Community Support, and Policing

Crime and insecurity are major problems in cities across the United States and around the world. In the hardest hit communities, the state struggles to provide enforcement capacity and maintain legitimacy. A key issue facing policymakers and law enforcement is how to strengthen trust with the community. Community trust in law enforcement is crucial for effective community-based policing, and especially so when gang members and other criminals threaten retaliation for cooperation with police. Surveying attitudes on trust in law enforcement and threat perceptions about gangs is difficult given the vulnerability of low-income communities where these problems tend to obtain, as well as the sensitive nature of the questions. This Matrix Prospecting Team explored innovations in political science, psychology, and development economics on sensitive survey design to measure attitudes toward law enforcement in communities with organized criminal gangs. These techniques may eliminate some social pressures that prevent respondents from fully revealing their attitudes. This will allow for a more accurate assessment of how much support law enforcement has, where that support exists, and what potential opportunities could help strengthen community confidence in the police.

**TEAM LEADS:** Jack Glaser, Associate Professor, Public Policy; Aila Matanock, Assistant Professor, Political Science

**TEAM MEMBERS:** Amy Lerman, Assistant Professor, Public Policy; Rob MacCoun, Professor, Public Policy and Law; Steve Raphael, Professor, Public Policy; Jennifer Skeem, Professor, Social Welfare

##### Electoral Violence in Developing Countries

Most countries around the world have adopted democratic constitutions over the past three decades, but peaceful political competition has yet to become a norm in many of these countries. Violence has affected more than 120 of the nearly 600 presidential and parliamentary elections held around the world between 1985 and 2005. Election-related killings have, in fact, become so commonplace that a special rapporteur for the United Nations Human Rights Council recommends documenting such cases on an annual

basis. The Electoral Violence in Developing Countries (EVDC) Prospecting Team brought together faculty and graduate students from across disciplines to investigate the relationship between violence and democratic elections in developing countries. Researchers explored different means for measuring electoral violence and assessing whether violence complements or substitutes for non-violent electoral malpractices like fraud or vote-buying, as well as whether these dynamics are different in post-conflict contexts compared to other contexts.

**TEAM LEADS:** Leonardo Arriola, Associate Professor, Political Science **TEAM MEMBERS:** Thad Dunning, Professor, Political Science; Mariane Ferme, Associate Professor, Anthropology; Solomon Hsiang, Assistant Professor, Public Policy; Aila Matanock, Assistant Professor, Political Science; Edward Miguel, Professor, Political Science; Nancy Peluso, Professor, Environmental Science, Policy, and Management; Manuela Travaglianti, Lecturer, Peace and Conflict Studies; Michael Watts, Professor, Geography

## Envisioning Radical Medicine

How can we envision and design innovative ways of addressing inequities and inequalities in clinical medicine, as informed by critical theory as well as clinical and personal experience? Synthesizing various forms of expertise and methodologies, this Prospecting Team sought to develop a new form of medical practice through collaborative approaches to long-standing problems of inequality and injustice in clinical medicine. Bringing together not only scholars from multiple disciplines, but also physicians, patients, and community members, the team made the collective education of all its members a priority and reimagined the way both theory and practice can be informed by the expertise of patients and community members. Inspired by the Italian psychiatrist Franco Basaglia's translation of philosophy into praxis, researchers in the group were united by a common goal of creating a social medicine proper—a healing of the illnesses of not only individual patients but also society itself. Over the course of the term, the team worked to co-design possible experiments wherein critical theory informed clinical practice. The team's approach was motivated by desire to move beyond the limits of existing frameworks of healthcare interventions. Such interventions, members of the group argued, represent flawed engagement with the philosophy of liberal humanism that privileges the suffering of an individual, atomistic patient, blocking alternative, radical targets of medicine, such as racism, economic inequality, environmental exploitation, gender violence, and other forms of injustice and inequality that manifest through the patient, clinician, and/or the clinical encounter.

**TEAM LEADS:** Sam Dubal, MD/Doctoral Student, Harvard Medical School/UC San Francisco; Nancy Scheper-Hughes, Professor, Anthropology **TEAM MEMBERS:** Seth Holmes, Associate Professor, Medical Anthropology and Public Health; Nick Nelson, Clinical Assistant Professor, UCSF/ Highland Hospital; Josh Neff, MA/MD Student, UC Berkeley/UCSF; Nadia Graber, MD/Doctoral Student, UC Berkeley/UCSF; Anthony Wright, Doctoral Student, UC Berkeley/UCSF

## The Establishment of Designated Emphasis in European Studies

Led by the director of UC Berkeley's Institute of European Studies, this Prospecting Team laid the groundwork for a Designated Emphasis (DE) in European Studies, a new academic program for graduate students integrating the social sciences, humanities, and professional schools. The team provided administrative support to organize a series of meetings with faculty from different departments and schools who are interested in this plan. European Studies is characterized by an interdisciplinary orientation. It includes a large variety of fields, from history, literary and cultural studies, philosophy, linguistics, and political science to sociology, economics, journalism, social sciences, geography, architecture, business, and law. The Designated Emphasis in European Studies will link the Institute of European Studies; the Institute of Slavic, East European, and Eurasian Studies; and the EU Center. This connection to the campus' research institutes will provide students with privileged access to fellowships and contacts to a series of European partner institutions and gives them the chance to interact with European visiting scholars and guest speakers at the institutes' many lectures, conferences, and events. The Designated Emphasis will also be linked to the European language programs on the Berkeley campus, which will allow students to develop the necessary linguistic skills in order to be able to study Europe's multilingual identities.

**TEAM LEAD:** Jeroen Dewulf, Professor, German **TEAM MEMBERS:** Thomas Laqueur, Professor, History; David Oppenheimer, Professor, Law; Gordon Rausser, Professor, Agricultural and Resource Economics; Neil Fligstein, Professor, Sociology; Pierre-Olivier Gourinchas, Professor, Economics; John Zysman, Professor, Political Science; Mark Sandberg, Professor, Scandinavian; Beate Fricke, Professor, History of Art; Deniz Gokturk, Professor, German; John Connelly, Professor, History; Beverly Crawford, Professor, Political Science; Gerard Roland, Professor, Economics; Mark Bevir, Professor, Political Science; David Zilberman, Professor, Agricultural and Resource Economics; Mia Fuller, Professor, Italian; David Vogel, Professor, Business School; Barry Eichengreen, Professor, Economics; Katerina Linos, Professor, Law; Greg Castillo,

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Professor, Architecture; Nick Ziegler, Professor, Political Science; Marion Fourcade, Professor, Sociology; Barbara Spackman, Professor, Italian; Mario Wimmer, Professor, Rhetoric; Déborah Blocker, Professor, French

### Neuroeconomics Interventions to Reduce Asset-Price Bubbles Associated with Animal Spirits

Neuroeconomics offers a novel approach to understanding asset-price bubbles and developing policies for preventing bubbles. Econometric methodology encounters difficulties in identifying asset-price bubbles retroactively, let alone in real time. The challenges presented by bubbles may result from econometricians assigning themselves the hapless task of measuring only external variables when assessing group-level effects (i.e., asset-price bubbles) that arise partly from internal, neuroeconomic processes. The largely missed opportunity to forecast the recent financial-system crisis has led to calls for new macroeconomic theory and methodology. Neuroeconomists now have an opportunity to step into this analytical void left by traditional econometric and macroeconomic approaches. This Prospecting Team assessed whether new applications of neuroeconomic methods may be useful for detecting the emergence of asset-price bubbles. Participants discussed a research program that aims to develop a neuroimaging-based approach to financial-system regulation, which would alert regulators and/or financial market participants when traders show a high prevalence of herding-related neuroimaging biomarkers. In this view, evolutionarily ancient neurocircuitry mediates herding-related decisions underlying asset-price bubbles, whereas healthy (i.e., non-bubble) asset-price increases are driven by decisions based on deliberative neocortical neurocircuitry.

**TEAM LEADS:** Daniel Acland, Adjunct Professor, Public Policy; John L. Haracz, Goldman School of Public Policy, UC Berkeley and Department of Psychological and Brain Sciences, Indiana University **TEAM MEMBERS:** Noam Yuchtman, Assistant Professor, Business School

### Prosopography and Historical Social Networks

Prosopography is the practice of identifying individuals mentioned in texts and setting them in their social contexts: families, social groups, etc. Prosopography is encountered in many humanities research agendas because its fundamental task is the extraction and identification of persons from records from all areas of human endeavor. As its goal is the reconstruction of social contexts, increasingly construed as social networks, prosopography also belongs to the realm of social science. Convening as a Prospecting Team, Berkeley

Prosopography Services (BPS) brought together identified and potential campus users and partners whose research needs and technical contributions would augment the development of additional features and enhancements to the existing project concept and architecture, and extend its program of community engagement, particularly on the Berkeley campus. The BPS demonstrator corpus is a group of cuneiform texts from ancient Iraq, written on clay tablets in the period following the reign of Alexander the Great. However, in discussions at Digital Humanities and Data Science activities on the Berkeley campus, researchers in the natural and biological sciences have indicated that the BPS model of probabilistic assertions for modeling individual persons emulates the research flow in their work as well.

**TEAM LEADS:** Laurie Pearce, Lecturer, Near Eastern Studies; Patrick Schmitz, Associate Director for Research IT and Strategy **TEAM MEMBERS:** Ahmed Asad, Associate Professor, Near Eastern Studies; William F. Hanks, Professor, Anthropology and Linguistics; Todd Hickey, Associate Professor, Classics; Ray Larson, Professor, Information; Rita Lucarelli, Assistant Professor, Near Eastern Studies; Francesca Rochberg, Professor, Near Eastern Studies; Niek Veldhuis, Professor, Near Eastern Studies

### Risk Management and Resiliency in Latin American Cities

Latin America is currently the most urbanized continent in the world after North America, with 79% of the population living in urban areas. The high urbanization rates that the continent experienced since the 1940s have been



accompanied by substantive political changes, such as the decentralization processes in the last three decades, which have drastically changed the role of local governments in economic development and policy decision-making. These changes have additionally augmented the importance of urban planning in the everyday life of populations. This Prospecting Team interrogated the capacity of Latin American cities to manage new and recurring challenges for human welfare and for governmental interventions in the built and natural environments. These include the considerations of sustainability and the increasing likelihood of disastrous events that damage the built environment due to climate change; conflicts generated through competing goals of freedom and public security, specifically as they relate to policing and imprisonment; and tensions between the capacities of formal governing bodies, and the realities of survival for the growing population of urban Latin Americans who live under informal conditions, encompassing public health, proximity to natural hazards, and frameworks of “illegality” and “citizenship.” The twin concepts of “risk management” and “resiliency” encompass these issues and link them with broader interdisciplinary and theoretical debates, including the risk society, the relations between crisis and governance, and resiliency as a means of understanding how the structure and functioning of cities evolve to accommodate change. Researchers found the municipality to be a useful lens for examining themes of risk and resiliency in Latin America.

**TEAM LEADS:** Heather Bromfield, Doctoral Student, City and Regional Planning **TEAM MEMBERS:** Teresa Caldeira, Professor, City and Regional Planning; Manuel Castells, Professor Emeritus,

Sociology and City and Regional Planning; Eva Harris, Professor, Public Health; Dan Kammen, Professor, Public Policy and Nuclear Engineering; Mara Loveman, Associate Professor, Sociology

## PROJECT TEAMS

### The Politics of Biology and Race in the Twenty-First Century

Although the Human Genome Project confirmed that race is not a biological category in 2000, an increasingly genetic analysis of race has sparked a new racial politics in America. This Project Team, also supported by the UC Center for New Racial Studies, researched how race has been rewritten in our genes during an era of neoliberal multiculturalism. This “post-racial” period, in which color-blind racism dominates racial ideology, also marks the emergence of biological citizenship and race consciousness at the molecular level. Contrary to popular belief, race has become the center of political inquiry, albeit genetically. Beginning with the premise that biotechnologies have not overcome race as a biological category but reinforced it through genomic sciences, the team studied the impacts and implications of such scientific transformations in racial discourse for both Ethnic Studies and Public Health scholarship, social inequalities, and state intervention, criminalization, and surveillance. Their conversations were informed by a set of guiding questions: How does whiteness operate in biotechnologies? How does race-based genetic variation continue to determine race as a scientific truth without the stigma of racism? How does the renewed relationship between race and biology provide



## APPENDIX (continued)

a modern mechanism for maintaining the racial order and its violent enforcement? How does this new racial politics neutralize science and elide the material impacts of racism in society? How can we advance an anti-racist method of study in Public Health that relates racial disparities to social inequalities rather than biological difference? The team addressed these questions collaboratively, using theories and methods from both Ethnic Studies and Public Health to research and produce research about the contemporary politics of biology and race. The collaboration between these two disciplines in particular, participants averred, may lead to a critical intervention in biopolitics both theoretically and practically. While Ethnic Studies offers qualitative theories of race and racism as a social formation that intersects with other axes of difference such as gender and sexuality, Public Health offers quantitative methods of measuring determinants of health and analyzing data. Bringing a diverse array of tools from the Humanities to the burgeoning field of epigenetics, the group's inquiry critically bridged studies of comparative racialization and biomedical research.

**TEAM LEADS:** Keith Feldman, Assistant Professor, Ethnic Studies; Mahasin Mujahid, Assistant Professor, Public Health

**TEAM MEMBERS:** Emon Elboudwarej, Doctoral Student, Department of Epidemiology; Irene Headen, Doctoral Student, Department of Epidemiology; Tala Khanmalek, Doctoral Student, Ethnic Studies

### The Human Rights to Water and Sanitation

In 2010, the UN General Assembly recognized a human right to water and sanitation, acknowledging that everyone, without discrimination, is entitled to adequate, safe, accessible, and affordable water. But what, in practice, does the human right to water entail? How should human rights influence the allocation of water among agriculture, industry, households, and the environment? How should the human right to water influence decisions to delegate service provision to the private sector? This Project Team explored how the human right to water can be effectively implemented in a world of social and economic inequality. Over the course of the year, the research of the group laid the groundwork for a large empirical study of the human right to water. Participants first considered the practical meaning of the human right to water, defined by the U.N. Committee on Economic, Social and Cultural Rights as the right of everyone to sufficient, safe, acceptable and physically accessible and affordable water for personal and domestic uses. While work translating this principle into concrete and realistic policy mechanisms has only just begun, the researchers reviewed studies of water access and water management with the goal of identifying empirical

definitions of each element of the human right to water. The group also developed preliminary metrics for measuring its implementation. The team then proceeded to explore current developments in countries that recognize the human right to water, including South Africa, Bolivia, Cambodia, Colombia, Nigeria, Panama, and Tunisia. These countries vary in many ways relevant to successful implementation, including their levels of wealth, political systems, technological capacity, within-country inequality, and water management strategies. Team members considered each country's current efforts to realize the human right to water, with the goal of identifying appropriate case studies for developing the study's research design.

**TEAM LEADS:** Charisma Acey, Assistant Professor, City and Regional Planning; Isha Ray, Professor, Energy and Resources Group

**TEAM MEMBERS:** John Colford, Professor, Public Health; Helene Silverberg, Adjunct Associate Professor, Political Science; Charlotte Smith, Lecturer, Public Health; Jennifer Wolch, Professor, City and Regional Planning

### Technology for Measurement (T4M)

A quiet revolution is underway in the social sciences. New technology solutions—from smart phones to environmental sensors and high-resolution satellite imagery—are profoundly reshaping the way we collect, store, visualize, and analyze data. In industrialized, urban settings, those tools have been used by the public and private sectors to measure different aspects of household behavior. Data sources include web and mobile phone traffic, power and water utility meters, public transit smart cards, ATM transactions, retail loyalty cards, and snapshots from thousands of satellites in orbit around the planet. Yet, considerable infrastructure is required for at-scale deployment of these technologies, and as a result, there are relatively few channels for studying household behavior in remote, resource-constrained settings, including most of the developing world. To enable cost-effective large-scale data collection in resource-constrained settings, we need to adapt new engineering advances for specific field and “laboratory” research applications. This requires multidisciplinary expertise: engineers and computer scientists to develop the hard and software for new data collection tools, but also economists and social scientists to understand market forces, user behavior, and the protection of individual privacy. The Technology for Measurement (T4M) Matrix Project Team brought together five entities on campus—D-Lab, BIDS, X-Lab, Big Data Psychology, and CEGA—to discuss the application of new technology solutions in field research settings. Participants identified concrete modifications required to existing methods for data collection in resource-constrained settings, helped assemble interdisciplinary teams of faculty and doctoral students to develop and field test new tools,



and provided support to those groups in applying for larger grants to continue the projects catalyzed by the team.

**TEAM LEADS:** Dav Clark, Lecturer, School of Information

**TEAM MEMBERS:** Eric Brewer, Professor, Electrical Engineering and Computer Science; Paul Gertier, Professor, Business; Shachar Kariv, Professor, Economics; Edward Miguel, Professor, Economics; Tapan Parikh, Associate Professor, Information; Raja Sengupta, Professor, Civil and Environmental Engineering; Joan Walker, Associate Professor, Civil and Environmental Engineering; Catherine Wolfram, Professor, Business

## 2013-2014

*\*Please note that because research teams were invited, summaries of their research were derived not from applications but interviews with team members.*

### RESEARCH TEAMS

#### Behavior Measurement and Change

With mobile devices and other data-driven sensors, today's researchers have the ability to measure human behavior "in the wild" on an unprecedented scale. This Matrix Team convened scholars from fields such as transportation management and

HIV prevention to explore how emerging methods can be harnessed to measure (and positively change) human behavior. The work informed a paper that was published in *Science*.

**TEAM LEADS:** Shachar Kariv, Professor, Economics; Raja Sengupta, Professor, Civil and Environmental Engineering

**TEAM MEMBERS:** John Canny, Professor, Electrical Engineering and Computer Science; Jim Casey, Professor, Mechanical Engineering; Aaron Fisher, Assistant Professor, Psychology; Sheri Johnson, Professor, Psychology; Joan Walker, Associate Professor, Civil and Environmental Engineering

#### Data, Science, and Inquiry

Led by scholars from anthropology and history, this team addressed key questions related to the transformation of social science in the 21st century, including the impact of "big data" on academic practice and the role of data in analysis. The project informed a cross-disciplinary project, "The Crowd and the Cloud," and inspired a new Matrix Research Team on algorithms and culture, which has led to multiple conferences and publications.

**TEAM LEAD:** Cori Hayden, Associate Professor, Anthropology; Massimo Mazzotti, Associate Professor, History

**TEAM MEMBERS:** David Bates, Professor, Rhetoric; Gloria Brar, Assistant Professor, Cell and Developmental Biology; Cathryn Carson,

## APPENDIX (continued)

Associate Professor, History; Timothy Choy, Professor, Anthropology; Paul DuGuid, Professor, Information; Alistair Illes, Assistant Professor, Environmental Science, Policy, and Management (ESPM); Jack Kosek, Assistant Professor, Geography; David Savage, Assistant Professor, Chemistry; Anna-Lee Saxenian, Professor, Information; Kimmen Sjolander, Professor, Bioengineering; Mario Wimmer, Adjunct Professor, Rhetoric; David Winickoff, Associate Professor, (ESPM)

### Emergence and Aggregation

Through readings and discussions, this team contemplated the historical origins of the emergence problem. Readings included the book *Invisible Hands: Self-Organization in the Eighteenth Century*, as well as an in-progress book about the problem of emergence in contemporary quantitative social science.

**TEAM LEADS:** Jenna Johnson-Hanks, Professor, Demography and Sociology; Jonathan Sheehan, Professor, History

**TEAM MEMBERS:** Mara Loveman, Associate Professor, Sociology



## Framing Rights and Immigration

This research team brought together scholars from the fields of sociology, law, political science, education, philosophy, and Latinx/Latin American Studies to explore a key fact: whether Californians think immigrants should have a path to citizenship depends on how the question is framed. The group published a paper in *Social Forces* and founded the Berkeley Interdisciplinary Migration Initiative (BIMI).

**TEAM LEAD:** Irene Bloemraad, Associate Professor, Sociology

**TEAM MEMBERS:** Kathy Abrams, Professor, Law; Catherine Albiston, Professor, Law and Sociology; Patricia Baquedano-Lopez, Associate Professor, Education; Taeku Lee, Professor, Law and Political Science; Sarah Song, Associate Professor, Law and Political Science; Leti Volpp, Professor, Law; Kim Voss, Professor, Sociology

## Imperial Declines

This team explored how and why empires reach a peak before inevitably diminishing in power and shrinking in reach; participants considered how past lessons of imperial decline could be applicable for today's policymakers. Outcomes included an edited volume and an academic conference.

**TEAM LEAD:** Carlos Norena, Associate Professor, History

**TEAM MEMBERS:** Thomas Metcalf, Professor Emeritus, History; Mark Peterson, Professor, History; Caitlin Rosenthal, Assistant Professor, History; Daniel Sargent, Associate Professor, History; Elena Schneider, Assistant Professor, History; Nicholas Tackett, Associate Professor, History; Steven Weber, Professor, Political Science and Information

## The Neuroscience of Decision-Making

To better understand the links between biology and decision-making, researchers from the Haas School of Business, UCSF, and other units examined the intersection of neurology, psychology, economics, and political science. As a result, scientists at UCSF adopted new behavioral tests as part of their protocols.

**TEAM LEAD:** Ming Hsu, Assistant Professor, Haas School of Business **TEAM MEMBERS:** Coye Cheshire, Associate Professor, Information; Tom Griffiths, Associate Professor, Psychology; Richard Ivry, Professor, Psychology; Robert Knight, Professor, Psychology; George Lakoff, Professor, Linguistics; Tom Laqueur, Professor, History; Steven Weber, Professor, Information

## Socionatures

A team of geographers and scholars from other disciplines examined the connections (and gaps) in our understanding of human-caused and natural phenomena such as climate change. Using the case study of arroyos, washed-out gullies commonly found in the southwestern United States, the group looked at the different approaches that social and natural scientists take toward understanding the links among ecological and sociological processes.

**TEAM LEAD:** Nathan Sayre, Associate Professor, Geography

**TEAM MEMBERS:** Wayne Getz, Professor, College of Natural Resources; Jake Kosek, Assistant Professor, Geography; Laurel Larsen, Assistant Professor, Geography; Jun Sunseri, Assistant Professor, Anthropology

## Synching Sounds: A Phonological Phenomenon

A research team of faculty and graduate students from different disciplines—including psychology, linguistics, and Slavic Studies—probed the implications of “agreement by correspondence,” a linguistic peculiarity that leads people to change similar sounds in words to be more like each other. The project resulted in published papers and two graduate dissertations, as well as an international symposium.

**TEAM LEAD:** Sharon Inkelas, Professor, Linguistics

**TEAM MEMBERS:** Susanne Gahl, Associate Professor, Linguistics; Larry Hyman, Professor, Linguistics; Keith Johnson, Professor, Linguistics; Jonah Katz, Visiting Assistant Professor, Linguistics; Darya Kavitskaya, Associate Professor, Slavic Languages and Literatures

## Tupí-Guaraní Language and History Group

Drawing from linguistics, computational biology, and biological anthropology, this working group studied the evolution and migration patterns of indigenous Tupí-Guaraní peoples of South America. This group achieved breakthrough findings and published multiple papers.

**TEAM LEAD:** Lev Michael, Associate Professor, Linguistics

**TEAM MEMBERS:** Natalia Chousou-Polydouri, Doctoral Student, Environmental Science; Zachary O'Hagan, Doctoral Student, Linguistics

## APPENDIX (continued)

### FOLLOWING IS A LIST OF SELECT PAST MATRIX-SPONSORED AND HOSTED EVENTS

#### 2015

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**1/29/15:** “How Economic, Social, and Technological Forces are Reshaping Market Research and the Applied Social Sciences,” Matrix Distinguished Lecture by Scott McDonald, Adjunct Professor, Marketing at Columbia Business School and Former Senior Vice President, Research for Condé Nast Publications

**1/30/15:** Matrix Opening Gala, a celebration of Matrix’s new home in Barrows Hall

**3/18/15:** “Remaking College,” a moderated discussion featuring Michael Kirst and Mitchell Stevens, authors of *Remaking College*. Organized by the UC Berkeley Center for Studies in Higher Education (CSHE) and Social Science Matrix

**4/8/15:** Berkeley Digital Humanities Faire, organized by Digital Humanities at Berkeley

**4/14/15:** “Democratization and Massification of Higher Education in Turkey and Challenges Ahead,” a lecture by Bekir S. Gür, PhD. Organized by CSHE and Social Science Matrix

**4/21/15:** “The Sputnik Syndrome: How Russian Universities Make Sense of Global Competition in Higher Education,” featuring Igor Chirikov, Russian scholar. Organized by CSHE and Social Science Matrix

**4/27/15:** “Econometric Regime Shifts and the U.S. Subprime Bubble,” Andre Anundsen, Norwegian Central Bank. Organized by the Matrix Research Team, “Neuroeconomics Interventions to Reduce Asset-Price Bubbles Associated with Animal Spirits”

**4/27/15:** “Chinese Universities in the Xi Jinping Era,” featuring William C. Kirby, Harvard University, and Wen-Hsin Yeh, UC Berkeley. Organized by CSHE and Social Science Matrix

**6/22/15:** “Survival Analysis, Event History Modeling, and Duration Analysis,” part of the The Inter-university Consortium for Political and Social Research (ICSPR) Summer Workshops at UC Berkeley

**7/6/15:** “Social Network Analysis,” part of the the ICSPR Summer Workshops at UC Berkeley

**8/21/15:** “Natural Language Processing for the Long Tail,” featuring David Bamman, Assistant Professor, UC Berkeley School of Information. Hosted in conjunction with the Digital Humanities at Berkeley Summer Institute

**9/5/15:** Conference in Honor of Thomas Laqueur, Helen Fawcett Distinguished Professor of History, presented by the Townsend Center for the Humanities and Social Science Matrix

**9/9/15:** Climate Readiness Institute Roundtable

**9/11/15:** Berkeley Center for Economics and Politics (BCEP) Conference

**9/16/15:** “Rich Schools, Poor Students: Tapping Large University Endowments to Improve Student Outcomes,” featuring Jorge Klor de Alva, President of Nexus Research and Policy Center. Organized by CSHE and Social Science Matrix

**9/21/15:** “Minerva: A New Kind of Higher Education,” featuring Stephen M. Kosslyn, Dean, Minerva School of Arts and Science at KGI. Organized by CSHE and Social Science Matrix

**9/24/15:** J.I. Staley Book Prize Award Ceremony, honoring Professor William F. Hanks for his book, *Converting Words: Maya in the Age of the Cross*. Organized by Social Science Matrix

**10/2/15:** “America Needs Talent,” featuring Jamie Merisotis, president and CEO of Lumina Foundation, in conversation with Carol Christ, Director of CSHE. Organized by CSHE and Social Science Matrix

**10/21/15:** “The (In)Justice System: A Panel Discussion on the Lifecycle of the Problem.” Organized by UC Berkeley’s Human Rights Program and the Human Rights Center at Berkeley Law, together with the Townsend Center for the Humanities and Social Science Matrix

**10/27/15:** “Righting the Balance for Human Rights: State and Non-State Actors Since 1995,” a lecture by Bennett Freeman, Chair of the Advisory Board of Global Witness and Former Deputy Assistant of State for Democracy, Human Rights, and Labor, organized by Social Science Matrix and the UC Berkeley Human Rights Program

**10/28/15:** “Leveraging Institutional Data to Tell the University of California’s Story: An Introduction to the UC Accountability Report and Information Center,” by Pamela Brown, Vice President of Institutional Research and Academic Planning (IRAP) for the University of California. Organized by CSHE and Social Science Matrix

**10/30/15:** Inaugural Conference and Celebration, a two-day event marking the launch of the Peder Sather Center for Advanced Study

**11/5/15:** “A New Model For the American Research University,” featuring William B. Dabars, Senior Research Fellow, Office of the President, Arizona State University. Organized by CSHE and Social Science Matrix

**11/30/15:** Matrix Holiday Party, an end-of-year celebration

**12/3/15:** “Violence: Electoral Conflict in Comparative Perspective,” a two-day conference coordinated by the Center on the Politics of Development’s Electoral Violence in Developing Countries initiative

**12/8/2015:** “Hacking Measurement,” presentations by BIDS Collaborative students, presented by the Matrix Research Team, “Technology for Measurement”



**12/11/15:** “Berkeley Symposium on the Study of Women, Gender, and Sexuality,” a two-day conference bringing together scholars from across campus

## 2016

**1/15/16:** “Translating Worlds: The Epistemological Space of Translation,” a seminar organized by William F. Hanks

**1/28/16:** “Technology and Governance: The Next 20 Years,” a conference organized by Professor Steven Weber and the UC Berkeley Center for Long-Term Cybersecurity

**2/8/16:** “The (In)Justice System: A Panel on Incarceration, Education, and Reentry: Reversing the School-to-Prison Pipeline,” coordinated by the Human Rights Program and the Human Rights Center at Berkeley Law, with support of the Townsend Center for the Humanities and Social Science Matrix

**2/18/16:** “Corporate Data and Human Rights: A Panel on Corporate Transparency and Accountability Around Internet Surveillance and Censorship,” coordinated by the Human Rights Program in partnership with Social Science Matrix, the Berkeley Center for Law & Technology, and the Center for Technology, Society & Policy

**2/23/16:** “The New Flagship University,” John Douglass, Center for Studies in Higher Education. Organized by CSHE and Social Science Matrix

**2/26/16:** “Sexual and Gender-Based Violence in Conflict,” Dr. Sarah Sewall, Under Secretary for Civilian Security, Democracy, and Human Rights, U.S. Department of State. Co-sponsored by Social Science Matrix, the UC Berkeley Human Rights Program, Goldman School of Public Policy, and the Human Rights Center at Berkeley Law

**3/29/16:** “Human Rights in the Digital Age: Using Tech and Data to Investigate Human Rights Abuses,” presented by the Human Rights Center and Social Science Matrix

**3/30/16:** “The One-University Idea and its Futures,” a presentation by Patricia A. Pelfrey, CSHE Senior Research Associate. Organized by CSHE and Social Science Matrix

**3/30/16:** “How States and Societies Count,” a presentation by Professor Rebecca Jean Emigh, UCLA. Co-sponsored by the Department of Sociology and the Department of Demography

**4/3/16:** MomiCon: Misconceptions of the Mind Conference (MomiCon), organized by June Gruber and Tania Lombrozo

**4/5/16:** “Race, Class, and Affirmative Action,” Sigal Alon, Associate Professor, Sociology & Anthropology, Tel Aviv University. Organized by CSHE and Social Science Matrix

**4/6/16:** “What’s Next for Turkey?” Nicole Pope, Columnist for *Today’s Zaman*, organized in partnership with the Townsend Center for the Humanities

**4/7/16-4/8/16:** Berkeley Digital Humanities Faire, organized by Digital Humanities at Berkeley

**4/11/16:** “Teaching Evaluations: Biased Beyond Measure,” Philip B. Stark, Associate Dean for the Division of Mathematical and Physical Sciences at UC Berkeley. Organized by CSHE and Social Science Matrix

**4/14/16:** “If Clothes Make the (Wo)man, Does a Doctorate Make the Professional?” Ami Zusman, Research Associate, Center for Studies in Higher Education, and author of *Driving Change*. Organized by CSHE and Social Science Matrix

**4/18/16:** “Parenting to a Degree: How Family Matters for College Women’s Success,” Laura Hamilton, Associate Professor of Sociology, University of California, Merced. Organized by CSHE and Social Science Matrix

## APPENDIX (continued)

**4/20/16:** “Algorithms to Live By: The Computer Science of Human Decisions,” Brian Christian, author, *The Most Human Human*; Tom Griffiths, Professor of Psychology and Cognitive Science, UC Berkeley. Organized by the Center for Science, Technology, Medicine, and Society, the Department of Psychology, and Social Science Matrix

**4/22/16:** “A Polarizing Europe: Identity, Aesthetics, and Radicalism in the Post WWII Era,” a graduate conference organized by the Institute of European Studies

**4/23/16:** Development and Political Economics Graduate Student Conference (DEVPEC), organized by the Berkeley Center for Economics and Politics (BCEP)

**5/2/16:** Human Rights Interdisciplinary (HRI) Minor Conference, organized by the Human Rights Program

**5/3/16:** Benjamin Jealous, former president and CEO of the National Association for the Advancement of Colored People (NAACP), presented as part of the The (In)Justice System series, organized by the Human Rights Program and the Human Rights Center at Berkeley Law, with support of the Townsend Center for the Humanities and Social Science Matrix

**5/4/16:** “Homo-Prestigious? University Status and the Academic Career,” Stephanie Beyer, Visiting Scholar from Germany and resident at the Center for Studies in Higher Education. Organized by CSHE and Social Science Matrix

**5/6/16:** “Diaspora Across the Disciplines,” St. Clair Drake Research Symposium, organized by the Department of African American Studies

**5/10/16:** “Academic Freedom & Value Protection Conundrums: How Global Engagements of Universities Foster an Ongoing Debate,” Grace Taneri, Research Scholar from Cyprus and Resident at the Center for Studies in Higher Education. Organized by CSHE and Social Science Matrix

**6/13/16:** “The R Statistical Computing Environment: The Basics and Beyond,” part of the ICPSR Summer Workshops at UC Berkeley

**6/22/16:** Society for the Advancement of Socio-Economics (SASE) Conference, coordinated by the Center on Economy and Morality (EMMA), a Matrix-affiliated center

**6/27/16:** “Survival Analysis, Event History Modeling, and Duration Analysis,” part of the ICPSR Summer Workshops at UC Berkeley

**7/11/16:** “Social Network Analysis,” part of the ICPSR Summer Workshops at UC Berkeley

**9/15/16:** “Rethinking Left-Wing Melancholia: Between Marx and Benjamin,” Enzo Traverso, Susan and Barton Winokur Professor in the Humanities, Cornell University. Organized by the Program in Critical Theory

**9/16/16:** “Weapons of Math Destruction,” a book talk with Cathy O’Neil, organized by Social Science Matrix with the Center on Economy and Morality (EMMA), a Matrix-affiliated center

**9/20/16:** “Beyond Clicktivism: Exposing Human Rights Violations in the Digital Age,” a panel discussion organized by the Human Rights Center and Human Rights Program

**9/26/16:** “The Malicious Fallacy of the Free Market,” Robert Reich, Chancellor’s Professor of Public Policy, presented as the Sociology Department Colloquium

**9/28/16:** “Maintaining Access to Public Higher Education,” presented by Leroy M. Morishita, President, California State University, East Bay. Organized by CSHE and Social Science Matrix

**10/5/16:** Philippine Diasporas: Race, Gender, and Intimacy,” a symposium organized by the Matrix Research Team, Migration, Racialization, and Gender: Comparing Filipino Migration in France and the United States

**10/14/16:** Open Forum with the Community, organized by the Biological Sciences Division (BSD) and the College of Natural Resources (CNR)

**10/17/16:** Practice Job Talk Workshop, organized by the Center on the Politics of Development

**10/18/16:** “The Public University & The Legislative Process,” featuring State Senators Loni Hancock and Carol Liu. Organized by CSHE and Social Science Matrix

**10/24/16:** “Quantitative Description Workshop,” organized by the Center on Economy and Morality (EMMA), a Matrix-affiliated center.

**10/26/16:** “Clinton’s Tuition Free Proposal: Would it Work and What Would it Mean in California?” A panel discussion organized by CSHE and Social Science Matrix

**10/27/16:** “Democracy and Religious Pluralism: India, Pakistan, and Turkey in Comparative Perspective,” a two-day conference. Co-organized by Karen Barkey, the Haas Distinguished Chair of Religious Diversity at the Haas Institute for a Fair and Inclusive Society and a Professor of Sociology at UC Berkeley, and Sudipta Kaviraj, Professor of Indian Politics and Intellectual History at Columbia University

**10/28/16:** “Beyond Victims and Voices: On Writing as a Radical Act,” a book talk featuring Viet Nguyen, Pulitzer Prize-winning author of *The Sympathizer*. Organized by the Department of Ethnic Studies and Social Science Matrix

**11/1/16:** “Water as a Human Right,” Leo Heller, Special Rapporteur on the Human Rights to Safe Drinking Water and Sanitation. Organized by the Matrix Research Team on the Human Rights to Water and Sanitation

**11/1/16:** “The Gardener and the Carpenter: What the New Science of Child Development Tells Us About the Relationship Between Parents and Children,” a book talk featuring Alison Gopnik, Professor of Psychology. Organized by Social Science Matrix with the UC Berkeley Education Psychology Library

**11/4/16:** “State Responses to Cyber Threats,” a conference organized by the Center for Long-Term Cybersecurity

**11/9/16:** “Research-Practice Partnerships and Promoting the Use of Research Evidence,” Vivian Tseng, Vice President of Programs, William T. Grant Foundation, organized by Social Science Matrix

**11/28/16:** “Urban Gun Violence: Realities and Solutions,” a panel discussion organized by the Human Rights Program as part of the Human Rights Center Series on Gun Violence

**11/30/16:** “A Conversation with Professor Arlie Hochschild, Author, *Strangers in their Own Land: Anger and Mourning on the American Right*,” a book talk presented by Social Science Matrix and the UC Berkeley Education Psychology Library

**12/1/16:** “Election Polling and Democratic Consolidation in Taiwan, Korea, and Japan,” a conference organized by Taeku Lee, Professor of Political Science and Law at UC Berkeley

**12/6/16:** “Modern German Histories,” a workshop organized by Der Kreis, a graduate student working group

## 2017

**2/6/17:** “The Pink Tide and Ebb: Assessing the Left in Latin America,” with Jeffery R. Webber, Senior Lecturer at the School of Politics and International Relations at Queen Mary University of London, and Alejandro Velasco, Associate Professor of Modern Latin America at the Gallatin School and the Department of History at New York University. Co-sponsored by the Center for Latin American Studies, Department of Sociology, the Department of History, and the Center for Race and Gender

**2/24/17:** “God, Sex, and Gender: a Conversation on Adrian Thatcher’s Redeeming Gender,” featuring Adrian Thatcher, Honorary Professor of Theology, University of Exeter, and Thomas W. Laqueur, Helen Fawcett Distinguished Professor of History, UC Berkeley. Organized by the Berkeley Center for the Study of Religion Colloquium

**2/27/17:** “Adult Mortality Determinants in Low and Middle Income Countries,” presented by the Center on the Economics and Demography of Aging (CEDA), a Matrix-affiliated center

**3/2/17:** “Buddhist Economics: An Enlightened Approach to the Dismal Science,” a book talk with Professor Clair Brown. Co-sponsored by the UC Berkeley Department of Economics and the Institute for Research in Labor and Employment

**3/10/17:** “From Morphology to Structuralism: Goethe, Levi-Strauss, and the Sciences of the Concrete,” featuring Michael Saman, independent scholar. Organized by the Institute of European Studies and Department of German

**3/15/17:** “Police and Guns in the Age of Concealed Carry,” presented as part of the Human Rights Center Series on Gun Violence

**3/22/17:** “How can we explain the (cultural) evolution of language?” a presentation by Luc Steels, ICREA Research Professor, Institut de Biologia Evolutiva (UPF-CSIC) Barcelona

**3/28/17:** “Lifestyle and the Aging Brain,” a conference organized by the Center on the Economics and Demography of Aging

**4/2/17:** Travel for Advancing the Science of Transportation Demand Management, organized by Global Metropolitan Studies

**4/3/17:** Ten Years of Global Metropolitan Studies, a symposium organized by Global Metropolitan Studies

**4/24/17:** “Preventing Gun Violence: What Works and What Stands in the Way,” a panel discussion presented as part of the Human Rights Center Series on Gun Violence

**4/27/17:** “The Republican Civil War and the Election of 2016,” hosted by the Institute for the Study of Societal Issues and the Center for Right-Wing Studies

**5/2/17:** “An Orderly Mess,” Dr. Helga Nowotny, Professor emerita of Science and Technology Studies, ETH Zurich, and a founding member of the European Research Council, presented as the Social Science Matrix Distinguished Lecture

**5/4/17:** Matrix Open House, a celebration to mark the end of the academic year

**5/5/17:** “Longue Durée History of Algorithmic Thinking in Mathematics,” a symposium coordinated by the Center for Science, Technology, Medicine, & Society (CSTMS)

**6/2/17:** Youth-Plan, Learn, Act Now (Y-PLAN) 2020, a seminar organized by the Center for Cities and Schools at UC Berkeley

**6/19/17:** “Survival Analysis,” part of the ICPSR Summer Workshops at UC Berkeley

**7/31/17:** “Bayesian Multilevel Models,” part of the ICPSR Summer Workshops at UC Berkeley

**8/7/17:** “Latent Class Analysis in Social Science Research,” part of the ICPSR Summer Workshops at UC Berkeley

**8/30/17:** 2017 Political Psychology Pre-Conference, organized by the American Political Science Association

**9/18/17:** “Creating Psychological Profiles from People’s Digital Footprints,” a presentation by Michal Kosinski, Assistant Professor in Organizational Behavior, Stanford University. Presented by the UC Berkeley Department of Sociology

## APPENDIX (continued)

**9/21/17:** Open House, presented by Global Metropolitan Studies

**9/29/17:** “Freedom of Speech Under Pressure in the World’s Liberal Democracies,” Peder Sather Symposium featuring Azita Raji, Former US Ambassador to Sweden, and Dr. Knut Olav Åmås, Executive Director, Fritt Ord Foundation. Organized by the Peder Sather Center

**10/11/17:** “Can High Reliability Rescue Health Care?” organized by the Center for Catastrophic Risk Management

**10/17/17:** “Between the Digital and the Political: New Ecologies of Mind, A Symposium,” part of the History and Theory of New Media Lecture Series. Co-sponsored by the Berkeley Center for New Media, the Townsend Center for the Humanities, and the Dean of Arts and Humanities

**11/30/17:** DARPA NGS2 Conference, organized by the Defense Advanced Research Projects Agency and Social Science Matrix

**12/6/17:** “Mindfulness in Action: Discovering How U.S. Navy SEALs Build Capacity for Mindfulness in High-Reliability Organizations (HROs),” organized by the Center for Catastrophic Risk Management

**12/7/17:** “20th Year Anniversary Symposium,” presented by the Doctoral Program in African Diaspora Studies

### 2018

**1/19/18:** Advanced Workshop in Climate Economics, organized by the Climate Economics Research Team

**1/22/18:** “Data Driven: Truckers and the New Workplace Surveillance,” a lecture by Karen Levy, Assistant Professor of Information Science at Cornell University and Associated Faculty at Cornell Law School, co-sponsored by the Department of Sociology and Algorithmic Fairness and Opacity Working Group

**2/1/18:** “Cosmopolitanism and Belonging,” Social Science Matrix Distinguished Lecture by Craig Calhoun, President of the Berggruen Institute and Centennial Professor at the London School of Economics

**2/17/18:** “Gender and Women’s Health Care in Early Modern Europe: The Birth of Modern Midwifery and Obstetrics,” a symposium organized by the Department of History celebrating the publication of *Midwife to the Queen of France: Diverse Observations*, by Alison Lingo, Research Associate in History at UC Berkeley

**2/21/18:** “The North Korean Quagmire and the Moon Jae-in Government: Nukes, Humanitarian Assistance, and Prospects for Inter-Korean Relations,” featuring Chung-in Moon, Distinguished University Professor at Yonsei University and John Linton, Director, International Health Care Center,

Severance Hospital of Yonsei Medical School. Organized by the Institute of East Asian Studies (IEAS), Berkeley APEC Study Center, Social Science Matrix, and Center for Korean Studies (CKS)

**2/27/18:** “Threatened Scholars: A Panel Discussion on Responses to Attacks on Academic Freedom Around the World,” presented as part of the Solidarity Series, sponsored by Social Science Matrix

**3/9/18:** “Activism and Pragmatism: Building a Career as a Global Change Maker: A Brown Bag Discussion,” featuring Bennett Freeman, Chair of the Advisory Board of Global Witness and Former Deputy Assistant of State for Democracy, Human Rights, and Labor. Organized by Social Science Matrix

**3/15/18:** “Human Rights in the Neoliberal Maelstrom,” a lecture by Samuel Moyn, Professor of Law and History, Yale University, presented as part of the Rhetoric Spring Colloquium, co-sponsored by Social Science Matrix and the Human Rights Program

**3/16/18:** “Humanitarianism, Religion, and Nationalism,” a conference co-sponsored by Social Science Matrix; Townsend Center for the Humanities; Human Rights Program; Center for Democracy, Toleration, and Religion; Institute for South Asia Studies; and the Berkeley Center for the Study of Religion

**4/9/18:** Proseminar featuring John Shattuck, Professor of Practice, Fletcher School of Law and Diplomacy, Tufts University; President Emeritus, Central European University; and Senior Fellow, Carr Center for Human Rights Policy, Harvard Kennedy School. Organized by Social Science Matrix

**4/11/18:** “Continent Divided,” a conference organized by the Institute of European Studies and the Matrix Research Team, “A Continent Divided: Building Bridges, Finding Truth”

**4/13/18:** “Reimagining Political Knowledge: Race and the Carceral State,” Cathy J. Cohen, David and Mary Winton Green Professor, Department of Political Science, University of Chicago, presented as part of the “Research to Impact” series by the Haas Institute for a Fair and Inclusive Society

**4/23/18:** “The Great Regression. Machine Learning, Econometrics, and the Future of Quantification,” a presentation by Etienne Ollion, Associate Professor and Permanent Researcher, French National Centre for Scientific Research (CNRS)

**4/27/18:** Development and Political Economics Graduate Student Conference (DEVPEC), organized by the Berkeley Center for Economics and Politics (BCEP)

**5/1/18:** Matrix Open House/Social Sciences Fest, an end-of-year celebration of the social sciences at UC Berkeley, organized by Social Science Matrix and the College of Letters & Science

**5/11/18:** “Radical Markets: Panel Discussion,” with E. Glen Weyl, Principal Researcher at Microsoft and Visiting Senior Research Scholar in Economics and Law, Yale University. Co-sponsored by the UC Berkeley Opportunity Lab and the Gilbert Center and presented as part of the Social Science Matrix Solidarity Series

**5/23/18:** Graduate Student Workshop, organized by Marion Fourcade, Professor of Sociology

**7/30/18-8/3/18:** “Bayesian Multilevel Models,” part of the ICPSR Summer Program in Quantitative Methods of Social Research

**8/6/18-8/10/18:** “Latent Class Analysis in Social Science Research,” part of the ICPSR Summer Program in Quantitative Methods of Social Research

**8/13/18-8/17/18:** “Machine Learning: Uncovering Hidden Structure in Data,” part of the ICPSR Summer Program in Quantitative Methods of Social Research

**9/12/18:** “The New Normal,” featuring Ivan Pupulidy, Adjunct Professor, University of Alabama at Birmingham. Presented by the Center for Catastrophic Risk Management

**9/20/18:** “Navigating Borders and Violence: Indigenous Maya Families and Central American Children in Migration,” featuring Leisy J. Abrego, Associate Professor, Department of Chicana/o Studies at UCLA, and Patricia Baquedano-López, Associate Professor in the UC Berkeley Graduate School of Education. Organized by the “Native/Immigrant/Refugee” Matrix Research Team

**10/11/18:** Screening of *Dizhsa Nabani*, part of the Fieldwork Forum Talk Series related to indigenous language revitalization

**11/2/18:** “2018 Midterm Election: Blue Wave or Red Wall?” Panel presented by the Citrin Center for Public Opinion Research and Social Science Matrix

**11/5/18:** “Queering Science: Rethinking Biology, Sex, & Environment” Panel presented by the “Queer Ecologies: Constructions of Gender and Sexuality in Animal Behavior Science” Matrix Research Team

**11/15/18:** “Winners and Losers in the 2018 Midterm Elections: Why it Happened and What it Means,” a panel discussion presented by Social Science Matrix together with the Berkeley Public Law and Policy Program, Jack Citrin Center for Public Opinion Research, and Institute for the Study of Societal Issues

**11/15/18:** “The New Research Compact: Social Science Partnerships for the Common Good,” Matrix Distinguished Lecture presented by Alondra Nelson, President of the Social Science Research Council (SSRC). Organized by Social Science Matrix

**11/25/18:** “Getting the Facts on Sexual Violence & Sexual Harassment,” a panel discussion presented as part of the Matrix Research Team, “Community Conversations on Sexual Violence and Harassment: Narratives of Activism, Inclusion, Confidentiality, Accountability, and Healing”

**11/30/18:** With and For the Multitude: Cruising a Waterfront with José Esteban Muñoz,” a presentation by Dr. Cleo Woelfle-Erskine, Assistant Professor of Equity and Environmental Justice in the School of Marine and Environmental Affairs at the University of Washington. Organized by the Matrix Research Team on “Queer Ecologies: Constructions of Gender and Sexuality in Animal Behavior Science”

## 2019

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**3/4/19:** “The Rise of Illiberal Governance: Comparing Viktor Orban and Donald Trump,” Matrix Distinguished Lecture by John Shattuck, Professor of Practice, Fletcher School of Law and Diplomacy, Tufts University; President Emeritus, Central European University; and Senior Fellow, Carr Center for Human Rights Policy, Harvard Kennedy School

**3/5/19:** “The 2020 Election: The Challenges and Changes Facing Political Polling,” featuring Peter D. Hart, Founder, Hart Research. Presented by Social Science Matrix together with the Jack Citrin Center for Public Opinion Research and Charles and Louise Travers Department of Political Science

**3/19/19:** “American Opinion on Immigration: Implications for Policy,” a panel discussion organized by Social Science Matrix together with the Citrin Center for Public Opinion Research, Public Law & Policy @ Berkeley, the Institute of International Studies (IIS), and the Institute for the Study of Societal Issues

**4/18/19:** 2019 Social Science Fest/Matrix Open House: A Celebration of the Social Sciences at UC Berkeley

**5/3/19:** “Gender and Politics on the Eve of 2020,” Citrin Center Conference on Public Opinion. Organized by Social Science Matrix with the Citrin Center for Public Opinion

**5/13/19:** “Renovating Democracy,” a book talk with Nathan Gardels & Nicholas Berggruen. Organized by Social Science Matrix

**5/13/19:** “How Do Communities Heal After an Incident of Sexual Violence?” A panel discussion presented as part of the Matrix Research Team, “Community Conversations on Sexual Violence and Harassment: Narratives of Activism, Inclusion, Confidentiality, Accountability, and Healing”

## Matrix's 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 in Education from Boston University and a Bachelor's Degree from Grand Valley State University.



### William F. Hanks

Bill Hanks is Director of Social Science Matrix and holds the Berkeley Distinguished Chair in Linguistic Anthropology. Bill 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.



### Jessica Stewart

Jessica Stewart serves as Associate Director of Programs for Social Science Matrix. She received her PhD from the History of Art Department at UC Berkeley in 2015. Having worked for both university and civic museums, Jessica has collaborated extensively with faculty and teachers to integrate interdisciplinary object- and exhibitions-based learning into their teaching. In addition to five years of experience managing programs, she brings to Matrix a commitment to advancing transdisciplinary scholarship and a knowledge of international research trends.



### 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 Social Science 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. A perpetually fascinated observer of human behavior, he holds a BA in anthropology from Harvard College.

# Acknowledgments

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**Stephen Frederick Ross**

**Eva Seto**

**Evelyn Tom Wong**

**Laura Wen-yu Young**

## **Photo Credits**

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### **FRONT COVER:**

Girls transport produce from their floating farm by boat on Inle Lake in Myanmar.

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### **BACK COVER:**

An organic chrysanthemum farmer smiles in front of her crops in La Trinidad Valley, Benguet, Philippines.

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Hundreds of Rohingya refugees cross the border from Myanmar into Cox's Bazar, Bangladesh.

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## CONTACT

Social Science Matrix  
UC Berkeley  
820 Barrows Hall  
Berkeley, CA 94720-1922  
510.664.7391  
[socialsciencematrix@berkeley.edu](mailto:socialsciencematrix@berkeley.edu)  
[matrix.berkeley.edu](http://matrix.berkeley.edu)