DATA & SOCIETY ANNUAL REPORT

2017 — 2018

Data&Society

Data & Society

Data & Society is an independent
nonprofit research institute that
advances public understanding of the
social implications of data-centric
technologies and automation.

Through interdisciplinary research
and engagement, we work to ensure
that knowledge guides the develop-
ment and governance of technology.

This report presents an overview of
institutional highlights from the
fiscal year spanning May 2017
to May 2018.

LETTER FROM THE PRESIDENT AND EXECUTIVE DIRECTOR

The social and cultural implications of data-centric and automated technologies are enormous. To resolve the hard questions around the design and governance of these technologies, we need to ensure that the values and assumptions that inform their creation are visible and intentionally chosen by using an evidence base built on empirical social science. Data & Society's team is focused on both research and engagement to better inform various stakeholders who are responding to the role of technology in society. In the past year, Data & Society researchers, staff, and fellows have contributed by:

—— Adding legal and sociological arguments to a key privacy Supreme Court case;
—— Changing the conversation around automated systems, policing, and evidence;
—— Combating misinformation by converting research into action and best practice;
—— Uniting partners in rapid response to widespread surveillance of the disadvantaged; and
—— Creating shared terminologies—and outlining emerging risks—for topics such as precision medicine and disinformation.

This annual report provides a snapshot of Data & Society in a year of tremendous growth, change, and creativity. Our organization has made the commitment to undertake both rigorous, convention-challenging research and targeted engagement in order to share timely insights with the communities and networks where they can have the greatest impact. And as we work to bridge and translate between research and practice communities, we are learning and iterating rapidly.

Data & Society represents a network as well as an organization. We are always looking to create connections, and we invite you to reach out, sign up for our weekly newsletter, attend a public talk at Data & Society, and get to know our broader community.

Our deepest respect goes to the network of world-class researchers, staff, fellows, advisors, and partners who make our work at Data & Society a reality. We are tremendously grateful to our supporters, without whom this powerful work could not continue.

Thank you for believing in our vision and our work.

DANAH BOYD
FOUNDER AND PRESIDENT

JANET HAVEN
EXECUTIVE DIRECTOR

LEADERSHIP

Janet Haven
Executive Director

BOARD OF DIRECTORS
danah boyd
Founder and President of the Board, Data and Society and Principal Researcher, Microsoft Research

Catherine Bracy
Co-Founder and Executive Director, TechEquity Collaborative

Anil Dash
CEO, Glitch

Alexander Macgillivray
Former United States Deputy Chief Technology Officer

Alondra Nelson
Professor of Sociology, Columbia University and President, Social Science Research Council

For a full list of Data & Society advisors, researchers, fellows, staff, and affiliates, please visit: www.datasociety.net/people.

In 2017–2018, Data & Society worked to balance our commitment to **rigorous empirical research** with new **engagement** efforts to ensure that knowledge reaches those shaping the development and governance of technology.

This year, we began our first **strategic planning** sprint to calibrate efforts so that our research insights continue to have both **resonance** and reach.

As Data & Society moves into its fifth year, we will continue to pursue frame-breaking research questions informed by the realities of those who may be adversely affected by data-centric and automated technologies.

Our objectives: ⟶

To challenge existing narratives about the purpose and power of technology in society using rigorous interdisciplinary research

To expand and support a diverse field of people and organizations grappling with cultural, legal, political, and technical approaches to issues raised by data-centric technologies

To ensure that civil society, media, policymakers, and industry engage with our research insights—and those of our broader network—to inform and reframe decision-making around technology

To encourage a culture and practice of open experimentation and new forms of knowledge production

Research at Data & Society falls under three overarching themes:

01 VULNERABILITIES IN SOCIO-TECHNICAL SYSTEMS

While calls for greater accountability mechanisms within socio-technical systems are widespread, these systems are increasingly subject to manipulation. These systems are also vulnerable to biased data that infuse algorithmic models. These conditions require an assessment of strategic manipulation, a broad imagination about the possibilities for encoding fairness and accountability into technical systems, and deep ethnographic research that describes and understands new social activity.

How do we understand and combat different types of vulnerabilities in socio-technical systems? How do we reframe accountability debates with evidence to take into account this emerging reality?

02 SYSTEMS OF RIGHTS, EQUITY, AND GOVERNANCE IN A NETWORKED WORLD

Rights and values provide legal and ethical frameworks to guide decision-making; inspire human-centric policy; and hold institutions, nation-states, and powerful individuals to account across jurisdictions. The use of rights and values as a source of governance and design inspiration for automated and data-centric technologies requires both re-examination and, potentially, a challenge to existing assumptions.

Can we use a rights-based framework to guide the development of artificial intelligence? What are the implications for AI developed under a range of political systems? What do we need to take into account to ensure just and equitable outcomes when automated systems intersect with public institutions?

03 INTERSECTIONS OF HUMANS AND INTELLIGENT SYSTEMS

Conventional narratives around automated systems often assign power and agency to the machines. But humans remain significant actors—as designers, partners, users, or contraveners—in these systems. The nature and value of their contribution to the system's function, as well as its real-life outcome, is often elided or invisible.

How are people maintaining or reclaiming their agency as actors within automated systems? What are the social and cultural trade-offs as humans become less visible but still play important roles, and what are the new norms and policy implications of those shifts? What new frames can we bring through interdisciplinary research to understand the near-future of human experience alongside intelligent systems, and the broader implications for society?

> Our researchers aim to produce rigorous, high-quality, and relevant evidence that can meaningfully inform, ground, and frame public debates.

Data & Society's four emerging research tracks are:

01. Media Manipulation and Disinformation, which includes the Media Manipulation Initiative, Disinformation Action Lab, and various Platform Accountability projects;

02. Social Instabilities in Labor Futures, which includes multiple projects, the upcoming release of the book *Uberland*, and engagement work with labor stakeholders;

03. Health and Data, which includes projects focused on the unintended consequences of health data collection, equitable outcomes, and healthy behavior with tech; and

04. Social Impacts of AI, which includes interconnected work areas such as Fairness, Accountability, and Transparency in Machine Learning; human infrastructures of AI, and human rights and AI.

What follows is a high-level overview of our larger research tracks. For a full range of outputs over the course of 2017–18, please visit www.datasociety.net.

01   MEDIA MANIPULATION AND DISINFORMATION

The Media Manipulation Initiative takes a sociotechnical approach to understanding the social, political, and economic incentives to **game information systems, websites, platforms, and search engines**—especially in cases where the attackers intend to destabilize democratic, social, and economic institutions. Media Manipulation uses empirical research to identify the unintended consequences of **socio-technical systems** and to track and address threats.

This year, the team produced three reports and one paper covering a broad range of themes: SEO and "alternative facts," content moderation, and the recent "attention hacking" of journalists and editors by coordinated online extremists, antagonists, and manipulators.

The initiative additionally hosted multiple closed-door engagements with field stakeholders to increase organizational capacity across disciplines. Relatedly, the Disinformation Action Lab piloted two ongoing projects and published a primer on "data voids" in search engine queries.
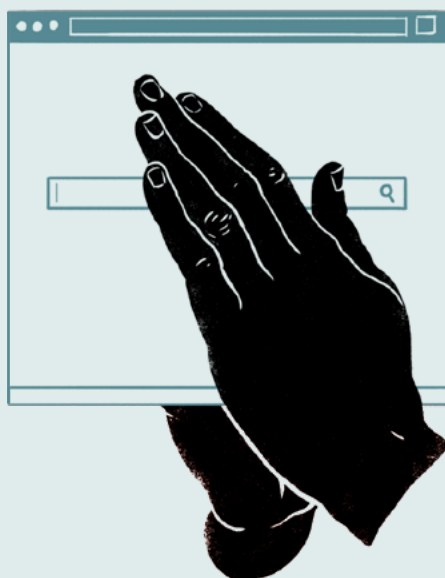
"Computational systems can incentivize or automate media content in ways that result in broader circulation regardless of accuracy or intent."

CAROLINE JACK, *LEXICON OF LIES*

1   Researcher Alex Rosenblat, Visiting Scholar Anne Washington, Founder and President danah boyd
2   Media Manipulation/Platform Accountability Research Lead Joan Donovan
3   Researcher Robyn Caplan

"It is naive, going forward, to assume that technology can flatten entrenched inequalities through standardization and scale."

JULIA TICONA, ALEXANDRA MATEESCU, AND ALEX ROSENBLAT, *BEYOND DISRUPTION*
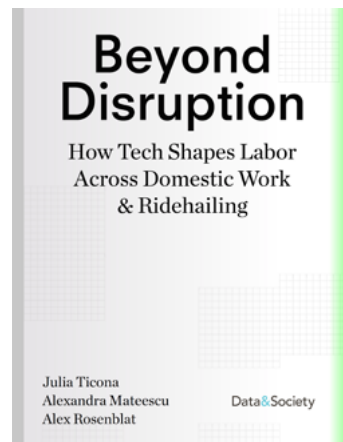
02 SOCIAL INSTABILITIES IN LABOR FUTURES

Technology is disrupting, destabilizing, and transforming many aspects of the labor force. The Social Instabilities in Labor Futures initiative seeks to better **understand emergent disruptions in the labor force** as a result of data-centric technological development, with a special focus on **structural inequalities.**

This year, the Future of Labor team released *Beyond Disruption*, an ethnographic report representing interviews with over 100 domestic and ridehailing platform workers in major U.S. cities to reveal how technology is reshaping the future of labor. Insights from the report were featured in researcher op-eds in the *New York Times* and *Slate* and a researcher appearance on NPR *All Things Considered*.

The report was shared by the New York City Mayor's Office of Economic Opportunity and reached civil society, policy, and legal leaders. Looking ahead, ridehailing researcher Alex Rosenblat will release her forthcoming book *Uberland: How Algorithms Are Rewriting the Rules of Work* on October 23, 2018.

03 HEALTH AND DATA

Health and Data is a growing focus for Data & Society and includes works on topics such as the unintended consequences of health data collection, equitable outcomes, and healthy behavior with tech. This year, the initiative focused on "precision medicine," a growing field that aims to use multiple data sources to tailor medical care to individuals. The Fairness in Precision Medicine project aims to critically assess the **potential for bias and discrimination in health data collection,** sharing, and interpretation.

The Fairness in Precision Medicine team released the first ever report to deeply examine the potential for biased and discriminatory outcomes in this emerging field that collects, integrates and analyzes multiple sources of data in order to develop individualized insights about health and disease. The report release was accompanied by *What Is Precision Medicine?*—a general audience white paper to introduce and outline this emerging field—and a detailed Precision Medicine National Actor Map that visualized major players in health data collection.

1 Researcher Matt Goerzen, Postdoctoral Scholar Kadija Ferryman, Research Analyst Kinjal Dave
2 Network Engagement Lead Audrey Evans and Researcher Alexandra Mateescu
3 Researcher Mikaela Pitcan and Postdoctoral Scholar Caroline Jack

"Excitement for precision medicine must be matched with clear-eyed examinations of the possibility for this emerging field to exacerbate existing risks...or create new points of vulnerability."

KADIJA FERRYMAN AND MIKAELA PITCAN,
FAIRNESS IN PRECISION MEDICINE

"The biggest challenge for a hype-driven ecosystem where countless public and private sector actors feel the need to implement AI systems is the plethora of poorly-constructed models, produced through methodologically unsound practices."
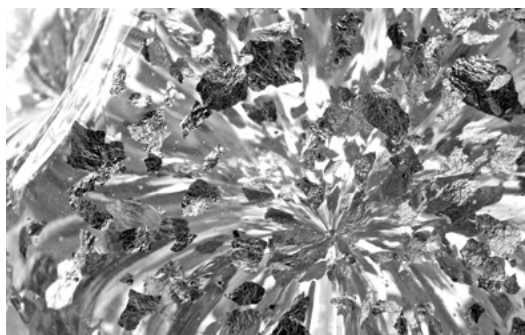
04   SOCIAL IMPACTS OF AI

The Intelligence and Autonomy initiative develops grounded, qualitative research to inform the design, evaluation, and regulation of AI-driven systems. This year kicked off the Mapping Human Infrastructures of AI project; a series of ethnographically-informed studies of **intelligent systems in which human labor plays an integral part**. This project explores how and why the constitutive human elements of artificial intelligence are often obscured or rendered invisible.

Data & Society also hosted the Workshop on Artificial Intelligence and Human Rights, which invited a group of experts from civil society, business, academia, international organizations, and government to engage in dynamic discussions around a central theme: Can the international human rights framework effectively inform, shape, and govern AI research, development, and deployment? A report from this convening arrives in fall 2018.

In 2017-2018, Data & Society researchers also explored the effects of technological change on governance frameworks. Recent work examined the disparate impact of big data in policing, and the ways in which machine learning intersects with current legal and regulatory assessments and demands alternative approaches to designing models against a values-based framework.

Looking ahead into 2019, this research area will expand its scope to include interconnected areas of work such as the aforementioned human rights area of inquiry and also Fairness, Accountability, and Transparency in Machine Learning.

1   Intelligence & Autonomy Research Lead Madeleine Elish

2   Data & Human Rights Research Lead Mark Latonero

3   Human Resources Manager Toyia Phillips, Financial Administrator Robyn Jackson, Grants &
    Contracts Administrator Beth Garrett, and Chief Operations Officer Stacy Abder
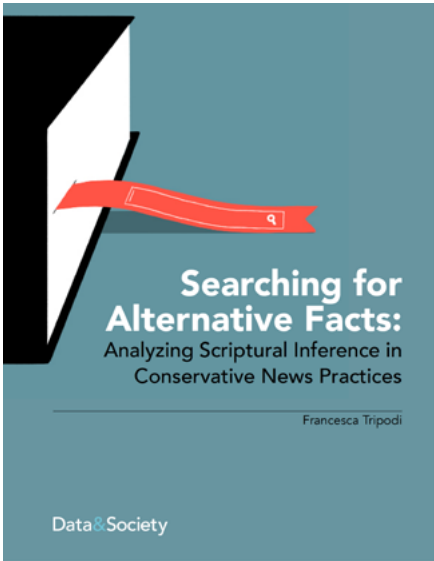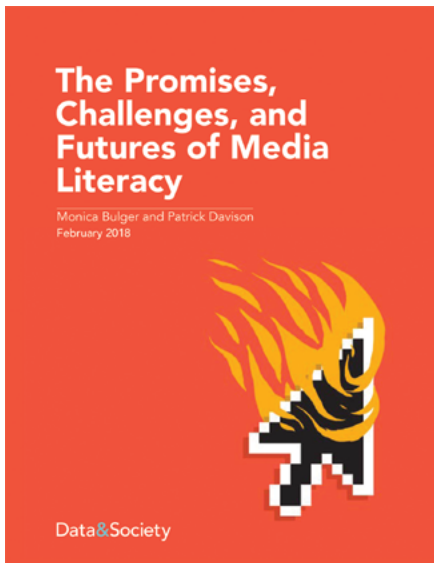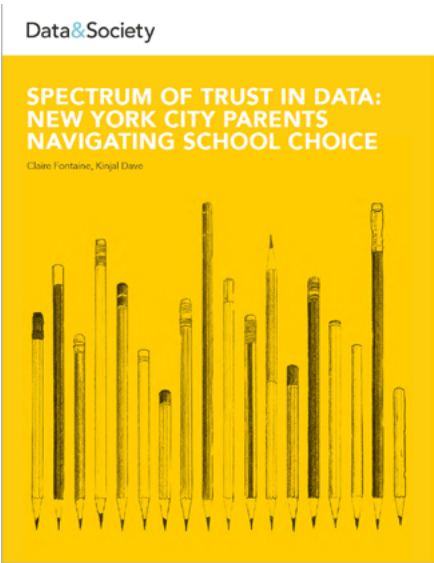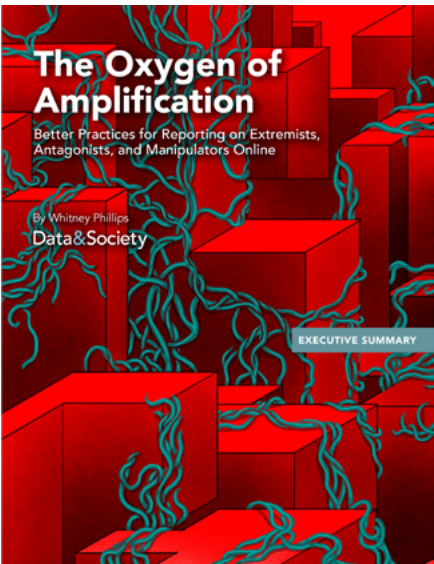
Fairness in Precision Medicine

February 2018

Kadija Ferryman
Mikaela Pitcan

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The Oxygen of Amplification

Better Practices for Reporting on Extremists, Antagonists, and Manipulators Online

By Whitney Phillips
Data&Society

EXECUTIVE SUMMARY

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SPECTRUM OF TRUST IN DATA: NEW YORK CITY PARENTS NAVIGATING SCHOOL CHOICE

Claire Fontaine, Kinjal Dave

The Promises, Challenges, and Futures of Media Literacy

Monica Bulger and Patrick Davison
February 2018

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REFUGEE CONNECTIVITY:

A SURVEY OF MOBILE PHONES, MENTAL HEALTH, AND PRIVACY AT A SYRIAN REFUGEE CAMP IN GREECE

HARVARD HUMANITARIAN INITIATIVE

Data&Society

Searching for Alternative Facts:

Analyzing Scriptural Inference in Conservative News Practices

Francesca Tripodi

Data&Society

Additional Research Highlights

ALGORITHMIC ACCOUNTABILITY: A PRIMER—a guide prepared for the US Congressional Progressive Caucus' Tech Algorithm Briefing: How Algorithms Perpetuate Racial Bias and Inequality—explores issues of algorithmic accountability, or the process of assigning responsibility for harm when algorithmic decision-making results in discriminatory and inequitable outcomes.

SPECTRUM OF TRUST IN DATA offers a framework for understanding New York City parents' and guardians' orientations toward publicly available school data. This report aims to better understand whether, in what ways, and to what ends, parents and youth draw on publicly available school performance data when deciding where to apply and enroll.

REFUGEE CONNECTIVITY—released in partnership with the Harvard Humanitarian Initiative's Signal Program on Human Security and Technology and the Centre for Innovation at Leiden University—showed the importance of internet connectivity and mobile devices to the privacy and mental health of Syrian refugees in Greece.

PRIVACY, SECURITY, AND DIGITAL INEQUALITY is the first in-depth analysis of the digital privacy and security experiences of low-socioeconomic-status populations in the United States. The report includes detailed comparisons across different racial, ethnic, and nativity groups, finding substantial gaps across these groups when looking at reliance on mobile connectivity.

[1]

"Black-boxed algorithms can unfairly limit opportunities, restrict services, and even produce 'technological redlining.'"

ROBYN CAPLAN, JOAN DONOVAN, LAUREN HANSON, AND JEANNA MATTHEWS, *ALGORITHMIC ACCOUNTABILITY: A PRIMER*

Engagement at Data & Society

Engagement at Data & Society means building **relationships**, curating **accessible content** from evidence-based frameworks, and inviting **debate and discussion** about the purpose and power of technology in society.

We engage multiple communities and interlocutors through public talks, in-house events, workshops, videos, podcasts, and our annual fellowship program. This year, Data & Society researchers, fellows, and staff presented at venues, such as RightsCon, Strata Data Conference, Silicon Harlem, WeRobot, and SXSW Edu while our communications and events teams maintained a steady stream of original programming at our New York City headquarters.

DATABITES

Data & Society's "Databites" speaker series presents timely conversations about the purpose and power of technology, bridging our interdisciplinary research with the broader public conversation about the societal implications of data and automation.

From May 2017 through May 2018, we hosted over 850 guests at Databites and in-house events. We continue to invite the public to join us in timely discussions of topics in our field.

1

To listen to Databites, please visit
https://datasociety.net/engage/#databites

WORKSHOPS & EVENTS

When Humans Attack! Conceptualizing Security in the Age of AI

Led by Madeleine Elish, this engagement workshop brought together stakeholders from multiple communities working on issues related to safety and security to discuss the unique vulnerabilities of machine intelligence. Uniting voices from government cybersecurity, industry product design, social science, computer science, and activists and advocates for vulnerable populations, the workshop surfaced tensions and vulnerabilities in planning for safe and secure AI. The workshop enabled discussions and new relationships that rarely occur across sectors, opening new opportunities for collaboration around AI security in the future.

Qualitative Studies of Socio-Technical Systems

Led by danah boyd, this academic workshop asked how we make sense of people's practices, organizational norms, social values, and cultural logics in a world where technology intersects with society in countless ways. Qualitative methodologies offer a unique approach for understanding what, how, and why. Drawing on different theoretical and disciplinary traditions, this workshop illuminated how the work of ethnographers and other qualitatively-minded scholars can offer a new way of seeing that challenges normative ideas and provides novel frameworks for understanding technology and society.

Artificial Intelligence & Human Rights

Led by Mark Latonero and Melanie Paganos, this stakeholder engagement workshop brought together experts and leaders from civil society, business, academia, international organizations, and government to engage in dynamic discussions around a central theme: Can the international human rights framework effectively inform, shape, and govern AI research, development, and deployment? Topics included the challenges of translation between human rights and technical communities, the potential avenues of engagement by sector, the complexities of legal remedy and redress, and the disproportionate impact of AI on vulnerable populations.

Future Perfect

Curated by Ingrid Burrington, the second-annual Future Perfect gathering at Data & Society brought together individuals from world-building disciplines including art, gaming, fiction, architecture, and science to explore the "uses, abuses, and paradoxes of speculative futures." Participants used narrative tools and lightning talks to explore automated healthcare, reparations for police violence, nuclear apocalypse, the limitations of financialized futures, and the consequences of SESTA.

Data & Society Media Workshop I & II

Curated by Sam Hinds García, these workshops featured brisk and vivid presentations of the latest evidence-based research for media makers seeking empirically-grounded sources and emerging stories at the intersections of society, technology, and culture. Debates explored public "hype cycles" of fear and hope around automated and data-centric technologies. Exercise and reading topics included AI, algorithmic manipulation, bias and equity in health data collection, and emergent instabilities in the labor futures.

Small Group Sessions at Data & Society

In order to offer a looser and more flexible model for working practitioners, we also host a variety of small group sessions. This year's lively sessions had titles like *Bots, AI and Labor*; *Yelp for Health? Assessing Bias in Digital Public Health Data*; and *Breaking News: How Push Notifications Alter the Fourth Estate.*

1   Databites Speaker Virginia Eubanks
2   Future Perfect presenters Jennifer Hamilton, Ruha Benjamin, Danielle Blunt, and Melissa Gira Grant
3   Work by students from the School for Poetic Computation

2

3

Fellows Program

Hosting a variety of practitioners and academics—data scientists and engineers, lawyers and librarians, ethnographers and creators, historians and activists—each class of Data & Society fellows connects us more deeply to the field through individual projects, mutual support, contribution to core research projects, and insightful public communications.

Our 2017-18 Fellows Talks provided a public showcase of interdisciplinary connections and provocative questions on topics ranging from algorithmic accountability and transparency in criminal justice software to collectivized digital security practices and online speech regulation.

2017-2019 FELLOWS.

— Marianna Bastashevski

— Taeyoon Choi

— Claudia Haupt

— Bex Hurwitz

— Matthew L. Jones

— Annmarie Levins

— Darakhshan Mir

— Rishab Nithyanand (Mozilla Open Web Fellow)

Explore videos of 2017-18 Fellows Talks by viewing Databites 110, 111, and 112 at www.datasociety.net/databites/.
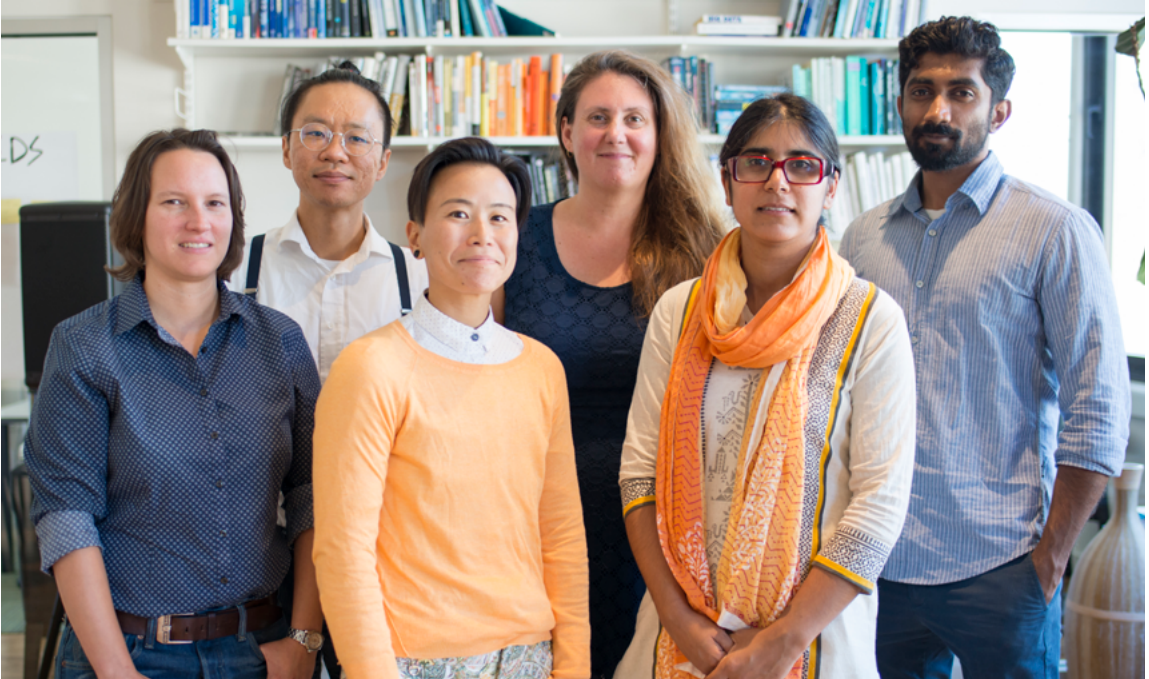
2017-2018 Fellows Claudia Haupt, Taeyoon Choi, Bex Hurwitz, Jeanna Matthews, Darakhshan Mir, and Rishab Nithyanand. (Not pictured: Marianna Bastashevski)

OUR RESEARCHERS AND FELLOWS SPOKE AT:

AMERICAN ACADEMY OF ARTS & SCIENCES	ARMORY LIVE PROGRAMMING AT THE NEW YORK ARMORY SHOW	COLUMBIA UNIVERSITY TOW CENTER
EUROPEAN COMMISSION, DG JUSTICE AND CONSUMERS	HUMAN RIGHTS WATCH	IEEE BIG DATA CONFERENCE
INTERNATIONAL COMMUNICATION ASSOCIATION	INTERNATIONAL SYMPOSIUM ON ONLINE JOURNALISM	NATIONAL CYBER SECURITY ALLIANCE
NETGAIN	NEW YORK CITY WORKFORCE DEVELOPMENT BOARD	NEWS IMPACT SUMMIT
O'REILLY AI CONFERENCE	OBAMA FOUNDATION SUMMIT	PERSONAL DEMOCRACY FORUM
RE:PUBLICA	RIGHTSCON	SAGE ASSEMBLY
SCIENCES PO	SILICON HARLEM	SOCIETY FOR SOCIAL STUDIES OF SCIENCE (4S)
SPOTIFY	STRATA DATA CONFERENCE	SXSW EDU
TECHONOMY	THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT	TRIBECA FILM INSTITUTE IMMIGRATION CO/LAB
UN GENEVA	WE ROBOT	YALE INFORMATION SOCIETY PROJECT

Supporters

Thanks to our supporters and allies, we can continue to produce original research that grounds informed, evidence-based public debate, while cultivating a unique network of researchers and practitioners ready to anticipate great challenges with vivid insight and direction. We are **deeply thankful** for the support we have received during the fiscal year of May 2017 to May 2018 from the following entities:

— Craig Newmark Philanthropies

— Digital Trust Foundation

— Ford Foundation

— Institute for Museum and Library Sciences

— John D. and Catherine T. MacArthur Foundation

— John S. and James L. Knight Foundation

— Microsoft

— National Information Standards Organization

— National Science Foundation

— Omidyar Network

— Open Society Foundations

— Robert Wood Johnson Foundation

— Sara & Evan Williams Foundation

— Siegel Family Endowment

— The Ethics and Governance of AI Initiative

— The News Integrity Initiative at the Craig Newmark Graduate School of Journalism at the City University of New York

— W.K. Kellogg Foundation

— World 50

STATEMENT OF INDEPENDENCE

We are committed to the independence and autonomy of Data & Society's initiatives and convenings. We do not accept funding that would affect our ability to pursue work free of external interference, and we fiercely protect the independence of our researchers and fellows in their intellectual activities and individual funding relationships.

If you are interested in supporting our work, we would love to talk with you.
Please contact info@datasociety.net.