Cities and Civic Digital Spaces Workshop Report

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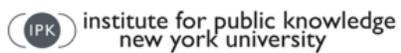
EXECUTIVE SUMMARY

> The future offers very little hope for those who expect that our new mechanical slaves will offer us a world in which we may rest from thinking. Help us they may, but at the cost of supreme demands upon our honesty and our intelligence.
> [Norbert Wiener, "God and Golem, Inc.," 1964]

The Cities and Civic Digital Spaces workshop investigated how the design and governance of physical public spaces can inform better digital design and governance – and vice versa. It also explored the parallels between urban challenges and those that digital platforms are facing. The workshop brought together a small but accomplished and influential group of scholars, designers, and digital practitioners.

Over the course of three sessions[1], participants discussed the abilities and unique features of physical public spaces, as well as their limits; issues around sorting, segregation and polarization; and questions around the role of governance, leadership and movements in public space design. Breakout sessions also discussed funding models, empathy, technology for teenagers, equity and justice, and maintenance and care.

Rather than coming to conclusions, the discussions brought about ten core areas of concern and related questions that we need to ask about digital space design moving forward. These themes are: maintenance, power, infrastructure, civility, discomfort, suboptimization, contestation, whiteness, governance, and skill.

The gathering marked the beginning of a longer engagement with the potential of the public space metaphor for bettering digital spaces.

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[1] The event was held under Chatham House Rules. Therefore, this report does not include individual attributions.

FUTURE HORIZONS: TEN THEMES

MAINTENANCE

The maintenance of a space - physical or digital - is very important. Despite that, the maintenance and care for a space tends to sit outside of the realm of design; it is often invisible, and sometimes is gendered. Why is maintenance valued less than design? How is the de-prioritization of maintenance linked to power structures? How can we rethink design along the lines of maintenance and care? How can we value maintain*ers*?

POWER

Questions around design, especially in the context of public space, are always questions around power, for example when we speak about the architectural idea of a "program". There is a tension between claiming to "respect" participants in physical and digital public spaces and not giving them power. How can design reveal these power imbalances? In what ways are they linked to wider structures of oppression? How can design processes make more explicit who is the designer, who is the user? How can design become a tool for liberation?

INFRASTRUCTURE

Digital spaces are material spaces, built on and held together by physical infrastructures. These infrastructures, such as submarine cables or satellites are imbued with power and politics. How can we consider these infrastructures in digital public space design? How can we develop a language and a vocabulary around public space, power and infrastructure? What questions about infrastructure do we need to ask to create better digital spaces?

CIVILITY

The enactment of civility, of being a member of the public with rights, responsibilities and expected behavior, is a central element of a functioning (public) space. How do we "ritualize civility" online (in the sense of being a citizen)? Who decides what is civil? Who and how is civility enforced? How can we actively use design to counter structural power imbalance and oppression that partially define "civility"?

DISCOMFORT

A feature of public space is that there is not a general level of comfort across all groups at all times. Some discomfort is part of publicness, and sometimes a place's history or its symbolism plays a role in that (for example Confederate park names). How do we entice

people to join and maintain spaces where they experience some discomfort? How can holding the tension between comfort and discomfort be mediated through design? How can history be actively confronted in design? How can we create processes of equitable design as part of acknowledging the role of discomfort in maintaining publicness?

SUBOPTIMIZATION

Public space design cannot, and should not, optimize for any one thing. In particular, public and digital space design should not just be approached through the lens of preference maximization. How can we center the idea of suboptimization in design? How can we consider a broader scope of optimization goals in public space design? In what ways can and should we reframe our notion of "success" in the context of suboptimization? How can we consider shifting optimization goals and integrate them into iterative design and maintenance processes?

CONTESTATION

Physical and digital public space design should not exclusively take as best-practice examples places of beauty and center questions around aesthetics. Often questions around belonging and contestation are more central. There are important lessons to be learned from contested spaces that function under severe tensions (such as between freedom and discipline, community and authority). How can we create design processes that learn from contested spaces? How can we bring learnings from contested spaces into a dialogue with learnings from spaces that are less contested? In what ways can questions around belonging be centred in design processes?

WHITENESS

Public space designs are often engineered for control. And often this is framed as control along racial lines, creating different bars for entry and levels of acceptance for different people and centering whiteness by expecting people of color to make themselves comfortable in white spaces. How can we develop a knowledge and a language for this centering of whiteness? How can the centering of whiteness be productively problematized in public space design? How can design processes *de*center whiteness?

GOVERNANCE

Design cannot create stable equilibria, and should not try to. Successful public space design requires equitable and flexible governance and feedback loops. How can we create these governance and feedback loops? What is the concept of control that underpins these loops?

How can we centre the idea of stewardship within (public and digital space) governance? What are the practices and processes that need to be created?

SKILL

Very often, a design idea is kept alive by project managers in a company, especially in the context of digital spaces. These individuals are trained in directing traffic, but they are not trained in dealing with people. How can the behaviour of project managers be changed? What kind of skills do they need to engage with people and difficult social questions? How can new kinds of training methods be developed and be integrated in the framing of space design?

PANEL ONE: WHAT ARE PUBLIC SPACES GOOD FOR (AND WHAT CAN'T THEY DO)?

This session explored the nature of public spaces and expanded into bigger questions: What is the design intention behind these spaces? Does it work? Does it fail? What constitutes success and what failure? Where do people fit in? How do they connect? What values are encoded and lived in these spaces? How is a sense of publicness created and maintained? What are the spoken and unspoken rules of public spaces? And how can we learn from them to design and govern digital platforms?

Key Take-Aways:

- We have to explore the notion of **"public space" and its power in the digital age**. For example, we must ask ourselves what does it mean to have many private companies providing "public space" online and being entrusted with governing these spaces?
- Public space design can and must **reflect communalities**, but also tensions, across communities and bridge them. For example, clear links between distinctly different pockets of the community must be created (such as in terms of wealthy and poor parts of a neighbourhood).
- A clear vision is important for **aligning design and policy decisions over time**. For example, this vision can encompass continuous decisions made around sustainability and materiality (such as using reclaimed materials instead of new ones).
- Design can and should be framed as modus of **facilitation of interaction** which can help confront vulnerability and discomfort. For example, discomfort by sharing a playground space with kids and parents of different socio-economic and racial backgrounds.
- A core question of successful public space design, physical or digital, is "**How can we ritualize civility?**" and how can design facilitate the act of being a citizen?
- Public space design, both as product and as process, must **acknowledge tension and contestation** (such as between freedom and discipline, community and authority) and consider that the **bars for entry and levels of acceptance** are different for different people – a big question in design should be "How do we belong?"
- Public space designs are often **engineered for control**, and often this is framed as control along racial lines.
- Designing for community must mean to center the question of **how demands can be made by the community**.
- There is **value in friction**, successful public spaces are **not optimized for a singular use**, purpose or group of people.

PANEL TWO: SORTING, SEGREGATION, AND POLARIZATION: HOW BIG IS THE PROBLEM AND WHAT CAN BE DONE?

This session investigated how issues around sorting, segregation and polarization emerge and are dealt with public and digital spaces. It considered: What sorting mechanisms are put to work in both public and digital spaces? How do issues of segregation materialize? In what ways does polarization unfold? What are the main challenges in addressing these issues? How is this done successfully or unsuccessfully in physical spaces, and how in digital spaces?

Key Take-Aways:

- Equitable design must **confront history actively**. For example in Memphis, Confederate park names were changed and statues were removed.
- **Mixing people in public space is challenging**: people tend to value people who look like them and therefore difficult questions arise around who claims the space and who still feels like they belong, and whose sense of belonging is maximized by design.
- A successful public space is a space which **strangers joyfully share** and which allows for the experience of the interaction to be carried over into other spaces.
- An important, yet often neglected question around digital space and inequality is **"Who is not online?"**
- A design idea is kept alive by project managers in a company who often are trained in directing traffic, but they are **not trained in dealing with people** – a core issue in good design, therefore, is a change in behavior and training of project managers.
- What (digital and public space) design must acknowledge is that there is **no increase in political polarization**, but there is an increase in the affective polarization, i.e. animosity along party lines has increased.
- Ordinary people often **juggle different identities** in social networks and there is a difference between online and offline communities whereby in digital spaces, people can hide whilst ambiguity is difficult to perform online.
- In public spaces, such as parks, there is an obvious **value** that comes from the communal, but there may be different values at play in digital spaces (such as monetary value expressed in monetized clicks).

PANEL THREE: DESIGN, GOVERNANCE, LEADERSHIP, AND MOVEMENTS: WHAT WORKS, AND WHY?

This session explored what designs, modes of governance, leadership styles and initiatives and activist movements make a successful space work. Core questions were: What are the design principles behind successful public spaces? How is effective governance developed, iterated and implemented? What prompts people to take ownership of spaces? What role does leadership play in this context and what does successful leadership look like? How do activism and movements contribute to or challenge successful physical or digital places?

Key Take-Aways:

- There is a **difference between freedom and "free for all"**. Even in a public space, there is a need for some rules that ensure that space is kept up and maintains a sense of freedom for everyone.
- Successful public space design consists of **clearly defined spaces**. For example, spaces for sports, spaces of socializing, spaces for nature.
- A central question for design against segregation should be "How do we design to **support collective epistemic processes of sorting, aggregation, synthesizing and transforming**?"
- Equitable and democratic digital space design could include the following **questions** into platforms: Why does it matter to me? How much should I share? How do I make it about more than myself? Where do we start? How can we make it easy and engaging for others to join? How do we get wisdom from crowds? How do we handle the downsides of crowds? Are we pursuing voice or influence or both? How do we get from voice to change? How can we find allies?
- Successful and equitable public space design should include **holistic programming** (such as employment programs for teenagers) and center on the question "How do we learn from each other?"
- In both public and digital space design, representation flows through gate keepers. A new question for design, therefore, is "What would it look like to have gatekeepers back at the platforms? Can we re-introduce the idea of stewardship?"
- Digital public spaces, or online platforms, have become a key tool for **organizing protest**.
- Design must consider that there are real consequences of **whiteness** and ask deeper questions around the function of whiteness and its impact on communities of color.

PARTICIPANTS

Delia Baldassarri is Professor in the Department of Sociology at New York University. She holds courtesy appointments in the Wilf Family Department of Politics and in the Management and Organizations Department at the Stern School of Business. Professor Baldassarri earned a B.A. and a Ph.D. in Sociology and Social Research from the University of Trento, Italy (2003; 2006), and a Ph.D. in Sociology from Columbia University (2007). Previously, she was an Assistant Professor and later Associate Professor at Princeton University. Professor Baldassarri's research interests are in the fields of Economic Sociology, Political Sociology, Social Networks, and Analytical Sociology. Her current research projects include a study of the emergence of cooperation in complex societies, focusing on the empirical case of ethnically heterogeneous communities and a book project, *Centrifugal Politics, Crosscutting People*, that investigates the demographic and social network bases of partisanship in American public opinion. She is a Fellow of the European Academy of Sociology, has been a Fellow at the Russell Sage Foundation, Nuffield College at Oxford, and is a Senior Researcher at Bocconi University. Her work has appeared in many leading journals, among which the *Proceedings of the National Academy of Science*, *American Journal of Sociology*, *American Sociological Review*, and *American Journal of Political Science*.

George Berry is a PhD candidate in sociology at Cornell University currently working as a data scientist at Civis Analytics. He previously worked at both Facebook and Twitter on combating election interference and improving online public discussions. His current work focuses on understanding the effectiveness of political advertising using Bayesian methods. His academic work focuses on understanding the diffusion of new behaviors in social networks, and on understanding the pattern and dynamics of homophily in online networks.

Matthijs Bouw is a Dutch architect and urbanist and founder of One Architecture (est. 1995), an award-winning Amsterdam and New York-based design and planning firm. He is the Rockefeller Urban Resilience Fellow for the University of Pennsylvania Stuart Weitzman School of Design. Bouw's work at Penn theorizes and positions design as an integrator and innovator among scales, disciplines, actors and issues in urban resilience and water management projects. He is a driving force between RBD U, a network of design schools that collaborate on resilience issues, and is developing the Chief Resilience Officer curriculum for 100 Resilient Cities. Additionally, he researches how to achieve and increase 'resilience value' in the implementation of complex projects. Bouw's practice is known for its unique approach in which programmatic, financial, technical and organizational issues are addressed, communicated and resolved through design. Bouw has been a pioneer in the use of design as a tool for collaboration, for instance through the development of 'Design Studios' as an instrument to support the Netherlands' Ministry of Infrastructure and the Environment with its long term planning.

Data journalist **Meredith Broussard** is an associate professor at the Arthur L. Carter Journalism Institute of New York University and the author of "Artificial Unintelligence: How Computers

Misunderstand the World.". Her academic research focuses on artificial intelligence in investigative reporting, with a particular interest in using data analysis for social good. She is also interested in reproducible research issues and is developing methods for preserving innovative digital journalism projects in scholarly archives so that we can read today's news on tomorrow's computers. She is an affiliate faculty member at the Moore Sloan Data Science Environment at the NYU Center for Data Science, a 2019 Reynolds Journalism Institute Fellow, and her work has been supported by the Institute of Museum & Library Services as well as the Tow Center at Columbia Journalism School. A former features editor at the Philadelphia Inquirer, she has also worked as a software developer at AT&T Bell Labs and the MIT Media Lab. Her features and essays have appeared in The Atlantic, Slate, and other outlets.

Greta Byrum was the director of the Resilient Communities program at New America, and now serves as Senior Fellow and advisor to the Resilient Communities team at New America NYC. She is currently co-director of the Digital Equity Laboratory at The New School, a university center advancing digital equity through organizing, applies research, and policy strategy. As director of the Resilient Communities program, Byrum led Resilient Networks NYC, a project supported by New York City's Economic Development Corporation. Resilient Networks provides training, tools, and equipment to community organizations in five Hurricane Sandy-impacted New York City neighborhoods so they can build storm-hardened local WiFi. The project is based on Byrum's earlier field research in New York, the Gulf Coast, and the Silicon Valley region showing that in disaster and emergency situations, local residents and community media organizations are often the most critical first responders. Previously, Byrum provided leadership for the field team at New America's Open Technology Institute, co-developing the "Digital Stewardship" approach to community technology with partners in Detroit and Brooklyn. While at OTI, Byrum also produces a suite or recommendations for community-led broadband planning, developed an impact evaluation plan for the nationwide public-private partnership EveryoneOn, and contributed to evaluations of other broadband programs including Federal stimulus projects in Detroit and Philadelphia.

Kenyatta Cheese is a professional Internet enthusiast who creates technology-based media studies on the impact of media and technology on culture. He is Cofounder of Everybody at Once, a media consultancy, Cocreator of Know Your Meme, a primary resource for understanding web culture, and Founder of Unmediated.org, a blog that tracks trends in decentralized media. He is also one of the pioneers of web-based television, with projects such as WiFiTV, Browse TV, and vogbrowser. In previous iterations he has worked with the Eyebeam Center for Art and Technology, Manhattan Neighborhood Network, and the online video network Rocketboom.

Associate Professor **Courtney D. Cogburn** employs a transdisciplinary approach to examining the role of racism in the production of racial inequalities in health. She is on the faculty of the Columbia Population Research Center and a faculty affiliate of the Center on African American Politics and Society and the Data Science Institute. The National Institutes of Health, the Robert Wood Johnson Foundation, and the Brown Institute for Media Innovation at the Columbia

School of Journalism have supported her work. Dr. Cogburn is interested in the ways we characterize and measure racism and the effects of racism on racial inequalities in health. She has focused on examining the effects of cultural racism in the media on acute physiological, psychological, and behavioral stress responses as well as associations between chronic psychosocial stress exposure and Black/White disparities in cardiovascular health and disease. She is also developing a project using data science to explore links between media-based racism and population health. Dr. Cogburn is the lead creator of 1000 Cut Journey, an immersive virtual reality racism experience that was developed in collaboration with the Virtual Human Interaction Lab at Stanford University and which premiered at the Tribeca Film Festival in 2018. The team is now exploring the use of the VR experience in affecting empathy, racial bias, structural competence and behavior. Prior to Columbia, Dr. Cogburn was a Robert Wood Johnson Foundation Health & Society Scholar at the Harvard T.H. Chan School of Public Health and the Harvard Center for Population and Development Studies. She holds a BA in Psychology from the University of Virginia, an MSW from the University of Michigan School of Social Work, and a PhD in the Combined Program in Education and Psychology from the University of Michigan. Dr. Cogburn is also a board member of the International Center Advocates Against Discrimination.

Carol Coletta is President and CEO of the Memphis River Parks Partnership. She is leading the relaunch of a nonprofit to develop, manage and program six miles of riverfront and five park districts along the Mississippi River. Ms. Coletta is on loan from The Kresge Foundation where she is a Senior Fellow in the foundation's American Cities Practice. She leads a $50+ million collaboration of national and local foundations, local nonprofits and governments to Reimagine the Civic Commons in five cities. It is planned as the first comprehensive demonstration of how a connected set of civic assets—a civic commons—can yield increased and more widely share prosperity for cities and neighborhoods. Prior to joining The Krege Foundation, Ms. Coletta was Vice President of Community and National Initiatives for the John S. and James L. Knight Foundation where she managed a portfolio of more than $60 million annually in grants and a team of 18 in 26 communities to drive success in cities. She led the two-year start-up of ArtPlace, a unique public-private collaboration to accelerate creative placemaking in communities across the U.S. and was president and CEO of CEOs for Cities for seven years. Previously, Ms. Coletta served as Executive Director of the Mayors' Institute on City Design, ran a Memphis-based public affairs consulting firm, Coletta & Company, and was host and producer of the nationally syndicated weekly public radio show *Smart City*. She continues producing conversations with urban leaders as a regular podcast, "Talking about Cities."

Gaby Darbyshire runs Framestore Ventures, developing and investing in original IP in the film, TV, animation, and AR/VR arenas. Gaby was previously a founder and Chief Operating Officer of Gawker Media; prior to that she founded a couple of companies, spent a stint in Silicon Valley, was a management consultant, and, aeons ago, was a Barrister in the UK and defended inmates on Death Row in the Caribbean.

François-Xavier de Vaujany is Professor of Management & Organization Studies at PSL, Université Paris-Dauphine and Visiting Research Professor at NYU (Tandon). His research deals with collaborative practices in public contexts, i.e. contexts in which true encounters can occur. His fieldworks cover topics such as open sciences, maker movement, coworking spaces, digital nomads, campus tours, collaborative learning expeditions and the use of public digital technologies by organizational members. By means of ethnographies, collaborative ethnographies and experimentations, he tries to understand the emergence and legitimation of these new organizational forms. His most recent research explores the co-production of a new research practice (Open Walked Event-Based Experimentations, OWEE) which aims at producing knowledge commons through and for public spaces.The bulk of his work draws on sensible and narrative theoretical perspectives. He has authored or edited eleven books and more than 130 articles, chapters and communications. His next book (in coll. with Jeremy Aroles and Karen Dales) entitled *Experiencing the New World of Work* will be published in 2020 by Cambridge University Press. François-Xavier is the co-founder and president of the Research Group on Collaborative Spaces (RGCS), an open science-oriented network exploring new ways of working in collaborative contexts. In 2013, he received the best paper award of the Academy of Management (OCIS division). He just received the AIM-CIGREF 2019 award.

Margaret Gould Stewart is Vice President of Product Design at Facebook. In this role, she leads a global team of product designers and researchers for teams such as Artificial Intelligence, Privacy, and Data Use. She also oversees Facebook's Responsible Innovation & Design Core Team, which is focused on integrating ethical foresight into the company's overall product development process. The team is developing methods, tools and training that support product teams early in the design and development phase. The goal is to ensure that teams at Facebook make every effort to understand how the products and technologies that are built could affect people in both positive and negative ways, and to facilitate engagements with multi-disciplinary external communities to inform the process. Margaret has been a leader in the field of user experience design for over 20 years. After graduating from New York University's Interactive Telecommunications Program in 1995, she consulted with media companies such as the New York Times, Time-Warner, and Scholastic to develop many of their first web properties. She is a frequent speaker on the subjects of design leadership, responsible innovation and the impact of technology on society. Before joining Facebook, Margaret served as Director of User Experience at YouTube, overseeing the design of all YouTube's products globally. Prior to that role, she managed Google's Search and Consumer Products User Experience team. Over the course of her 20-year career, Margaret has led design teams for Facebook, YouTube, Google, Lycos, Tripod, and Angelfire. As part of the Google design team, she accepted the National Design Award for Corporate Achievement in 2008 and now serves as a member of the Board of Trustees for the Cooper Hewitt Smithsonian Design Museum. She is a regular speaker at conferences such as TED, CHI, and AIGA, and publishes her thoughts on design and leadership on Medium.

Robert Hammond is the co-founder and former executive director of Friends of the High Line. He's worked as a consultant for a variety of entrepreneurial endeavors and nonprofits, including

the Times Square Alliance, Alliance for the Arts and National Cooperative Bank (NCB). Hammond is also a self-taught artist. From 2002 to 2005 he served as an Ex-Officio Trustee of the Metropolitan Museum of Art. He was awarded the Rome Prize from the American Academy in Rome in 2009.

Keith N. Hampton is a professor in the Department of Media and Information, and an affiliated faculty member in the Department of Sociology at Michigan State University. He is also the associate director for academic research at the Quello Center, a center focused on research that stimulates and informs public debate on media, communication and information policy. Hampton's research uses a variety of approaches, including surveys, behavioral mapping, video and textual analysis, ethnographic observation, social network analysis, and interventions to study how new technologies are used in public and semi-public spaces. He is interested in how the everyday use of technology is related to topics that include: social isolation, social support, network diversity, democratic engagement, social tolerance, psychological distress, helping behavior, and neighboring. Prior to joining the faculty at MSU, he held the position of Endowed Professor in Communication and Public Policy and Co-Chair of the Social Media & Society Cluster in the School of Communication and Information at Rutgers University; Assistant Professor at the Annenberg School for Communication, University of Pennsylvania; and Assistant Professor of Technology, Urban and Community Sociology & Class of '43 Chair in the Department of Urban Studies and Planning at the Massachusetts Institute of Technology. He received his Ph.D. and M.A. in sociology from the University of Toronto, and a B.A. (Hons) in sociology from the University of Calgary.

Eric Klinenberg is Helen Gould Shepard Professor of Social Science and Director of the Institute for Public Knowledge at New York University. He is the author of Palaces for the People: How Social Infrastructure Can Help Fight Inequality, Polarization, and the Decline of Civic Life (Crown, 2018), Going Solo: The Extraordinary Rise and Surprising Appeal of Living Alone (The Penguin Press, 2012), Fighting for Air: The Battle to Control America's Media (Metropolitan Books, 2007), and Heat Wave: A Social Autopsy of Disaster in Chicago (University of Chicago Press, 2002), as well as the editor of Cultural Production in a Digital Age, co-editor of Antidemocracy in America (Columbia University Press, 2019), and co-author, with Aziz Ansari, of the New York Times #1 bestseller Modern Romance (The Penguin Press, 2015). His scholarly work has been published in journals including the American Sociological Review, Theory and Society, and Ethnography, and he has contributed to The New Yorker, The New York Times Magazine, Rolling Stone, and This American Life.

Justin Kosslyn spent a decade at Google, joining as an entry-level Product Manager and progressing to the Head of Product for the Jigsaw team. In that role, he oversaw the R&D and deployment of a range of technical products, which often aimed to improve security for elections, journalists, and activists. In addition to managing a set of Product Managers as well as teams on User Experience Research and Support & Engagement, Justin drove projects including Share the Facts for global fact-checkers (schema now used by Google Search, Bing, and Facebook); Password Alert, a Chrome extension to fight phishing; and Google's warnings

for targets of government-backed cyberattacks. Published in Slate, TechCrunch, and Motherboard, quoted in NYT and WaPo. He currently is executive director of Civic, a new effort being incubated at TED, which aims to help build a healthy information commons where people can reliably find factual information and participate in democratic discourse.

R. L'Heureux Lewis-McCoy is an associate professor in the Sociology of Education program in the Department of Applied Statistics, Social Science and Humanities at New York University's Steinhardt School of Culture, Education and Human Development. He holds a PhD in Public Policy and Sociology from the University of Michigan in Ann Arbor, MI (2008) and a Bachelor's degree in Sociology from Morehouse College in Atlanta, GA (2000). His central line of research concentrates on educational inequality particularly focused on the intersecting roles of race, class, and place. His first book, Inequality in the Promised Land: Race, Resources, and Suburban Schooling examined the experiences of low income and racial minority families' attempts at accessing school-related resources in an affluent suburb. He is currently fielding a multi-site ethnographic study in Westchester County that examines residents' experiences with housing and schools. His larger research interests include race and racism, gender justice, and community mobilization. His research has appeared in multiple edited volumes and academic journals such as Urban Education, American Educational Research Journal, and Ethnic & Racial Studies. He is a frequent media contributor and public speaker. His insights have been included in Ebony Magazine, The Grio, The Root, US World News Report and on channels such as CNN and Al Jazeera.
Prior to joining NYU Steinhardt, he held an appointment as an associate professor of Sociology and Black Studies at the City College of New York - CUNY and was a member of the doctoral faculty at the CUNY Graduate Center.

Michael Murphy is the Founding Principal and Executive Director of MASS Design Group, an architecture and design collective with offices in Boston, Kigali, and Poughkeepsie. As a designer, writer, and teacher, his work investigates the social and political consequences of the built world. Michael's research and writing advocates for a new empowerment that calls on architects to consider the power relationships of their design decisions, while simultaneously searching for beauty and meaning. Since MASS's beginnings with the Butaro District Hospital in Rwanda, their portfolio of work has expanded to over a dozen countries and span the areas of healthcare, education, housing, urban development, and more recently, food systems, indigenous sovereignty, and the public monument. Michael's 2016 TED Talk invites viewers to question how architecture can be a tool for healing and the construction of dignity. To this end, MASS seeks partnerships and projects that examine our structural systems and how to reconstruct them through our built environment. MASS's work has been recognized and published widely. Most recently, MASS has been recognized as recipients of the 2018 J. Irwin and Xenia S. Miller Prize, the 2018 American Academy of Arts and Letters Award in Architecture, and the 2017 Cooper Hewitt National Design Award in Architecture. MASS's most recent project, the National Memorial for Peace and Justice in Montgomery Alabama has been featured in over 400 publications including The New York Times, The New Yorker, The Washington Post, and 60 Minutes. A recent architectural review by Mark Lamster of Dallas

Morning News called the memorial,"the single greatest work of American architecture of the 21st century." Michael is an Adjunct Associate Professor at the Columbia Graduate School of Architecture, Planning, and Preservation, has taught at the Wentworth Institute of Technology, the Boston Architectural College, and the Harvard Graduate School of Design. In 2018, he was a Santa Fe Art Institute Equal Justice Resident. Michael is from Poughkeepsie, NY, and holds a Master of Architecture from the Harvard Graduate School of Design and a Bachelor of Arts in English Literature from the University of Chicago.

Eli Pariser wants to help technology and media serve democracy. At 23 years old, he was named Executive Director of MoveOn.org, where he led the organization's opposition to the Iraq war, raised over $120 million from small donors, and helped pioneer the practice of online citizen engagement. In 2006 he confounded Avaaz, now the world's largest citizen's organization with over 40 million members in 190 countries. In 2011, Pariser anticipated the dangers of a hyper-personalized Internet, and introd bestselling book of the same name. Bill Gates, Sir Tim Berners-Lee, and other internet luminaries have since expressed concern about the phenomenon, and his TED talk on the topic now has over 4 million views. In 2012, he co-founded Upworthy, a mission-driven media company designed to make civically important ideas popular, with Peter Koechley. Within two years, Upworthy had over 80 million monthly visitors. Pariser's writing has appeared in The New York Times, the Washington Post, and WIRED; he has appeared on World News Tonight, Good Morning America, the Colbert Report, and many other shows; and he speaks internationally about democracy, media and the Internet—including once in an Austrian horse stable with the philosopher Slavoj Zizek. He has a BA from Bard College at Simon's Rock and an honorary doctorate from Dominican University, and sits on the US Programs Board of the Open Society Foundation. He is currently an affiliate of the Safra Center for Ethics at Harvard, a Langfield Visiting Resident at Princeton, Omidyar Fellow at the New America Institute, and co-director of the Civic Signals project at the National Conference on Citizenship. He lives in Brooklyn with his wife, filmmaker Gena Konstantinakos, and their two kids.

Caitlin Petre examines the social and material implications of an increasingly data-saturated world, with particular attention to the relationship between digital technologies, expertise, and media industries. Using field research methods, she analyzes how new sources of quantitative data interact with long-established approaches to cultural production and the management of media workers. Caitlin Petre studies the social processes behind the digital datasets and algorithms that increasingly govern the contemporary world. Using qualitative research methods such as ethnographic observation and in-depth interviewing, she maps the complex relationships between digital analytics, the social actors who create them, and the established experts who make use of them. Her current book project, which is under contract with Princeton University Press, explores how audience analytics are reshaping the work of journalism. In today's commercial newsrooms, journalists are increasingly judged based on the number of clicks, likes, shares, and "attention minutes" their articles generate. Drawing on more than a year of ethnographic fieldwork at the *New York Times*, Gawker Media, and Chartbeat (a leading analytics company), Petre delivers a behind-the-scenes account of these metrics, and explores

their implications for democratic discourse, workplace power distributions, and the very notion of editorial judgment.

Jonathan Rock Rokem is Lecturer in Human Geography at the School of Anthropology and Conversation, and Co-Director of Kent's Interdisciplinary Centre for Spatial Studies (KISS) University of Kent. He has research interests in political geography and urban studies, with particular specialism in social and spatial analysis, interdisciplinary methods, urban violence and inequality from a geopolitical perspective, with a specific focus on Europe and the Middle East. Jonathan's work is inspired by over a decade of researching ethnic minorities in contested cities. His overarching research agenda is committed to conceptualising a socio-spatial ontology that brings a new comparative perspective to human geography and urban studies. He also investigates the deferential role of transport and mobility infrastructures as tools to govern social life in highly uneven and unequal settings. Jonathan publishes in international, peer-reviewed, multi-disciplinary scientific journals within the disciplines of geography and urban studies, such as *Political Geography*, *International Journal of Urban and Regional Research*, *Urban Studies and CITY*. His most recent book *Urban Geopolitics: Rethinking Planning in Contested Cities*, was published by Routledge Cities and Regions series in 2018. Prior to joining the University of Kent in January 2019, Jonathan taught at the Department of Geography, University College London (UCL) and held a Marie Curie Research Fellowship at the Bartlett School of Architecture, Space Syntax Laboratory, UCL. Jonathan also has extensive experience as urban planning consultant and led the Advocacy Participation and NGOs in Planning (APaNGO) EU funded project at the Town and Country Planning Association, London, UK. His main consultancy interests lay within creating sustainable urban environments through community participation and reconciliation with a particular emphasis on contested urban space.

Natasha Dow Schüll's first book, *ADDICTION BY DESIGN: Machine Gambling in Las Vegas* (Princeton University Press 2012), draws on extended research among compulsive gamblers and the designers of the slot machines they play to explore the relationship between technology design and the experience of addiction. Her next book, *KEEPING TRACK: Sensor Technology, Self-Regulation, and the Data-Driven Life* (Farrar, Straus, and Giroux, under contract), concerns the rise of digital self-tracking technologies and the new modes of introspection and self-governance they engender. Her documentary film, *BUFFET: All You Can Eat Las Vegas*, has screened multiple times on PBS and appeared in numerous film festivals. Schüll graduated Summa Cum Laude from UC Berkeley's Department of Anthropology in 1993 and returned to receive her PhD in 2003. She held postdoctoral positions as a Robert Wood Johnson Health and Society Scholar at Columbia University's Institute for Social and Economic Research and Policy and as a fellow at NYU's International Center for Advanced Studies. She joined MIT's Program in Science, Technology, and Society in 2007 and was awarded tenure in early 2015, before moving to NYU. Schüll's research has been supported by the National Science Foundation, the Alfred P. Sloan Foundation, the Woodrow Wilson Foundation, and the Robert Wood Johnson Foundation, among other sources. Schüll's research and op-eds have been featured in such national media venues as 60 minutes, The New York Times, The Economist, The Atlantic, The Washington Post, Capital Gazette, Financial Times, Forbes, Boston Globe,

Salon, Chicago Tribune, Chicago Daily Herald, Las Vegas Sun, 99% Invisible, NPR, WGBH, and WNYC.

Clay Shirky is an American writer, consultant and teacher on the social and economic effects of Internet technologies and journalism. He has a joint appointment at New York University (NYU) as a Distinguished Writer in Residence at the Arthur L. Carter Journalism Institute and Assistant Arts Professor in the New Media focused graduate Interactive Telecommunications Program (ITP). His courses address, among other things, the interrelated effects of the topology of social networks and technological networks, how our networks shape culture and vice versa. He has written and been interviewed about the Internet since 1996. His columns and writings have appeared in *Business 2.0*, *The New York Times*, the *Wall Street Journal*, the *Harvard Business Review* and *Wired*. Shirky divides his time between consulting, teaching, and writing on the social and economic effects of Internet technologies. His consulting practice is focused on the rise of decentralized technologies such as peer-to-peer, web services, and wireless networks that provide alternatives to the wired client–server infrastructure that characterizes the World Wide Web. He is a member of the Wikimedia Foundation's advisory board. In *The Long Tail*, Chris Anderson calls Shirky "a prominent thinker on the social and economic effects of Internet technologies."

Michael Slaby is currently the Chief Strategist at NY-based nonprofit Harmony Labs. He previously ran the Chicago-based startup he founded, Timshel, which developed the platform known as The Groundwork. Slaby was the Chief Technology Officer of Obama for America in 2008. In 2012, he rejoined the campaign as Chief Integration and Innovation Officer.When the campaign finished he began work on social impact organizations that leverage technology to create social movements. Slaby is the former chief technology strategist for TomorrowVentures, which is an angel investment fund for Eric Schmidt.

As an entrepreneur, **Kevin Slavin** has successfully integrated digital media, game development, technology, and design. He is a pioneer in rethinking game design and development around new technologies (like GPS) and new platforms (like Facebook). In 2005 he co-founded Area/Code (acquired by Zynga in 2011), where he developed large-scale, real-world games using mobile, pervasive, and location-aware technologies. This included work for major companies, including Nokia, Nike, and Puma, and also for media giants, including MTV, A&E, the Discovery Channel, CBSI, and Disney. He co-founded AFK Labs in 2008, designing next-generation responsive environments, including one for what was then the largest and densest sensor mesh on the planet. Slavin argues that we're living in a world designed for–and increasingly controlled by–algorithms. His very popular TED talk, "How Algorithms Shape Our World," has received over 2 million views. He frequently delivers keynote addresses and has spoken at international venues such as the Royal Society of Art, Aspen Institute, BBC, and MIP/Cannes. Slavin has taught at NYU's ITP, the Cooper Union, and Fabrica, and has worked as a creative director and strategic planner in advertising agencies, including DDB and TBWA\Chiat\Day. He is currently working on producing a TV show for network broadcast. As an artist, his public, city-scale work has been exhibited in Frankfurt's Museum fuer Moderne Kunst

and the Design Museum of London. He has been written about in The New York Times, The Wall Street Journal, BusinessWeek, Wired, and Fast Company. He received his BFA from the Cooper Union.

Mona Sloane is a sociologist based at NYU's Institute for Public Knowledge (IPK), and an adjunct professor at NYU's Tandon School of Engineering. She researches the intersection of design and inequality in the context of AI innovation, policy and ethics. At IPK, Mona founded and convenes the 'Co-Opting AI' series. Mona holds a PhD from the London School of Economics and Political Science (LSE) and has completed fellowships at UC Berkeley and the University of Cape Town. She is also a co-founder and former member of the LSE research programme Configuring Light/Staging the Social. Mona has published on AI ethics and policy, design inequalities, research impact, design thinking, the politics of design, and related topics. Her work has been funded by the LSE, the Economic and Social Research Council, Santander, ACM and others. She tweets at @mona_sloane.

Landscape Architect **Laura Starr** is a founding partner of Starr Whitehouse where she focuses on making density livable by bringing nature into the city. Her practice began with her tenure as Chief of Design at the Central Park Conservancy during its formative years, where she learned the craft of forging consensus among diverse stakeholders in order to realize complex urban projects such as the reconstruction of the Harlem Meer and Great Lawn. Her work has won national recognition at Durst's VIA 57 West, set new standards for affordable housing amenity spaces at Related's Hunter's Point South, and transformed the Battery from a non-descript lot into a world-class urban park. She currently leads the City's consultant team on the reconstruction of St. Mary's Park in the Bronx. Ms. Starr has contributed to Sandy recovery efforts through the SIRR Report, the BIG U Plan, and as leader of the city's consultant team on the East Harlem Resiliency Study. She has run dozens of public design workshops and serves on Manhattan's Community Board 1's resiliency taskforce. Today, Starr is seen as a leader in sustainable design and an advocate for a city that is greener and more responsive to the needs of a twenty-first century public.

Michael Tolhurst is a Senior Policy and Research Analyst at the Charles Koch Institute. Previously he was a university lecturer in philosophy.

Fred Turner is Harry and Norman Chandler Professor of Communication at Stanford University. He is also Professor by courtesy appointment in the Departments of History and Art & Art History. In 2012, he was appointed the Akiko Yamazaki and Jerry Yang University Fellow in Undergraduate Education in honor of his commitment to undergraduate teaching. Turner's research and writing explore media, technology and American cultural history. He is especially interested in how emerging media have shaped American life since World War II. He is the author of three books: The Democratic Surround: Multimedia and American Liberalism from World War II to the Psychedelic Sixties (Chicago, 2013); From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism (Chicago, 2006); and Echoes of Combat: The Vietnam War in American Memory (Anchor/Doubleday, 1996; 2nd

ed., Minnesota, 2001). His essays have tackled topics ranging from the rise of reality crime television to the role of the Burning Man festival in contemporary new media industries. They are available here: fredturner.stanford.edu/essays/. Turner's writings have won a range of awards, including the PSP Award for the best book in Communication and Cultural Studies from the Professional and Scholarly Publishing Division of the Association of American Publishers and the Katherine Singer Kovács Essay Award from the Society for Cinema and Media Studies. They have also been widely translated. Turner has been a Beaverbrook Fellow at McGill University, a visiting scholar at Leuphana University, and twice a Fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford. He has consulted on exhibitions at the Whitney Museum of American Art, the New York Historical Society, the Haus der Kulturen der Welt in Berlin, and the Victoria and Albert Museum in London. His research has also informed a number of documentaries, including *Cybertopia – Dreams of Silicon Valley* for Dutch public television (2014) and *All Watched Over by Machines of Loving Grace* for the BBC (2011). Before joining the faculty at Stanford, Turner taught Communication at Harvard University's John F. Kennedy School of Government and the Massachusetts Institute of Technology. He also worked as a freelance journalist for ten years. His writing has appeared in venues ranging from the *Boston Sunday Globe Magazine* to *Nature*. He continues to write for newspapers and magazines in the United States and Europe. Turner earned his Ph.D. in Communication from the University of California, San Diego. He has also earned a B.A. in English and American Literature from Brown University and an M.A. in English from Columbia University.

Sudhir Alladi Venkatesh is William B. Ransford Professor of Sociology at Columbia University. Previously he was at Facebook for 3 years where he managed the Community Integrity research team. He now consults with Twitter.

Claire Weisz is an architect and urbanist, and a founding principal of WXY. With her partners Mark Yoes, Layng Pew, and Adam Lubinsky, Claire focuses on innovative approaches to public space, structures, and cities. WXY has received the League Prize from the Architectural League of New York, as well as being selected as one of the League's Emerging Voices practices in 2011, in addition to numerous awards from AIA National, AIANY, and the American Planning Association. Recent and ongoing work in New York City includes the redesign of Astor Place, the Spring Street Sanitation Garage, the redesign of the Rockaway Boardwalks, Pier 26's Boathouse/Restaurant, Battery Park's SeaGlass Carousel, a pedestrian bridge in lower Manhattan, a design to better accommodate both pedestrians and elevated trains in Harlem, a study of Brooklyn's growing commercial tech sector (The Brooklyn Tech Triangle), The East River Blueway Plan, and a finalist proposal for the Department of Housing and Urban Development's Rebuild by Design initiative. With Andrea Woodner, Claire co-founded The Design Trust for Public Space, and has recently been on faculty at New York University's Wagner School of Public Service and a Visiting Critic of Urban Design at Cornell's College of Architecture, Art and Planning in NYC. Claire received her professional degree from The University of Toronto with Honors and her Master's in Architecture from Yale University.

Chris Wiggins is an associate professor of applied mathematics at Columbia University and the Chief Data Scientist at the New York Times. At Columbia he is a founding member of the Department of Systems Biology, the executive committee of the Data Science Institute (http://datascience.columbia.edu/), and the Institute's education and entrepreneurship committees. He is also an affiliate of Columbia's Department of Statistics and a founding member of Columbia's Center for Computational Biology and Bioinformatics (C2B2). He is a co-founder and co-organizer of hackNY (http://hackNY.org), a nonprofit which since 2010 has organized once a semester student hackathons and the hackNY Fellows Program, a structured summer internship at NYC startups. Prior to joining the faculty at Columbia he was a Courant Instructor at NYU (1998-2001) and earned his PhD at Princeton University (1993-1998) in theoretical physics. He is currently writing a book on the history and ethics of data with Professor Matt Jones (Columbia) forthcoming from W. W. Norton & Company in 2021. In 2014 he was elected Fellow of the American Physical Society and is a recipient of Columbia's Avanessians Diversity Award.