Digital Urbanisms

Friday
Oct. 11, 2019

The development of urban digital technologies and the deployment of digital information have evolved into a mutually reinforcing feedback loop between distributed sites of data production and extraction, and the planning and design of data-driven and evidence-based landscapes. Mobile social media, networks of sensors, and the ecology of connected devices termed the "Internet of Things," among others, constitute infrastructures that harvest information, while advancing techniques of analysis and visualization have begun to describe and design sociopolitical and built environments in their image. Digital Urbanisms is a one-day symposium bringing together urban researchers and practitioners – planners, architects, geographers, organizers, and entrepreneurs – to take stock of the digital processes and products shaping cities, their promises and problems, and discuss alternatives and approaches for operating within and against the uneven spaces they characterize.

Schedule
Friday, October 11th, 2019

09:30am **Introduction**

Amale Andraos
Dean, Columbia GSAPP

Leah Meisterlin
Assistant Professor, Urban Planning, Columbia GSAPP

10:00am **Infrastructures: Digital Materiality**

Nerissa Moray
Associate Director, Planning & Development, Sidewalk Labs

Jennifer Ding
Solutions Engineer, Numina Co

Vinhcent Le
Technology Equity Council, The Greenlining Institute

Mimi Sheller
Director, Center for Mobilities, Research and Policy, Professor of Sociology, Drexel University

Moderated by Malo Hutson
Director, Urban Community and Health Equity Lab
Associate Professor, Urban Planning, Columbia GSAPP

11:30am **Datascapes: Systems of Representation**

Taylor Shelton
Assistant Professor, Geography and GIS, Mississippi State University

Justin Hollander
Professor and Director, Urban Attitudes Lab, Urban and Environmental Policy and Planning, Tufts University

Laura Bliss
West Coast Bureau Chief, CityLab

Moderated by Mark Wasiuta
Co-Director, Critical, Curatorial and Conceptual Practices, Columbia GSAPP

01:00pm **Lunch Break** (provided)

02:00pm **Keynote by Ruha Benjamin**

Associate Professor, African American Studies, Princeton University
Response by Leah Meisterlin

03:00pm **Data and Democracy**

Greta Byrum
Co-Director, Digital Equity Laboratory, The New School

Renee Sieber
Associate Professor, Geography, McGill University

Janice Gates
Director of the Equitable Internet Initiative, Detroit Community Technology Project

Moderated by Susan McGregor
Assistant Director, Tow Center for Digital Journalism, Assistant Professor, Columbia Journalism School

04:30pm **Methodologies and Media**

Craig Dalton
Assistant Professor, Global Studies and Geography, Hofstra University

Annette Kim
Associate Professor and Director, Spatial Analysis Lab, Price School of Public Policy, University of Southern California

Mark Shepard
Associate Professor and Director, Media Arts and Architecture Program, University at Buffalo

Moderated by Laura Kurgan
Director, Center for Spatial Research
Professor of Architecture, Columbia GSAPP

06:00pm **Reception and Book Signing**

Ruha Benjamin's recent publications *Race After Technology: Abolitionist Tools for the New Jim Code (Polity 2019)* and *Captivating Technology: Race, Carceral Technoscience, and Liberatory Imagination in Everyday Life (Duke University Press 2019)* will be available for sale and signing.

Leah Meisterlin (‘06 MS.UP, ‘09 M.Arch), Organizer, is an urbanist, GIS methodologist, cartographer, and Assistant Professor at Columbia University’s Graduate School of Architecture, Planning and Preservation. Broadly, her research and teaching engage concurrent issues of spatial justice, informational ethics, and the effects of digital technologies on the representation of social and political space. Her current research explores the ways in which urban processes are defined, described, and disrupted by competing models of distance within cartographic practices and GIS frameworks.

Among others, Meisterlin’s work has appeared in the Annals of the Association of American Geographers, Planning Perspectives, The Avery Review, ARPA Journal, and Drug and Alcohol Dependence, the Museum of Modern Art, the Oslo Architecture Triennale, and the Lightroom Gallery at Carleton University (forthcoming 2019). Before joining the faculty at GSAPP, Meisterlin taught at Barnard College and was co-founding partner at Office:MG, a consultancy focused on spatial systems analysis in complex environments.

Ruha Benjamin, Keynote Speaker,
is an Associate Professor in the Department of African American Studies at Princeton University, of science, medicine, and technology; race-ethnicity and gender; knowledge and power. She is the founder of the JUST DATA Lab where she aims to rethink and re-tool data for justice. She is a Faculty Associate in the Center for Information Technology Policy, Program on History of Science, Center for Health and Wellbeing, Program on Gender and Sexuality Studies, and Department of Sociology and serves on the Executive Committees for the Program in Global Health and Health Policy and Center for Digital Humanities.

Benjamin's first book, "People's Science: Bodies and Rights on the Stem Cell Frontier" (Stanford University Press 2013), investigates the social dimensions of stem cell science with a particular focus on the passage and implementation of a "right to research" codified in California. Her second book, "Race After Technology: Abolitionist Tools for the New Jim Code" (Polity 2019) examines the relationship between machine bias and systemic racism, analyzing specific cases of "discriminatory design" and offering tools for a socially-conscious approach to tech development. She also edited a volume titled "Captivating Technology: Race, Carceral Technoscience, and Liberatory Imagination in Everyday Life" (Duke University Press 2019), which brings together an incredible set of scholars to explore the interplay between innovation and containment across a wide array of social arenas, past and present. Her next book project is tentatively titled "The Emperor's New Genes: Borders, Belonging, and Bioethics Beyond the Genome". It is a multi-sited investigation of how human population genomics reflects, reinforces, and sometimes challenges sociopolitical distinctions such as race, caste, and citizenship, focusing on initiatives in the U.S., South Africa, and India.

Taken together, this body of work addresses debates about how science and technology shape the social world and how people can, should, and do engage technoscience. All the while, the work grapples with the fact that what may bring health and longevity to some may threaten the dignity and rights of others.

Infrastructures: Digital Materiality

This session aims to contextualize the conference and ground discussion at the intersection of the digital and material environment and its implications. Topics include the development of urban sensors, the regulation of broadband access and usage, the ubiquity of locative media, and the changing landscape of urban mobility. It will collectively draw out critical tensions (for justice, inclusion, access, privacy, etc.) and examine the ways that places are designed with and through their embedded technologies.

Malo Hutson, Moderator

is an Associate Professor and Director of the Ph.D in Urban Planning program at Columbia GSAPP and Director of the school's Urban Community and Health Equity Lab. Hutson is a widely-recognized scholar, teacher, and practitioner whose research at the intersection of urban planning and health inequities is of profound relevance in the planning of today's cities across the United States, and around the world. Hutson's specific focus is on community development and urban equity, racial and ethnic inequalities and urban policy, as well as the built environment and health. His most recent book, "The Urban Struggle for Economic, Environmental, and Social Justice: Deepening Their Roots" (Routledge, 2016), explores the efforts by coalitions of residents, community leaders, unions, and others to resist displacement as a result of neighborhood change and gentrification. Hutson received his Ph.D. in Urban and Regional Planning from the School of Architecture and Planning at the Massachusetts Institute of Technology, and earned both his Bachelor of Arts in Sociology and Master of City Planning degrees from the University of California at Berkeley.

Jennifer Ding

is a Solutions Engineer at Numina, translating data into insights for Numina's partner cities around the world. Previously, she was the founder and CEO of ParkIT, a computer vision company that developed algorithms to transform Internet Protocol (IP) cameras into a real-time parking data sensor— venture-backed by Jaguar Land Rover, deployed across North America with major state universities and municipalities, and acquired by Numina in 2018. With degrees in Electrical Engineering and Policy Studies from Rice University and Computer Science from Cornell Tech, Ding's interests are focused on developing emerging technologies for all of the people and communities they impact, which she has explored as an IDEO CoLab Design Fellow. Her work has been featured with IEEE EMBS and the Harvard Kennedy School's Shorenstein Center.

Abstract

Using a proprietary sensor and analytics platform, Numina measures all forms of street-level activity with a privacy-first approach. Their mission is to make cities more responsive, so they are safer, healthier, and more equitable for the people who live in them.

Because Numina measures the public realm, they set grounding principles from the start of "Privacy by Design" and "Intelligence without Surveillance". Their sensors are designed to be decentralized from each other and the rest of the network, and anonymize data on sensor ("at the edge"), before sending to servers over encrypted channels.

These safeguards protect the privacy of the spaces measured, while also providing unprecedented levels of data to urban planners, mobility companies, and developers on volume counts, paths, and traffic behaviors of travelers and objects in the streets. Numina makes this real-time intelligence queryable via API — at scale, turning streets into a developer platform.

Vinhcent Le

is a Technology Equity attorney at the Greenlining Institute, where he develops Greenlining's strategy to protect consumer privacy, prevent algorithmic bias, and close the digital divide. As an attorney, Le works with the California legislature and Public Utilities Commission to pass laws and regulations ensuring that low-income communities have the same access to the technologies and tools that are vital to economic opportunity. As part of that work, Le helped secure multi-million dollar commitments to increase broadband access in California, modernization of the Lifeline program and developed a statewide grant program providing laptops to low-income students. Le received his J.D. from the University of California, Irvine School of Law and a B.A. in Political Science from the University of California, San Diego.

Abstract

Redlining, the systematic denial of services to communities of color, drew lines across American cities, dictating the contours of development, investment, density, and transit. That legacy lives on today as those same communities face a modern and digital form of redlining due to uneven access to technology. Solving this access problem is critical as more developers, policymakers, and cities embrace the promise and utility of big data to solve urban issues. This discussion will explore how redlining shaped our cities and discuss how inequities in access to our digital infrastructures can reinforce that historical redlining in the built environment today. Using examples of how cities and businesses are using pervasive digital technologies such as GPS, broadband, connected sensors, cameras and smartphones for decisions like zoning, transit, and physical infrastructure investments,

this discussion will demonstrate that equitable access to digital infrastructure is a key component for unlocking the promise of data driven policymaking and urban design.

Nerissa Moray

is a strategic planner and project manager who has worked extensively with both public and private sector clients on urban innovation, parks and open space, coastal planning and real estate, and economic development projects. At present, she is an Associate Director of Planning & Design at Sidewalk Labs, working to deliver one of North America's most innovative urban development projects: Sidewalk Toronto. Prior to Sidewalk, Moray was the Director of Planning and Design for New York's Lowline project, and managed planning and building design projects at BuroHappold Engineering, working on such notable projects as the High Line, the Crystal Bridges Museum of American Art, and Changing Course - Redesigning the Lower Mississippi River Delta. Prior to working in the A&E industry, Moray gained 10 years of international experience as a project and program manager delivering large-scale information technology projects for government, financial, and manufacturing industry clients.

Abstract - Sidewalk Toronto Case Study

The Sidewalk Toronto project aims to fuse progressive approaches to urban development with the most promising new urban technologies -digital, physical, policy and financing-to improve the lives of urban citizens. But the incorporation of new digital technology layers into the infrastructure of public spaces, rights-of-way, and buildings, comes with few precedents and naturally raises questions of operational transparency, personal privacy, and data governance. This case study of the Toronto project will introduce elements of its digital innovation agenda, including proposals for new mobility systems, such as digitally-enabled "dynamic curbs", sustainable energy and stormwater infrastructure, and outcome-based building code. It will discuss proposals for integrating digital design into the planning and approvals process, institutional frameworks for the stewardship of data for the common good, and a new visual language that supports ongoing engagement with the public around digital infrastructure transparency in the public realm post project implementation.

Mimi Sheller

is Professor of Sociology and founding Director of the Center for Mobilities Research and Policy at Drexel University in Philadelphia. She is founding Co-Editor of the journal Mobilities and past President of the International Association for the History of Transport, Traffic and Mobility. She helped to establish the interdisciplinary field of mobilities research, and is also a key contributor to Caribbean Studies. Her most recent books are "Mobility Justice: The Politics of Movement in an Age of Extremes" (Verso, 2018), "Aluminum Dreams: The Making of Light Modernity" (MIT Press, 2014), and forthcoming "Island Futures: Caribbean Survival in the Anthropocene" (Duke University Press, 2020).

Abstract - Mobilizing "Smart City" Infrastructurescapes through Stakeholder-driven Design Processes

Rapidly proliferating technology applications for "smart mobilities" emphasize shared, electric, and potentially autonomous systems for "mobility as a service." These transformations of urban mobility infrastructure are closely tied to an emerging discourse of "smart cities." This paper will address the challenges and pitfalls of applied "smart city" research that seeks to build "stakeholder processes" and "human-centered design" (Andreani et al. 2018) into city-scale Internet-of-Things (IoT) implementation. In partnership with the City of Philadelphia, Sheller has joined a multidisciplinary research team from Drexel University that is seeking to pilot various IoT technologies and cross-sector collaboration processes. Her talk will address the potentials and limitations of such stakeholder-driven smart city processes to mitigate issues of infrastructural (in)justice, and will consider how they might be contributing to new processes of exclusionary infrastructuring. Ethical considerations include the governance of "big data" collection in relation to privatization of public data and spaces, platformization through opaque algorithms, and threats posed by market domination by single companies. How can human-centered process design counter these ethical challenges during the roll-out of digital "infrastructurescapes" that will shape future urban mobilities?

Datascapes: Systems of Representation

This session questions the analysis and visualization of “big, social” data. It examines the implications and suggestions, as well as its descriptions of social space with the hope of spurring a non-binary discussion of research and practice with respect to urban data and its representation(s) – whether visual, textual, statistical, or otherwise conceived and made public.

Mark Wasiuta, Moderator

is a Lecturer in Architecture and Co-Director of the program in Critical, Curatorial and Conceptual Practices at Columbia GSAPP. His research exhibition practice focuses on the status, agency, and ontology of documents and archives for architecture through under-examined projects of the postwar period. Current work includes Control Syntax—a series of projects mapping the intersection of computers, cities, and the formation of a computational governmentality—and "Detox USA", a study of cultures of contamination and purification in America. Recent exhibitions include "Control Syntax Songdo" at MAXXI in Rome, "No Longer Art: Salvage Art Institute" at Museo de Art de Zapopan in Mexico, and "No-Stop Classroom" at the LUMA Foundation in Arles, France. His work has also been exhibited at the Graham Foundation, LAXART, Het Nieuwe Instituut, Storefront for Art and Architecture, the Venice Architecture Biennale, the Benaki Museum, the DESTE Foundation for Contemporary Art, and elsewhere. He is Co-Author and Co-Editor of "Rifat Chadirj: Building Index" (Arab Image Foundation and Kaph Books, 2018), "Dan Graham's New Jersey" (Lars Müller, 2012), and author of numerous articles. His upcoming publications include "The Archival Exhibition: A Decade of Research at the Arthur Ross Architecture Gallery", and "Information Fall-Out: Buckminster Fuller's World Game". Wasiuta is recipient of recent grants from the Asian Cultural Council and the Graham Foundation, where he is currently an inaugural Graham Foundation Fellow. He is also Consulting Curator of Architecture at the Jewish Museum in New York City.

Laura Bliss

is the West Coast Bureau Chief at The Atlantic's "CityLab", covering urban politics and policy. She also authors the newsletter "MapLab". Her work has also appeared in the New York Times, The Atlantic, Los Angeles magazine, and beyond.

Abstract

As a writer, reporter, and editor at The Atlantic's CityLab, Bliss has carved out a "mini-beat" covering maps. In her presentation, she'll discuss three aspects of this part of her work: first, writing news and features covering the digital location data industry; second, writing MapLab, a news-driven, biweekly newsletter dedicated to the business, science, and art of mapping; and third, a personal essay series devoted to how maps shape private and public life called "The Maps That Make Us." These three aspects of coverage have created rich dialogue among readers

about the representation of identity in maps, the power of mapmakers to shape understanding of the physical world, and the privacy implications of location data collection by smartphones and cars, among many other topics. Bliss believes it has also created a unique space in the media landscape for general readers and map enthusiasts alike to learn about maps and their importance across other issues in the news, from politics to immigration to climate change.

Justin Hollander

is a Professor of Urban and Environmental Policy and Planning and Director of the C.A.G.S. in Urban Justice and Sustainability at Tufts University. His research and teaching is in the areas of physical planning, Big Data, shrinking cities, and the intersection between cognitive science and the design of cities. He is the author of seven books on urban planning and design, including "Cognitive Architecture Designing for How We Respond to the Built Environment" and "Urban Social Listening: Potential and Pitfalls for Using Microblogging Data in Studying Cities". Hollander also hosts the podcast "Cognitive Urbanism" available on Apple Podcasts.

Abstract

For decades, scholars have been exploring how emerging computing technologies might improve upon long-standing challenges of engaging community members in local government decision-making. These new technologies create a digital urbanism that allows for community engagement in planning processes, but also provides new forms of data to inform the planning process. In this presentation, Hollander will speak to both perspectives on digital urbanism. First, he will discuss ways that community engagement can be enhanced through social media outreach, while also demonstrating ways that such processes can also be co-opted by nefarious bots. Next, he will speak about the power of today's digital data sets to be adopted by planning and design professionals, from Twitter posts that offer content about quality of life and travel data, to Google Streetview images that suggest, en masse, how safe a neighborhood is, to Flickr photos that point to the kinds of places that people in a community care about.

Taylor Shelton

is an Assistant Professor in the Department of Geosciences at Mississippi State University. Broadly-trained as a human geographer, Shelton's work combines critical socio-spatial theory and GIS in order to

understand—and challenge—urban inequalities. In particular, his work focuses on how mapping and data visualization can be used to develop alternative understandings of urban social and spatial processes, especially as it relates to questions of housing, segregation, and neighborhood change.

Prior to joining Mississippi State in 2017, Shelton held appointments as a Visiting Scholar in the Department of Geography at the University of Kentucky and as a Postdoctoral Fellow in the Center for Urban Innovation at the Georgia Institute of Technology. He earned B.A. and M.A. degrees in geography from the University of Kentucky and his PhD from the Graduate School of Geography at Clark University.

Abstract - Towards a situated mapping: doing data-driven geography in a post-truth age

Society is currently confronted by the contradiction that at the same time as the amount of, and means to analyze, data has exploded and become widely accessible, there is a declining faith in (and reliance upon) data in the public realm. While critical social scientists have long critiqued the 'just the facts' approach of data-driven science and policy-making as ideology-laden (just without openly acknowledging it as such), the complete dismissal or rejection of such facts represents a challenge to the continued existence of many of these disciplines and scholarly traditions. This paper argues that in such an emerging post-truth age, our approaches to data and mapping need not rely on an increasingly outmoded view of data-qua-facts. Instead, we should turn to data and mapping as a means of thinking about the world differently, and advancing an alternative vision of what society is and can be.

Drawing inspiration from both Donna Haraway's call for 'situated knowledges' and Elvin Wyly's more recent notion of 'strategic positivism', this paper calls for a more situated mapping that simultaneously leverages the ostensible objectivity of data while also moving beyond it in order to reveal the underlying processes that drive patterns of social and spatial inequality. Using examples from research in Louisville and Lexington, Kentucky, the paper demonstrates how a more situated approach to mapping can present not only 'the facts' of social and spatial inequality, but also help to reimagine spaces, places and taken-for-granted narratives about inequality and the ways that we measure it.

Data and Democracy

This session explores the implications of urban digital tech and data usage for public participation, engagement, citizenship, and inclusion. This dialogue between panelists in a range of different fields aims to raise questions and critique as well as highlight practices and opportunities for action, intervention, and organizing.

Susan McGregor, Moderator

is Assistant Director of the Tow Center for Digital Journalism and an Assistant Professor at Columbia Journalism School, where she helps supervise the dual-degree program in Journalism and Computer Science. Her courses focus on data journalism, information visualization, algorithms, and ethics. Her research work on information security, privacy, and novel news distribution methods has been funded by the National Science Foundation, the Knight Foundation, Google, and several departments and programs at Columbia University. She is Co-Chair of the Data Science Institute's Center for Data, Media and Society, and a member of the 2019-2020 World Economic Forum Global Future Council on Media, Entertainment and Culture. Her book "Information Security Essentials: A Guide for Reporters, Editors and Newsroom Leaders" will be published by Columbia University Press in 2020.

Greta Byrum

reimagines the way we design, build, control, and govern communications systems. As Co-Director of the Digital Equity Laboratory at The New School in New York City, she builds digital justice through applied research, community projects, and policy strategy. Previously, Byrum founded the Resilient Communities program at New America, where she developed and led Resilient Networks NYC, an initiative bringing training, tools, and equipment for storm-hardened mesh WiFi to five neighborhoods in NYC's flood plains. Byrum was a 2017 Harvard Loeb Fellow and currently serves on the boards of the New Harmony Earth Sanctuary and the METRO New York Libraries Council.

Abstract - The Future is Already Here - It's Just Poorly Managed

Data-driven systems offer the potential to understand environmental conditions, improve health, create energy efficiencies, mobility solutions, etc. Yet these systems also play to a market in carceral and surveillant uses, on display in the Uighur region of China; or increasingly via less visible but ubiquitous forms of social control worldwide.

While we might expect regulatory guardrails for novel sociotechnical systems affecting social equity and wellbeing, in practice our legislative and judiciary systems are ill-equipped. Byrum will walk through three cases that demonstrate the deficiencies of existing governance infrastructure to manage the public safety and human rights risks of data-driven systems:

1. New York City's Automated Decision-Making Systems (ADS) Task Force (City)
Charged by NY's City Council with developing a framework for procurement and implementation of algorithmic systems by City departments and agencies, the first-of-its-kind Task Force has struggled with public relations and basic understanding of operational needs versus data privacy concerns.

2. Tenants' Rights and IoT in the Private Sector (State)
Two recent lawsuits demonstrate the challenges of data-driven systems for housing policy. In Hell's Kitchen, keyless locks have allowed a landlord to gather data from and control access for rent-controlled tenants. In Brownsville, tenants maintain that a landlord-installed facial recognition system has enabled discriminatory treatment. While State laws set housing policy, there is no mechanism in place to address the equity impact of these new housing technologies.

3. The First-Ever Digital Decennial Census (Federal)
In 2020, the decennial census will be digital for the first time. But while 80% of households will be asked to participate online, 35% of U.S .adults do not have home internet, raising the barrier to being counted for the poor, elderly, people of color, rural residents, and immigrants. Moreover, the recent executive order provides blanket authority for the unprecedented sharing of sensitive data. How do we ensure that the count will not be biased towards more affluent, white residents—and that data will not be re-identified or misused?

In each case, Byrum will discuss efforts underway to create public advocacy to shape the implementation of data-driven systems more intentionally and democratically for equity and the public good.

Janice Gates

is the Director of Programming for the Equitable Internet Initiative (EII) at the Detroit Community Technology Project (DCTP). She has a background in program management, marketing, public relations, and communications. She works with anchor organizations in three Detroit neighborhoods (Islandview, Southwest, and the North End) seeding community technology programming, including DCTP's Digital Stewards training program, local expansion, outreach strategies, partnerships, program implementation, evaluation, and internet adoption.

Abstract

38% of households in Detroit have no broadband connection at home with 63% of low-income households with no broadband connection. The median household income in Detroit is $26,249. Up to 70% of school-aged children in Detroit have no Internet access at home. In Detroit's lower-income communities, affordable internet access either does not exist or comes at the cost of slower and lower quality internet speeds.

The Equitable Internet Initiative (EII) addresses the digital divide in Detroit. EII has worked to demystify technology and show the critical role media and technology plays in restoring and healing communities.

Gates will discuss DCTP's commitment to community technology and the history and context of their work. She will also share EII's impact on these neighborhoods and its community members as well as the challenges each has been confronted with. Participants will learn about DCTP's principles, community engagement practices, teaching philosophy, use of participatory design, and how these practices ensure that those most marginalized by the digital divide are at the forefront of generating the solutions to challenges they face.

In addition, participants will learn how DCTP practices data justice within their networks particularly as they work with other organizations and community members to resist the harmful technologies of Project Greenlight and facial recognition. Finally, Gates will share how DCTP views their role as an organization in the context of Detroit.

Renée Sieber

is a Professor of Geography and Environment at McGill University, in Montréal, Canada. She is also affiliated with McGill's School of Computer Science, McGill's Digital Humanities Working Group, and the Global Environmental and Climate Change Centre of Quebec. Sieber works at the intersection of social theory and computer code. She specializes in use and value of information technology by marginalized communities, community-based organizations, and social movement groups; public participation GIS/participatory Geoweb; use of GIS in the environmental movement; and development of e-commerce tools for use in marginalized communities.

Abstract

A participatory democracy assumes that institutions enable the public to represent their interests and influence civic policy. Civic tech and data increasingly permit technocratic and automated decision making (ADM) in government. What is the role of the public in civic decision making, particularly with the idea that only technology of increasing complexity and opacity can solve today's urban situations? Sieber draws on 20 years of technologically-enabled civic participation utilizing geographic information systems (GIS) to investigate how people use technology to participate in government policy or, when necessary, use that tech to effectively oppose policy. Sieber shifts to the latest technocratic solution: AI in ADM. How do the public participate in something considered a blackbox, where government employees do not even understand how AI works and where the public's role can essentially be reduced to inputs? Given that opacity, what would it take for the public to do it on their own? Among technologically-enabled civic participation, what are the commonalities and challenges? Sieber will talk about technological ephemerality, learning curves, user interfaces, and control over the means of technological reproduction.

Methodologies and Media

This is a conversation on hybridity –engaged and situated research as a mode of practice; design and visualization as modes of urban research–from different spatial disciplines and perspectives which explore the epistemologies of digital or data-driven tools and techniques and their implications for the spaces, places, and claims produced.

Laura Kurgan ('88 M.Arch)

is Professor of Architecture at Columbia GSAPP, where she directs the Visual Studies curriculum and the Center for Spatial Research. She is the author of "Close Up at a Distance: Mapping, Technology, and Politics" (Zone Books, 2013). Her work explores things ranging from digital mapping technologies to the ethics and politics of mapping, and the art, science and visualization of data. As Director of the Center for Spatial Research, she has been Principal Investigator on research supported by the Open Society Foundations, the Ford Foundation, the Andrew W Mellon Foundation, and the Gardiner Foundation. Current topics of her research at CSR include justice mapping, conflict urbanism, spatial inequality, and historical New York City.

Craig M. Dalton

is an Assistant Professor in the Department of Global Studies and Geography at Hofstra University. Trained in both geographic information systems (GIS) and critical cultural geography, he specializes in social justice-oriented mapping and critical data studies. A founding member of the Counter-Cartographies Collective, he is engaged in a variety of community projects and has recently published on topics including the epistemological problems of data science, the political economy of navigation apps, and modes of resistance to corporate location data collection. He also dreams of change through speculative fiction, political theatre, and this year, learning to understand baby talk.

Abstract - Practicing Cartographic Activism in a Digital Age

Counter-mapping is a powerful conceptual framework and set of practical methods for imagining and realizing places, spaces, and lives. Its purpose is to perform situated knowledge production through mapping in such a way that develops social, spatial alternatives. Current digital geographic technologies are powerful tools for counter-mapping initiatives, but also pose potential pitfalls for practitioners. Multiple counter-mapping initiatives illustrate how digital technologies can enhance and empower more and different kinds of people in their respective contexts. Such technologies facilitate larger scale, complex geographic analysis and wide distribution of the results. However, doing so successfully means seriously engaging important issues with such technologies. First, where does the data come from? Geographic digital data are useful, but also frequently suffer from the assumption that they are a full and accurate representation, a poor assumption in the contemporary data economy. Second, how does the digital divide

fall in this project? Not just in terms of hardware, but there are real social divides of training and education in making maps and accessing them in every initiative. Third, digital data allows for the massive collection of data and storage in centralized archives. Who has access to that archive? How might that data or the map be co-opted? Dalton's presentation will touch on each of these questions and reflect on lessoned learned, drawing from examples including the Counter Cartographies Collective, the Anti-Eviction Mapping Project, Inside Airbnb, Guerilla Cartography, St. Mungo's, and others.

Mark Shepard ('96 M.S.AAD)

is an Associate Professor of Architecture and Media Study at the University at Buffalo, where he is Co-Director of the Center for Architecture and Situated Technologies and program director of the Media Arts and Architecture Program (MAAP). His work investigates the entanglements of contemporary technologies and urban life. He is an editor of the "Situated Technologies Pamphlets Series" and "Sentient City: ubiquitous computing, architecture and the future of urban space", published by the Architectural League of New York and MIT Press. His work has been presented at museums, galleries, and festivals internationally, including the Venice International Architecture Biennial; the Prix Ars Electronica, Linz, Austria; and the International Architecture Biennial Rotterdam.

Abstract - Bias in Urban Research: From Tools to Environments

What we see is influenced by how we see, which in turn is conditioned by the tools we use to see with. One could say these tools bias what we see. If our understanding of cities is shaped by the tools and techniques by which we apprehend them, they are also shaped by them. In this way, the evolution of urban environments can be understood as an ontogenetic process, whereby the relation between the tools and objects of urban research and design is recursive and mutually reinforcing. Today we more frequently view cities through the data they generate, often deploying algorithms as tools for insight. Methods involving big data and machine learning introduce forms of bias that are both inherited from human bias residing in the dataset itself, as well as generated by the way in which the algorithms mine, parse, and interpret that data. Further, as neighborhoods become instrumented with arrays of sensors, and their residents, in turn, generate ever-larger volumes of data as they go about their daily business, these tools themselves are beginning to merge

with the environments they observe. Shepard's talk traces this shift from observational tools to environments that observe in an attempt to examine the changing nature of bias in urban research and design and the subsequent implications for epistemologies of urban environments.

Annette Kim

is Associate Professor of Public Policy at the University of Southern California. She founded and directs SLAB, the Spatial Analysis Laboratory, that advances visualization through spatial ethnography and critical cartography in order to find inclusive and humane ways to design and govern the 21st-century city. She also co-founded the collective RAP: Race, Arts, and Placemaking. Her books include "Sidewalk City: Re-Mapping Public Space in Ho Chi Minh City" (University of Chicago Press, 2015) and "Learning to be Capitalists: Entrepreneurs in Vietnam's Transition Economy" (Oxford University Press, 2008). She received a Ph.D. in city and regional planning, M.A. in visual studies from the University of California, Berkeley, M.P.P. from Harvard University, and a bachelor's degree in studio art and architecture from Wellesley College.

Abstract

For the first time in history, the human race has become urban. Human migration to cities has set off a global upheaval with far-reaching implications. Our fundamental notions and institutions of identity and belonging, and of entitlements to public and private space are being challenged and re-written all over the world.

SLAB presents three research projects that exploit the possibilities and explore the limits of our digital trace filled world in order to map migrant urbanisms, the emergent spatial practices of everyday peoples carving out new possibilities in China and the United States. Subterranean City makes visible Beijing's underground layer of bomb shelters and basements which privately housed a million migrant workers. Hidden City maps the informal market for dormitories hidden in Shanghai's formal built environment, measuring the chasm between "fake data" on the internet and groundtruthed data. ethniCITY presents the complex linguistic landscape of Los Angeles, a city that allows the expression of multiple cultures in the built environment. The exhibition then moves beyond building exteriors into Bill's Taco restaurant, an important African American space that is co-produced by Mexican- and Korean-Americans, all sharing a stake in creating places of belonging.

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