URBAN INTELLIGENCE

Spring 2017 | Wednesdays 4 – 6:45pm
NMDS 5676 | CRN 6972

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We live amidst real-time data flows, with sensors measuring everything from air quality to traffic, with our own cell phones yielding information about our whereabouts and activity levels, with buildings reporting on their own energy consumption and maintenance. This urban "intelligence" ostensibly allows for the optimization of our environments and our selves – for the production of "smart cities" and smart citizens. In this hybrid studio we'll examine how the methods of data science shape our civic values and urban imaginaries, and condition the work of urban design and administration; and we'll assess the consequences – for the material environment, for urban citizenship, for quality of life, etc. – when data and efficiency drive design and development decisions. Taking nearby Hudson Yards as our case study, we'll explore not only how "smartness" is operationalized in such new urban developments, but also what other kinds of intelligence have long been present in our cities. To evaluate Hudson Yards's smarts, we'll develop a collection of "urban intelligence test kits" – IQ tests, guidebooks, measurement instruments, field kits, etc. – to evaluate how human and machine logics, intelligences, and values are integrated and negotiated on this urban test-bed.

**The course is supported by a generous grant from the Provost's Innovations in Education Fund, which will cover necessary costs for specialized training, design consultation, fabrication, and publication of our results, and our work will be featured in a special "urban interfaces" issue of MIT Press's *Leonardo Electronic Almanac*.

Our Tools

This is our class website: http://www.wordsinspace.net/urbanintel

Here you'll find our most up-to-date schedule, pdfs or links for all the readings, catalogues of our work, etc. Most of our resources are available on the open web, but some materials are copyrighted; to access those, you'll be prompted to enter a username and a password: **student** | **seecritfilez**

Your Contributions

ATTENDANCE, PARTICIPATION + IN-CLASS LAB ACTIVITIES

We need you to show up on time, having completed the readings, and prepared to share your experience, expertise, interests, and ideas. We hope you'll engage constructively and respectfully with your classmates.

You will be permitted **two excused absences** ("excused" means that you must have contacted me *prior* to class to inform me of your absence) for the semester. Additional excused absences – and any unexcused absences – will negatively affect your grade. **More than three absences**, excused or unexcused, will result in failure of the course; if you anticipate needing to miss several classes, you are advised to drop the course. A pattern of late arrivals is likewise detrimental. Your consistent presence and regular, constructive contributions – including your participation in our in-class labs – account for **20% of your final grade**.

PRECEDENT ANALYSIS

We'll be exploring precedent projects throughout the semester, and you'll be asked to review a whole bunch of examples for class on March 8. Each of you should choose one project – a kit, plan, performance, method, etc., that has some epistemological interest at its core (either featured in the readings for this week or *inspired* by the readings) – for analysis. Assess its (1) subject matter or purview; (2) its underlying epistemology and methodology; (3) how its format or mode of execution serves, or fails to serve, its purposes; and (4) its weaknesses or unexplored critical dimensions. **Before class on March 8, please post your ~600-word analysis (with links and illustrations!) to our class website**, and be prepared to share your work in a **five-minute (max!) informal in-class presentation**. Then, over the course of the next week, please review your classmates' posts and offer thoughtful, substantial (at least a couple sentences!) **responses to two**.

Your precedent analysis and two follow-up comments account for **10% of your final grade.**

TEAM PROJECT PLAN + ENVIRONMENTAL SCAN

Your team is responsible for **submitting to Shannon, Jack, and Kate, by April 5 via Google Drive**, a 1500- 2000-word project plan and environmental scan addressing the following:
- your design concept and the critical ideas informing your project
- the various stakeholders in those critical concerns
- the primary audiences / user groups for your "kit," and its desired impact on each
- the "tone" of your project (realist, activist, speculative, functional – in other words: is it meant to *work* in the "real world," or is it a utopian/dystopian/jokey thought experiment?)
- the format(s) / material properties of your "deliverable," and how that/those format(s) serve(s) your larger goals
- the environment(s) in which user groups will engage with your kit
- your kit's functionality – or, how it will ideally work

- precedent projects (include multimedia documentation, if appropriate)
- relevant critical literature
- a tentative development plan + discussion of team members' roles

These bullet points needn't dictate the organization of your plan; you're free to determine the structure of your document, so long as it addresses the above issues and any others that you regard as pertinent.

Your team project plan and environmental scan account for **20% of your final grade.**

TEAM BUDGET

We have a generous budget for this class, and a good portion of that budget will be allocated to individual groups for construction materials, equipment, tutorials, and other costs associated with the completion of your projects. Dirk Van Stee, NSPE's Assistant Director for Budget and Operations, will visit our class on March 15 to discuss budgeting and purchasing policies and procedures. Your team must then identify all costs associated with your final project and **submit to Shannon and Jack, via Google Drive**, a comprehensive, itemized budget (formatted in accordance with Dirk's recommendations) **on or before April 12**, at which point the team will receive a **declining-balance credit card** to purchase necessary supplies and services. Team members are responsible for reconciling all expenses as they are incurred.

Your team budget accounts for **10% of your final grade.**

FINAL PROJECT

Each team will develop a "test kit" (broadly conceived!) composed of instruments, interfaces, tools, texts, etc., through which we could evaluate various forms of "urban intelligence." Throughout the semester we'll examine the myriad human and non-human intelligences that are built into our smart cities, and that have historically been built into our cities over the *longue durée*. We'll also examine different approaches to operationalizing and evaluating intelligence, including scientific, administrative, designerly, and artistic approaches to monitoring and testing smart cities. Your challenge will be to choose an epistemological and methodological orientation and develop a "test kit" to evaluate – earnestly, speculatively, or parodically – certain place-based urban intelligences.

Because our work will be featured in a special "urban interfaces" issue of MIT Press's *Leonardo Electronic Almanac*, all teams will be responsible for submitting carefully edited and formatted documentation of their final projects. Specifications will be developed by our UI Graphic Design Consultant.

Final projects are due on **May 10**, and account for **30% of your final grade.**

By **noon on Friday, May 12**, each student must **submit to Shannon, Jack, and Kate, via Google Drive**, a 600- to 900-word evaluation of their team's overall accomplishments and each team member's individual contribution. Your assessment should include the following:
- a brief restatement of what your team set out to accomplish and an evaluation of whether your team met those initial goals, or how your goals might have evolved over the course of the semester
- a brief discussion of your group's dynamic and work process, and how they might have evolved over the course of the semester
- a brief discussion of each team member's contribution (including your own), including any challenges individual members might have presented
- any additional big-picture reflections or minor details you'd like us to know.

Your team assessment accounts for **10% of your final grade.**

LEARNING OBJECTIVES

Throughout the semester, we'll:
- Learn about various theories of "intelligence," examine how epistemologies are operationalized through different methodologies and materialized in design and administrative processes, and consider how they shape our urban imaginaries
- Explore the connections between research methods, design strategies, politics, and cultural values
- Assess the politics and economics of data, the ethics of sensing and monitoring technologies, the environmental impacts of design, and the qualities of cities that make them livable and inclusive
- Model, and advocate for, a more inclusive, interdisciplinary, methodologically varied, critical approach to city-building – particularly in an age characterized by the fetishization of data, the reification of algorithms, and the privileging of growth and efficiency as prime urban and civic virtues.

January 25: Enlightened Urban Futures

To be enjoyed/endured in class (you needn't review in advance!):

- Excerpts from "World's Smart Cities: San Diego," *National Geographic Channel* [video: 0:44].
- Cisco's Smart + Connected Communities
- IBM Smarter Cities
- Kohn Pederesen Fox's Urban Interface [ppt]
- The U.S. Department of Transportation's 2016 Smart City Challenge Finalist Pitches
- Brian Petchers, Tim Pierson, Chloe Sorvino and Kirsten Taggart, *Forbes'* Hudson Yards video (May 31, 2016) [:02:26].
- Hudson Yards' promo videos
- Sara Blom and Dorien Zandbergen, *Smart City: In Search of the Smart Citizen* (2015) [video: 1:04].
- Liam Young and Tim Maughan, *In the Robot Skies* (2016) [film teaser: 1:38].
- Wes Goatley and Georgina Voss, Ground Resistance (2016) [exhibition].
- Google Urbanism
- Keller Easterling's Presentation Images
- The (much debated) Data – Information – Knowledge – Wisdom pyramid

February 1: Visit to Alphabet's Sidewalk Labs @ Hudson Yards

Field Trip (4:30 – 6:30): Sidewalk Labs, 10 Hudson Yards, 26th Floor

- John Hockenberry, "The Future of the 'Smart City,'" *The Takeaway* (June 23, 2016) [radio: 0:52] (consider the gendered roles various spokespeople play here).
- Check out Sidewalk Labs.
- Skim through Sidewalk Talk.
- Shannon Mattern, "Instrumental City: The View from Hudson Yards, circa 2019," *Places Journal* (April 2016).
- Nick Pinto, "Google is Transforming NYC's Payphones into a 'Personalized Propaganda Engine,'" *Village Voice* (July 6, 2016).
- Search for and review recent popular and academic publications on Hudson Yards and Sidewalk Labs. We'll create a **shared Google Doc** on which we can collaboratively build an annotated bibliography.

February 8: What *are* smart cities? (And why are they often so dumb and scary?)

- Anthony Townsend, "Urbanization and Ubiquity" in *Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia* (New York: Norton, 2013): 1-18 [I encourage you to read the entire book throughout the semester].
- *Browse through* Anthony Townsend, "Cities of Data: Exploring the New Urban Science."
- Orit Halpern, Jesse LeCavalier, Nerea Calvillo, and Wolfgang Pietsch, "Test-Bed Urbanism," *Public Culture* 25:2 (2013): 273-306.
- Rob Kitchin, "Making Sense of Smart Cities: Addressing Present Shortcomings," *Cambridge Journal of Regions, Economy and Society* 8 (2015): 131-36.
- Rob Kitchin, "Rethinking, Reimagining and Remaking Smart Cities," *Programmable City Working Paper* 20 (August 2016).
- Reeves Wiedeman, "The Big Hack," *New York Magazine* (June 19, 2016).
- You'll want to sit down for this: Ben Huh, "Should I Pursue My Passion or Business?" *Medium* (October 25, 2016).
- *Skim* Seattle's Digital Equity initiative and NYC's Guidelines for the Internet of Things

Supplemental: Plenty more people (mostly guys) to choose from!!
- Michael Batty, *The New Science of Cities* (Cambridge: MIT Press, 2013).
- Dan Hill's *City of Sound* and Medium channel.
- Adam Greenfield, *Against the Smart City* (Do Projects, 2013).
- Constantine Kontokosta, "CUSP Quantified Community and Neighborhood Labs," AEC Technology Symposium (September 25, 2015).
- Constantine Kontokosta, Nicholas Johnson and Anthony Schloss, "The Quantified Community at Red Hook: Urban Sensing and Citizen Science in Low-Income Neighborhoods," Bloomberg Data for Good Conference (September 25, 2016).
- Keiichi Matsuda, *Hyper-Reality* (2016) [film]
- William Mitchell, *Me++: The Cyborg Self and the Networked City* (Cambridge, MIT Press, 2003) and *e-topia: Urban Life, Jim – But Not as We Know It* (Cambridge: MIT Press, 1999).
- Brian Nussbaum, "Smart Cities – The Cyber Security and Privacy Implications of Ubiquitous Urban Computing," *Stanford Center for Internet and Society* (February 9, 2016).
- Antoine Picon, *Smart Cities: A Spatialized Intelligence* (Wiley, 2015).
- Carlo Ratti and Matthew Claudel, *The City of Tomorrow: Sensors, Networks, Hackers, and the Future of Urban Life* (New Haven: Yale University Press, 2016).
- Jathan Sadowski and Frank Pasquale, "The Spectrum of Control: A Social Theory of the Smart City," *First Monday* 20:7 (2015).
- Mark Shepard, *Ubiquitous Computing, Architecture, and the Future of Urban Space* (Cambridge: MIT Press, 2011).
- Liesbet van Zoonen, "Privacy Concerns in Smart Cities," *Gov't Info Quarterly* 33:3 (July 2016).
- White House, Office of the Press Secretary, "Fact Sheet: Announcing…Participating Communities in the White House Smart Cities Initiative" (September 26, 2016).
- Liam Young, "An Atlas of Fiducial Landscapes: Touring the Architectures of Machine Vision," *Log* 36 (Winter 2016): 125-34.

February 15: Urban Intelligence before "Smartness"™

Lab: 4-4:30pm: Making Center Tour with Mick Hondlik: meet @ Tool Checkout, 2 W 13th St, 2nd Floor

- Shannon Mattern, "Of Mud, Media and the Metropolis: Aggregating Histories of Writing and Urbanization," *Cultural Politics* 12:3 (Fall 2016): 310-31.
- Malcolm McCullough, "Ambient" and "Information" in *Ambient Commons: Attention in the Age of Embodied Information* (Cambridge, MIT Press, 2013): 7-45.
- *Skim* Shannon Mattern, "Indexing the World of Tomorrow," *Places Journal* (February 2016).
- "Urbanizing Military Information Technology: Interview with Jennifer Light," *Harvard Design Magazine* 38 (Spring/Summer 2014): 139-47.
- Excerpt from Orit Halpern, *Beautiful Data: A History of Vision and Reason Since 1945* (Durham: Duke University Press, 2014): 110-22.
- Keller Easterling, "Zone: The Spatial Softwares of Extrastatecraft," *Places Journal* (June 2012).
- Browse through the Parsons Making Center Resources.

Supplemental Resources:
- Cambridge's Centre for Urban Conflicts Research.
- John de Boer, "Resilience and the Fragile City," *Our World* (August 25, 2015).
- Keller Easterling, *Extrastatecraft: The Power of Infrastructure Space* (New York: Verso, 2014).
- "Indexical Landscapes" Symposium, ArtCenter College of Design, October 2016.
- Jennifer Light, *From Warfare to Welfare: Defense Intellectuals and Urban Problems in Cold War America* (Baltimore: Johns Hopkins University Press, 2003).
- Jesse LeCavalier, *The Rule of Logistics: Walmart and the Architecture of Fulfillment* (Minneapolis: University of Minnesota Press, 2016).
- Clare Lyster, *Learning from Logistics: How Networks Change our Cities* (Basel: Birkhäuser, 2016).
- Ned Rossiter, *Software, Infrastructure, Labor: A Media Theory of Logistical Nightmares* (New York: Routledge, 2016).
- Anthony Townsend, "The $100 Billion Jackpot," "Cybernetics Redux," "Cities of Tomorrow" in *Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia* (New York: Norton, 2013): 19-114.

February 22: What's "smart"? And how do we know it when we see it?

Lab: Kate + Jack share their work.
Activity: Developing metadata schemes for next week's cataloguing exercise: what criteria are most salient in distinguishing between various forms of "intelligence"?

- Shane Legg and Marcus Hutter, "Universal Intelligence: A Definition of Machine Intelligence," *Minds & Machines* 17:4 (2007): 391-444.
- Mark Dery and Steven Pinker, "Smart Bombs: Mark Dery, Steven Pinker on the Nature-Nurture Wars and the Politics of IQ," *BoingBoing* (August 14, 2009).
- Raffi Khatchadourian, "The Doomsday Invention," *New Yorker* (November 23, 2015).
- Don Tapscott, "How Blockchains Could Change the World," *McKinsey & Company High Tech* (May 2016).
- Elvia Wilk with Jenna Sutela, "Slime Intelligence," *Rhizome* (August 16, 2016).
- Murray Shanahan, "Consciousness Exotica," *Aeon* (October 19, 2016).
- Shannon Mattern, "Methodolatry and the Art of Urban Measure," *Places Journal* (November 2013).

Supplemental Resources:
- "An Ethereal Future," *Reddit* (2014) [on blockchain futures].
- Mariusz Flasinski, "Theories of Intelligence in Philosophy and Psychology" in *Introduction to Artificial Intelligence* (Springer, 2011): 213-23.
- Michelle G., "Picture Yourself as a Stereotypical Male," *MIT Admissions* (September 5, 2015) [on the gender and racial biases of testing].
- Gary Groth-Marnat, *Handbook of Psychological Assessment*, 5th Ed. (New York: John Wiley & Sons, 2009).
- Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14:3 (Autumn 1988): 575-99.
- Institute for the Future, "Understand the Blockchain in Two Minutes" [video]
- Olivia Judson, "What the Octopus Knows," *The Atlantic* (January/February 2017) [Peter Godfrey-Smith @ NYPL February 21].
- Eduardo Kohn, *How Forests Think: Toward an Anthropology Beyond the Human* (Berkeley: University of California Press, 2013).
- Perluigi Serraino, *The Creative Architect: Inside the Great Midcentury Personality Study* (New York: Monacelli Press, 2016).
- Tom Stonier, *Beyond Information: The Natural History of Intelligence* (New York: Springer-Verlag, 1992).
- "Test Bias," *The Glossary of Education Reform* (May 22, 2015).
- "Testing, Testing," *things magazine* (September 28, 2012).
- Anna Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton: Princeton University Press, 2015).

March 1: Other Actual + Potential Urban Intelligences (i.e., Thinking Beyond "Smart")

Lab: Developing a catalogue of spatial intelligences – <mark>more info to come</mark>

- Aparna Piramal Raje and Saskia Sassen, "Redefining Notions of Urban Intelligence," *Live Mint* (June 29, 2016).
- Jane Jacobs, "The Uses of Sidewalks: Safety" and "…Contact" in *The Death and Life of Great American Cities* (New York: Vintage Books, 1992 [1961]): 29-73 [if you haven't read the book, I encourage you to do so – maybe not now, but some time!]
- Jennifer Gabrys, excerpts from "Engaging the Idiot in Participatory Digital Urbanism" and "Digital Infrastructures of Withness" in *Program Earth: Environmental Sensing Technology and the Making of a Computational Planet* (Minneapolis: University of Minnesota Press, 2016): 233-8, 241-5, 261-5.
- Eric Gordon and Stephen Walter, "Meaningful Inefficiencies: Resisting the Logic of Technological Efficiency in…Civic Systems" in Gordon and Mihailidis, eds., *Civic Media: Technology | Design | Practice* (Cambridge: MIT Press, 2016): 243-66 – **focus on 253-63**.
- Matthew Wilson, "Cyborg Geographies: Towards Hybrid Epistemologies," *Gender, Place and Culture* 16:5 (2009): 499-515.
- Felipe Vera and Rahul Mehrotra, "Temporary Flows & Ephemeral Cities," *Room One Thousand* 3 (2015).
- Skim through the Rockefeller Foundation's 100 Resilient Cities.

Supplemental Resources:
- Civic Intelligence:
    - Dan Hill, "On the Smart City; A Call for Smart Citizens Instead" through "Passive Citizens" + "Suggestion: Active City Gov't" through the end, in "On the Smart City: Or, a 'Manifesto' for Smart Citizens," *City of Sound* (February 1, 2013).
    - Ubiquitous Commons + Human Ecosystems
    - John Elrick and Will Payne, "Model City: Rule of Innovation," *New New Games*.
- Media/Data Literacies and Civic Media as Counterbalances to Smart Technologies:
    - Shannon Mattern, "Public In/formation," *Places Journal* (November 2016).
    - Paul Mihailidis and Roman Gerodimos, "Connecting Pedagogies of Civic Media: The Literacies, Connected Civics, and Engagement in Daily Life" in Eric Gordon and Eric Gordon and Paul Mihailidis, eds., *Civic Media: Technology | Design | Practice* (Cambridge, MIT Press, 2016): 371-91.
- Actor-Networked/Cyborgian/Ecological Intelligences:
    - Owain Jones, "After Nature: Entangled Worlds," in Noel Castree, David Demerritt, Diana Liverman, and Bruce Rhoads, eds., *A Companion to Environmental Humanities* (Oxford, UK: Wiley-Blackwell, 2009): 294-312.
    - Adhijnan Rej, "Jugaad: Frugal Innovation or Hacking the Indian Way?" *Wired Innovation Insights* (October 23, 2013).
    - Erik Swyngedouw, "The City as a Hybrid – On Nature, Society and Cyborg Urbanization," *Capitalism, Nature, Socialism* 7:25 (March 1996): 65-80.

Possibly of Interest? Post Democracy: Indigeneity, Stack, Sovereignty

Thursday, March 2, 6:30 – 8:30
Wollman Hall, 65 West 11th Street

With the flow of finance, people, and influence across national borders undermining the traditional sovereignty of the nation-state, this event explores alternative ways that we might think about the definition and role of how a space is delimited and ruled. The conversation considers new technologies including the structure of "the stack" as described by theorist Benjamin Bratton. In several texts Bratton describes the relationship between different types of automated calculation such as mobile apps, smart cities, and cloud platforms amongst others. In recent years Bratton, as well as other academics and artists, have developed substantial discourse around this term, considering how these seemingly invisible structures that inform and underpin our everyday lives operate in ways that are akin to older, more familiar models of the market and the state and also how they differ. This panel brings those conversations together with the history and contemporary moment of the No DAPL protests, one of the largest gatherings of indigenous nations in one place that has gained significant momentum and visibility in the news to fight the Dakota Access Pipeline.

Participants include theorist Benjamin Bratton, writer Tyler Coburn, anthropologist Jaskiran Dhillon, as well as artists Nobu Aozaki, Adelita Husni-Bey, and Daniel Sauter (moderator).

March 8: Observing + Operationalizing Spatial Intelligence

You needn't read all of these texts closely; you're welcome to skim through. Your primary goals are to create a mental inventory of potential forms of output, and to generate ideas – in particular, potential concrete forms – for your own projects.

- Adam Rothstein, "The Cities Science Fiction Built," *Motherboard* (April 20, 2015).
- Shannon Mattern, "Interfacing Urban Intelligence," *Places Journal* (April 2014).
- Shannon Mattern, "Infrastructural Tourism," *Places Journal* (July 2013).
- Shannon Mattern, "Cloud and Field," *Places Journal* (August 2016).
- Jentery Sayers, "Kits for Cultural History," *Hyperrhiz* 13 (Fall 2015) – and skim through the other articles in this special issue on "Kits, Plans, Schematics."
- Christine Gaspar, "Images of the City: The Work of the Center for Urban Pedagogy" and Kadambari Baxi and Irene Cheng, "Citizenship by Design" in Miodrag Mitrasinovic, ed., *Concurrent Urbanities: Designing Infrastructures of Inclusion* (New York: Routledge, 2016): 76-86, 114-23.
- Check out the work of Public Lab and the Extrapolation Factory.

Due Before/In Class: Each of you should choose one project – a kit, plan, performance, method, etc., that has some epistemological interest at its core (either featured in the readings for this week or *inspired* by the readings – for analysis. Assess its (1) subject matter or purview; (2) its underlying epistemology and methodology; (3) how its format or mode of execution serves, or fails to serve, its purposes; and (4) its weaknesses or unexplored critical dimensions. Please **post your ~600-word analysis (with links and illustrations!) to our class website** before class, and be prepared to share your work in a **five-minute (max!) informal in-class presentation**. Then, over the course of the next week, please review your classmates' posts and offer thoughtful, substantial (at least a couple sentences!) **responses to two**.

Supplemental Resources (most will be examined in class):

- Carl Abbott, *Imagining Urban Futures: Cities in Science Fiction and What We Might Learn from Them* (Middletown, CT: Wesleyan University Press, 2016).
- Christopher Alexander, *A Pattern Language: Towns, Buildings, Construction* (New York: Oxford University Press, 1977).
- Julian Bleecker and Barry Brown, InterIKEA Systems (2015) [more from NearFutureLab].
- Jennifer Gabrys, "Smart Cities as Sustainable Cities: A Visual Essay," *Society & Space* (2014)
- Kevin Gaunt, "Bots – Collaborative AI for the Smart Home," *Core 77* (2016).
- Natalie Jeremijenko et al., Environmental Health Clinic + Lab.
- Carla Leitão and Ed Keller, "Drive," *Volume* 49: Learning Network (November 2016).
- Jennifer Light, "Taking Games Seriously," *Technology and Culture* 49 (2008): 347-75.
- Museum der Dinge's "Object Lesson: The Story of Material Education in 8 Chapters" exhibition and the exhibition texts.
- Gillian Rose, "Top Ten Tips for Making a Smart City Promotional Video," *Visual/Method/Culture* (September 19, 2016).
- Various Urban Dashboards.
- More Test Kits: blood tests, drug ID tests, Octavia Butler's "survival kits," pool tests, pregnancy tests, rape kits, water tests

March 15: Creating Intersections

Group Formation: Sam Haddix, Transdisciplinary Design Alum + Parsons Faculty
Work Plan: <mark>Project Brief/Contract Worksheet</mark> with **Jack + Kate**
Budgets (6pm): Dirk Van Stee, Assistant Director of Budget and Operations

Due In Class: three 3x5 index cards, each describing, diagramming, illustrating, etc., a different spatial intelligence that you find most compelling and would potentially like to explore in your final project – <mark>more info to come</mark>

- Marc Downie, Shelley Eshkar & Paul Kaiser, *Creative Collaborations* (Helsinki Design Lab / Sitra, 2012).
- *Skim* through Bryan Boyer, Justin W. Cook and Marco Steinberg, *Recipes for Systemic Change* (Helsinki Design Lab / Sitra, 2011) – in particular, the description of HDL's studio process on 97-119

March 22: No Class – Spring Break

March 29: Intelligence Gathering + Testing Methods

Guest: Bryan Boyer (in-person or via Skype)
Methods Workshop w/ Jack + Kate <mark>(hot-glue tool assemblage?)</mark>

What follows is a tentative list of readings. Our final selection will depend on the nature of your group projects:
- Elliott Montgomery and Chris Woebken, *Extrapolation Factory: Operator's Manual* (CreateSpace, 2016).
- Francisco Laranjo, "Critical Everything," *Grafik* (March 8, 2015).
- Marcus Foth and Martin Brynskov, "Participatory Action Research for Civic Engagement," in Eric Gordon and Paul Mihailidis, eds., *Civic Media: Technology | Design | Practice* (Cambridge, MIT Press, 2016): 563-80.
- Kathleen H. Pine and Max Liboiron, "The Politics of Measurement and Action," *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (CHI, 2015): 3147-56.
- Skim through Bryan Boyer, Justin W. Cook and Marco Steinberg, *Legible Practices: Six Stories about the Craft of Stewardship* (Sitra, 2013) – particularly their one-page method profiles on pp. 34-40, 53-7, 68-75, 86-93, 104-11, 123-8.

April 5: Groups Present Project Plans

Due Before Class: Groups' Project Plans + Environmental Scans: see instructions @ top of syllabus

Presentations: <mark>guidelines to come</mark>

April 12: Workshop + Informal Desk Consultations

Due Before Class: Group Budget: format to be determined in consultation with Dirk Van Stee

Desk Consultations: groups will work independently and meet individually with Jack, Kate, and Shannon

April 19: Mid-Semester Review

Guest Critics: Elliott Montgomery, Extrapolation Factory and Parsons Faculty; Mariana Mogilevich, architectural historian and Editor-in-Chief, *Urban Omnibus*; Andrew Blum, architecture / urbanism / tech journalist and author of *Tubes: A Journey to the Center of the Internet*

Presentations: <mark>guidelines to come</mark>

For Next Week: iterate and test your projects based on the critics' feedback

April 26: Workshop + Desk Consultations

Publication Template: Kate discusses <mark>formatting guidelines</mark> for your final documentation

Post-Testing Share-Out: groups briefly discuss their test results

May 3: Workshop

Due In Class: While you'll have time in class to work in your groups and consult with the instructors, you'll also be expected to share with Kate and Shannon a draft of your project documentation, so they can recommend revisions to your text and graphics

May 10: Final Presentations + Publication Materials Due