

# PLAN 673: The Ethics and Politics of New Urban Analytics

Fall 2019

Class Room: Murphy 302

Instructor: Nikhil Kaza

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Time: 4:00 PM - 6:45 PM (W)

Office Hours: 1:00 PM - 2:00 PM (T)

Office: 314 New East

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## Course Description & Objectives

Smart Cities are now a buzzword. While there is no consistent definition of what these cities are, these smart cities are urban spaces blanketed with ubiquitous and heterogeneous sensor networks that are constantly monitoring the vitality of the city. Such continuous surveillance raises deep political and ethical questions. It raises issues about institutional reconfiguration to manage and plan for these cities.

In this seminar, we will examine urban analytics platforms and interrogate them from variety of lenses, including privacy, equity and probity. We will examine the need and the structure of new governance mechanisms, delinations of rights, novel market transactions and social interactions. The main objective of the course is to take a critical look at urban data infrastructure and its discontents. This includes understanding the design of data collection mechanisms, institutional dimensions of data production (e.g. administrative vs crowdsourced) and self-reinforcing feedbacks of analysis and production of data.

This is a companion course to *PLAN 672: Urban Data Analytics*, which deals with different analytic techniques. Students are encouraged to take them both.

## Prerequisites & Preparation

This course does not require any prior preparation. However, it moves quickly and has voluminous readings. Prior exposure to an applied theory course is useful.

The course requires vigorous in-class participation, ability to digest and interpret large amount of literature and extensive out-of-class research.

## Course Policies

The following set of course policies is not meant as an exhaustive list. If in doubt, ask for permission and clarification.

## Grading

- 15% Seminar lead/presentation
- 15% Case study presentation
- 40% Seminar participation (weekly annotations)
- 30% In-depth end-of-term paper

## Attendance

Because this is a seminar, your attendance and participation is essential.

## Assigned Readings

Much of the material covered in the class will be from various books that are assigned for the particular week. I don't necessarily require you buy them, but you can procure them as necessary including using communal strategies.

As you can see from the schedule, readings from the week are voluminous. You will have to figure out ways to read and digest material. After all, one of the recurring themes in the seminar is "Big Data".

When articles are assigned, links are usually provided on Sakai.

We will use hypothes.is to annotate a selected set of readings for the week. The selected readings are marked explicitly on Sakai. These annotations are used by seminar lead to present and discuss the material. These readings are mandatory for everyone and form the bulk of the discussion in the class. The annotations are due Monday 5 PM.

For other readings assigned for the week, you will split the readings (chapters, articles) amongst yourself. Each of the student will then make a brief presentation (~5 min) of the main points of their assigned pieces.

## Class Format

In general, every class is broken up into three parts.

In the first part, the one student will lead the seminar touching upon the salient points of the required readings for the week along with summarising/challenging/expanding on annotations made by his/her colleagues. (~1 hr)

In the second part, all students will summarise and discuss the optional readings (~30 min)

In the third part of the class, another student will lead the seminar particularly focusing on a case study that illuminates, and builds upon other readings until that week (~45 min).

We will take short breaks as necessary.

### **Case Study Presentation.**

Each of you is expected to lead the seminar using concrete case studies at least one of the topics assigned. The case studies can be drawn from the set of the readings assigned for the class, ethnographies of places or from non-academic reports. There is a non-exhaustive list at the end of the syllabus that might provide some starting points. You are welcome, but not required to pick from this list. In either case, you should treat the articles as starting points for more in-depth research on the case rather than as definitive word on the case.

If you prefer to discuss a different topic not listed in the schedule, please see me ahead of time so that we can make space.

### **End of Term Paper**

A well thought out, diligently researched, properly supported paper on the issues of data and society as they apply to urban environment and its management is required at the end of the semester. At appropriate times, students will informally present progress on this paper in class and solicit feedback. Final presentations on this paper are scheduled on Dec 6.

### **E-mail**

Sakai messaging system is the preferred way to communicate with me and your colleagues.

### **Appointments**

I am available during my office hours. You can also schedule a time on my calendar that is mutually convenient, to discuss any aspect of the course. <http://nikhilkaza.youcanbook.me>.

## Schedule (Tentative)

### Aug 21 (Wed): Introduction

Few, S. (2012). "Big data, Big ruse". In: *Visual Business Intelligence Newsletter*.

Stephens-Davidowitz, Seth (2017). *Everybody Lies: Big Data, New Data, and What the Internet Can Tell Us About Who We Really Are*. New York, NY: Harper Collins. ISBN: 978-0-06-249749-9.

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### The Politics of Promise & Institutional Reconfiguration

#### Aug 28 (Wed): Smart Cities

Goodspeed, Robert (2014). "Smart cities: moving beyond urban cybernetics to tackle wicked problems". In: *Cambridge Journal of Regions, Economy and Society* 8.1, pp. 79–92.

Hill, Dan (2008). *The street as platform*. <http://www.cityofsound.com/blog/2008/02/the-street-as-p.html> (visited on Jun. 03, 2018).

Townsend, Anthony M (2013). *Smart cities: Big data, civic hackers, and the quest for a new utopia*. WW Norton & Company.

Vanolo, Alberto (2014). "Smartmentality: The smart city as disciplinary strategy". In: *Urban Studies* 51.5, pp. 883–898.

#### Sep 4 (Wed): Pursuit of Efficiency & Neoliberal Paradigm

Eubanks, Virginia (2018). *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*. New York, NY, USA: St. Martin's Press, Inc. ISBN: 1250074312, 9781250074317.

Moore, Mick (1989). "The Fruits and Fallacies of Neoliberalism: The Case of Irrigation Policy". In: *World Development* 17.11, pp. 1733-1750. ISSN: 0305-750X. DOI: 10.1016/0305-750X(89)90197-6.

#### Sep 11 (Wed): The Fall of the Firm and the Rise of Platforms

Graham, Mark, Isis Hjorth, and Vili Lehdonvirta (2017). "Digital labour and development: impacts of global digital labour platforms and the gig economy on worker livelihoods". In: *Transfer: European Review of Labour and Research* 23.2, pp. 135–162. ISSN: 1996-7284. DOI: 10.1177/1024258916687250. <http://dx.doi.org/10.1177/1024258916687250>.

Guyer, Jane I (2016). *Legacies, logics, logistics: Essays in the anthropology of the platform economy*. University of Chicago Press.

Plantin, Jean-Christophe, Carl Lagoze, Paul N Edwards, et al. (2016). "Infrastructure studies meet platform studies in the age of Google and Facebook". In: *New Media & Society*, p. 1461444816661553.

Rosenblat, Alex (2018). *Uberland: How Algorithms Are Rewriting the Rules of Work*. First edition. Oakland, California: University of California Press. ISBN: 978-0-520-29857-6.

## Sep 18 (Wed): Technological Anxiety & Creative Destruction

Prof. Nancey Green-Leigh of Georgia Tech is scheduled to give a talk in the department on similar topic. See her project at <https://design.gatech.edu/robotics-industry-survey>. We will have to work out the logistics but it is likely that we will attend her talk and discuss the readings in that context. Stay tuned.

Crowston, Kevin, Steve Sawyer, and Rolf Wigand (2001). "Investigating the interplay between structure and information and communications technology in the real estate industry". In: *Information Technology & People* 14.2, pp. 163–183.

Mokyr, Joel, Chris Vickers, and Nicolas L Ziebarth (2015). "The history of technological anxiety and the future of economic growth: Is this time different?" In: *Journal of Economic Perspectives* 29.3, pp. 31–50.

West, Darrell M. (2018). *The Future of Work: Robots, AI, and Automation*. Washington, D.C: Brookings Institution Press. ISBN: 978-0-8157-3293-8.

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## The Politics of Data Generation & Acquisition

### Sep 25 (Wed): What data is collected? Why?

Alonso, William and Paul Starr, ed. (1989). *The politics of numbers*. Russell Sage Foundation.

Kitchin, Rob (2014). "The real-time city? Big data and smart urbanism". In: *GeoJournal* 79.1, pp. 1–14. ISSN: 1572-9893. DOI: 10.1007/s10708-013-9516-8. <https://doi.org/10.1007/s10708-013-9516-8>.

Scott, J. C (1998). *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. Yale Agrarian Studies/Yale ISPS. Chapter 2. New Haven, CT: Yale University Press.

Wang, Tricia (2016). *Why Big Data Needs Thick Data*. <https://medium.com/ethnography-matters/why-big-data-needs-thick-data-b4b3e75e3d7> (visited on Jun. 03, 2018).

### Oct 2 (Wed): Multiple Epistemologies

Aitken, S. C and S. M Michel (1995). "Who contrives the "Real" in GIS? Geographic Information, Planning and Critical Theory". In: *Cartography and Geographic Information Systems* 22.1, pp. 17–29.

Brown, Michael and Larry Knopp (2008). "Queering the map: the productive tensions of colliding epistemologies". In: *Annals of the Association of American Geographers* 98.1, pp. 40–58.

Thrift, Nigel (2014). "The Promise of Urban Informatics: Some Speculations". En. In: *Environment and Planning A: Economy and Space* 46.6, pp. 1263–1266. ISSN: 0308-518X. DOI: 10.1068/a472c. <https://doi.org/10.1068/a472c> (visited on May. 26, 2018).

### Oct 9 (Wed): Consent & Ownership

Kitchin, Rob (2016). "The Ethics of Smart Cities and Urban Science". In: *Philosophical transactions. Series A, Mathematical, physical, and engineering sciences* 374.2083. ISSN: 1364-503X. DOI: 10.1098/rsta.2016.0115.

Reed, Michael (2015). “Who Owns Ellen’s Oscar Selfie? Deciphering Rights of Attribution Concerning User Generated Content on Social Media, 14 J. Marshall Rev. Intell. Prop. L. 564 (2015)”. In: *The John Marshall Review of Intellectual Property Law* 14.4. ISSN: 1930-8140.

Rieke, Aaron, Harlan Yu, David Robinson, et al. (2016). *Data Brokers in an Open Society*. En. London, UK: Open Society Foundation.

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## The Politics of Data Analysis

### Oct 16 (Wed): Coding & Decoding

Gitelman, Lisa, ed. (2013). *Raw Data Is an Oxymoron*. Cambridge, MA: The MIT Press. ISBN: 978-0-262-51828-4.

Winner, Langdon (1980). “Do Artifacts Have Politics?” In: *Daedalus* 109.1, pp. 121–136. ISSN: 00115266. <http://www.jstor.org/stable/20024652>.

### Oct 30 (Wed): Summarisation, Analysis & (Mis)Representation of Data

Best, Joel (2004). *More Damned Lies and Statistics*. En. Berkeley, CA: University of California Press. <https://www.ucpress.edu/book.php?isbn=9780520238305> (visited on May. 26, 2018).

Cheng, Tao and Monsuru Adepeju (2014). “Modifiable Temporal Unit Problem (MTUP) and Its Effect on Space-Time Cluster Detection”. En. In: *PLOS ONE* 9.6, p. e100465. ISSN: 1932-6203. DOI: 10.1371/journal.pone.0100465. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0100465> (visited on Jun. 02, 2018).

Robertson, Colin and Rob Feick (2018). “Inference and analysis across spatial supports in the big data era: Uncertain point observations and geographic contexts”. En. In: *Transactions in GIS* 22.2, pp. 455–476. ISSN: 1467-9671. DOI: 10.1111/tgis.12321. <https://onlinelibrary.wiley.com/doi/abs/10.1111/tgis.12321> (visited on Jun. 02, 2018).

### Nov 6 (Wed): Cirtical Cartography

Harley, J. B. and J. H. Andrews (2002). *The New Nature of Maps: Essays in the History of Cartography*. Ed. by Paul Laxton. 1st. Baltimore, Md.: Johns Hopkins University Press. ISBN: 978-0-8018-7090-3.

Monmonier, M. (2018). *How to Lie with Maps*. Third. Chicago, IL: University of Chicago Press.

### Nov 13 (Wed): Predictive Blackboxes & Algorithmic Bias

Kim, Annette M. (2018). *Satellite Images Can Harm the Poorest Citizens*. The Atlantic. <https://www.theatlantic.com/technology/archive/2018/06/satellite-images-can-harm-the-poorest-citizens/561920/>.

Tufekci, Zeynep (2015). “Algorithmic Harms beyond Facebook and Google: Emergent Challenges of Computational Agency”. In: *Colorado Technology Law Journal* 13, p. 203. <https://heinonline.org/HOL/Page?handle=hein.journals/jtelhtel13&id=227&div=&collection=>

Ziewitz, Malte (2015). "Governing Algorithms". In: *Science, Technology, & Human Values* 41.1, pp. 3–16. ISSN: 1552-8251. DOI: 10.1177/0162243915608948. <http://dx.doi.org/10.1177/0162243915608948>.

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## **The Politics of Control**

### **Nov 20 (Wed): Biopolitics**

Deleuze, Gilles (1992). "Postscript on the Societies of Control". In: *October* 59, pp. 3–7.

O'Neil, Cathy (2016). *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. New York: Crown.

Shapiro, Aaron (2017). "Reform predictive policing." In: *Nature* 541.7638, pp. 458–460.

### **Dec 4 (Wed): Surveillance**

Monmonier, M. (2002). *Spying with Maps: Surveillance Technologies and Future of Privacy*. Chicago, IL: University of Chicago Press.

Zuboff, Shoshana (2018). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. First. New York, NY: PublicAffairs. ISBN: 978-1-61039-569-4.

## Potential Case Studies

The following are some ideas that provide starting points for exploration into cases. They are not exhaustive, nor are they meant to be representative of the cases. The collection itself is also not representative, but illustrative.

- [Data Commons & Waze](#)
- [Pigeon Air Patrol](#)
- [Chicago Array of Things podcast](#)
- [Mayors' Response to Uber, Airbnb](#)
- [Transportation Network Companies in Asia](#)
- [Pew Shared Economy & Equity](#)
- [Data Privacy in Seattle](#)
- [Civic Tech clusters](#)
- [Climate Data Partnerships](#)
- [Civic Hacking](#)
- [Brooklyn City Observatory](#)
- [Data security and IOT](#)
- [Access to healthcare](#)
- [Global South](#)