

Course manual “Creative urban technologies: exploring and navigating the smart and social city”

Version: 1 November 2020

- Course coordinator & lectures: Michiel de Lange m.l.delange@uu.nl; Working Group instructor Corelia Baibarac-Duignan: c.baibarac-duignan@uu.nl.
- Time/location lectures: Tuesdays 9.00 - 11.00, online on MS Teams (starting Nov. 10 2020)
- Time/location working group: WG1 Thursdays 13:15 – 15:00, online on MS Teams (starting Nov. 12)
- MS Teams link to course environment: <https://bit.ly/3mJGO8p>
- Minor Creative Cities UU website: <https://students.uu.nl/en/hum/creative-cities>
- Course link: <https://cursusplanner.uu.nl/course/ME2V15008/2020/2>

1. COURSE OUTLINE

A. About the minor *Creative Cities*

The minor Creative Cities caters to students interested in emerging artistic practices, subcultures and new media and how these phenomena relate to creative dynamics in society. Investigating cities, urban citizenship and the multidimensional dynamics between them obviously suggests an interdisciplinary academic approach while simultaneously offering endless possibilities for exploring connections between theory and practice. All four courses literally open the door to the urban world immediately beyond the university classroom and provide students with theoretical concepts, practical tools, and creative space to explore it. For more information about the minor refer to <https://students.uu.nl/en/hum/creative-cities>.

B. About the course *Creative Urban Technologies*

Aim: The course aims to introduce students to the burgeoning cross-disciplinary field that studies the relationships between digital media technologies and today’s cities, with a specific focus on the phenomenon of the “smart city”. Students investigate and develop insight into how digital technologies shape city life. Under guidance, students will read literature thoroughly and critically, learn to differentiate between various types and sources, frame theoretical discussions in the field, position themselves, develop new ways of conceptualizing the treated issues, find sources, and undertake a research project. Students are trained in developing their ability to deploy academic skills in written and oral presentations, individually and as part of a group. Attention is given to students’ capacity to reflect critically on current issues, practices, discourses, and academic research about smart cities, and the ability to develop an appropriate research method for their research.

Content: A wide variety of digital media technologies have come to shape the organization and experience of urban life. These urban technologies influence how we live, work, travel, meet, and spend our leisure time in the so-called “smart city”, the city augmented with digital technologies. Examples include mobile communication, wireless internet access, GPS navigation, rfid access cards, media facades, embedded sensors and the Internet of Things, camera surveillance, location based services, and pervasive games. The “smart city” has become a popular corporate and policy term that refers to the use of digital technologies to optimize urban infrastructures and processes. Frequently, such technologies are designed and implemented by large corporations and institutions. Moreover, they tend to act in the background of everyday life and remain relatively invisible. This seems to place citizens in a rather passive role as mere consumers, or as subjects of control through data profiling and surveillance. The central question in this course is how urbanites use digital technologies in smart and creative ways to actively shape their own uses and experiences of the “smart city”. We investigate the role of urban technologies in specific fields like public space, media art, play and games, citizen participation and co-creation, (big) data and privacy/surveillance, and identity construction.

2. TASKS

2. ASSIGNMENTS

Below an overview of the required assignments for the course.

Note: All written assignments must be posted on Blackboard's discussion forum in a single individual thread as inline text (no attachments, except for the final paper). Please start an individual thread under your own name. Proceed by posting the other assignments as replies to yourself, changing only the week numbers. See the example on Blackboard.

Note2: All assignments must contain your name, student number, a title, and a list of references.

Task 1: research log - 40% of final grade

The individual research log consists of all the preparatory work toward task 2. The research log contains the following elements (to be posted on Blackboard):

Part A: Two weekly propositions

50 - 100 words per week, 7 weeks in total (= 14 propositions)

Each week you raise two relevant propositions to spur the debate during working group sessions. These propositions are based on the compulsory course literature. You could raise attention to a contestable argument of an author or offer a critique. Central is the critical comparison of texts. Do not produce abstracts but create your own small argument or point. Think of a catchy title for your assignment to frame your point. It helps to think of the following questions: What type of text is it? Who is/are the author(s) and what is the source? What different views on the same theme can you extract from the texts? What are the central issues of debate? Are the texts complementary or do they highlight different or even opposite views? Do the authors use the same concepts and definitions? How strong are their arguments? What position do you agree with and why? You are encouraged to support your propositions by referring to real world cases/examples.

Propositions are not individually graded but as part of the portfolio. What is assessed is how well you analyze the available literature, how critical your perspective is, whether you develop your own ideas and voice, and how you use the propositions to inform your research project.

Deadlines: Every Tuesday before 17:00 in the discussion forum on Blackboard. Be prepared to bring these in during the working group meetings.

Part B: Team work on research assignment

Students will work in Project Groups (teams) on a research assignment. Teams should prepare to present their work in progress during working group meeting. Relevant material found and produced should be included in the research log. So, keep track of what you doing as a team in a weekly diary and include any relevant images, or otherwise that you find or produce.

Task 2: research report - 60 % of final grade

Students write an individual report about their research project. Reports should contain the following elements:

Phenomenon: the thematic topic you study and the concrete case that you use. Often this is introduced through an anecdote or original observation.

Question and hypothesis/argument: a well-formulated question about your phenomenon, plus the expected outcomes and/or point you want to make. The research question is often broken down into sub-questions.

Theory: the perspective and concepts you use to research the phenomenon, and operationalization of key notions.

Method: the approach you use to find answers to your question(s), a discussion of the data gathered and the pros/cons of this approach.

Positioning: the reason(s) for the academic relevance and perhaps also societal relevance: why are you researching this?

Analysis: presentation and discussion of the results.

Conclusion: what have you found, what are the limitations, what are the possibilities for future research?

The length of the report should be 2500 - 3000 words. During working groups, we shall devote ample time to discuss final paper progress. The **deadline** for handing in your final report is **27 January 2021** 17:00 CET.

Assignment

The assignment involves a collaboration with multiple organizations outside of university. The full briefing of the project will be discussed during class, and in an additional handout that is to be distributed in tandem.

3. COMPLETING THE COURSE

The course is successfully completed when these conditions are met:

- Students have handed in all required weekly propositions on time. Students who miss more than one cannot complete the course. The grading scale is from 1 (lowest) to 10 (highest).
- Students have participated in the team assignment with a minimum grade of 5.5.
- Students have handed in their final report on time with a minimum grade of 5.5. Students have the right to repair a 4 or higher. Only final papers can be repaired.
- Students have attended all class meetings. If students miss one class they need to notify the instructor in advance and compensate with an extra assignment. Students absent from more than one class without good reason cannot complete the course. Get in touch with the study advisor if you have to miss more than one class: <https://students.uu.nl/gw/contact>.

Fraud and Plagiarism

Please read the rules concerning fraud and plagiarism: <http://students.uu.nl/en/practical-information/academic-policies-and-procedures/fraud-and-plagiarism>. These rules apply not only to the final paper but to every assignment.

4. CONTACT

Please use MS Teams to ask questions about the course. Not only will you likely get quicker answers from other students and from the instructor, your question may also help fellow students. E-mail the course coordinator if you feel that you need to discuss a more personal matter. Notify the working group instructor via e-mail of any class absence: c.baibarac-duignan@uu.nl.

5. WEEKLY LITERATURE

Note: many URLs only work from within the university network, or after logging in with your account.

Week 1. Creative cities, urban technologies

As a general introduction to this course, we will get to know key notions like the creative city and smart city. What do they entail? What is a city, what is creativity and how is it tied to city life? What is the role of digital media technologies in creating smart cities?

Florida, Richard L. 2012. *The Rise of the Creative Class: Revisited*. New York: Basic Books. Ch. 1 "The Transformation of Everyday Life" (1-12) + excerpt from Ch.3 "The Creative Class" (54-62). <https://www.dropbox.com/s/emoo4nk5yvikipj/wk1-florida.pdf?dl=0>.

Hill, Dan. 2008. *The Street as Platform*. Archived here: <https://medium.com/butwhatwasthequestion/the-street-as-platform-3ebd021c85ff>

And its followup:

Hill, Dan. 2016. The Street as Platform 2050. <https://medium.com/butwhatwasthequestion/the-street-as-platform-2050-98bbb81016f4>

Optional

de Lange, Michiel. 2014. The "urban" in "urban media". Short position paper, Utrecht University. https://www.dropbox.com/s/mx4yxi1z8f1rqrr/141130_De_Lange-The_urban_in_urban_media.pdf?dl=0.

Brenner, Neil, and Christian Schmid. 2015. "Towards a New Epistemology of the Urban?" *City* 19 (2-3): 151-182. <http://www.tandfonline.com.proxy.library.uu.nl/doi/full/10.1080/13604813.2015.1014712>

Wirth, Louis. 1938. "Urbanism as a way of life." *The American Journal of Sociology* 44 (1): 1-24. <http://bit.ly/1AGC3Qt>.

Landry, Charles, and Franco Bianchini. 1995. *The Creative City*. London: Demos. www.demos.co.uk/files/thecreativecity.pdf.

Karlsson, Charlie. 2011. "Clusters, Networks and Creativity." In *Handbook of Creative Cities*, eds. David E. Andersson, Åke E. Andersson and Charlotta Mellander. Cheltenham, UK; Northampton, MA: Edward Elgar Pub. 85-114. <http://bit.ly/XnNHka>.

Hartley, John, Jason Potts, and Trent MacDonald. 2012. "The Creative City Index." *Cultural Science Journal* no. 5 (1). <http://eprints.qut.edu.au/60058/1/51%2D488%2D1%2DPB.pdf>.

Caprotti, Federico, Robert Cowley, Ayona Datta, Vanesa Castán Broto, Eleanor Gao, Lucien Georgeson, Clare Herrick, Nancy Odendaal, and Simon Joss. 2017. "The New Urban Agenda: key opportunities and challenges for policy and practice." *Urban Research & Practice* 10 (3):367-378. <https://doi.org/10.1080/17535069.2016.1275618>.

Week 2. Smart cities, smart citizens

In week 2 we follow up on the first week by looking at how digital technologies in today's smart and social cities are forwarded to address various urban problems.

Hemment, Drew, and Anthony Townsend, eds. 2013. *Smart Citizens*. Manchester: FutureEverything Publications. Pages 1-3 and 9-12. <http://bit.ly/1LWDcLL>.

- McFarlane, Colin, and Ola Söderström. 2017. "On alternative smart cities." *City*:1-17. <https://bit.ly/2CgRgSs>.
- Gabrys, Jennifer. 2014. "Programming Environments: Environmentality and Citizen Sensing in the Smart City". *Environment and Planning D: Society and Space*. 32(1): 30-48. <https://doi.org/10.1068/d16812>.

Optional

- Albino, Vito, Umberto Berardi, and Rosa Maria Dangelico. 2015. "Smart Cities: Definitions, Dimensions, Performance, and Initiatives." *Journal of Urban Technology* no. 22 (1):3-21. <http://bit.ly/1FkMk5f>.
- Caragliu, Andrea, Chiara Del Bo, and Peter Nijkamp. 2011. "Smart Cities in Europe." *Journal of Urban Technology* 18 (2): 65-82. <http://dx.doi.org/10.1080/10630732.2011.601117>. <http://www.tandfonline.com.proxy.library.uu.nl/doi/abs/10.1080/10630732.2011.601117>
- Allwinkle, Sam, and Peter Cruickshank. 2011. "Creating Smart-er Cities: An Overview." *Journal of Urban Technology* 18 (2): 1-16. <http://www.tandfonline.com/doi/pdf/10.1080/10630732.2011.601103>.
- Shepard, Mark. 2011. "Toward the Sentient City." In *Sentient city: Ubiquitous computing, architecture, and the future of urban space*, ed. Mark Shepard. Cambridge, MA: MIT Press. 16-37. http://mixedrealitycity.org/readings/Shepard_SentientCity.pdf.
- Greenfield, Adam. 2011. *Beyond the 'Smart City'*. <http://urbanscale.org/2011/02/17/beyond-the-smart-city/>
- Hollands, Robert G. 2008. "Will the Real Smart City Please Stand Up?" *City* 12 (3): 303–20. <http://www.tandfonline.com/doi/abs/10.1080/13604810802479126>
- Crang, Mike, and Stephen Graham. 2007. "Sentient cities: Ambient Intelligence and the Politics of Urban Space." *Information, Communication & Society* 10 (6): 789-817. <http://www.informaworld.com/10.1080/13691180701750991>
- Hollands, Robert G. 2015. "Critical interventions into the corporate smart city." *Cambridge Journal of Regions, Economy and Society* no. 8 (1):61-77. <https://doi.org/10.1093/cjres/rsu011>.
- Söderström, Ola, Till Paasche, and Francisco Klausner. 2014. "Smart Cities as Corporate Storytelling." *City* 18 (3):307-320. <http://dx.doi.org/10.1080/13604813.2014.906716>.
- Vanolo, Alberto. 2013. "Smartmentality: The Smart City as Disciplinary Strategy". *Urban Studies*, 51(5): 883-898. <https://doi.org/10.1177/0042098013494427>

Week 3. Creative citizenship

This week we further focus on the question how new media technologies may be used to leverage the creative potential of urbanites as active shapers of their own living conditions.

- Cardullo, Paolo and Kitchin, Rob. 2019. "Being a 'citizen' in the smart city: up and down the scaffold of smart citizen participation in Dublin, Ireland." *GeoJournal* 84(1): 1-13. <https://link.springer.com/article/10.1007%2Fs10708-018-9845-8>
- Radywyl, Natalia, and Biggs, Che. 2013. "Reclaiming the Commons for Urban Transformation." *Journal of Cleaner Production* 50: 159–170. <https://doi.org/10.1016/j.jclepro.2012.12.020>
- Tironi, Martín. 2018. Speculative prototyping, frictions and counter-participation: A civic intervention with homeless individuals, *Design Studies*, 59: 117-138. <https://doi.org/10.1016/j.destud.2018.05.003>

Optional

- Adrian Smith & Pedro Prieto Martín. 2020. Going Beyond the Smart City? Implementing Technopolitical Platforms for Urban Democracy in Madrid and Barcelona, *Journal of Urban Technology*, DOI: 10.1080/10630732.2020.1786337
- Saunders, Tom, and Peter Baeck. 2015. *Rethinking Smart Cities From the Ground Up*. London: Nesta. https://smarnet.niua.org/sites/default/files/resources/rethinking_smart_cities_from_the_ground_up_2015.pdf.
- Foth, Marcus, Martin Brynskov, and Timo Ojala, eds. 2015. *Citizen's right to the digital city: Urban interfaces, activism, and placemaking*. Singapore: Springer. <https://link-springer-com.proxy.library.uu.nl/content/pdf/10.1007/978-981-287-919-6.pdf>
- Frei, Hans, and Marc Böhlen. 2010. "Micropublicplaces." In *Situated Technologies Pamphlet Series*, eds. Omar Khan, Trebor Scholz and Mark Shepard. New York: The Architectural League of New York. (only the first part: pp. 12-28). <http://www.situatedtechnologies.net/files/ST6-MicroPublicPlaces.pdf>.
- Graham, Stephen, and Alessandro Aurigi. 1997. "Virtual Cities, Social Polarization, and the Crisis in Urban Public Space." *Journal of Urban Technology* 4 (1): 19-52. <http://www.tandfonline.com/doi/pdf/10.1080/10630739708724546>.
- Vajjhala, Shalini. 2005. "Integrating GIS and Participatory Mapping in Community Development Planning." In *25th Annual ESRI User Conference, San Diego, CA, July 25-29 2005*. <http://proceedings.esri.com/library/userconf/proc05/papers/pap1622.pdf>.
- Craglia, Max and Carlos Granell (Eds.) 2014. *Citizen Science and Smart Cities Report of Summit Ispra, 5-7th February 2014*. <https://core.ac.uk/download/pdf/38628014.pdf>
- Sadoway, D. & Shekhar, S., (2014), "(Re)Prioritizing Citizens in Smart Cities Governance: Examples of Smart Citizenship from Urban India", *The Journal of Community Informatics*, 10 (3). <http://www.ci-journal.net/index.php/ciej/article/view/1179>
- Haklay, Mordechai (Muki). 2018. "Beyond quantification: a role for citizen science and community science in a smart city". In *Data and the City*, eds. Rob Kitchin, Tracey P. Lauriault, Gavin McArdle. Oxon: Routledge. <https://www.taylorfrancis.com/books/e/9781315407388/chapters/10.4324/9781315407388-16>
- Balestrini, Mara, Rogers, Yvonne, Hassan, Carolyn, Creus, Javi, King, Martha, and Marshall, Paul. 2017. "A City in Common: A Framework to Orchestrate Large-scale Citizen Engagement around Urban Issues". *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, Denver, Colorado, May 06 - 11, 2017. <https://dl.acm.org/citation.cfm?doid=3025453.3025915>
- Baibarac, Corelia. 2015. "Spatial-Technological Experiments in the Environment: Eliciting and Representing Experiences of Urban Space." *Digital Creativity* 26 (3-4): 263-278. <https://doi.org/10.1080/14626268.2015.1090454>

Week 4. Controversies and publics

This week we explore controversies for their potential role in widening civic participation towards shaping smarter cities by enabling the creation of publics around shared matters of concern.

de la Bellacasa, Maria Puig. 2011. "Matters of care in technoscience: Assembling neglected things." *Social*

Studies of Science 41 (1):85-106. <https://doi.org/10.1177/0306312710380301>.

Nold, Christian. 2018. Turning Controversies into Questions of Design: Prototyping Alternative Metrics for Heathrow Airport. In *Inventing the Social*, eds. Noortje Marres, Michael Guggenheim, Alex Wilkie. Manchester: Mattering Press.

Teli, Maurizio, Silvia Bordin, María Menéndez Blanco, Giusi Orabona, and Antonella De Angeli. 2015. "Public design of digital commons in urban places: A case study." *International Journal of Human-Computer Studies* 81:17-30. <https://doi.org/10.1016/j.ijhcs.2015.02.003>.

Wilbert, Chris. 2006. Profit, plague and poultry: the intra-active worlds of highly pathogenic avian flu. *Radical Philosophy*, 139. pp. 2-7. <https://core.ac.uk/reader/131198643>

Optional

Madsen, Anders Koed and Munk, Anders Kristian. 2019. "Experiments with a data-public: Moving digital methods into critical proximity with political practice". *Big Data & Society*, 6(1): 1-14. <https://doi.org/10.1177/2053951718825357>

Marres, Noortje. 2007. "The Issues Deserve More Credit: Pragmatist Contributions to the Study of Public Involvement in Controversy". *Social Studies of Science*, 37(5): 759-780. <https://doi.org/10.1177/0306312706077367>

Marres, Noortje. 2015. "Why Map Issues? On Controversy Analysis as a Digital Method". *Science, Technology, & Human Values*, 40(5): 655-686. <https://doi.org/10.1177/0162243915574602>

Latour, Bruno. 2005. *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press. https://www.ufrgs.br/ppgas/portal/arquivos/orientacoes/LATOUR_Bruno._2012.pdf

Venturini, Tommaso. 2009. "Diving in magma: How to explore controversies with actor-network theory." *Public Understanding of Science*, 19(3): 258-273. <https://doi.org/10.1177/0963662509102694>

Venturini, Tommaso. 2010. "Building on faults: How to represent controversies with digital methods." *Public Understanding of Science*, 21(7): 796-812. <https://doi.org/10.1177/0963662510387558>

Venturini, Tommaso, Ricci, Donato, Mauri, Michele, Kimbell, Lucy and Meunier, Axel. 2015. "Designing Controversies and Their Publics." *Design Issues*, 31(3): 74-87. https://doi.org/10.1162/DESI_a_00340

Week 5. Playful City

How can play and games be used to reprogram the city in creative ways? In this week we explore the intersections between urbanity and play and games by focusing on pervasive urban games, gamification, and gameful design.

Alfrink, Kars. 2015. "The Gameful City." In *The gameful world: approaches, issues, applications*, edited by Steffen P. Walz and Sebastian Deterding, 527-560. Cambridge, MA: The MIT Press. <https://ebookcentral.proquest.com/lib/uunl/reader.action?docID=3339935&pg=538>.

de Lange, Michiel. 2015. "The Playful City: Using Play and Games to Foster Citizen Participation." In *Social Technologies and Collective Intelligence*, edited by Aelita Skaržauskienė, 426-434. Vilnius: Mykolas Romeris University. <http://bit.ly/1hWbkeB>.

Sicart, Miguel. 2016. "Play and the City." *Navigationen special issue" Playin' the City: Artistic and Scientific Approaches to Playful Urban Arts"* no. 16 (1): 25-40.
http://dokumentix.ub.uni-siegen.de/opus/volltexte/2016/1004/pdf/Navigationen_Playin_the_city.pdf.

Videos

McGonigal, Jane. 2010. "Gaming can make a better world". *TED Talk*.
http://www.ted.com/talks/jane_mcgonigal_gaming_can_make_a_better_world.html. (20 min.).

Squire, Kurt. 2013. "Civic Engagement Through Digital Games." <http://www.edutopia.org/kurt-squire-games-civic-engagement-video> (9 mins.)

Sicart, Miguel. 2017. "Unplayable Cities". <https://vimeo.com/244818275>. (22 mins).

Optional

Foth, Marcus, Andrew Hudson-Smith, and Dean Gifford. 2016. "Smart Cities, Social Capital, and Citizens at Play: A Critique and a Way Forward." In *Research Handbook on Digital Transformations*, edited by F. Xavier Olleros and Majlinda Zhegu. Cheltenham, UK: Edward Elgar.
https://www.dropbox.com/s/d27602w0lrkz6vk/Foth_etal.2016.pdf?dl=0.

Gordon, Eric, and Jessica Baldwin-Philippi. 2014. "Playful Civic Learning: Enabling Lateral Trust and Reflection in Game-based Public Participation." *International Journal of Communication* Vol. 8.
<http://ijoc.org/index.php/ijoc/article/view/2195/1100>.

Debord, Guy-Ernest. 1956, 1958. "A User's Guide to Détournement" + "Theory of the Dérive". Available on <http://www.bopsecrets.org/SI/index.htm>. [classic Situationist texts about playful subversive practices].

Juul, Jesper. 2011. "Gamification Backlash Roundup". Blogpost on:
<http://www.jesperjuul.net/ludologist/gamification-backlash-roundup> (+ blog comments!)

Licope, Christian, and Yoriko Inada. 2010. "Locative Media and Cultures of Mediated Proximity: the Case of the Mogi Game Location-Aware Community." *Environment and Planning D: Society and Space* 28 (4): 691-709.
<http://www.envplan.com/abstract.cgi?id=d13307>.

Schouten, Ben, Gabriele Ferri, Michiel de Lange, and Karel Millenaar. 2017. "Games as Strong Concepts for City-Making." In *Playable Cities: The City as a Digital Playground*, edited by Anton Nijholt, 23–45. Singapore: Springer Singapore. http://link.springer.com/10.1007/978-981-10-1962-3_2.

Tan, Ekim. 2014. *Negotiation and Design for the Self-Organizing City: Gaming as a Method for Urban Design*. Delft: Delft University of Technology, Faculty of Architecture and the Built Environment, Department of Urbanism. (Ch. 3 "City Gaming for the Self-Organizing City" pp. 107 – 140).
<http://abe.tudelft.nl/index.php/faculty-architecture/article/view/tan>

Recommended websites

<http://urban360.me/2012/08/24/if-urban-life-is-a-game-smart-cities-are-the-playgrounds/>

<http://civicmediaproject.org/works/civic-media-project/index>.

Week 6. Data City

In week 5 we focus on the role of digital media technologies in (re)creating urban subjectivities, by looking in particular at the role of (big) data and datafication processes.

de Lange, Michiel. 2019. "The Right to the Datafied City: Interfacing the Urban Data Commons". In *The Right to*

the Smart City, eds. Paolo Cardullo, Cesare Di Feliciano and Rob Kitchin. Bingley: Emerald Publishing. <https://www.semanticscholar.org/paper/The-Right-to-the-Datafied-City%3A-Interfacing-the-Lange/ce8ab6e86c53692098001d8f53b2ec37f3148f53>

Flyverbom, Mikkel and Murray, John. 2018. *Datastructuring – Organizing and curating digital traces into action*. *Big Data and Society* (1-12). <https://journals.sagepub.com/doi/10.1177/2053951718799114>

Pybus, Jennifer, Cote, Mark and Blanke, Tobias. 2015. "Hacking the social life of Big Data". *Big Data and Society* (1–10). <https://journals.sagepub.com/doi/10.1177/2053951715616649>

Optional

Hemmersam, Peter, Nicole Martin, Even Westvang, Jonny Aspen, and Andrew Morrison. 2015. "Exploring Urban Data Visualization and Public Participation in Planning." *Journal of Urban Technology* no. 22 (4):45-64. <http://www.tandfonline.com.proxy.library.uu.nl/doi/abs/10.1080/10630732.2015.1073898>

Jensen, Klaus Bruhn. 2013. "How to do Things with Data: Meta-Data, Meta-Media, and Meta-Communication." *First Monday* 18 (10). <http://firstmonday.org/article/view/4870/3751>.

Tufekci, Zeynep. 2014. "Engineering the public: Big Data, Surveillance and Computational Politics." *First Monday* 19 (7). <http://firstmonday.org/ojs/index.php/fm/article/view/4901/4097>.

Whitson, Jennifer R. 2013. "Gaming the Quantified Self." *Surveillance & Society* no. 11 (1/2):163-176. <https://search-proquest-com.proxy.library.uu.nl/docview/1428931132?pq-origsite=gscholar>

Tenney, Matthew, and Renee Sieber. 2016. "Data-Driven Participation: Algorithms, Cities, Citizens, and Corporate Control." *2016* no. 1 (2):13. <http://www.cogitatiopress.com/urbanplanning/article/view/645>

Nafus, Dawn, and Jamie Sherman. 2014. "This One Does Not Go Up To Eleven: The Quantified Self Movement as an Alternative Big Data Practice." *International Journal of Communication* no. 8:1784–1794. <http://ijoc.org/index.php/ijoc/article/download/2170/1157>.

Handler, Reinhard A., and Raul Ferrer Conill. 2016. "Open Data, Crowdsourcing and Game Mechanics. A Case Study on Civic Participation in the Digital Age." *Computer Supported Cooperative Work (CSCW)* no. 25 (2): 153-166. <http://link.springer.com.proxy.library.uu.nl/article/10.1007/s10606-016-9250-0>.

Pink, Sarah, and Vaïke Fors. 2017. "Being in a mediated world: self-tracking and the mind–body–environment." *cultural geographies*, 24 (3):375-388. <http://journals.sagepub.com.proxy.library.uu.nl/doi/abs/10.1177/1474474016684127>

Baack, Stefan. 2015. "Datafication and empowerment: How the open data movement re-articulates notions of democracy, participation, and journalism." *Big Data and Society* (1-11). <https://journals.sagepub.com/doi/10.1177/2053951715594634>

Klauser, Francisco, Paasche, Till and Söderström, Ola. 2014. "Michel Foucault and the Smart City: Power Dynamics Inherent in Contemporary Governing through Code." *Environment and Planning D: Society and Space*, 32(5): 869-885. <https://doi.org/10.1068/d13041p>

Gray, Jonathan, Gerlitz, Carolin and Bounegru, Liliana. 2018. "Data infrastructure literacy." *Big Data and Society* (1-13). <https://journals.sagepub.com/doi/10.1177/2053951718786316>

Recommended special journal issue: <http://link.springer.com/journal/10606/25/2/page/1>

Week 7. Maker City

In this week we pay attention to new modes of making (e.g. makerspaces, hackerspaces, hackathons, hackable cities, urban labs) as civic-driven and participatory creative urban practices.

Anderson, Chris. 2012. *Makers: The New Industrial Revolution*. 1st ed. New York: Crown Business. Ch.2 "The New Industrial Revolution" & Ch. 3 "The History of the Future" pp. 17-51. <https://www.dropbox.com/s/kaepzyrk4vk33rb/A-Makers.pdf?dl=0>

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