

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

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- Minor Creative Cities: <http://students.uu.nl/en/hum/creative-cities>.
- Creative City minor Facebook group: <https://www.facebook.com/groups/1175685609181057/>
- Course description in Osiris: <http://bit.ly/2wd6HDB>.
- Blackboard link: <http://bit.ly/2vkRkN1>.
- Time/location lectures: Tuesdays 11.00 - 12.45, Drift 21, room 105 (starting Sept. 12)
- Time/location working groups: WG1 on Wednesdays 15:15 – 19:00, Drift 25, room 203 (starting Sept. 13) and WG2 13:15 – 17:00, Drift 25, room 301 (starting Sept. 15).

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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. The minor consists of the following courses:

1. Creative urban technologies: exploring and navigating the smart and social city; Level 2, *Michiel de Lange*.
- 2a. Wild Years: social theories on youth and generations (English); Level 2, *Peter Selten*.
- 2b. Creatieve Stad (Dutch); Level 3, *Gerald Mollenhorst*.
3. Community Art: Practice and Theory; Level 3, *Edward Hubbard*.
4. The City as Stage: Critical Interventions in Public Space; Level 3, *Sigrid Merx*.

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. All activities should meet the requirements of the manual "Academische vaardigheden" (in Dutch).

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. 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 mid-term assignment and final paper). For your first assignment, please start a thread titled with your name. See example on Blackboard. Proceed by posting the other assignments as replies to yourself, changing only the week numbers.

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

A. Individual assignments - 20% of final grade

Individual assignments consist of the following:

i. Two weekly propositions (6 times) – 50 - 200 words in total.

Each week you raise two relevant propositions to spur the debate during working group sessions. These propositions are based on the course literature. You could raise attention to a contestable argument of an author or offer a critique. You are encouraged to link the propositions to real world cases – seeing how the theories hold up to examples you can think of.

One of the propositions should be analytical: you take a stance based on the arguments presented in the course literature. The other proposition should focus on the application of the theories: how do the theoretical ideas come back in example cases.

The propositions will be graded on how well you analyze the available literature, how critical your perspective is, whether and how you show your own ideas, and how you use this proposition to introduce an own academic line of inquiry (so not only ‘I don’t agree with this’, or ‘this could be more elaborate’).

Weekly assignments must meet the following conditions:

- Two propositions to spark the debate. Together 50 to 200 words max. Be prepared to bring these in during the working groups! Always add your name and student number!
- Students doing their team presentation do not need to submit a written assignment in that week.
- **Deadlines:** Every Tuesday before 17:00 in the discussion forum on Blackboard. Please post as inline text (no attachments please). Please respect these deadlines in order for the week teams to be able to incorporate your propositions in their presentations.
- **Note:** the first assignment is already due in week 1 but you get more time: Friday 15 Sept.

17:00.

ii. Mid-term assignment in week 3 – 750 words max.

For the mid-term assignment in week 3 students carry out a case study. This takes the form of an independent investigation of the intersections of digital media technologies and urban life, critically reflect on this using academic literature and course lectures, and frame issues for further research and discussions. The aim of this assignment is to connect theory and practice through a combination of observation, participation and reflection.

- **Length** 750 words max
- **Deadline:** Tuesday 26 September 17:00 on Blackboard in your own single thread (inline or as a pdf attachment).
- **Important:** as always, use the course literature and/or other academic sources for your assignment!

It is recommended to use this assignment as exploration for the final paper (or even already carrying out an analysis, should you want to). Choose one of the two

Affording a City Model

Find and analyze an urban application, a playful intervention or a city installation to determine its 'city model' – the underlying assumption of what the city or urban is, how citizens should act, and what are proper actions. Briefly explain why you chose the case. Look at the affordances of the case: what actions are allowed and which are made impossible? What is considered good behavior? What kind of city or citizen does this imply? Based on the app, intervention or installation only, what is the desired citizen action. Some examples of city models and affordances will be provided during class.

Pursuing a City Model

Design a hypothetical app, intervention or installation that pursues a city model. Describe the city model you pursue and what elements determine whether this goal – the city model – is achieved. Next, describe what particular design considerations go into achieving this goal – what actions should be allowed and how is that achieved. Shortly put: describe how your design consciously steers the user to adopt a particular city model. The goal of this assignment is to show how particular design choices can spur debate due to their inability to control the user.

Examples

- Mark Shepard's Sentient City Survival Kit - <http://survival.sentientcity.net>.
- Next Nature - <http://www.nextnature.net/tag/design-for-debate/>.
- Dunne & Raby about 'critical design' - <http://www.youtube.com/watch?v=-bns4qcRRYY>.
- The "adversarial design" interventions discussed in Morozov's chapter from week 2.
- The Hackable City project website: <http://thehackablecity.nl>.
- Play the City website: <http://www.playthecity.nl/11349/en/digital-urbanism>
- Ben Schouten ea.: 'Games as Strong Concepts for City-Making'. <http://bit.ly/2vYE79p>
- Eric Gordon, Eric, and Stephen Walter. 'Meaningful Inefficiencies'

ii. Paper proposal in week 5 – 500 words max

In week 5 students submit an initial research proposal for their final paper. The final assignment takes the shape of an essay containing a critical reflection of the phenomenon studied. The requirements for the paper proposal are listed below.

Essay: Write a theoretical paper about one of the weekly themes or a related topic relevant to the course. The proposal should convey the elements of “The Five Questions Pie Chart”:

1. Phenomenon: the topic you wish to research and the case you will use (what are you researching?). Often introduced through an anecdote or original observation.
 2. Question and hypothesis/argument: a well-formulated question about your phenomenon that cannot be answered with a simple yes/no, but is not too broad either; plus the expected outcomes and/or point you want to make (which question are you asking and what are the expected outcomes?). The research question often needs to be broken down into subquestions, and key notions must be operationalized.
 3. Positioning: providing reasons for its academic relevance and perhaps also societal relevance (why are you researching this?)
 4. Theory: the perspective and concepts you use to research the topic (within what framework are you addressing this phenomenon?)
 5. Method: the approach you use to gather data and increase your understanding (how you are going to conduct the research to find answers to your question?). For this course it is allowed to address phenomena through speculative design as long as there is a critical reflection.
- The order may vary but all of these points should be addressed in the proposal. It is not necessary use separate headers, instead try to incorporate these points into a logical structure.
 - **Deadline:** The proposal must be handed in via Blackboard on **Tuesday 10 October**. at 17:00, and is peer reviewed in week 6.

For a case study, speculative design is allowed. More information about this principle will be given during the seminars.

Note: It is recommended to work on the same topic or case for your paper and the mid-term assignment!

B. Team assignments - 20 % of final grade

During the first working group meeting students are organized in six teams of about 4 to 5 people. Teams are expected to meet at least once a week outside of class meetings and discuss assigned texts and other sources, continuously monitoring their relevance and possible uses for both the team’s class meeting lecture and each team member’s individual research paper project. These are the team tasks:

i. Team presentation

Each week one of the six teams will prepare and be responsible for leading the first part of one of the class meetings (ca. 30 minutes). During these presentations the group will present *their ideal application, game, installation or system* that embodies the particular city themes discussed that week. Money is not an issue, so let your mind run free. Explain your design, what its goal is, how the user interacts with it and why you chose these particular interactions. Your designs should be informed by the week’s literature, shaping your goals and design choices. Use your designs to show off an ideal solution, and example of the problems plaguing the literature, or a better alternative according to the authors, for instance. The goal of your presentation is to provide a critical reflection on the weeks literature, the city model presented and the

assumptions, in order to incite debate with your fellow students.

Make sure not to provide simple summaries; course participants will have read the texts, so regard them as colleagues with similar interests who happen to want to know more about the subject from you, the experts! Try to make it an interactive session by raising lots of issues for group discussions and providing examples or cases to ponder. Teams are advised to use the propositions handed in by their fellow students as part of their weekly assignments to guide the design and debate. You may use relevant audiovisual material, interactive platforms, etc., as tools or illustrations or as case material to make your own point. You will also be judged and informed on your presentation skills.

ii. Peer review in week 6

Teams will do peer reviews of each other’s paper proposals in week 6, and post these reviews on Blackboard (under both their own thread and the threads of fellow students). Peer reviews must pay attention to the presence and strength of elements mentioned in the paper proposal description.

- Length: ca. 250 words per review.
- **Deadline:** Post on Blackboard before **Tuesday 17 October. 17:00.**

Students are strongly advised to repeat this team-based peer review procedure among themselves to prepare for the final paper.

C. Individual final paper - 60% of final grade

Students will write a final paper of about 3000 words. Write a paper about one of the weekly themes or a related topic relevant to the course. Students are advised to choose a similar topic as the one explored in the mid-term assignment. Use a concrete case study of a particular urban technology in order to answer an exploration of the main question of this course: *how urban technologies are used creatively to help shape urban life*. Central in this assignment is a critical reflection on the many smart city cases out there. Especially towards the end of the course we shall dedicate ample time during the working group hours to discuss final paper progress.

- The final paper should be 3000 words ($\pm 10\%$).
- The **deadline** for handing in your **final paper is Friday 10 November 2017** before 17:00.
- Please hand in papers via Ephorus, using the course instructor's e-mail address as the submission code.

See example scheme below. The grey block depends on your team membership (in this example week 2).

	Wk 1	Week 2	Week 3	Wk 4	Week 5	Week 6	Wk 7	Week 8	Wk 9	Wk 10	Wk 11
<i>Weekly propositions</i>	x		x	x	x	x	x				
<i>Team presentation</i>		x									
<i>Written assignments</i>		Propositions Feedback	Mid Term Assignment		Paper Proposal	Peer review proposal		Feedback Meetings	Final paper due		Grades

3. CLASS MEETINGS SETUP

Below an indication of how the meetings are structured. Changes are possible as needed.

A. Class meetings - First part

The subgroup that is responsible for leading the class meeting will start the session by doing a 30-minute presentation and discussion. Before the break we will briefly reflect on the team presentation and identify possible aspects for improvement.

B. Class meetings - Second part

After a break, we will dedicate time to discussing the week texts in further depth. An active attitude from students is expected here: you should raise questions, points for debate, and criticize the author's ideas (of course using sound arguments!) and forward your own ideas. Students are advised to also use this time to develop and test ideas for their final papers. Aside from discussing the literature, we will expand more on theories and methods, and discuss how to read texts, how to work with hypotheses, and how to write with a specific audience in mind. We will pay specific attention to the principle of Speculative Design and the concept of City Models.

C. Class meetings - Third part

After another break, the remaining time of the contact hours can be used for further questions, discussing paper proposals, teacher feedback and/or group meetings. If necessary we will explore more specific elements of ['The Five Questions Pie Chart'](#).

4. COURSE COMPLETION

The course is successfully completed when these conditions are met:

- Students have handed in all required weekly assignments on time (20% of final grade), with a minimum total grade of 5.5. An average score below 5.5 means students may not hand in their final paper. Failure to hand in an assignment on time will result in an irreparable 1. Students who miss more than one assignment cannot complete the course. The grading scale is from 1 (lowest) to 10 (highest).
- Students have participated in the team assignments: presentation + peer reviews (20%), with a minimum grade of 5.5.
- Students have handed in their final paper on time (60%), with a minimum grade of 5.5. The **deadline is Friday November 10th 2017** before 17:00. 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 who are absent from more than one class cannot complete the course.

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.

5. CONTACT

Please use Blackboard's discussion forum 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 a successful group change, or of any class absence at

s.c.martens@uu.nl.

6. 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 both to the Creative Cities minor and 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?

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>

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/sh/60b3b68ax3bzf2k/AACEYEDMIQWceMBUi5u_dCGWa?dl=0

Hill, Dan. *The Street as Platform*. 2008. <http://www.cityofsound.com/blog/2008/02/the-street-as-p.html>.

Optional

de Lange, Michiel. 2014. The "urban" in "urban media". Short position paper, Utrecht University.
https://www.dropbox.com/sh/60b3b68ax3bzf2k/AACEYEDMIQWceMBUi5u_dCGWa?dl=0

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>

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.

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>.

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

Morozov, Evgeny. 2013. *To Save Everything, Click Here: The Folly of Technological Solutionism*. New York: PublicAffairs. Ch. 9 "Smart Gadgets, Dumb Humans" pp. 318-352. <http://bit.ly/1JMS8Fm>.

Optional

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>

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.

de Lange, Michiel, and Martijn de Waal. 2013. "Owning the City: New Media and Citizen Engagement in Urban Design." *First Monday, special issue "Media & the city"* 18 (11).
<http://firstmonday.org/ojs/index.php/fm/article/view/4954/3786>.

Saunders, Tom, and Peter Baeck. 2015. *Rethinking Smart Cities From the Ground Up*. London: Nesta.
<http://bit.ly/1N5t3JL>.

Optional

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 n 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>.
- Max Craglia 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>

Week 4. 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.

- 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/sh/60b3b68ax3bzf2k/AACEYEDMIQWceMBUi5u_dCGWa?dl=0
- 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.)

Optional

- 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. <http://tinyurl.com/yclhjh9>
- 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!)

Licoppe, 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 5. Data City

In week 5 we focus on the role of digital media technologies in (re)creating urban subjectivities, by looking at the role of (big) data and the 'Quantified self' movement.

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>.

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>.

Pink, Sarah, and Vaike Fors. 2017. "Being in a mediated world: self-tracking and the mind–body–environment." *cultural geographies* no. 24 (3):375-388. <http://journals.sagepub.com.proxy.library.uu.nl/doi/abs/10.1177/1474474016684127>

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>

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

Week 6. Maker City

In this week we pay attention to new modes of making (e.g. makerspaces, data challenges hackerspaces, hackathons) 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. <http://tinyurl.com/pu8begz>. [pw: creativecities]

Niaros, Vasilis, Vasilis Kostakis, and Wolfgang Drechsler. 2017. "Making (in) the smart city: The emergence of makerspaces." *Telematics and Informatics*. <http://www.sciencedirect.com/science/article/pii/S0736585316306980>.

Veeckman, Carina, and Shenja van der Graaf. 2015. "The City as Living Laboratory: Empowering Citizens with the Citadel Toolkit." *Technology Innovation Management Review* no. 5 (3). <http://timreview.ca/article/877>.

Optional

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Week 7. Critical reflections: the too smart city?

In the final week we pay specific attention to critical notes made about the media city. This includes the omnipresence of surveillance technologies, the pervasive practices of data gathering, the rhetoric of participation, and mechanisms of inclusion and exclusion.

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Optional material about media art, design and urban life

Below some more material about locative media, digital art and urban screens, and how these media provide alternative perspectives to smart city discourses.

Texts

- Galloway, Anne. 2004. "Intimations of Everyday Life: Ubiquitous Computing and the City." *Cultural Studies* 18 (2/3): 384-408. http://www.purselipsquarejaw.org/papers/galloway_culturalstudies.pdf.
- Paul, Christiane. 2008. "Digital art." 2nd ed, *World of art*. London ; New York: Thames & Hudson. (pp. 216-237). <https://db.tt/4DzCiNj5>.
- Picon, Antoine. 2008. "Toward a City of Events: Digital Media and Urbanity." *New Geographies* 0: 32-43. http://cuma.periplurban.org/wp-content/uploads/2008/06/picon_digitalmediaandurbanity.pdf.
- Tuters, Marc, and Kazys Varnelis. 2006. *Beyond locative media*. http://networkedpublics.org/locative_media/beyond_locative_media.

Videos about 'critical design'

- Mark Shepard / Sentient City Survival Kit (5 min.) <http://survival.sentientcity.net>.
- Dunne & Raby about 'critical design' (7 min.) <http://www.youtube.com/watch?v=bns4qcRRYY>.
- RedSheep – Critique on Critical Design (5 min.) http://www.youtube.com/watch?v=-FTtamBXo_w

Recommended websites

- <http://cuma.periplurban.org>.
<http://www.medienkunstnetz.de>.
<http://uranus.media.uoa.gr/hc2/onlineresource/>
<http://vagueterrain.net>.