

# How we know where we are in the smart city:

## Excerpts from conversations in Amsterdam (Netherlands)

Christine Richter (University of Twente)

Shazade Jameson (Tilburg Institute for Law, Technology and Society)

Linnet Taylor (Tilburg Institute for Law, Technology and Society)

Carmen Pérez del Pulgar (Institut de Ciència i Tecnologia Ambientals, Barcelona, Spain)

*Nordic Geographers Meeting – “Geographies of Inequality”*

*June 18<sup>th</sup> – 21<sup>st</sup> 2017, Stockholm, Sweden*

*Session N7: “Smart for whom? An exploration of the social and environmental aspects of smart urbanism”*

*(Human Dimension)*

# Maps4Society Project (M4S, 2015/16)

“Promises and Perils of Smart Cities” (Kitchin, 2015) (surveillance, safety, convenience, efficiency, participation, ...)

“Algorithmic governance” (Coletta, C. & R. Kitchin, 2016)

“Group privacy” (Taylor et al, 2017) and dynamic (re-)groupings and classifications of people-space relations through data

“Virtuality of territorial borders” (Hildebrandt, 2017)

...



**How do people perceive, experience, discuss these matters from their perspective as smart city inhabitants (Amsterdam)?**

# Methodological notes

- Amsterdam as global city/model for datafication
- 20 expert interviews: research/ commercial/ public sector/ activist
- Observation & participation in events and discussions – smart city Amsterdam, Geonovum, M4S
- Scenario-building exercise

- Focus groups

- Profiling
- Sex workers
- EU immigrants
- Tech developers
- Non-users of smart technologies
- Non-EU immigrants
- Freelancers
- High-school children

2015/16

## “The virtual:” language and feelings

*“If we get ‘the virtual’ – the problem for which jurisdictional borders were the solution – wrong, we will not be able to develop an appropriate actualization.” (Hildebrandt, 2017, p. 25)*

- a. How to speak about what you care about if there are no words for it (yet)
- b. Feeling of extreme visibility

*“ I feel extremely visible: check ins on Facebook, everything you post on Twitter, Google, that knows through your phone evert step you take pretty much, everything you post using gmail. I am pretty sure everything is scanned and collected and aggregated” (Technology developers of energy provider)*

c. *Sense of powerlessness*

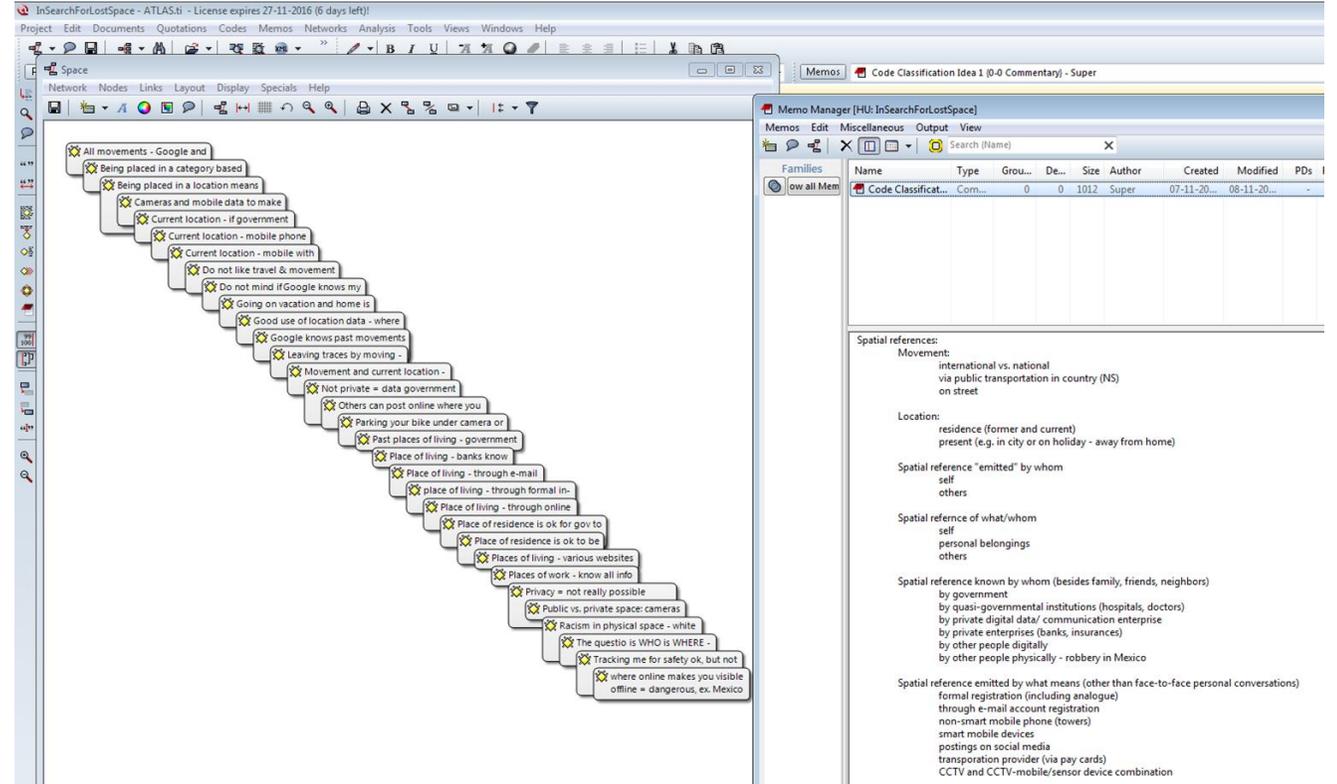
- *"It's getting more and more difficult to be anonymous in the city...because of the cameras, because if you park your car somewhere in the city you have to put your license plate, with the public transport cards, and so on. It's very difficult to be anonymous in the city]...before you had ways out” (Freelance workers)*

# Interpretive framework

## Concepts from Mireille Hildebrandt's (2017) "The Virtuality of Territorial Borders"

1. The geometrical perspective
2. Multi-focal realities
3. Shifting borders of the sovereign subject
4. In search for borders of the virtual world

# 1. Re-configuring the geometric perspective: from “territory” to “networked spatialities”



THEN .....NOW.....

## 2. Multi-focal realities: spaces, meanings, and effects

### Digital traces of physical space

#### Spatial references made by participants

##### Movement:

international vs. national  
via public transportation in country (NS)  
on street

##### Location:

residence (former and current)  
present (e.g. in city or on holiday - away from home)

##### Spatial reference "emitted" by whom

self  
others (about oneself)

##### Spatial reference of what/whom

self  
personal belongings  
others

##### Spatial reference known by whom (besides family, friends, neighbors)

by family, friends, neighbors  
by government  
by quasi-governmental institutions (hospitals, doctors)  
by private digital data/ communication enterprise  
by private enterprises (banks, insurances)  
by other people digitally  
by other people physically - robbery in Mexico

##### Spatial reference emitted by what means (other than face-to-face personal conversations)

formal registration (including analogue)  
through e-mail account registration  
non-smart mobile phone (towers)  
smart mobile devices  
postings on social media  
transportation provider (via pay cards)

### Private and public digitophysical spaces

## KINDS OF SPACES IDENTIFIED BY PARTICIPANTS

### Personal (Private)

- Physical/Meatspace (e.g. 'the body', 'my location', 'home', 'real identity')
- Digital (e.g. 'emails, sms, phone/skype conversations)
- Digitophysical (e.g. 'smart-phones', 'smart watch', 'smart meter')

### Public

- Physical (e.g. public (e.g. square, bus) and private (e.g. shop) space outside the home)
- Digital (e.g. Facebook, Blogs, Advertisement websites, etc.)
- Digitophysical (e.g. CCTV, facial recognition devices, wifi-beacons)

## 2. Multi-focal realities: spaces, meanings, and effects

### a. Different emphases in meanings of privacy

- Not misusing data as a matter of personal dignity and integrity
- My data can be used by government, but not by private industry
- Any message sent by me and intended only for the recipient
- Health information

### b. Uneven effects of hypervisibility

- *“It’s difficult for **members of minorities**, because they are always suspicious. It’s difficult for them to always be with fear of being suspicious”* (non-EU immigrants)
- *“they can also **financially ruin you** and **out you** at your landlord which means you are homeless and it's really difficult to find a home when you're earning from sex-work if not impossible; and even out you to your non sex-work employers, which you know... **makes you more vulnerable**”* (Sex-workers)

### 3. Shifting borders of the sovereign subject

**“[T]he human subject does not precede society and its technological backbone. Rather, both are constituted and shaped by the technological infrastructure that reigns...humans are in persistent process of border-making and these borders depend on the habits we develop, question and change.**

(Hildebrandt, 2017, p.18)

### 3. Shifting borders of the sovereign subject

#### a. Invisible boundaries about the self drawn elsewhere, out-of-sight

- Especially web of relations and third party flows of own data

#### b. (Attempts at) own boundary making

- Engaging digitally as little as possible
- But need to engage: “I think it's hard to define because I guess privacy is everything that concerns me - being honest the best thing would be [to be] able to share whatever and only what I want to share..”
- Need to frequently consider and imagine future risks and multiple audiences and perceptions when engaging with online world.
- Giving up on personal privacy: *“To be honest I am becoming less careful with my online behaviors because at the moment I work from the assumption that in 10 years my law enforcement will know what I am doing anyway”* (Sex workers)

## 4. In search for borders of the virtual world

**“Cyberspace is always experienced by embodied and situated individuals. This entails that online interactions have consequences in the embodied world, meaning they can affect reputation, employability, creditworthiness, energy usages, health risk assessment etc. ”**

(Hildebrandt, 2017, p. 21)

## 4. In search for borders of the virtual world

### a. Expressed in the frequent discussion and questioning: safety vs. surveillance

- Weighing of pro/con
- Weighing of individual vs. group(s) and society
- Context specificity: descriptions of concrete situations in reference to safety vs. surveillance

### b. Consequences in the embodied world

- *“You get a nice big map of Amsterdam saying 'you have a huge fire risk here' what does it do for insurance, house prices and the whole area when you live there” (Technology developers of energy provider)*
- *Beyond the city’s jurisdiction ... “Maybe you want to go to Mexico for holidays and you tell your friends and family about it and some friends post something about me going to Mexico, and then everybody knows. But Mexico is terrible at the moment and everyone knows you are going to Mexico from Europe. It is terrible but there are many kidnappings. The situation in Mexico is different. We come from a different country and we need to be careful” (non-EU immigrants)*

## Shifting Borders of the sovereign subject / Borders of the virtual world

*“It all comes closer. Before you sat in front of the computer and now you have a computer on your hand and on your wrist and it gets closer and closer to the human body. I think body functions are the next big data things”*

(Technology developers of energy provider)

*“We clearly need to rethink and to remake jurisdiction...The notion of ‘we’ seems pivotal here. ‘We’ is first a multitude, not a grand legal subject that can be taken for granted as a given people, or a given nation...multitude should be the starting point.”*

(Hildebrandt, 2017, p.25)

# Implications

## Words

- Need for a new language, a new vocabulary, that captures shifting, new and lacking boundaries (we are trying to shoehorn in old concepts to a new digital city) – “poetics of digital space” (Arias-Maldonado, M., 2016)
- As a means for people - citizens, researchers and policy makers included – to express themselves confidently.

# Implications

## People and spaces

- People wish to see **spaces created** in data infrastructures that serve people as citizens and **that open up the city to its people**, rather than just opening up the people to the city
- People wish to see **preserved personal space**, whether that is the home or the self

# Implications

## Data infrastructures

- Design and development of data infrastructures through reflection based on principles of **contextual integrity** (H. Nissenbaum, 2009), for example through **purpose limitation** (Herrmann et al, 2016)
- Design and development of data infrastructures through consideration and mitigation of **differential effects** - both positive and negative - on people – emergence of groups from data (Taylor et al, 2017)
- Infrastructures that offer possibilities to choose non-participation and be allowed participation (“Rights in and to the digital city”) and allow for people to understand the options and conditions.

## The report of this research can be found here:

Accessible at: <http://ssrn.com/abstract=2792565>

Or google ["customers, users or citizens"]

Citation:

"Taylor, L., Richter, C., Jameson, S., & Perez del Pulgar, C. (2016). Customers, users or citizens? Inclusion, spatial data and governance in the smart city. University of Amsterdam."

# THANK YOU.

## References

Arias-Maldonado, M. (2016) "Die Digitale Wende – Posthumanität Ante Portas – Bausteine Einer Poetic des Digitalen Raums." *Lettre International* (LI 114): 39-44 (Uebersetzung aus dem Spanischen von Ulrich Kunzmann).

Coletta, C. and R. Kitchin (2016). Algorhythmic governance: Regulating the 'heartbeat' of a city using the Internet of Things. Paper has been submitted to the Algorithms in Culture workshop to be held in University of California Berkeley, 1-2 December 2016. Published as an open access pre-print on SocArXiv: <https://osf.io/bp7c4/>.

Kitchin, R. (2015) The promise and peril of smart cities. *Journal of the UK Society of Computers and Law*. <http://www.scl.org/site.aspx?id=42789>.

Herrmann, M., Hildebrandt, M., Tielemans, L., & Diaz, C. (2016). Privacy in Location-Based Services: An Interdisciplinary Approach. *Scripted* 13(2). 145-170.

Hildebrandt, M. (2017) "The virtuality of territorial borders.pdf" *Utrecht Law Review*, **13**(2): 13 – 27. ISSN: 1871-515X Available at: [http://works.bepress.com/mireille\\_hildebrandt/79/](http://works.bepress.com/mireille_hildebrandt/79/)

Nissenbaum, H. (2009) *Privacy in Context: Technology, Policy, and the Integrity of Social Life*. Palo Alto: Stanford University Press.

Taylor, L., Richter, C., Jameson, S., & Perez del Pulgar, C. (2016). Customers, users or citizens? Inclusion, spatial data and governance in the smart city. University of Amsterdam.

Taylor, L., Floridi, L., & B. van der Sloot (2017). *Group Privacy – New Challenges of Data Technologies*. Cham, Switzerland: Springer. [edited volume].

Zuboff, S. (2015). Big Other: surveillance capitalism and the prospects of an information civilization. *Journal of Information Technology*, **30**: 75-89.