Digital Urbanism and the Challenge of Urban Governance (DIG_URBGOV) – Short Research Summary

a research project led by,
Dr. Constance Carr and Prof. Markus Hesse
Institute of Geography & Spatial Planning, Campus Belval, University of Luxembourg, Luxembourg

and supported by,
Prof. Gene Desfor and Prof. Roger Keil
CITY Institute, York University, Toronto

The aim of DIG_URBGOV is to explore the broad question of how technology is unfolding in societal contexts and what the related impacts or implications are in urban space. As new modes of accumulation are invented, and as we are witnessing a revolution in digital devices, services or economies, some urgent questions are surfacing: What is the role of big tech in urban development? What kinds of societal impacts might we expect? How are these impacts and interrelations understood, negotiated, and governed? What will our urban future look like (digital or not)?

Inspired by scholarly and qualitative takes on the digital turn in urban geography, DIG_URBGOV research will zero in on Alphabet Inc.'s involvement in urban development along the Toronto's lakeshore. This case potentially poses a minefield of lessons that can speak both to the international scholarly debates in urban studies and to practitioners everywhere. The research will thus bridge two worlds, that of tech-driven economic development on the one hand, and urban studies scholarship on urban planning and policy on the other.

In so doing, our research aims to help to establish what is meant when speaking about digital and/or smart cities in broader contexts as well as in certain detail. It seems quite evident that as of now there is no consensus on this, just as the case was decade (or more) ago:

> "Despite numerous examples of this 'urban labelling' phenomenon, we know surprisingly little about … smart cities, particularly in terms of what the label ideologically reveals," (Hollands 2008).

Recently, 'Smart Rebel Cities' circulated an overview of tech-cities and their various permutations and development paths over the years. Their examples span Masdar to Songdo to Sidewalk (Smart Rebel City 2019). Or, consider a recent overview of over 50 German smart cities published by Bitkom e.V. & Fraunhofer IESE (2019). Just about any city that had implemented any kind of digital device or system (traffic lights, or driverless cars) was a smart city.

While developing an awareness of the diverse understandings of digital cities seems necessary, this project is particularly interested in the urban constellations of digital producers and how they intersect with other modes of city governance, planning and development.

Urban studies, technological development and society

Clearly, digitization and technology have revolutionized geography in many ways. This is, however, nothing new. Decades ago, with the rise of the Internet, some (e.g. Mitchell 1995) speculated that the web and other ITs would eradicate space into the 'City of Bits'. Such statements didn't go uncriticised, however, as onlookers pointed at the technological determinism that often underpinned such positions, and emphasised that there is a complex relationship between urban development, urban planning, and technological innovation.

Yet, urban geography has experienced a 'digital turn' (Ash et al. 2016; Ash et al. 2019), even if the concrete terms under which this digital turn is materializing remain obscure.

While the digitalization of urban spaces has, of course, provided benefits, it has also come sidelong a number of unsolved problems, which reveal that there are a number of unanswered questions with regards to digital or smart cities (these are summarised in a conference paper by Carr & Hesse, 2019).

DIG_URBGOV aims to explore some of these in greater detail by focussing on one digital/smart city that is currently in the spotlight: Alphabet Inc.'s project in Toronto. In 2017, Sidewalk Labs, won the international competition to develop

Quayside, a derelict piece of land in downtown Toronto in the Port Lands district.

The announcement ignited not only a massive media storm, but also perked the interest of urban scholars both locally and around the world who wondered what it meant when one of the world's largest tech companies was suddenly investing in the real estate, housing, and construction industries. How will this change or challenge the usual modes of urban development? How will this change our understanding of cities and urban spaces?

DIG_URBGOV aims to explore these questions. In this context, the research is structured around overlapping research streams as follows.

First research stream *What are the institutional arrangement of digital cities? How do tech-firms situate themselves in urban development? How do pre-existing institutions react to new players in the field of urban development?*

Kitchin (2015) noted that the smart-city agenda is heavily pushed by tech companies. Yet, even if tech products are destined to change cities, practices of urban development and planning are not generally the domain of expertise belong to most tech firms. There is thus a need to understand how it is that tech companies understand urban space and what their intentions are.

In *Tactical Urbanism*, Lyndon and Garcia (2015) referred to a kind of urban transition process that was driven by extra small scale urban initiatives that, in their aggregate and over time, changed the spaces and flows that constituted urban spaces. Such initiatives were usually experimental in character and relatively easy to implement (in terms of investments or permissions required). And, while the strategic objectives may be have been obscure, the effects could be rapidly assessed, and appropriate measures were easily undertaken.

One could interrogate what tactical urbanism looks like when driven by big tech: What would be the implications of such experimental, uncertain, urban interventions? This line of reasoning could be extended into an institutional analysis of big tech urban development, with the aim of understanding the kinds of institutional arrangements that are ignited when big-tech enters the field of land use development and urban planning.

Second research stream *What new kinds of socio-political implications are there when big tech enters the field of urban development? Are there new social divisions associated with tech firms pursuing land use and real estate development?*

A useful reference point in addressing this question is that of Zuboff's (2019) "two texts." The first text is most easily understood as the user interface. These are the texts that users read and engage with – the clicking, liking, typing, inputting, etc. This is the text that technologists often refer to as when trying to design their products as user friendly and/or fit-for-purpose. The second text refers to all the texts in operation behind the screen – the algorithms, scripts, cookies, bots, and codes etc. that execute the commands.

However, Zuboff's (2019) two texts are not solely about the different sides of the screen. The two texts also demarcate the material and embodied spaces and flows that constitute them. On the first text, this could be conceived as the everyday life and its multitude of user demands for technological development. On the second text, one could refer to the chips, wires, metals and all the value chains implicated in the production of hardware, plus all the political economies that produce them, run them. The two texts can thus also indicate social spheres: 1) distributions of knowledge; 2) increasing asymmetries in the economies of scale; 3) encroaching "economies of scope" (Zuboff 2019) as more and more spheres of tech innovation intervene in the non-quantified spheres of social life.

The first and second texts could also be understood as the front end and back ends of the new tech-drive urban space. DIG_URBGOV aims to explore this divide, aiming to understand how is it discursively reproduced, how it is understood by various actors and institutions, what kinds of efforts exist to bridge it, and how it affects the planning process.

Methods

DIG_URBGOV is a qualitative research project. Our aims are to understand the discourses surrounding the Quayside project, to reconstruct the role that these discourses play for planning, politics, and governance, and the various ways the governance of Quayside is actually executed, in the contested field between private and public stakeholders and the general public.

We are already keeping a close eye on discursive practices in media (newspapers, websites, public documents). Against the background of written discourse, Carr has also already met with a number of knowledgeable persons active in the field. These were planners, community activists, or local scholars who had researched in the area for many years. Exploratory and informal discussions with these enabled an initial understanding of the various dimensions surrounding the Quayside project. They were also helpful in naming further interview partners. The goal is to achieve a diversity of viewpoints.

DIG_URBGOV researchers are thus keen on interviewing further governing officials, architects, real estate agents, developers, and smart city technologists.

Concluding remarks

So, it is clear that technological change has always gone hand in hand with transitions in urban and regional space; that is, technological change as such is not new. This research project is thus not a zero sum analysis of whether or not tech is bad or good. It is not about positioning urban scholarship as for or against technological innovation. That would be missing the point.

Rather, the object of the research is to understand the new institutional networks and structures of governance that arise alongside the new modes of production concerning digital urban space. The research thus targets the intersection of four domains of research on this issue: the practices of technological development and innovation, urban political economy, sustainability, and urban spatial planning.

In carrying out this research, the aim is to uncover what it means when big tech enters the field of urban development. While technological innovation is not new, the character of big tech is. For example, the differential scales of economy, or the new modes of production could potentially revolutionize the ways how, why, and for whom, modern cities and regions are planned and organized. Such changes have implications on society and space, and can challenge pre-existing and habitual modes of governance and urban development. And, these can have wide-reaching ramifications and perhaps unforeseen consequences. With a qualitative lens on this issue, DIG_URBGOV aims to shed light on this.

About the researchers

Constance Carr received her doctorate from the Humboldt University in Berlin, and is currently Senior Postdoctoral Researcher at the Institute of Geography and Spatial Planning, University of Luxembourg. Much of her post-doctoral focussed on policy and planning practices in urban regions under growth pressure (Krueger et al. 2019), looking at emerging sub- or post-suburban and cross-border urban regions (Carr & McDonough 2018; Carr 2018), governance of small states (Affolderbach & Carr 2016), and critical takes on European sustainable urban development (Carr et al. 2015).

Carr also grew up in the St. Lawrence Neighbourhood, in the Woodsworth Housing Co-op. While working on her Master degree in Environmental Studies, she also worked in several homeless shelters in Toronto's east downtown, including The 519 Drop-In Centre. For the duration of DIG_URBGOV, she is a Visiting Scholar at the CITY Institute, York University, and member of their Smart City Cluster.

Markus Hesse is Professor of Urban Studies at the Institute of Geography and Spatial Planning, University of Luxembourg. His research is concerned with, among others, urban and regional development in the context of flows (Hall & Hesse 2013), suburbanisms (Hesse & Siedentop 2018), European urban development and policy, economic geography, and global cities (Hesse 2016). The recent GLOBAL-project explores relational cities, that is, tech- and services-enclaves which reveal a specific trajectory of extraverted development, bearing particular challenges for their internal organization. As a case study, he is currently also tracking the spatial imprint of Amazon.com.

Carr's and Hesse's current musings on urban studies, including updates on DIG_URBGOV, can be read at *Urbanization Unbound* (https://urbanunbound.blogspot.com). They can be reached at constance.carr@uni.lu and markus.hesse@uni.lu.

References and Further Readings

Affolderbach, J, Carr C (2016) Blending scales of governance: Land-use policies and practices in the small state of Luxembourg. *Regional Studies* 50(6) 944-955.

Ash, J, Kitchin, R, Leszczynski, A (2016) Digital turn, digital geographies? *Progress in Human Geography*, 42(1) 25-43.

Ash, J, Kitchin, R, Leszczynski, A (2019) *Digital geographies*. London: Sage.

Bitkom e.V. and Fraunhofer IESE (2019) Smart City Atlas. Berlin: *Bitkom e.V.*

Carr, C (2014) Discourse yes, implementation maybe: an immobility and paralysis of sustainable development policy. *European Planning Studies* 22(9) 1824-1840.

Carr, C, Becker, T, Evrard, E, Nienaber, B, Roos, U, McDonough, E, Hesse, M, Krueger R. (2015) Raising sustainability/Mobilising sustainability: Why European sustainable urban development initiatives are slow to materialise/Territorial cohesion as a vehicle of sustainability/Sustainable urban development and the challenge of global air transport nodes and spatial integration/Distorted density: Where developers and non-governmental organizations on sustainable urban development agree/Overcoming politics with markets? The co-production of sustainable development in urban and regional planning. *Planning Theory & Practice* 16(1) 99-125.

Carr, C, McDonough, E (2016) Integrative Planning of Post-suburban Growth in the Glatt Valley (Switzerland). *Raumforschung und Raumordnung* 76(2) 109-122.

Carr C. (2018) Sustainability in Small States: Luxembourg as a Post-suburban Space Under Growth Pressure in Need of a Cross-National Sustainability. In: Brinkmann R., Garren S. (eds) The Palgrave Handbook of Sustainability. Palgrave Macmillan, Cham

Carr, C, Hesse M (2019) Some notes on smart cities and the corporatization of urban governance. Available at: http://orbilu.uni.lu/handle/10993/38978

Castells, M (1985). High Technology, Urban Restructuring and the Urban-Regional Process in the United States'. In: Castells, M. (ed.): High Technology, Space and Society. Newbury Park: Sage.

Castells, M (1996), *The Rise of the Network Society*. The Information Age: Economy, Society, and Culture, vol. 1. Malden/Oxford: Blackwell.

Graham, S and Marvin, S (2002). *Telecommunications and the city. Electronic spaces, urban places*. London, New York: *Routledge*.

Hall, P, Hesse M (2013) *Cities, Regions and Flows*. London: Routledge.

Hartenstein, F (2019) Silicon Valley Urbanism. Interview at Planologie. https://planologie-podcast.de/2019/03/17/pln008-silicon-valley-urbanism/?fbclid=IwAR0fX_J1tZ8EfGXP2aUwP88WouO2Ga_tOn2Ti-9TE81LGG0RkXKHpZP1mDk (Accessed 6th March 2019)

Hesse M (2016) On borrowed size, flawed urbanisation and emerging enclave spaces. *European Urban and Regional Studies* 23(4) 612-627.

Hesse M, Siedntop S (2018) Suburbanisation and Suburbanisms – Making Sense of Continental European Developments. *Raumforschung und Raumordnung* 76(2) 97-108.

Hollands, RG (2008) Will the real smart city please stand up? Intelligent, progressive or entrepreneurial? *City* 12(3) 303-319.

Kitchin, R (2015) Making sense of smart cities: addressing present shortcomings. *Cambridge Journal of Regions, Economy and Society* 8, 131-136.

Krueger, R, Gibbs, D, Carr, C (2018) Examining regional competitiveness and the pressures of rapid growth: An interpretive institutionalist account of policy responses in three city regions. *Environment and Planning C: Politics and Space* 36(6) 965-986.

McClelland, C (2018) *Silicon City: San Francisco in the Long Shadow of the Valley*. New York: Norton & Company.

Kellerman, A, Paradiso, M (2007) Geographical location in the information age: from destiny to opportunity? *Geojournal* 70, 195-211.

Lydon, M, Garcia, A (2015) *Tactical Urbanism - Short term action for long term change*. Island Press: Washington.

Mitchell, W (1995) *City of Bits*. Cambridge: MIT-Press.

Smart Rebel City (2018) http://www.smartrebelcity.org/kapitel/kapitel-1

Solnit, R (2002). *Hollow City: The Siege of San Francisco and the Crisis of American Urbanism*. London: Verso.

Walker, RA (2018) *Pictures of a Gone City – Tech and the Dark Side of Prosperity in the San* Francisco Bay Area. Oakland: PM Press.

Zuboff, S (2019) *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. London: Profile Books.