# Decentering the smart city

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**Abstract**

This short working paper provides a critique of the smart city and the alternative visions of its detractors, who seek a more just and equitable city. Drawing parallels with data activism and data justice, it is argued that two main approaches to recasting the smart city are being adopted: inverting the ethos and use of smart city technologies; and discontinuing and blocking their deployment. The case is made for decentring the smart city, moving away from the reification of technologies to frame and consider their work within the wider (re)production of social relations.

**Key words:** smart city, technological solutionism, decentring, equality, justice, citizenship

At the core of this book has been the entwining of imaginaries and equality with respect to present and future cities, particularly their incarnation as smart cities. Collectively the authors have sought to imagine a different kind of smart city, both in terms of how we think about them and their realisation. At the heart of this reimagining is equality and a belief that smart cities should serve the interests of all their residents in equal measure. Unsurprisingly, the

concepts of power and capital, and their counterpoints of justice, citizenship and democracy, feature prominently in the discussion. Like much of the critical literature on smart cities, the chapters make the case that smart cities as presently conceived and realised predominantly serve the interests of companies and states, which often work in tandem within a neoliberal framing.

Smart cities are the latest, technology-driven incarnation of entrepreneurial urbanism that recasts the entire urban realm as a market, rather than the urban being a place where markets function (Kitchin 2015; Shelton et al. 2015). Within neoliberalism what were public infrastructures and services, run by the state for the public good, are outsourced, privatized and deregulated, delivered by for-profit operators. The state facilitates this marketization of infrastructure and services, and their increasing technocratic nature, through its restructuring and neoliberal re-orientation, and state-sponsored innovation and market creation. Here, rather than act as the sole service provider, the public sector is cast as partner or broker, working in conjunction with or procuring services from the private sector. Bodies such as the EU's European Innovation Partnership on Smart Cities and Communities (EIP-SCC) foster public-private collaboration, actively seeding new marketplaces through funding mechanisms and the creation of living laboratories for the trialling new technologies (Cardullo and Kitchin 2019a). At the same time, municipalities view the smart cities agenda and the creation of well-managed, efficient and optimized city infrastructures and services as a means to attract inward investment and talent, and drive city-region economic development, competitiveness and productivity (Townsend 2013; Shelton et al. 2015).

Smart city technologies also have consequences for the state's work, altering governance practices and shifting the nature of governmentality and citizenship. Through new technologies such as city operating systems, centralised controlled rooms, coordinated emergency response systems, digital surveillance, predictive policing, and intelligent transport systems, how populations are managed, services delivered, and infrastructure controlled and regulated has become more technocratic, algorithmic, automated, and anticipatory (Kitchin 2014). In turn, governmentality shifts from a disciplinary calculative regime in which people self-regulate behaviour based on the fear of surveillance and sanction, to control regimes in which people are corralled and compelled to act in certain ways, their behaviour explicitly or implicitly steered or nudged through their embedding in or use of systems (Vanolo 2014). The transformation in the organisation and ethos of government by neoliberalism and the use of smart city technologies alters the social contract between the state and citizens. Neoliberal citizenship moves away from inalienable rights and

the common good towards individual autonomy, freedom of choice, and personal responsibilities and obligations defined largely by market principles, with checks and balances that seek to limit excessive discrimination and exploitation (Ong 2006). In other words, citizens have choices and freedoms as long as they have capital to afford them and they comply and behave as states and markets dictate. Within the smart city then, citizens are largely cast as consumers, although they can equally be positioned as data-points to be exploited or subjects to be steered, nudged and controlled (Cardullo and Kitchin 2019b). If there is civic engagement, it is in the form of a participant, tester or player who provides feedback or suggestions, rather than citizens being active, engaged participants (a proposer, co-creator, decision-maker or leader).

Unsurprisingly, those critiquing smart cities are concerned that their rational and deployment is overly determined by the interests of companies (capital) and states (power) (Söderström et al. 2014; Cardullo et al. 2019; Sadowski 2020). For-profit systems are inherently underpinned by the logics of capitalism in which inequalities and discrimination are a built-in design feature for accumulating capital. Smart cities are a key contemporary component of second circuit of capitalism, core to property development and a spatial fix for capital. It is no coincidence that new greenfield cities and large urban regeneration projects are cast as smart city developments (Datta 2015; Wiig 2018; Coletta et al. 2019). The technologies themselves enact the logics and practices of platform and surveillance capitalism, extracting profit through service arrangements with states and the data of citizens (Sadowski 2020). In the latter case, additional value is accrued through 'data colonialism,' in which the process of accumulation is achieved by enclosing communal and personal resources, with little or no renumeration for data that is monetized by the product creator, with control of this exploitative relationship residing with the data extractor (Thatcher et al. 2016 ). Through the use of data-driven, algorithmic technologies, the surveillance gaze and levels of control are deepened with respect to managing populations, thus enhancing state power. Smart systems are often differentially focused on managing particular populations (along the lines of race, ethnicity, gender, disability, etc.), automating and deepening inequalities (Eubanks 2017). And in more authoritarian regimes, smart city technologies provide a means to target, track and corral the location, movement and activities of people in fine detail (Liang et al. 2018).

As such, while companies and states promote their technologies as being citizen-centric, there is significant scepticism concerning such rhetoric (Kitchin 2015). In general, what is meant by 'citizen-centric' is a weak form of stewardship (delivering on behalf of

citizens) and civic paternalism (deciding what's best for citizens), rather than citizens being meaningfully involved in the vision and development of the smart city (Shelton and Lodato 2019). Instead, the underlying ethos remains steadfastly neoliberal, with the notion of 'citizen-centric' being an empty signifier, giving the impression of participatory intent while the actual structural relations remain firm.

The chapters in this book provide a critique of the neoliberal smart city and its framing and imaginary of the future city. They draw on the ideas and ideals of justice, citizenship to democracy imagine a smart city that strives for equality and fairness. As with data activism and data justice, they divide into two approaches for realising their vision. Milan and van der Velden (2016) identify two main classes of data activism. The first, proactive data activism uses open government data and creates their own datasets to seek political action and social change, co-opting the techniques of data science, states and companies to range back against them. The second, reactive data activism, seeks to challenge, undermine, and dismantle present asymmetrical arrangements of data power and politics through political protest and legal challenge. Similarly, D'Ignazio and Klein (2020) chart the differences between data ethics and data justice. Data ethics aims to make data-driven systems fairer, accountable and transparent. However, it locates the source of ethical issues in individuals and technical systems, and pursues solutions that are procedural in nature (e.g., through data governance structures and legislation). D'Ignazio and Klein (2020) contend that the focus on procedures and compliance works to secure power rather than challenging and transforming it as their components and solutions can be captured by vested interests to serve their own ends. Moreover, the solutions pursued deal with symptoms without tackling root causes, curtailing only the worst excesses of data capitalism and data power without fundamentally changing them. In contrast, data justice is organized around a different set of concepts – justice, oppression, equity, co-liberation, and reflexivity. These concepts locate the source of ethical issues in unequal and uneven structural power and work towards dismantling them and putting in place alternative arrangements. In other words, they challenge data power rather than securing it and are more difficult to co-opt.

Most visions of the citizen-centric smart city follow the proactive data activism and data ethics approach. They seek to facilitate the co-option of smart city technologies by citizens and encourage the adoption of regulatory and compliance mechanisms for governing the smart city centred on notions of bias, fairness, accountability, and transparency (Townsend 2013; Kitchin 2016). Rather than being oppositional to the smart city and the use of digital technologies to mediate urban life, such an approach is about re-envisioning and

orientating the smart city so that they are fair and proportionate in their operations (see Chapters by Caldwell; O'Shea; Smith et al.). For others, this approach of co-option and regulation reifies existing structural relations, rather than challenging and transforming them (see Cardullo et al. 2019). It places the emphasis on technical and procedural interventions, ignoring the wider neoliberal political economy and capitalist relations that underpin smart city deployments and sustains inequalities. They posit that there will be no fundamental shift in the inequalities inherent in present visions of smart cities, which will continue to serve primarily the interests of companies and states, without wider political change. Therefore the logics and realisation of the smart city needs to be opposed and alternative urban visions forwarded (see Chapters by Dare, von Ditmar, Sledmere).

What the latter suggests is the need to decentre the smart city, where decentering 'is to 'see through' technology and position it in relation to systems of oppression, whose norms and values are wired in' to smart city initiatives (Gangadharan and Niklas 2019: 895). In other words, we need to move away from the reification of technology and how it can be co-opted and regulated, instead situating smartness within the wider (re)production of social relations (Gangadharan and Niklas 2019). We need to stop casting 'smartness' and digital technologies in a privileged, significant independent role and recognize them as the agents of wider structural forces. This requires us to focus on and imagine the future city in a more holistic sense, and how smartness might or might not be a means of realising a fairer, more open and tolerant city. Rather than trying to work out how to insert equality into smartness, instead the focus is squarely on equality and reconfiguring structural relations and figuring out how smart technologies can be used to create equality and equity *in conjunction* with other kinds of interventions, such as social, economic and environmental policy, collaborative planning, community development, investment packages, multi-stakeholder engagement, and so on.

The issues facing cities are not going to be fixed through technological solutionism, but a multifaceted approach in which technology is one just one component (Morozov and Bria 2018). Homelessness is not going to be fixed with an app; it requires a complex set of interventions of which technology might be one part, along with health care and welfare reform, tackling domestic abuse, and a shift in the underlying logics of the political economy (Eubanks 2017). Congestion is not going to be fixed with intelligent transport systems that seek to optimize traffic flow, but by shifting people from car-based travel to public transit, cycling and walking. Similarly, institutionalized racism channelled and reproduced through predictive policing will not be fixed solely by tinkering with the data and algorithms to make

them more robust, transparent and fairer, but by addressing institutionalized racism more generally and the conditions that enable it (Benjamin 2019). In such a decentred perspective, platform and surveillance capitalism are not framed as separate and distinct forms of capitalism, and racism expressed through smart urbanism is not cut adrift from the structural logics and operations of institutionalized racism (understood in purely technical and legal terms). Rather, smart city technologies and their operations are framed with respect to capitalism and racism *per se*, and the solutions are anti-capitalist alternatives and anti-racism in which smart city technologies might or might not play some part.

This is not to say that a proactive activism/ethics approach centred on smart city technologies have limited value. The efforts and ideals of civic media, citizen science and citizen-led projects to develop their own and co-opt smart city technologies, along with initiatives to tackle biases and seek fairness, transparency and accountability in corporate and state systems, inherently has utility. But as D'Ignazio and Klein (2020: 61) make clear, they are 'inadequate on their own' to address the injustices enacted and reproduced through smart city initiatives. Instead, they need to be approached in a decentred way, framed in relation to wider structural conditions and coupled with more radical ideas and interventions in order to create a more just and equal society. This requires a developing different imaginary for creating equitable cities in which smart technologies play some role rather than necessarily being front-and-centre. The chapters in this book provide some routes onto this path, but there is much work still to be done.

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**References**

Benjamin, R. (2019) *Race After Technology*. Polity Books, Cambridge.

Cardullo, P., di Feliciantonio, C. and Kitchin, R. (eds) (2019) *The Right to the Smart City*. Emerald, Bingley.

Cardullo, P. and Kitchin, R. (2019a) Smart urbanism and smart citizenship: The neoliberal logic of 'citizen-focused' smart cities in Europe. *Environment and Planning C: Politics and Space* 37(5): 813-830.

Cardullo, P. and Kitchin, R. (2019b) Being a 'citizen' in the smart city: Up and down the scaffold of smart citizen participation in Dublin, Ireland. *GeoJournal* 84(1): 1-13.

Coletta, C., Heaphy, L. and Kitchin, R. (2019) From the accidental to articulated smart city: The creation and work of 'Smart Dublin'. *European Urban and Regional Studies* 26(4): 349–364.

Datta, A. (2015). New urban utopias of postcolonial India: 'Entrepreneurial urbanization' in Dholera smart city, Gujarat. *Dialogues in Human Geography* 5(1): 3-22.

D'Ignazio, C. and Klein, L.F. (2020) *Data Feminism*. MIT Press, Cambridge, MA.

Eubanks, V. (2017) *Automating Inequality: How High-Tech Tools Profile, Police, and Punish The Poor*. St Martin's Press, New York.

Gangadharan, S.P. and Niklas, J. (2019) Decentering technology in discourse on discrimination. *Information, Communication & Society* 22(7): 882-899.

Kitchin, R. (2014) The real-time city? Big data and smart urbanism. *GeoJournal* 79(1): 1-14.

Kitchin, R. (2015) Making sense of smart cities: addressing present shortcomings. *Cambridge Journal of Regions, Economy and Society* 8 (1): 131-136.

Kitchin, R. (2016) *Getting smarter about smart cities: Improving data privacy and data security*. Data Protection Unit, Department of the Taoiseach, Dublin, Ireland.

Liang, F., Das, V., Kostyuk, N. and Hussain, M.M. (2018) Constructing a data-driven society: China's Social Credit System as a state surveillance infrastructure. *Policy and Internet* 10(4): 415-453.

Milan, S. and van der Velden, L. (2016) The alternative epistemologies of data activism. *Digital Culture & Society* 2(2): 57–74.

Morozov, E. and Bria, F. (2018) *Rethinking smart cities: Democratizing urban technology*. Rosa Luxemberg Stiftung, New York, NY, http://www.rosalux-nyc.org/rethinking-the-smart-city/

Ong A (2006) Mutations in citizenship. *Theory, Culture & Society* 23(2–3): 499–505.

Sadowski, J. (2020) *Too Smart: How Digital Capitalism is Extracting Data, Controlling Our Lives, and Taking Over the World*. MIT Press, Cambridge, MA.

Shelton, T., & Lodato, T. (2019). Actually existing smart citizens: Expertise and (non)participation in the making of the smart city. *City* 23(1): 35-52.

Shelton T, Zook M and Wiig A (2015) The 'actually existing smart city'. *Cambridge Journal of Regions, Economy and Society* 8(1): 13–25.

Söderström, O., Paasche, T. and Klauser, F. (2014). Smart cities as corporate storytelling. *City* 18(3): 307-320.

Thatcher, J., O'Sullivan, D. and Mahmoudi, D. (2016) Data colonialism through accumulation by dispossession: New metaphors for daily data. *Environment and Planning D* 34(6): 990-1006.

Townsend, A. (2013). *Smart cities: Big data, civic hackers, and the quest for a new utopia*. New York: W.W. Norton & Co.

Vanolo A (2014) Smartmentality: The smart city as disciplinary strategy. *Urban Studies* 51(5): 883–898.

Wiig, A. (2017). Secure the city, revitalize the zone: Smart urbanization in Camden, New Jersey. *Environment and Planning C: Politics and Space* 36(3): 403-422.