Social justice in the digital age: re-thinking the smart city with Nancy Fraser

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Abstract:

While many urban scholars acknowledge the importance of justice and participation for emerging smart city initiatives, these dimensions remain inadequately addressed in critical literature. To strengthen the smart city critique, in this conceptual intervention we employ the theory of justice developed by philosopher Nancy Fraser, organized along the domains of redistribution, recognition, and representation. Using Fraser's tripartite framework of justice, we reformulate and expand the existing critiques of the smart city. Moreover, drawing on her notion of transformative approaches, we argue for shifting the discussion away from the smart city, even an alternative one, towards the just city and a just urbanism in the digital age.

1. Introduction

After being initially dominated by affirmative perspectives only, since about 2014 an increasing number of critical views on the smart city have been published by urban studies scholars (amongst others Hollands, 2015; Kitchin, 2016; Köhler, 2016; Söderström, et al. 2014; Viitanen & Kingston, 2014; Wiig & Wyly, 2016; Bauriedl & Strüver, 2017; Hollands, 2008). Although most of these critiques directly or indirectly invoke justice, what they mean by it remains vague and theoretically underdeveloped.

In order to strengthen the theoretical development of justice in smart city critiques, we employ the theory of justice developed by philosopher Nancy Fraser. Even though it was not explicitly developed for urban contexts (see for instance Harvey, 1973; Fainstein, 2010; Soja, 2010; Lefebvre, 2003 [1970]; Brenner et al., 2009; Marcuse et al., 2009), Fraser's approach to justice is particularly convincing and, in

our view, very relevant for understanding social justice in the smart city. It allows us to analytically separate questions of economic, cultural, and political justice, and at the same time to work out their close (empirical) interconnections, as distributive injustices are inherently linked with cultural and political injustices. Fraser goes beyond theories that place either material redistribution or cultural recognition in the foreground; because, as she emphasizes, there is: "(N)o redistribution or recognition without representation" (Fraser, 2005, p. 85). A critique based on Fraser's theory of justice thus enables a comprehensive and nuanced engagement with the uneven ways in which rights, responsibilities, duties, capacities, and opportunities are experienced across existing urban contexts in which digitization, digital networks, and internet-based infrastructures are presented as an important goal of urban development and inherent public good.

The following section reformulates and expands the existing critiques of the smart city using Fraser's tripartite framework of justice, organized along the domains of redistribution, recognition and representation. In the final section, after briefly discussing (and rejecting) calls and ideas for "alternative smart cities", we call for continued conceptual analysis, policy interventions and social struggles guided by Fraser's theoretical insights, namely an ideal of justice based on parity of participation, to further urban social justice in a digital age. Overall, we understand our conceptual intervention as a base to shape the terrain on which empirical investigations into justice in the smart city may proceed.

2. Justice as parity of participation

According to Fraser (2013), social justice must be based on the principle of parity of participation, i.e. "social arrangements that permit all (adult) members

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of society to interact with one another as peers" (p. 164). This requires, first, an "objective condition [which] precludes forms and levels of economic dependence, and inequality that impede parity of participation.... [and second an] intersubjective condition [which] precludes institutionalized norms that systemically depreciate some categories of people and the qualities associated with them" (Fraser, 2013, p. 164). The first condition refers to redistribution, the second to recognition. In her later work, acknowledging the increasingly interconnected and globalized world and recognizing that "it is no longer axiomatic that the modern nation-state is appropriate for thinking about justice" (Fraser, 2013, p. 191), Fraser adds the political dimension of representation. It is important to note that social justice requires all of these conditions – i.e. redistribution, recognition, and representation – and no dimension can be reduced to the other. Fraser's intention was precisely to develop a conception of justice that encompasses all those dimensions and does not position them against each other, effectively overcoming what she calls the redistribution-recognition-dilemma (Fraser, 1995; 1997).

2.1 *Redistribution*

An analysis of the critical smart city literature with the help of Fraser shows that most of the critiques evoke an understanding of justice as redistribution. Redistribution refers to the economic dimensions of justice in terms of class inequalities and allocations of wealth and opportunity. More specifically, attention is drawn to the "social arrangements that institutionalize deprivation, exploitation, and gross disparities of wealth, income, and leisure time, thereby denying some people the means and opportunities to interact with others as peers" (Fraser, 2013, p. 164).

Hollands (2015), for example, criticizes smart city programmes as "technologically led, corporately influenced and tied to competitive models of the entrepreneurial city [...] undertaken by city governments for urban marketing/ branding purposes" (p. 70). Many critics see the smart city as a tool of transnational technology corporations, like IBM, Cisco, and Google, to maximize their profits. The aim of these

companies is to create and expand markets and to make cities dependent on their equipment and knowledge for managing them, effectively establishing themselves as monopolists (Rauth, 2015; Söderström et al., 2014; Datta, 2015; Kitchin, 2014; Viitanen & Kingston, 2014). The smart city is seen as exemplifying a broader shift in the economy towards a cognitive-cultural capitalism¹ (Söderström et al., 2014, p. 308; see also Wyly, 2013; Scott, 2011), which can be understood as a search for a new 'spatial fix' (Harvey, 2001) in times of increasingly difficult accumulation strategies (Hollands, 2008). Critics remind us further that such an accumulation strategy was enabled by the privatization of national telecommunication systems (Hollands, 2015).

Such commercially-driven urban governance has several redistributive consequences: First of all, smart city technologies are costly and most of the costs are fully or partially borne by the public, effectively subsidizing the private sector. Even more problematic, by prioritizing IT investments, local governments redirect public spending away from less spectacular and already underfunded areas of public intervention (e.g. social housing, education, or health) that would better address pressing urban issues like poverty and inequality. It also comes at the expense of neglecting basic – analogue – urban services like waste management and sewage systems (Hollands, 2008; 2015; Söderström et al., 2014). Additionally, some of the costs of the smart city are directly charged to the individuals or households, e.g. the costs for smart (electricity) meters. These are direct financial burdens that especially affect poorer households because purchase costs will not be redeemed by lower spending (Viitanen & Kingston, 2014, p. 810; Rauth, 2015). A fourth redistribution issue is related to questions such as who collects, owns and controls the access to data and digital technologies, who profits, and who pays? Here again the assessment is pessimistic because "large private vendors [...] control huge swathes of the information economy and will have disproportionate control over the future development of the economy and society thanks to the winner-take-all dynamic enabled and amplified by the internet" (Rabari & Storper, 2014, p. 38-39).

¹ Its main characteristics being "(1) the new forces of production that reside in digital technologies of computing and communication; (2) the new divisions of labor that are appearing in the detailed organization of production and in related processes of social re-stratification; and, (3) the intensifying role of mental and affective human assets (alternatively, cognition, and culture) in the commodity production system at large" (Scott, 2011, p. 846).

Overall, “the real geography of an unevenly-developed world of richer and poorer cities, regions and countries will not be effaced by the digital revolution” (ibid., p. 40). Overlaying existing injustices with smart city technology does not dissolve them but will deepen and amplify them. As a result, new social and economic divisions in smart cities have to be expected (Söderström et al., 2014; Hollands, 2008; 2015; Viitanen & Kingston, 2014; Köhler, 2016, p. 273). All this is contrary to a parity of participation as a precondition of social justice.

2.2 Recognition

For Fraser, recognition, the second dimension of justice, is not equivalent with identity politics but refers to social struggles aimed towards overcoming structures of subordination. Misrecognition occurs when the cultural values that are placed upon certain groups render them inferior and hence unable to participate as peers in social life (Fraser, 2013, p. 164). Whereas redistribution examines the barriers to participation parity associated with wealth and class inequities, recognition directs attention towards the institutionalized patterns, structures, and policies that produce and sustain inequities of social status.

On the whole, attention to status inequality along the lines of race, gender, and other axes of social differentiation is notably absent from existing critical literature on smart cities. Given the significance of recognition to Fraser’s formulation of justice, these varied and interconnected status inequalities warrant more attention and analysis, particularly given the widespread claim by promoters of smart cities that the benefits of technological innovation will accrue to all (documented in McFarlane & Söderström, 2017).

Critical scholars who interrogate the forms of governance emerging in the context of the smart city point out that the restructuring triggered by the implementation of smart city imperatives and technologies not only often exacerbate extant inequalities but also requires ‘smart citizens’. This leaves “little room for the technologically illiterate, the poor and, in general, those who are marginalised from the smart city discourse” (Vanolo, 2014, p. 893). However, not only the discursively devaluated and non-technically affine citizens will find themselves at a distinct disadvantage, but potentially everyone as ‘smart’ systems tend to be “more opaque” and difficult to navigate than existing urban systems (Rabari

& Storper, 2014, p. 39). These new forms of social exclusion work across scales, not only positioning individuals but also cities and regions differentially. By suggesting the inevitability of a linear and universal path of development, those who fail to adopt smart technologies may be then framed as ‘lagging behind’ (Vanolo, 2014, p. 891-92).

2.3 Representation

In more recent work, Fraser expanded her two-part theory of justice to include the political dimension of representation. This third, both political as well as spatial dimension, refers to the defining conditions which determine “who is included and who [is] excluded from the circle of those entitled to a just distribution and reciprocal recognition” (Fraser, 2013, p. 195). Representation refers simultaneously to *membership* in terms of who counts, who belongs, who is included, and who is excluded, and to the *procedures* and processes that structure inclusion and contestation. Injustice occurs when there is misrepresentation, i.e. “when political boundaries and/or decision rules function to wrongly deny some people the possibility of participating on a par with others in social interaction – including, but not only, in political arenas” (Fraser, 2013, p. 196). Importantly, Fraser does not assume static territorial boundaries of the nation state as the most and only adequate stage for justice claims.

The question of representation also plays a role in smart city critique. However, it is mostly indirectly negotiated via the perspective of participation; on the question of the possibilities of contributing in concrete situations to decision-making or data collection. A discussion on how equal participation can be ensured as well as a critique of misframing is, to our knowledge, not yet present.

A core argument put forward by smart city advocates is that digital technologies will provide participatory and interactive platforms as well as real-time ground-level data. Both will improve participation by promoting greater involvement in collective decision-making, augment the scrutiny of public agencies, and thus empower citizens. Some go so far to argue that digital technologies play a fundamental role in manifesting liberal democratic values, such as “individual freedom, a more genuinely participatory political system, a critical culture and social justice” (Rabari & Storper, 2014; quoting Benkler, 2006, p. 31). Kitchin (2015) observes that some “smart city vendors such

as IBM and Cisco" have in response to criticism even started to rework their discursive framing by altering "the discursive emphasis of some of their initiatives from being top-down managerially focused to stressing inclusivity and citizen empowerment" (p. 133). For example, Vienna's smart city Vision promises broad social participation as an integral factor of their strategy.²

As a key dimension of justice, representation provides a framework to examine claims that smart cities facilitate and enhance participation. The concept of misrepresentation is relevant in our view for a critique of three underlying logics of the smart city: (1) the positioning of citizens as consumers and sensors, (2) the corporatization of urban governance, and (3) the role of digital technology.

(1) Perhaps one of the most clearly identified ways in which smart city narratives impede equal participation is through the positioning of citizens as consumers and as sensors rather than shapers or owners of digital technologies, effectively masquerading buy-more-strategies as responsive and citizen-centric (Cardullo & Kitchin, 2017; Viitanen & Kingston, 2014). The reduction of citizens to consumers promotes the logic of markets, diverting attention from the procedures and practices that enable and constrain democratic participation. Problematically, the digital consumer frame also contains biases and exclusions that leaves parts of the city and its population unaccounted for, particularly those that lack the resources, opportunity, or even desire to embrace digitally mediated forms of participation (Viitanen & Kingston, 2014). Clearly, technologies enable individuals to gather data, but since they are not enabled to meaningfully act upon it, citizens are reduced to sensors (Goodchild, 2007), to "both a generator of data and a responsive node in a system of feedback" (Gabrys, 2014, p. 38). The implication is that citizens are challenged to provide (often app-based) solutions to practical issues "but not to challenge or replace the fundamental political rationalities shaping an issue or plan" (Cardullo & Kitchin, 2017, p. 18). This also reduces participation to "computational responsiveness [...] coextensive with actions of monitoring and managing one's relations to environments, rather than advancing democratic engagement through dialogue and debate" (Gabrys, 2014, p. 38). Current

smart city experiments and control rooms are hardly ever the result of participatory governance and democratic decision-making (Arbeitsgruppe Smart City, 2017, p. 27).

(2) A second instance of misrepresentation lies with the increasing power of corporations to own and control technology and data (Bauriedl & Strüver, 2017; Hollands, 2015). Not only are digitally-mediated interactions dominated by the economic, cultural, and political values and interests of profit-maximizing private-sector actors (Hollands 2015), the ways the exigencies to which smart cities are supposed to respond – such as sustainability and climate change – are also increasingly shaped by corporate interests (Blue, 2016; Rosol et al. 2017). It is therefore reasonable to conclude that the turn towards technologically-mediated forms of governance will continue to favor the interests of transnational corporate actors over other stakeholders (Viitanen & Kingston, 2014).

(3) A third area of misrepresentation results from the ways in which digital technologies are restructuring the material and discursive conditions of participation (Rose, 2017; Braun, 2014; Gabrys, 2014). The problem is that technology is not just added as a bonus that people may or may not use or indulge in, but that it changes society in fundamental ways. For instance, smart technologies facilitate the government's capacity to monitor, anticipate, and suppress public dissent and resistance, giving rise to the prospects of a "disciplined city" (Vanolo, 2014, p. 884). As Vanolo (2014) observes: "The smart city discourse has an effect on the way citizens are supposed to behave. On the one hand, citizens are very subtly asked to participate in the construction of smart cities, on the other, they are implicitly considered responsible for this objective. This means that the citizen is re-subjectified in the form of an active citizen required to achieve his goals" (p. 893). Visions and designs of smart technologies are thus also leading to new forms of subjectification tied to the Foucauldian notion of responsabilization through participation (Rosol 2015).

Finally, employing digital technologies also requires reframing the urban and urban processes in a language or code that technology can act upon. This is based, as Söderström et al. (2014) observe, on a

² Critiques, however, question whether the conditions to facilitate this, i.e. mechanisms and procedures to enhance citizen participation, and empowerment are in place (Laimer, 2014; Rauth, 2015).

problematic systems thinking, which reduces decision-making to “technocratic conception of urban management where data and software seem to suffice” (p. 317). Such framing glosses over the political aspects of urban policy development in which priority setting and contests over meaning are central.

3. From the smart to the just city in the digital age

More recent critical accounts do not stop at pointing out the problems of the smart city, but also voice calls for engaging with the smart city discourse by “crafting [...] alternative smart city stories” (Söderström et al., 2014, p. 307; see also McFarlane & Söderström, 2017). Alternative conceptions of the smart city put forward by critical urban scholars are based on the premise that they have to start with people and with actual existing cities and their current problems, not with technology (Hollands, 2015, p. 63). For example, they advocate for a shift from technocratic to place- and knowledge-based smart cities that are informed by the struggles in urban places that “disturb, resist or create” their versions of smart urbanism (Söderström, 2016, p. 63). They draw our attention to ways of a socially just use of technology, for example, by (urban) social movements or by “digitizing slums” (McFarlane & Söderström, 2017). They point out the “myriads of initiatives where technology is used to empower community networks, to monitor equal access to urban infrastructures, or [to] scale up new forms of sustainable living” (Söderström et al., 2014, p. 318) and in general promote a use of technology to empower people through participatory and citizen-based smart initiatives (Hollands, 2015; 2008). Those proposed alternative visions of smart urbanism are valuable as they create counter-narratives and foster a progressive urbanism that can challenge the dominant discourse of transnational corporations.

However, how do we create a strong alternative vision that is not limited to what Krivý (2018) calls an *auxiliary* critique, which only adds “particulars to the object of critique while leaving its foundational contradictions unexamined” (p. 14)? Krivý doubts that the smart city can be challenged by a “bottom-up liberation of technologies in the name of people” or by challenging “the SC’s corporatisation with liberal humanist values of inclusion, empowerment, sustainability and digital privacy” (ibid., p. 21). This means going beyond a critique of the smart city, which could be retorted by smart city advocates with “Of course,

that’s our agenda, too” or “Of course, we are working on it” (ibid., p. 21-22). Also, Söderström et al. (2014) wonder about how to foster those alternative stories that are place-based insofar as they respond to local needs but still go beyond just “anecdotal small-scale actions” (p. 318).

Turning back to Fraser, we suggest that the thus far proposed alternatives are in fact *affirmative* remedies to the problems of the current smart city. By affirmative, she means “remedies aimed at correcting inequitable outcomes of social arrangements without disturbing the underlying framework that generates them” (Fraser, 1995, p. 82). Affirmative remedies have still valuable outcomes, and many would argue that intelligent urban systems can be used for progressive purposes. Digitizing slums, for example, fill in “blank spots on our city maps” where governments lack critical information about urban life (McFarlane & Söderström, 2017, p. 318). However, mapping blank spots does not address the underlying structures that makes slums possible in the first place. Vanolo (2016), also examining digitizing slums, goes so far to say that “this may sound efficient, but it is dangerous from a social point of view, because it means stigmatizing and militarizing ‘dangerous’ places more and more” (p. 32).

Therefore, and going beyond the affirmative, Fraser (1995) proposes *transformative* approaches “aimed at correcting inequitable outcomes precisely by restructuring the underlying generative framework” (p. 82). In our case that would mean shifting the discussion away from the smart city, even an alternative one, and towards the *just city and a just urbanism in the digital age*. A just city encompasses a *distributive* dimension oriented towards overcoming class inequalities, a *recognition* dimension oriented towards dismantling status hierarchies, and a *representation* dimension oriented towards enabling transformative opportunities for reframing the “stage on which struggles over distribution and recognition are played out” (Fraser, 2013, p. 195).

Surely we cannot define what that will exactly look like. But we can use Fraser’s definition of justice as parity of participation across economic, cultural, and political domains to start posing questions and conditions to guide efforts towards it. Some of these questions will be very specific to digitalized and networked city. For example, to what degree are citizens provided the opportunity to opt out of digitization

and still retain the capacity to fully participate in social life? Or we can ask, what forms of claim making and struggles to address inequities of recognition are facilitated or hindered by novel technologies and the way they are owned and governed, and to what effect?

However, as transformative remedies of digital injustices aim at correcting underlying structural issues, the main questions will remain broader as they are geared towards fundamental justice questions. This includes questions like: How are resources including wealth, income, labor, leisure time and land distributed, who stands to profit from the introduction of digital technologies and who will lose (redistribution)? Are there certain groups of people systematically depreciated and thus constrained in their ability to make claims and receive recognition for these claims (recognition)? Who is setting the frame for political struggles and justice claims and who is excluded from this frame-setting (representation)?

Adopting Fraser's approach to the smart city literature means foremost attending to the interconnections among structural inequality, social status, and political claim-making that shape and are shaped by technology-centered, profit-driven urban initiatives. In this, the smart city criticism can learn from other justice movements. According to Schlosberg (2004), for example, early approaches of the environmental justice movement focused primarily on distribution issues. Recent interventions, however, pursue a broader approach, because "a thorough notion of global environmental justice needs to be locally grounded, theoretically broad, and plural — encompassing issues of recognition, distribution, and participation" (Schlosberg, 2004, p. 518). For the movements for food sovereignty, Fladvad (2017) shows that they turn against a misframing by addressing the global level (political dimension), calling for the recognition of a peasant way of life (cultural dimension), as well as denouncing their unjust class situation (economic dimension) (p. 60.). Finally, Bulkeley et al. (2014) in reference to climate justice call for a three-dimensional approach that recognizes the way in which "each facet of justice is bound to each of the others" (p. 34). Building on this, with our contribution we would like to encourage critical urban research to embed its smart city critique in a broader understanding of justice based on economic, cultural, and political parity of participation.

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