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## COMMENTARY

### **The minority report: social hope in next generation indicators work. Commentary on Rob Kitchin et al.'s 'Knowing and governing cities through urban indicators, city benchmarking, and real-time dashboards'**

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Kitchin et al. offer clear warnings about the proliferation and use of increasingly automated, standardized and digitized urban data systems. These risks and warnings resonate for us, both social scientists who study, and sometimes design, these systems in practice in the cities of North America, Australia and Europe. What Kitchin et al. overlook is the set of opportunities that also accompany the increased use of urban indicators. From a perspective of local democracy, empowerment and social learning, such opportunities do exist and are worth considering by anyone interested in building momentum to move the city toward awareness of its development path and, ultimately, changing this path. We offer this perspective here, recognizing that this is indeed the 'minority report' of those who see potential for social hope and enlightenment in monitory and numerate local democracy. We discuss, in turn, the potential of instrumentalism, abandoning the god's-eye view, the tie between indicators and managerialism, standardization and localization agendas, and the prospect of social learning.

#### **Questioning the role of instrumentalism in indicators systems**

The arguments made by Kitchin et al. take into consideration that urban indicators have become 'a de facto civic epistemology' for cities, that 'the recent move to open up the data underpinning indicators' and correspondent communication strategies from governments and city managers to citizens is a nearly global trend. Before discussing further the consequences of this trend, we flag that our experience in Canada, Portugal and beyond teaches us that many do continue to live in a 'closed data' context, to their great frustration and that counter trends toward greater obfuscation of data need our attention as well. For every politician who promotes open data, there seems to be another who fears it. This appears a small matter to Kitchin et al., but a big matter for us, and specifically from a democratic and local empowerment perspective. As researchers who

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attempt to cast new light on social, environmental, cultural and economic conditions of life with a view to improving the policies that reinforce patterns of persistent exclusion, we see promise in the availability of more and better data to more people in communities that are suffering and trying to articulate a different path of progress.

Certainly, relying on bad data to make and justify decisions and actions can result in deteriorating conditions for many. However, relying on *less* data and drawing decisions and taking actions that *cannot* be justified by data has at least an equal chance of doing the same. Why blame the data right out of the box? Why not force more transparency into the decision-making and conclusion-drawing process, rather than limit the possibility of transparency by constraining access to data?

### **Questioning the god's-eye view in indicators systems**

Despite pretensions to the contrary, indicators do not offer any comprehensive access to a reality that is ultimately, objectively, neutrally or rationally packaged. We all are inhibited or influenced by our own perspectives and biases, and to borrow from the philosopher Hilary Putnam, none of us can attain a 'god's eye view' from above, regardless of the data or position we command. At the same time, few of us are entirely unable to change our perspective when presented with better information, in a social context that is recognizable to us, and where the change offers us something of value; and to a large extent, this is the promise of education, for example.

The digital revolution in communication, now in its third decade and only gathering speed, has profound impacts on how and what information we perceive and understand. Urban indicator systems are wrapped up in this revolution. Questioning the frameworks and communication protocols in use, both implicit and explicit, and the constraints they impose on our understanding, is an important role for social science to play in this revolution. At the same time, some kind of constraint on our understanding is always present; as Friedrich Nietzsche said, 'There is only perspective seeking, only a perspective knowing.' We are always understanding the conditions around us and the decisions we make about how to engage with them based on some framework or other. Challenging the shortcomings of a particular framework is a task best kept separate from maintaining an active, reflexive stance toward what our horizons and blind spots offer our perception, more generally, across a shifting context. In the big picture, the only solution to our ever-partial perspectives is to offer more perspectives to the task of solution-seeking, a point we will return to in our final argument in this commentary.

On the point of persistent foreclosure of perspectives within the framing of urban indicator frameworks, we recognize, along with Kitchin et al., a bent toward a particular type of framing, fuelled by quantitative data in service of 'a new urban science'. We share in Kitchin et al.'s concern that an overly predictive, excessively quantified approach to understanding the city and determining path of action in it may be growing in popularity, at the expense of the more qualitatively and theoretically rich approach of traditional urban studies.

It is unfair, however, to blame indicators for this trend, as indicators projects can include a qualitative approach, as well. In principle, an indicator can be either a qualitative or a quantitative variable (Gallopín, 1997); and a rich process in determining, organizing and maintaining an indicators project can also compensate for the inability of hard data to help us read between the lines. Longstanding efforts to design subjective and qualitative indicators that are every bit as appealing to managers as quantitative ones should not be ignored in our understanding of indicators projects and their effects

(subjective quality-of-life studies, happiness studies). The work of the Happiness Initiative could be examined in this regard, a subjective quality of life survey administered to a group that offers both scored and qualitative results, and a pathway for increasing happiness at different scales of perception. Or, perhaps, the most famous indicator from the Sustainable Seattle sustainability indicators project, which was quantitatively measurable (number of salmon returning to local streams to spawn) but selected by local people as a 'keystone' for their indicator set because of its indication of the complex array of positive cultural heritage, economic opportunity and environmental quality conditions. Local indicators projects can and have been brought to the service of protecting a people's right to happiness, quality of life for children and elders, peace, ecological health, and cultural diversity.

### **Questioning managerialism in governance resulting from indicators systems**

Together with Kitchin et al., we recognize a need for vigilance toward the rising interpretation of the city as a set of 'visualized facts' within a generalized move toward quantiphilia at a more abstract level, a sort of 'epistemological economy' (Parsons, 2004, p. 45). This interpretation portends, more than anything, a new era of capital growth in cities that become 'smart' through investments and installations of new data capture technology, data analysis and manipulation systems, and data displays and feedback systems. That is to say, we see this emergent urban post-material data and technology economy as being primarily a move in the service of capital growth, and only secondarily if at all in the service of local democracy or better governance. At the same time, we find it undeniable that these moves toward better visualized facts in city management can, in certain cases, improve accountability, transparency and thus conditions of local democracy. As an example, Kitchin et al. seem to view the increased use of data in urban management as a necessary move toward management at a distance in which individual officials are relieved of taking full responsibility. We disagree. The example of Baltimore's CitiStat is the most celebrated one of embedding an indicators system and set of procedures, including regular presentation of data by responsible staff to politicians for judgment, as a means of increasing, not decreasing, staff accountability and programme results in terms of valued community outcomes. Mayor Michael Bloomberg of New York City, in famously managing the city as 'a data-driven corporation', provides another example of the nature of accountability and results that can occur from this approach.

If our dashboards tell us about trends moving in the wrong direction, why would we not manage on the basis of measurement? It is certainly better than one alternative, well known for results of manipulation, corruption and reinforcing the plight of persistent losers: the use of anecdote, 'clientelism, cronyism and localism' (Kitchin, Lauriault, & McArdle, 2015, this issue). Kitchin et al. offer a rationale for non-action on the basis of an insidious technocratic rationality, and the assumption of political neutrality in the choices made that can accompany this. It is of course in the interest of all social change advocates and agents to see greater consensus and cooperation emerge about the need for changes to urban management. However, the immense challenge of this consensus is belied by the very multiplicity of scenarios, interpretations and actions possible, based on a very complex and many-faceted urban reality with interactive effects of any action on positive, negative and neutral outcomes for numerous groups and institutions. It is not accidental, or sinister, that we have adopted approaches of using small pieces of data to indicate larger spheres of reality; it is a necessary reflection of human limitations of acting with intentionality in the face of overwhelming uncertainty and complexity.

Value, in terms of a community development agenda, can come from a technocratic and data-centric approach, but this does not take politics out of urban governance. Politics are infused in every step of the way. We now have data-driven policy, yes, and this is somewhat new; but in all cases we also have policy-driven data, and this is not new (Bell, Eason, & Frederiksen, 2011). Lyytimäki, Gudmundsson, and Sørensen (2014) explore an interesting taxonomy of unintended effects of sustainability indicators in communication processes, such as obfuscation, dissonance or boomerang effects. A better understanding of local political processes and the communicative uses to which indicators are put will go further to help us understand the political and contextual outcomes of indicator systems.

### **Questioning the centrality of the standardization agenda in indicators work**

In exposing the risks of a move toward standardized urban indicator systems, Kitchin et al. ignore the parallel move toward local urban indicator systems, created within particular city contexts for primarily internal use. These should be treated as a separate category of indicators systems because the critiques of standardization do not apply, and the drivers and implications of these local systems run the gamut from a wholesale managerialist shift, to a business-as-usual bureaucratic coordination approach, to ambitious, citizen-driven and transformation-oriented efforts. Suffice to say that it is painting with too broad a brush to state that indicators work by ‘occlud[ing] local forms of knowledge’ as a matter of necessity. Cities choose local systems even after considering standardized options, even when the latter would be more cost-effective, because they are interested in place branding and marketing, in selling themselves to potential new investors and residents as ‘beyond the pale’, ‘different from the pack’ and in a class of their own. This is a capitalist growth agenda, but local indicator development processes can also bring out local knowledge and meaning that otherwise saw no policy uptake, because it was not codified. These processes can also increase democratic oversight of data validity, when citizens have the opportunity to scrutinize and question data and indicators that do not ‘ring true’ to their experience.

In increasing numbers of cities, we are witness to the co-habitation of both standardized and localized indicator systems. This is a trend worth pursuing in research, to examine the different purposes, goals, target groups, messages and outcomes that each potentiates, as well as their interactions in democratic as well as managerial space.

### **Advancing the prospect of learning for social change through indicators systems**

Indicator systems are not mere collections of facts, and do not always carry pernicious effects when it comes to local democracy, self-determination and the way citizens, advocates and planners approach our work within and outside of government. It bears remembering that one motive force for the current surge in indicators systems is the Agenda 21 report resulting from the 1992 Rio Earth Summit, which called for nations and (paired with Local Agenda 21 which articulated the local role in achieving sustainable development) local communities to measure and track trends in order to understand better and address specific sustainable development challenges in place. The way in which the theory of sustainability indicators has developed has been toward systems-based, holistic and citizen-driven efforts to change the dominant course of urban development toward more sustainable goals (IISD, 2009). Only by looking more closely at systems in place, where they come from, how they are instituted, implemented and used, and by whom can we determine the good or harm they are likely to deliver.

Kitchin et al. view the indicators agenda as one of increasing the ‘span of control’ ‘over a large repository of voluminous, varied and quickly transitioning data, enabling domains to be explored and interpreted in an easily digestible and intuitive way without the need for specialist analytic skills’. It is surprising to us that, given this understanding, they dismiss that access to such power, control and learning cuts both ways. Urban indicators systems can open up new opportunities for learning about one’s city, across time and in a comparative context with other places and conditions. This has the potential not just to change ‘the relationship between government and the public’, as Kitchin et al. (2015, this issue) note, but also to change the means and increase the power that citizens employ to assess government function and effects across time, sector and jurisdiction. Seeing indicators as representing instrumental rationality in which ‘hard facts trump other kinds of knowing’ limits a sufficiently rich understanding of how these things operate.

Nor is it just a matter of increasing access to data and context to citizens, it is a question of changing habits and expectations of citizens in terms of things like: the role of the citizen with regard to data, the potential for engaged action, agency in plan and programme implementation in the city. This is a social learning process that can enrich and spur forward new social actions: it can mean more and different people engaged, changing entrenched viewpoints through interaction and dialogue in new contexts of empowerment, crafting new kinds of interventions. We are thinking here, for example, of the 350.org organization, which leveraged understanding of the key indicator of carbon dioxide concentration in the atmosphere to create a new climate action campaign, whose most recent evidence of success as of this writing was the mobilization of about 400,000 people to the streets of New York City, plus many more in other cities, in advance of a new round of political climate talks. Mobilization, as well as management, by numbers is becoming increasingly creative and slipping into non-quantified domains. At a time when streaming data, big data, infographics, real-time and crowd-sourced data, and many-dimensional and interactive moving graphics become the dominant forms taken by urban indicators systems, it does not make much sense to refer to these projects as simple quantified reductionism. Much more is going on here. Nor is it clear why today’s indicators systems should be perceived as predominantly keeping ‘black-boxed the algorithms, databases, software and design decisions that shape the interface’s look-and-feel and operation’. They can also, through new web technologies, allow unprecedented drilling down into data lineage and metadata, personalized data sorting and tabulating data points for customized inquiries. This is in fact something new that does have great potential to impact political dynamics.

### **Conclusions: the fallacy of misplaced concreteness in urban indicators systems**

The philosopher Alfred North Whitehead’s fallacy of misplaced concreteness applies well to the story of harmonized indicators and what they do to the cities that adopt them (Whitehead, 1925). Objective science, knowledge and indicators provide the illusion of validated truth, spoken to power. To Whitehead, the fallacy of misplaced concreteness is the mistake of jumping to the conclusion that the world itself can be just as objective and quantified as the numbers used to represent it, that the process of generating the concrete data is one and the same with the process of laying bare the truth of the world. This mistake, Whitehead held, is responsible for the denial of such essential human and social characteristics as common sense, experienced reality, social preferences and habits, learning and perspective taking, as having anything to do with the management and conduct of the world in which we live. The commission of the fallacy of misplaced

concreteness carries a heavy burden of the mistakes of modernist, rational comprehensive planning and management approaches in our cities.

Kitchin et al., rightly, emphasize that indicators are never neutral and objective and certainly do not reveal the city as it ‘actually is’. By criticizing realist ontology and epistemology, they expose the fallacy of misplaced concreteness. But they neglect that the prevalence of this fallacy, at the same time, paired with these modern urban indicator systems, opens up new pathways to the accountability of decision-makers for the choices they make; we can mobilize a fallacy of misplaced concreteness to advance urban advocacy toward new social goals, as well. Also, laying the numbers bare before us and pointing at them as we might point at reality is only part of what today’s urban indicator systems do. Indicator systems also offer new resources for city vision and goal-setting, and may have the potential to stretch the distance that goals may lie from current practice.

The project of uncovering the fallacy of misplaced concreteness in the majority of urban indicators initiatives must go on. Even more so in the rapid-fire and graphically sophisticated digital age, clear lines and bright boundaries give the impression of certainty, of our ability to understand, the objective defensibility of our interpretation, and the direction in which we should act. The detail that indicator systems seem to provide boils the complexities of the city down to cognitively manageable chunks. We can welcome new knowledge, and access to new knowledge, while maintaining cognizance of the historical fact that, often, expansions of knowledge can be accompanied by expansions in ignorance as well, ‘like the circumference of an expanding circle’ and that without precautions, better knowledge ‘can equip people merely to be more effective vandals of the Earth’ (Orr, 2004, p. 5).

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