PART TWO

Data Decisioning and Data Justice

A Dialogue with Rob Kitchin

Part II of this volume examines the logics and rationalities of urban data, a now integral and interwoven element of urban life. Authors in this part challenge the discourse of "data as fuel," by explicating processes of smartification and the profit motives *fuelling* data capture and extraction. Building on critical data studies and data justice, the authors identify (in)justice within these data-based sociotechnical arrangements. Specifically, interrogating disjunctures between dominant conceptions of rights and data-based assemblages, rationalities, and relationalities of smart urbanism.

To discuss these entanglements, here we dialogue with Dr Rob Kitchin, Professor and European Research Council Advanced Investigator at Maynooth University. Kitchin has held numerous prestigious positions and has published nearly two hundred articles and book chapters and thirty authored or edited books. His research focuses on the politics and impacts of data, software, and related digital technologies.

Editors: We are really intrigued by these emerging conversations around social justice in the smart city and, in particular, you, Taylor Shelton, and a few other people have raised this idea of the right to the smart city. Your latest collaboration (Cardullo, Di Feliciantonio, and Kitchin 2019) *inspired us to think more precisely about social justice and what frameworks we can draw on in that conversation. The right to the smart city, as you know, is one of dozens of frameworks that one could draw in for social justice conversations, and so in this book contributors grapple with the benefits and drawbacks that come with different kinds of frameworks for thinking about social justice in the smart city. For instance,*

Miguel Valdez, Matthew Cook, and Helen Roby forward theories of epistemic justice to navigate these uneven and unequal power relations.

What do different frameworks omit? What do they include or assume, and what sort of work can they do for us? So, we are taking a step back to ask critical questions about the right to the smart city, about other frameworks and so on.

Over the past several years of the critical smart cities research agenda, we have been intrigued by the emergence of a few competing notions of social justice. As noted by contributors, there are calls for smart cities from the bottom up; there are calls for reappropriating smartness language; there are calls for attention to difference such as race, gender, coloniality, and so on. One of your recent interventions has been to emphasize the potentialities of the right to the smart city as theorized by Henri Lefebvre. The title of your chapter in your recent book is "Towards a Genuinely Humanizing Smart Urbanism" (Kitchin 2019)*, which we understand is riffing off David Harvey. But it divulges one of our key concerns with the framework. We wonder what are the limitations of rights language? As Ryan Burns contends in the previous part, are we able to reappropriate rights languages for more-than-human frameworks? To think about non-human actors, non-human animals, ecologies, or even machines, possibly – computational devices.*

RK: The first thing you must do is unpack social justice. At the highest philosophical level, where you come from will shape where you're going with it. If you are an egalitarian, you will think about this differently than if you're a utilitarian, or if you're a libertarian, and so on. One is everybody is equal; one is greatest number for the greatest good; one is the market is naturally just, and if you get screwed, that's your problem. So, the top level makes a difference, and you can argue that there are kinds of rights within each of those frameworks. I have a problem with discussions around social justice that uncritically take the implicit notion that they all mean people will be treated fairly, equitably, and equally, without actually stating how they will get there. Depending on your worldview, your notion of fairness, equality, equity, and so on is different.

There could be instrumental notions of justice, which is about outcomes. There could be procedural justice that pays attention to how mechanisms work. There could be distributional forms of justice around the fair distribution of resources. There could be recognition – that is to say, equal respect, the same treatment across subjects. Or there could be representational justice that seeks equal voice and ability to challenge data, power, and so on. We might say that representational concerns are more political in nature, recognition more cultural, distributions more spatial, procedural more process-related, instrumental more about outcomes, and so on. One of the things we have to consider is whether technology is part of any sort of solution, or even if it should be figured into the framing of the problem. Is the solution *technological* justice or is the solution just *justice*, full stop? I've been known to make the case that we shouldn't really be thinking about the right to the *smart* city. It should just be the right to the *city*. I said a little bit about that in my "Genuinely Humanizing" chapter (Kitchin 2019).

The right to the city is really rooted in a kind of political economy that goes back to a Marxist critique of urbanism, with an eye towards notions of citizenship and governmentality. This is an important shift in how people are governed, managed, treated, regulated, controlled, etc. Within these new forms of citizenship, there is a rights and entitlement side, but there is also a more neoliberal notion of citizenship based on acting responsibly, consumerism and choice based on ability to pay. Other people will come at this through a feminist, or a postcolonial, approach; Catherine D'Ignazio's work is a good example of the first, and Ayona Datta's of the second. Within data justice there are people like Evelyn Ruppert and a whole bunch of Indigenous scholars such as Tahu Kukutai, Stephanie Russo, and Maggie Walter. This work is about reconfiguring power as opposed to rights in a pure sense.

When we were doing the smart city stuff, we were linking it into a kind of political economy reading of the smart city, which would emphasize capital, property, uneven development, and so on. That was partly where rights language was informing our social justice framework. And this political economy reading would be in opposition to popular entrepreneurial urban thought. In a lot of ways, the smart city is the third wave of entrepreneurial urbanism: we had entrepreneurial planning in the '90s, we then had the creative city in the 2000s, and now we have the smart city. It has gone from economic planning through cultural economy, towards tech. Smart cities are a kind of tech version of that kind of entrepreneurial urbanism.

Editors: Some of these frameworks are far more amenable to thinking about the recognition of non-human actors. In this part, Torin Monahan highlights how ride-hailing platforms have inserted themselves as obligatory passage points in urban transportation systems. Through privatization, urban mobility platform companies, such as Uber, "capture and capitalize data," limiting accessibility often for the most marginalized in our communities. With cases like these, it is often easier to consider property or the distribution of resources; however, as noted by Lorena Melgaço and Lígia Milagres and others, extending rights to animals or to the environment becomes more challenging. To this point, Nathan Olmstead and Zachary Spicer further politicize the data assemblage, highlighting its co-constitution and invoke ideas of around "biodegradability" to capture the fleeting nature of data. Can you speak more to navigating these frameworks moving towards justice?

RK: I think within ethics of care it is probably easier to get there than with a rights-based framework. Catherine D'Ignazio and Lauren Klein, in their book *Data Feminism*, have this nice distinction between data ethics and data justice. They say that the problem with ethics, which is centred on rights, compliance, and regulation, is that it accepts the system as it is; it is about whether you match the system, and tweaks to the system, not about radically changing it. In other words, it locates the problem in individuals and the technology, rather than locating problems in structural conditions. This can be a bit of a problem with rights-based justice: rights operate within that political economy. It does not challenge the political economy; it just formulates rights within it. D'Ignazio and Klein talk about

data ethics versus data justice, but it could just as easily be reformulated as smart city ethics versus smart city justice. There is an important distinction there. I think we say that a little bit in the first chapter of *The Right to the Smart City*.

I would say the second side – the justice side – is more likely to be useful for more-than-human stuff. I am seeing more of that in the data literature than I am seeing in the smart city literature. In the data literature you find people like Deborah Lupton and Ash Watson (2021), for example, writing on the more-than-human with new materialist ideas around data ethics and data justice. Data justice research in some ways overlaps with the smart city research, given that all city operations are data driven, but they really are separate conversations.

Editors: In approaching this volume, we have been interested in varied understandings of "smart." You have called for the reframing, reimagining, and remaking of the smart city, and you have conceptualized the effort as "an emancipatory and empowering project; one that works for the benefit of all citizens and not just selected populations" (Kitchin 2019, 4). *And indeed, this is one of our preoccupations: first, whether smartness is capable of being reappropriated for emancipatory and just ends, and related, what would the conception of emancipatory justice entail? More specifically, is smartness an inherently worthwhile pursuit, or should it be abandoned altogether? What is to be gained from saving the smart city, or smartness as a concept?*

RK: It fundamentally comes down to whether you think that technology is useful at all. Can you imagine driving around Calgary with no traffic control system? You would probably be gridlocked the entire time. So, technology is useful. That is our premise in *Slow Computing: Why We Need Balanced Digital Lives* (Fraser and Kitchin 2020). We start by saying, "Look, there are lots of problems with technology, but actually it's also quite productive, you can get a lot of joy out of using it, and you can do lots of useful things with it." Getting the balance between its beneficial use and its pernicious, exploitive uses is the biggest challenge. There are tons of technology in the city actually being used for social good and for our benefit. Whether that's streetlighting, or whether it is traffic control, or something else, there's loads of stuff that is actually useful. The problem is when it is used as a mechanism of exploitation or for profit, or to create a certain power differential that can be exploited in a particular way.

So, I think this notion of being against the smart city is wrong-headed in a sense because technology is so embedded into the fabric of our cities now. If we were to take it out, we would just have non-functioning cities. I think the goal should instead be to configure it in a way that it works for the benefit of citizens. Several people, certain city councils, and even some European projects have done quite a bit of work around this. Barcelona is the classic example that nearly everybody talks about, where they moved from a right-wing neoliberal government in 2015 to a left-leaning government. They adopted the notion of

technological sovereignty, which is a particular form of rights in relation to the city: technology has to serve citizens, not corporations and states. They had a whole series of efforts to transform how they were using technology: they began disinvesting from big multinational companies, they started to shift over to open-source platforms and tools, invested in open data, and so on. They are using a collective decisionmaking platform to foster public debate, and this is not a small-town hall meeting with fifty people. This is tens of thousands of people giving their opinion on what they think should happen in a district or on a street in relation to municipal renewal, or water delivery, for example. And this is feeding into other debates about things like Airbnb, Uber, and platform economies – how to regulate them, and so on. In Medellín, Colombia, for example, the city mandates that the smart district can't gentrify and displace the existing community, and that it has to serve the existing community.

It is about saying that there might be some useful stuff with this technology, but on what basis do we think it's useful? If you set things up in a different way, then you will get a different conversation. If you say the aim of the smart city is fairness, equity, fair distribution, justice, and so on, you will get a different kind of city than if you say the drivers should be efficiency, optimization, profit, and so on. You will get a different city. The technology is neither good nor bad. It is productive, and the consideration should be in how it's used.

Editors: Many of the technologies and practices of datafication, like those discussed by Valdez, Cook, and Roby, have been around for decades; however, calling them "smart" is relatively new. It sounds like you might not think that there is anything necessarily transformative about designating them with the term "smart." As we discuss in the Introduction, calling them smart does some discursive work, at least, but we wonder if, materially, you might not see it as particularly transformative.

RK: It can be transformative. Depending on what it is aimed at and how it is implemented. We can potentially make a difference to an area or people's quality of life and so on – in terms of how it tackles an issue. The smartness thing is a marketing label to a large degree. And it is trying to play off this notion that gaining optimization or efficiency can be done through machine learning, artificial intelligence, or automated and algorithmic forms of governance. That is where the smart bits are coming from. But smartness is a tricky term, you are right.

Now a lot of it is actually not that smart, right? Being able to tap in, tap out to get on to the Underground and whatever else – there's not a lot going on there. Some of it is more sophisticated. Traffic control rooms are pretty sophisticated, handling data in real time and using them to phase the traffic lights and react in real time to what is going on. Martin Dodge always uses this example of the control room in *The Italian Job*. I do not know if you saw the original film, where they drive Minis [Mini Coopers] through the city; Michael Caine's in

the film. It is made in 1969, but one of the ways they get the cars out of the city really fast is they hack the traffic light system. So, even back in 1969 they were hacking the system. Of course, they had to hack it a different way: you had to break in, take the magnetic tape out, and put your magnetic tape in. But it was still a hack, if you think about the cybernetic stuff and the late '60s, early 1970s.

Using digital technology to manage what's going on in the city, then, has a longer history, and we have cycled through many different terms. Back in the 1980s, I think it was *wired cities*, and then we went into *cyber cities* and *network cities* and *knowledge cities* and *innovation cities*. Now we are at smart, right? And we have forgotten that some of these conversations were happening. Bill Mitchell, Mike Batty, Steve Graham, Simon Marvin, Matt Zook – many people were already talking about some of this stuff in the 1990s.

Editors: So, on the one hand, you could say smartness is here to stay until the next term takes over, so as scholars it would work in our favour to recognize that it is here, and try to achieve just smart cities. On the other hand, it also would make quite a bit of sense to say that smartness is as ephemeral as digital cities, intelligent cities, creative cities, and so on, and therefore we need to think outside of those terms to work towards just cities regardless of the technological assemblage.

RK: The problem with using smart as the link to justice in relation to the city is that it tends to suggest that the solution will also be technological. This is why you might want to decentre that. It is difficult even with great ideas like technological sovereignty: technology is still in the term. It is still the solution.

Editors: Smartness is a marketing term, and as Alberto Vanolo, Vincent Mosco, and others in this volume note, it did not originate from good intentions or a positive social impact. Alison Powell (2021,4) *suggests that "[w]hat began as an idea about improving citizens' access to knowledge by expanding access to the internet built up into a set of systems oriented toward extracting, modelling, and optimizing systems based on data." David Murakami Wood and Torin Monahan* (2019, 1) *take this further, suggesting that "digital platforms fundamentally transform social practices and relations, recasting them as surveillant exchanges whose coordination must be technologically mediated and therefore made exploitable as data." With these and other critiques in mind, we have been sceptical of the long-term viability of saying we need to work within the smart framework and make it just, for precisely the reasons you just said.*

RK: Sure, but it is a little bit of a game and it is a bit more nuanced than that. You need to be in this space challenging what the actors are saying, as opposed to talking from outside. This is always the dilemma: do you get in the room and try to influence from the inside, or do you shout over the barricades from the outside? Which is going to get you further along in terms of transforming how cities work? I'm one of these people who likes to be in the room. I'll sit on a government committee, go to industry events, and try to influence the conversation within those spaces, as opposed to writing from the outside and hope

that they read it and it might influence them. In fact, we developed the city dashboards to work from the inside. Now, I know that that's a tactical choice, but that's the way that we've tried to do it. It's how we've tried to shift some of the thinking around citizen inclusion and citizen-centric ways of operating cities. Whereas, if we were not there, and we were just generally advocating in a broad sense, I'm not sure how much we would be able to influence what was going on.

This is what we have been writing around ethics washing, particularly in smart cities, where they will adopt principles or guidelines, or they will plug it into their corporate social responsibility. All the time, it is really more of an exercise in marketing and visioning than it is about fundamentally shifting their ethos and practice. Compliance as an idea is a bit like that. Catherine D'Ignazio and Laura Klein critiqued data ethics because its compliance bits can help some pernicious groups say, "Well, we're complying. Even if the system itself is structurally unjust and creates oppression, if we're complying with the law, then everything is fine."

Editors: Authors in this volume offer a range of critical approaches to studying the intersections of technology and society. As detailed in the chapters on data and infrastructure, there is no shortage of people who can use data and develop technology. However, as both you and Alison Powell in Dialogue 5 note, more needs to be done in these technological spaces.

RK: The technologists are the people who need to do the heavy work of learning to think through critical theory. But it is our job to get this into the technology space in a way that makes sense to data scientists. That is who I mostly teach. I only teach first-year and a master's course in geography; my other teaching is in maths and computer science, introducing them to critical thinking around data and technology. It has raised many issues with how computer science and data science are taught. Students do not get an ethical grounding. It is just not really part of an orthodox curriculum, and if it is included, it is a very deontological form of ethics that mostly orients around compliance. It is similar in the smart city space, and when you go and talk to chief information officers or chief technology officers, they are coming out of that data science background and they're largely not grounded in social science or ethical thinking.

Editors: Nor do they have social science or humanities scholars on their research teams. Obviously, it is hard to specialize in everything; computer scientists are often trained to be programmers, and not much else. But when a team of computer scientists develop "smart" technology to address complex social issues – such as using facial recognition to detect intoxication for use in shelters, without anyone on the team who specializes in addiction, homelessness, or social intervention – we get very concerned. We argue that tech-focused and "smart" research teams need humanities and social science scholars.

RK: You see it when you go to hackathons as well, some of the weird and wonderful projects they come up with without deeply thinking about it.

Of course, it does differ in different contexts. For example, Ireland is a sort of postcolonial context, and surveillance is frowned upon. One implication is that the closed-circuit television cameras in Dublin don't record. The video they capture is just there and gone. We interviewed one of the camera operators, who said, "Why the hell would I want to record it? I live here, right? I don't want a surveillance grid!" It is linked to this colonial history of the British state surveilling the Irish population. We don't have the same cultural sensibility around it, and we're much more resistant to it. Also, Barcelona, being in Catalonia, which is in opposition to the Spanish state, does have a very different set of – you could call it *smart-mentalities* or *data-mentalities* or some way of thinking about this kind of infrastructure. People in Hong Kong have a very different notion of this, because of what China can introduce into Hong Kong's surveillance grid and its implications for democracy. So, depending on where you are, you'll find that the local authorities, or even the tech specialists, will have a different view of it because of their history and their culture and their systems of governance and so on.

Editors: In this part on data decisioning, contributors interrogate the development and utility of urban data. Jonathan Gray and Noortje Marres stress that "[u]rban data technologies present a critical site of experimentation in rendering cities legible, inhabitable, and liveable on the level of the collective: as the arrangements for articulating urban collectives with data technologies continue to be captured, appropriated, and repurposed by a variety of actors, we must analyse critically not only by whom and to what end urban experiments are organized, but also the methodologies *for the articulation of urban collectives with data they implement." Elsewhere in the book, Orland Woods explores how data can problematize the terms of "smart." Much of your work has centred around data: Big Data, open data, the data revolution. What role do data play for your conception of a socially just smart city?*

RK: One of the most important considerations is in collecting the data that you need as opposed to collecting everything you can get, as well as using them in fair and sensible ways. Anything that is indexical or identifiable to a person or an object – for instance, a transaction or a person's location – is sensitive data and can create a system of dataveillance or surveillance or geoveillance, however we want to phrase it. We must be very careful about how we use that data and what sorts of restrictions we put around them.

Many of the debates going on now are around privacy, and I think that is important, but the bigger issue is governmentality and how the data are used. Now, privacy feeds into that because it's the conditions under which you can get the data, but what's more important is how the data are shared, processed, and so on. We need to mandate that only data necessary to a system's working

should ever be collected. We write about this in *DIS Magazine*: we reproduce what's collected off an Uber app, and it's pretty much everything on your phone. It pulls data from all over the phone, even when there's no relationship to your getting a taxi. It measures about five different things related to the battery on your phone, but there's no need for it to know your battery temperature, your battery signature, or your battery type. Interestingly, this is just an alternative form of indexical data: you can identify phones from their battery signature alone. So, even if you turn your other pieces of identity off, they can identify your phone based on how your battery decays or how the energy is pulled off of it.

There are really two reasons why this is happening. The first one, with particular significance for smart cities (but also lots of other domains), is data capitalism. Some people call it surveillance capitalism, but I think data capitalism is a bigger set of processes and practices. One part of data capitalism is basically asking how to make money off of data. Most smart city technologies create a lot of data: you're tapping in and tapping out, it's stored on an identifiable card, you're getting your licence plate scanned as you drive around the city, your phone is getting pinged as you walk around shopping malls. This is all in the name of optimization or efficiency, but it raises the question of whether we want those kinds of systems, and if we do, how are they to be regulated in a sensible fashion?

We're seeing lots of debates falsely framed as trade-offs. Is it *privacy or convenience* or *privacy or security*? We've also seen in the debates around COVID-19, a false framing of the trade-off between privacy and public health. It frames privacy as harmful for addressing the pandemic: contact tracing apps are all about location, movement, and data, but really they're intended to control and discipline movement and location.

The adoption of smart cities, by the way, is all very fractured and messy. Companies are pushing technologies, and governments are often adopting them, but there's also a lot of resistance inside local authorities or municipalities. It is really an adoption gap. Companies like IBM and Cisco to a certain degree have kind of turned away from *smart city* or they have rebranded themselves on the Internet of Things, because they were finding that a lot of cities weren't adopting or only partly adopting.

And this varies with geographic context, as well. One of the problems with popular smart city discourses is that they create a universalism: a universal discourse about how the smart city is going to save every city on the planet. On the contrary, they're actually going to look different within Europe, North American, African, and Asian contexts. There is a wealth of different political economies and histories and everything else going on.

This tension means that smart cities are not a done deal at all. This is playing out in quite messy ways, and that's how these discussions around justice and

citizenship and so on can actually be productively used. We can push things onto a different trajectory. We can change the future vision.

FURTHER READING

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