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2019

<https://doi.org/10.25969/mediarep/15783>

Veröffentlichungsversion / published version
Zeitschriftenartikel / journal article

Empfohlene Zitierung / Suggested Citation:

Taylor, Linnet; Richterich, Annika; Abend, Pablo: Global Data Justice: Linnet Taylor in Conversation with Annika Richterich and Pablo Abend. In: *Digital Culture & Society*. Inequalities and Divides in Digital Cultures, Jg. 5 (2019), Nr. 1, S. 197–210. DOI: <https://doi.org/10.25969/mediarep/15783>.

Erstmalig hier erschienen / Initial publication here:

<https://doi.org/10.14361/dcs-2019-0112>

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Global Data Justice

Linnet Taylor in Conversation with Annika Richterich
and Pablo Abend

Linnet Taylor is Associate Professor for Data Ethics, Law and Policy at the Tilburg Institute for Law, Technology and Society (TILT), at Tilburg University in the Netherlands. For her most recent research project, funded by the European Research Council (ERC), she examines and develops the idea of global data justice. Linnet makes the case for much-needed fairness in how datafication affects the (in)visibility, representation and treatment of individuals. She argues that establishing a notion of data justice is vital for ethically desirable developments in datafied and datafying societies. From 2014 until 2016, she was a Marie Curie postdoctoral fellow at the University of Amsterdam (NL), with a project on ethical frameworks for the use of big data in development policy. During her PhD research at the Brighton-based Institute of Development Studies (UK), she conducted fieldwork in Ghana. Her thesis *Global travellers on the digital dirt road* examines the country's ICT diffusion as well as individuals' international mobility and networks. In this email interview, Linnet Taylor tells about how she came to focus on her current research and gives insights into her ongoing academic work, particularly her global data justice framework.

Pablo Abend/Annika Richterich (PA/AR): Thank you for participating in this interview. We are very glad to have you on board, as your work is relevant to many of the problems and questions discussed in this journal issue on “Inequalities and Divides in Digital Cultures.” You investigate *global data justice*, a concept that we will also explore in this piece. Already for a few years, much of your research has focused on the implications of big data and datafication. Originally, you come from Development Studies, having completed your PhD in this field. How has your current research focus developed out of earlier academic interests?

Linnet Taylor (LT): The work on data justice came about because of a tension that emerged between the fields of development studies and surveillance studies. A little background to help explain this: when mobile phones became widespread in lower-income countries around 2005, in combination with increasing internet access, this led to a situation where people almost everywhere were producing data about themselves through their devices and internet use. That offered a whole new way to do research on lower-income countries (just as was already being done

in higher-income ones): suddenly it was possible to track and analyse behaviour, economic characteristics, politics, all sorts of things, without actually going to the place in question. This brought new actors into the development field such as mobile network operators (Taylor 2016) and tech giants (Taylor & Broeders 2015). These actors had completely different backgrounds and starting assumptions about poverty, mobility, economic development, from the people who had been doing and using development research.

So on the one side, there was this radical increase in the accessibility of real-time information about people's movements, transactions and behaviour in lower-income countries. And with it came great enthusiasm among development scholars and practitioners about "a world that counts" (United Nations 2014) – the idea that now you could identify where people were experiencing poverty and oppression, the new data sources would also bring the power to change that. So ICT use seemed to present great opportunities for furthering people's rights and representation (Heeks & Renken 2016).

Yet on the other hand, there was a whole body of work in surveillance studies which warned that the transition to greater visibility created informational and power asymmetries in the form of surveillance and the potential for manipulation and exploitation (Dencik, Hintz, & Cable 2016). But surveillance studies research has focused mainly on high-income countries where surveillance technologies have been most sophisticated, so these two accounts of the effects of digitisation – from development studies and surveillance studies – were not speaking to each other.

The tension here is real: many people in lower-income countries do not have access to birth or land registration, to formal sources of banking or credit, and their political voices frequently go unheard. So the new data sources are fundamentally important for counting people better in order to represent them and serve their needs. However, we should be clear that this constitutes surveillance. Surveillance doesn't have to be used in the interests of control, but it usually becomes so. Therefore, surveillance studies makes the point that we shouldn't do it lightly, or assume it's beneficial when pointed at the poor. If we don't like what the NSA is doing with our data in the name of protecting us, we should be careful of developing a double standard for people living in poverty and disadvantage. Yet somehow the "big data revolution" is being sold as purely beneficial for the vulnerable, where the technology is neutral and powerful actors are beneficent. But you only have to read the work of Gilliom (2001) or more recently Virginia Eubanks (2018) to see how databases tend to have disciplinary functions.

So one of the questions the emerging field of data justice is asking is how we should address this tension between the right to be seen and counted, and the right to be left alone (Taylor 2017). And, in the case of my work specifically, who is the "we" in that sentence: who gets to decide how people are made visible and represented using digital data, what kinds of legitimacy are being claimed by those with power over data, and what kind of resistance is possible? The new

visibility has politics, and these are not going to surface on their own. There is a lot to be done at the intersection of technology, rights and vulnerability.

PA/AR: Next to the importance of development studies and surveillance studies for your work, you also stressed the relevance of “Critical Data Studies,” particularly in a mutual interview with Craig Dalton and Jim Thatcher (Dalton, Taylor, & Thatcher 2016). What are the main elements of this critical approach to data, and what are key challenges in this field? What academic disciplines should engage in critically studying data?

LT: Critical Data Studies demands that we address the politics of datafication. It suggests that we not accept uncritically claims that data technologies are neutral, or that data represent people equally and fairly. The field stems initially from work in critical and digital geography, where scholars are looking at processes of datafication from materialist and political economy viewpoints (Kitchin & Lauriault 2014), in relation to cities (Shaw & Graham 2017), the humanitarian sector (Burns 2014) and in mapping and the claims associated with it (Graham, De Sabbata, & Zook 2015). The work being done examines the potential for violence, both symbolic and real, inherent in processes of mapping, identifying and categorising people and territory, it highlights the discursive nature of the representations created through digital data, and the unevenness of the power to represent and act that is created by the new sources of data.

PA/AR: In the same article (Dalton, Taylor, & Thatcher 2016), you discuss the *big data divide* with regard to power and datafication too. Could you briefly explain what this entails, and how it relates to the general understanding of the *digital divide*?

LT: The idea of the digital divide was much discussed in ICT4D (Information and Communications Technologies for Development): it was clear that ICTs had value for the poor, and that huge numbers of people were excluded from using and benefiting from them due to lack of access to devices and connectivity. However, once access and connectivity increased it became possible to talk of a different kind of digital divide. Initially this was described as an inequality in the power to use and benefit from data (Boyd & Crawford 2011), where businesses were getting access to most of the value and people were getting left out. But it's also possible to identify a different kind of divide, a more epistemological one, in the way people can be seen and counted through the data they emit (Dalton, Taylor, & Thatcher 2016). People living in wealthier places, for instance, are the subjects of extensive data collection all the time. They walk around emitting data about their movements, their preferences, their behaviour and characteristics, and all that data is supplemented by a lot more collected by the environment around them, particularly if they live in a city, and by the state in which they live. In contrast, people in lower-income places are subject to exponentially less data collection: their devices are

less sophisticated and administrative data collection on the part of the state is much less extensive.

So when you say that people, or their needs, can be represented better now we have more data, the question arises of whether that representation is fair for the less well-off. Shearmur (2015) has said that “Big Data are not about society, but about users and markets. They are therefore inherently biased in that they do not track people who fall outside the particular markets or activities being tracked,” and this is really important in thinking about what digital divides should be considered in terms of “reading” people through data. For instance claims have been made that we can understand income poverty through airtime purchases (Gutierrez, Krings, & Blondel 2013), refugee integration through movement signatures (Bosetti et al. 2019) and that we can disaggregate people by gender through their mobile traces (GSMA 2018). All these claims are based on processes of proxying for particular characteristics such as gender or poverty, and where this kind of differentiation is being taken as a basis for policy intervention, Critical Data Studies researchers would argue that it becomes really important to understand what proxies are being used and how they are chosen. Are you “predicting” gender based on a tested methodology where you actually check whether you have guessed correctly, or is the method experimental? If the latter, then it limits the claims you can make and the kind of intervention you can make around increasing gender equality. If you think you can identify who is an undocumented worker by analysing their mobile traces (Uluturk, Uysal, & Varol 2019), then the claim had better be based on a solid methodology that can be tested, and it should be discussed with the acknowledgement that most of the interventions that happen once undocumented people are identified are not beneficial to those people, in terms of their subjective needs.

PA/AR: With your ERC project “Global data justice in the era of big data: toward an inclusive framing of informational rights and freedoms,” you propose an idea or rather a framework of data justice. For those readers not familiar with this concept, could you please introduce your idea of data justice?

LT: This idea of data justice was developed as a way to place different visions of datafication in dialogue with each other, and to surface tensions and politics around those two visions. The Global Data Justice project starts from the premise that we do not have good thinking tools for conceptualising the relationship between power and vulnerability with regard to datafication worldwide, but that it is probably unwise to act as if data technologies are purely beneficial and without risk to the poor, in particular. At the same time it is becoming increasingly necessary to conceptualise good governance of data on the global level, given that data crosses borders and jurisdictions as it is produced, processed and used. So our approach with the project is to do empirical research in different regions and sectors to understand how people are conceptualising what is “good” and

“needed” with regard to datafication, and to understand “moments of truth”¹ with regard to data governance, where people notice that data is not being governed adequately. At these moments, political and ethical positions may emerge as to how data should be managed.

For higher-income countries, the Snowden revelations and the Cambridge Analytica debacle could both be described as moments of truth, but we are also seeing these moments of truth in many different places. Our empirical objective with this project is to compare what is happening in those moments in different regions, and to use that to draw out any overarching commonalities in the concepts that people call on in those moments. For instance, people in different places may speak very differently about how they conceptualise privacy or autonomy, but if we can identify what they talk about, when they talk about these things, then we may arrive at a set of concerns and needs that can serve as reference points and triggers for data governance mechanisms on the global level.

PA/AR: Your work stresses specifically *global* aspects of data (in)justice and discrimination, with regard to *rights* and *freedoms*. Why and how is this particularly important for your research?

LT: The reason we need to think about the global level is intuitively obvious. When we use the internet, email, apps or otherwise interact with any of the larger tech companies, we are doing so across borders. There is real debate about the extent to which we have any traction on what happens with the data we produce when it crosses borders. We also hear very different debates on what is legitimate to do with data, either on the part of states or corporations, in different places. Yet we are all experiencing similar processes now: people all over the world use mobile phones and the internet, they engage in e-commerce using similar ways of processing data. And most importantly, the market in which all our data is traded and aggregated is global. We know almost nothing about its dimensions or dynamics, unlike other intangible processes such as stock market trading, but we are trying to regulate and govern data as if it were local. Some data is, but in the end, digital data tends to reproduce and travel, gaining value as it does. It circulates globally, but somehow we only attempt to rationalise what is happening to it on the national level.

There are some countervailing moves, for instance we see similar forms of data protection spreading across the world, based on the European model. But those laws are being enacted in places that often have limited privacy and discrimination protections, for instance, and limited enforceability of both those and data protection laws, once passed. So you could say that a lot of this regulation is going to be fairly toothless, and certainly does not give us the kind of influence we need

1 This terminology is borrowed from the ongoing research of Esther Görnemann at Vienna University of Economics and Business.

over our data when it circulates in different and opaque ways within the global market, and amongst giant data brokers such as Acxiom, Google and Facebook.

This is the argument for thinking about this on the global level: technologies and markets are operating across borders, but our legal and rights-based thinking about data does not operate that way yet.

With regard to rights and freedoms, the framework we are using to organise our empirical research calls on both. It hypothesises that there are three possible pillars for just governance of data, and that they should bring together ideas that have been separated until now in different disciplines and bodies of thought. First, the idea that we should have some control over our own visibility through data: we should be visible when it is reasonable under the social contract and when it is beneficial to us. But we should not be forced to be visible just because the market wants to extract value from the data we produce while living our everyday lives and interacting with necessary services. Second, this leads to a hypothesis about our autonomy with regard to data technologies: that we should be free to adopt technologies and systems, and access should be more equal, but also that we should not have to use digital modes of interaction for functions of citizenship – for example, public authorities such as schools or the police should not be able to demand that I communicate with them using WhatsApp or Facebook, because those technologies will result in my data being fed into the private sector and circulated in ways that may be exploitative, and which should not be demanded as part of the social contract between citizen and state. If I cannot choose whether to interact with a particular institution, then that interaction should not involve the commercial sale of my data.

One instance where we can see this perspective being articulated is in the recent judgement of India's supreme court about the national population database Aadhaar. Civil society organisations had complained that commercial enterprises were able to demand access to people's administrative records, the same records that gave them access to social welfare systems and other basic rights, through this database. The court's opinion was that

“Mobile phones are a storehouse of personal data and reflect upon individual preferences, lifestyle and choices. The conflation of biometric information with SIM cards poses grave threats to individual privacy, liberty and autonomy... The mere existence of a legitimate state aim will not justify the disproportionate means...” (Supreme Court of India, Aadhaar judgement, 26 September 2018)

This problem is more about legitimacy than about data protection specifically, yet often data protection is the legal framing for claims that are actually about the legitimacy of the state to make its citizens visible. With regard to leads to thinking about data protection, but also about the legitimate use of data more broadly. One important way of understanding legitimacy can be understood in relation to rights and freedoms. But there is another, stemming from the theories of human devel-

opment and capabilities used in development studies (Nussbaum & Sen 1993). This theory, which relates to human rights but aims for something broader, gives us the starting point for global data justice research.

What one might term the theory of change for the Global Data Justice research we are doing is this: we should understand people's subjective needs with regard to data and representation, we should understand how far they are being met by current models of governance, and we should debate this with people affected by data technologies around the world. This process of surfacing agreements, tensions and disagreements may create a space where just approaches to governance can emerge. This is the process Sen indicated when he argued that if we wish to work towards a situation where people can thrive and be free, that involves creating the conditions where their capabilities (such as being healthy, being educated, being politically recognised) can be realised. This process, he suggested, takes place in the "sphere of public reasoning" (Sen 2005). Finding out what the sphere of public reasoning looks like with regard to data governance requires us to be open to different possibilities and experiences of data's potential, and to place different assumptions about good governance in dialogue with each other. So ours is a two-stage process: first we do ethnographic research to understand how people are experiencing global datafication, and then we must create spaces for dialogue and debate based on any commonalities we find. The process of conceptualising global data justice starts by reporting on that process and finding framings within philosophy, political economy and law, among other possibilities, that can help us translate those insights into directions for governance, and indicate what models we might want to suggest.

PA/AR: In your paper "What is data justice?" (Taylor 2017), you argue that disciplinary and discriminatory effects are characteristic for the public-private interfaces of big data. You moreover warn that data-driven discrimination is on the rise. What recent signs do you see for these arguments? What cases illustrate these concerns and necessitate data justice?

LT: There are many examples of problems circulating in the fields of STS, media studies and related disciplines, but rather than focusing on each of the individual problems as has happened so far, the value of the justice question is that it leads us to look at not only individual cases. Instead, we can use them to interrogate the shift from public to private data collection, analysis and use of digital data and the effects it is having on who can intervene upon whom. For example, I have drawn above on the examples of Snowden's revelations about surveillance, Cambridge Analytica's misuse of data and India's Aadhaar, but something else we can see from these examples is that commercial firms are starting to shape, and even generate, national policy interventions, rather than just working in partnerships initiated by the public sector. The NSA could not analyse the quantity or nature of data that it does without commercial firms producing innovations designed to

change the way surveillance operates. Cambridge Analytica intervened in elections around the world like a mercenary outfit, according to its own commercial agenda. The CEO of Infosys created the world's largest biometric database not only to provide welfare more efficiently to the poor, but because a database containing multidimensional records on the entire Indian population is potentially transformative of the way business can drive social and political change (Taylor & Broeders 2015). The European Commission's Big Data for Migration initiative calls on commercial actors to generate new ideas about what might constitute migration statistics (IOM & European Commission 2017; Rango & Vespe 2017), which will in turn shape migration policy. We are similarly seeing Google market its urban analytics and payment systems to cities in ways that reconceptualise who should provide public transport and what constitutes public space.

On the individual level these things look like examples of the exploitation of people through data, but taken together they sketch a picture of a world where the social contract around data and representation is not clear. It is no longer established between people and the state (i.e. by people handing over administrative data about themselves consciously), but between people, the state and the private sector, where the data provision is invisible and the uses of data are less predictable. This three-way relationship cannot be based on the same claims to legitimacy or reciprocity as the traditional citizen-state one. If we recognise that this is happening globally, we have two choices: to reject it, or to govern it, perhaps by setting out (as the Indian Supreme Court has started to do) what the boundaries and checks should be for the private sector's activities in what have until now been public-sector duties and functions.

PA/AR: You often stress the relevance of data justice with regard to individuals' socio-economic position. Who suffers most from data-driven discrimination, who would significantly benefit from a social justice agenda for datafied societies?

LT: I think the appeal of the notion of global data justice is that it takes what we might term hard cases – cases where we see extremes of exploitation in terms of the vulnerability of the people involved, and the imbalance of power between actors – and it asks that we consider not just how to remedy particular problems, but what these problems mean for all of us. Biometric and other identification technologies that are being tested on refugees can also be seen as an ethical and political question for other “non-sovereign subjects” (Weinberg 2017). These experiments, if successful, are then likely to spread to identification systems worldwide.

This offers a choice: we can focus on particular instances of vulnerability and power asymmetry that create “moments of truth,” such as for instance the World Food Program's partnership with surveillance giant Palantir (IRIN News 2019), and we can use that analysis to make a case for why these instances should be governed and controlled. Alternatively, we can move to a broader political and ethical discussion of why these cases worry us, and why they capture the public

imagination in different places around the world. Another example is the Chinese Social Credit System (Creemers 2018), which is causing much anxiety in the West but considerably less in China, as far as current reports indicate. This suggests that people in the West are anxious about the connections between private and public monitoring through data, and the power this may create to restrict people's agency, and that this example, although actually quite different from what is going on in the West because it uses mainly public-sector data, can tell us something about what we feel is right and wrong with regard to data governance.

These two choices lead in very different directions both in an academic sense and in terms of the debate on data governance. The first approach, which seeks to remedy individual problems, resembles a global game of whack-a-mole, where we wait for injustice to pop up and then hit it with a particular solution, such as data protection or research ethics. The second, which a global data justice approach would argue is at least as important, attempts to use cases to establish coherent positions on what the boundaries and systems of governance should be in relation to data in general.

PA/AR: It is sometimes argued that recent social science research on big data neglects the agency and power of users: that it does not sufficiently consider e.g. activism or other civic engagement with data. How do the concept of data justice and your project's approach accommodate users' agency and possibilities to resist and even change data practices?

LT: If we take an overall approach that looks for ways to demarcate what is legitimate and what is not, then we have to look at what people's agency is with regard to the users of their data. We need to look at their political agency with regard to the state, and at how that translates into influence over what firms can and cannot do. This involves imagining data governance into a bottom-up as well as top-down exercise. The information from individual cases is important, hence the ethnographic and case-based empirical approach. But just as important is finding a methodology for translating the findings from that process into public debates and dialogue with technology developers and policymakers. Naming and shaming is not the objective here: creating an engaged dialogue between interested parties, including those affected by data use and exploitation in their everyday life, is.

PA/AR: Your data justice framework can also be related to ongoing debates around *data literacy*. Its first conceptual pillar includes the possibility to be seen as well as the option to reject such visibility. As second pillar, you suggest "engagement with technology." And your third pillar involves the capacity to recognise and oppose big data biases. These possibilities also require a certain degree of skills, on side of users. How is data literacy, i. e. skills and knowledge concerning big data practices, relevant to your concept, or: how much user expertise and training does data justice need?

LT: Data literacy is important from the point of view of wishing to create an informed dialogue between people and policy on data governance. The most fundamental approach to emancipation and social justice, according to Freire (1970), for example, is to educate people so that they can articulate their own choices. So in that way, you could see data literacy as central to a meaningful “domain of public reasoning.” However, data literacy is also being much abused as a way of attempting to responsabilise people for what happens to the data they produce. When we volunteer ordinary administrative data (census data, or registration data for example) we have to trust that the state will use it in ways that are beneficial to us, or at least non-malevolent. When we use social networking, internet, communications technologies that produce huge amounts of data – never mind the internet of things that is increasingly involved in tracking our movements and behaviour – we have to trust a lot more because we really can have no idea what will happen to data about us once it enters the data market. Particularly in cases where that data is de-identified and therefore separated from recognisable versions of our identities.

So it’s worrying when people are asked to develop “skills and knowledge concerning big data practices,” because as researchers it is clear to us that the markets and practices involved in processing data are profoundly opaque to the ordinary person, and that this is by design, not by accident. Telling people to be responsible for their data is an efficient way to divert attention from the lack of meaningful regulatory traction on many exploitative forms of data collection and use, many of which may be sanctioned by the same governments that are supposed to be regulating them.

PA/AR: In light of your data justice framework and how it could be implemented, do you see more recent policy developments, like the EU General Data Protection Regulation (GDPR), as steps in the right direction?

LT: Data protection is one centrally important tool in conceptualising what we can and should do about data governance. So is the fundamental right to privacy, which is increasingly articulated in rights instruments around the world. However, data protection has a dual function: to facilitate and shape markets, and to protect people from harm. I would argue that functionally, most policy attention is still going to the former: the proposal to include a “data protection” track in the G20’s discussions is not being made because the G20 are tormented about the power asymmetries in the data market and want to rectify them. It is because the data market is a multi-billion-dollar market, which states hope will grow and not cause too many political problems. This aim needs to be balanced by pressure to consider justice. This pressure has to come from civil society, law, activism and academia, and it is essential if we are going to achieve a balanced approach to governing data that takes humans’ needs into account at least as much as the market’s – and ideally far more.

PA/AR: What do you consider as major obstacles for data justice in the future? What developments, if any, give you hope that we could be moving towards more justice-oriented big data practices?

LT: When I think about problems for a data justice approach, I think about the array of solutions we have, and the possibility that they will be taken as magic bullets. We see data protection laws, springing up all over the world. We see data protection coming up for discussion by the G20. We see national constitutions and international treaties that formalise the right to privacy. Human rights in general are being discussed with reference to the digital. We see lots of discussions about data and ethics going on around the world, we have a strong set of institutions and processes around research ethics, there are all sorts of activism going on about data analytics and AI. Yet somehow the problem of power asymmetries, informational asymmetries, intervention without clear legitimacy, is growing rather than seeming closer to resolution.

Yet there are, as you suggest, signs of hope. The humanitarian sector is working hard on the idea of group risk with regard to data technologies, as that is one area where group risk is very clear and ripe for discussion. The number of lower-income countries trying to establish meaningful protection through law is encouraging, mainly because it can often surface what people want and need. Even where it is not built to be enforceable, or does not work to counter all data's negative effects, it opens the possibility for internationalising the debate on the problem. I am also encouraged that our project's attempts to map the data market's dimensions and dynamics are receiving support and attention from around the world, as knowing more about the object we are trying to control will help us figure out what kinds of boundaries we might want to establish.

The reason our Global Data Justice project is engaged in conceptual, rather than more applied, research on effective governance is because of this maelstrom of activity. Everyone is working very hard – but we do not always know what our target is. Is it promoting human interests over those of the market economy? Is it promoting an efficient market? Is it allowing data to flow, stopping data flowing entirely, allowing some kinds but not others? And what about problems of how data's use changes over time, changes when it is used for grouping rather than individual targeting, or when data is de-identified? What about the claims being made to balance privacy and autonomy with other rights such as food and shelter? We don't have good answers for a lot of these questions, but I think that the greatest likelihood for achieving justice with regard to our datafying world is not to treat any problem as static. We should act toward more just outcomes based on what we know now, but we also need better thinking tools for understanding what will happen next, so that we are not taken by surprise.

So the greatest obstacle to data justice may be the belief that we have an answer to the problem. This problem is just as dynamic as social change and development, because it is entangled with those things and is going to remain so. All the

things that we think are good about technology may get used against us in the future, if they become valuable enough. We cannot trust that tech “for social good” is a stable entity that should be left alone to improve things. We should be sceptical of any discourse that says technology is neutral, stable or will inevitably lead to good or bad outcomes. We should also look for governance resources that can give us leverage over the big picture. So the current push to establish governance of data on the national level is necessary, but insufficient. Data flows, markets and innovations are global, and we must do not only the hard work of imagining what to do about them on the global level, and the even harder work of making those approaches align with what people value on the global level.

References

- Bosetti, P./Poletti, P./Stella, M./Lepri, B./Merler, S./De Domenico, M. (2019): “Reducing Measles Risk in Turkey Through Social Integration of Syrian Refugees.” In: Proceedings of the Data for Refugees Challenge Workshop. Istanbul: Data for Refugees Turkey, pp. 1–15.
- boyd, D./Crawford, K. (2011): “Six Provocations for Big Data.” In: A Decade in Internet Time: Symposium on the Dynamics of the Internet and Society. Oxford Internet Institute, pp. 1–17. <https://doi.org/10.2139/ssrn.1926431>.
- Burns, R. (2014): “Rethinking Big Data in Digital Humanitarianism: Practices, Epistemologies, and Social Relations.” *GeoJournal*, 80(4), pp.477–490. <https://doi.org/10.1007/s10708-014-9599-x>.
- Creemers, R. (2018): “China’s Social Credit System : An Evolving Practice of Control.” <http://dx.doi.org/10.2139/ssrn.3175792>.
- Dalton, C. M./Taylor, L./Thatcher, J. (2016): “Critical Data Studies : A Dialog on Data and Space.” *Big Data & Society* (June), pp. 1–9. <https://doi.org/10.1177/2053951716648346>.
- Dencik, L./Hintz, A./Cable, J. (2016): “Towards Data Justice? The Ambiguity of Anti-Surveillance Resistance in Political Activism.” *Big Data & Society* 3(2), pp. 1–12. <https://doi.org/10.1177/2053951716679678>.
- Eubanks, V. (2018): *Automating Inequality*. New York: St Martins Press.
- Freire, P. (1970): *Pedagogy of the Oppressed*. New York: Continuum.
- Gilliom, J. (2001): *Overseers of the Poor: Surveillance, Resistance, and the Limits of Privacy*. Chicago: University of Chicago Press.
- Graham, M./De Sabbata, S./Zook, M. A. (2015): “Towards a Study of Information Geographies: (Im)mutable Augmentations and a Mapping of the Geographies of Information.” *Geo: Geography and Environment* 2(1), pp. 88–105. <https://doi.org/10.1002/geo2.8>.
- GSMA. (2018): “The Gender Analysis & Identification Toolkit: Estimating subscriber gender using machine learning.” Retrieved from <https://www.gsma>.

- com/mobilefordevelopment/wp-content/uploads/2018/09/GSMA-Gender-Analysis-and-Identification-Report-GAIT-August-2018.pdf.
- Gutierrez, T./Kriings, G./Blondel, V. D. (2013): "Evaluating Socio-Economic State of a Country Analyzing Airtime Credit and Mobile Phone Datasets." ArXiv: 1309.4496 [Physics] 6. Retrieved from <http://arxiv.org/abs/1309.4496>.
- Heeks, R./Renken, J. (2016): "Data Justice For Development: What Would It Mean?" (Development Informatics Working Paper Series No. 63). Manchester. Retrieved from <http://www.gdi.manchester.ac.uk/research/publications/working-papers/di/>.
- IOM/European Commission. (2017): Big Data for Migration Alliance (BD4M). Brussels: European Commission.
- IRIN News. (2019): "New UN deal with data mining firm Palantir raises protection concerns." (13 March 2019). Retrieved from <https://www.irinnews.org/news/2019/02/05/un-palantir-deal-data-mining-protection-concerns-wfp>.
- Kitchin, R./Lauriault, T. P. (2014): "Towards critical data studies : Charting and unpacking data assemblages and their work." *Geoweb and Big Data*. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2474112.
- Nussbaum, M. C./Sen, A. (1993): *The Quality of Life*. Oxford: Oxford University Press. <https://doi.org/10.1093/0198287976.001.0001>.
- Rango, M./Vespe, M. (2017): *Big Data and Alternative Data Sources on Migration : From Case-Studies to Policy Support Summary Report*. Ispra.
- Sen A. (2005): "Human Rights and Capabilities." *Journal of Human Development* 6(2), pp. 151–166. <https://doi.org/10.1080/14649880500120491>.
- Shaw, J./Graham, M. (2017): "An Informational Right to the City? Code, Content, Control, and the Urbanization of Information." *Antipode* 49(4), pp. 907–927. <https://doi.org/10.1111/anti.12312>.
- Shearmur, R. (2015): "Dazzled by Data: Big Data, the Census and Urban Geography." *Urban Geography* (June), pp. 1–4. <https://doi.org/10.1080/02723638.2015.1050922>.
- Taylor, L. (2016): "No Place to Hide? The Ethics and Analytics of Tracking Mobility using Mobile Phone Data." *Environment and Planning D: Society and Space* 34(2), pp. 319–336.
- Taylor, L. (2017a, 6 September): "My new project: Data Justice." *Weblog*. Retrieved from <https://linnettaylor.wordpress.com/2017/09/06/my-new-project-data-justice>.
- Taylor, L. (2017): "What Is Data Justice? The Case for Connecting Digital Rights and Freedoms on the Global Level." *Big Data and Society*, forthcoming. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2918779.
- Taylor, L./Broeders, D. (2015): "In the Name of Development: Power, Profit and the Datafication of the Global South." *Geoforum* 64(4), pp. 229–237. <https://doi.org/10.1016/j.geoforum.2015.07.002>.

- Thatcher, J. (2014): "Living on Fumes: Digital Footprints, Data Fumes, and the Limitations of Spatial Big Data." *International Journal of Communication* 8(19), pp. 1765–1783.
- Uluturk, I./Uysal, I./Varol, O. (2019): "Refugee Integration in Turkey: A Study of Mobile Phone Data for D4R Challenge." In: *Proceedings of the Data for Refugees Challenge Workshop*. Istanbul: Data for Refugees Turkey, p. 523.
- United Nations. (2014): "A world that counts: mobilising the data revolution for sustainable development." New York. Retrieved from <http://www.undatarevolution.org/wp-content/uploads/2014/12/A-World-That-Counts2.pdf>.
- Weinberg, L. (2017): "Rethinking Privacy: A Feminist Approach to Privacy Rights after Snowden." *Westminster Papers in Culture and Communication* 12(3), pp. 5–20. <https://doi.org/10.16997/wpcc.258>.