'Rescuing' data justice? Mobilising the collective in responses to datafication

Lina Dencik

Published online: 17 Feb 2025.

Submit your article to this journal ↗

Article views: 493

View related articles ↗

View Crossmark data ↗

Routledge
Taylor & Francis Group

'Rescuing' data justice? Mobilising the collective in responses to datafication

Lina Dencik

Goldsmiths, University of London, London, UK

ABSTRACT

Key activities that relate to data justice have emerged from different stakeholders that seek to confront and address different implications of advancements in datafication. These activities indicate the extent to which such concerns have become mainstreamed on the one hand and the contentious and political nature of translating justice concerns into practice on the other. This article engages with this 'politics of data justice' by outlining different approaches to data justice and makes the case that dominant responses to datafication and its injustices privilege processes of *individualisation* and *marketisation*. In light of this, the article draws inspiration from Gerald Cohen's notion of 'rescuing justice' as a way to assert an alternative vision for data justice that centres collectivity. It does so by considering two key traditions in scholarship on justice: the Marxist/socialist tradition that understands justice as critique; and the feminist tradition that understands justice as empowerment. Central to both of these traditions is an emphasis on engaging with justice within existing social relations and the structural conditions against which injustices are experienced. On this basis, the article argues that an emphasis on collectivity can be an avenue through which data justice can (re)claim more radical understandings of justice that take account of how technology is embedded in wider power dynamics and ways in which they might be challenged.

Introduction

The growing focus on the broader societal implications of datafication has elevated questions of social justice in line with a concern for data justice. According to Dencik et al. (2019), data justice has been 'used to denote an analysis of data that pays particular attention to structural inequality, highlighting the unevenness of implications and experiences of data across different groups and communities in society.' However, what this means in practice and how it is approached is greatly varied. This is perhaps unsurprising considering the inherently multifaceted nature of datafication, and the many stakeholders that shape its development. It also points to the way different interests and perspectives

manifest in not only the analysis of societal implications but responses to them. As such, it is important to unpack how justice concerns about datafication are being established, on what terms, and with what political consequences.

Areas of key activities that relate to data justice have emerged from different stakeholders, with responses to justice concerns prominent within policy-making, in industry and technology, and across civil society, that seek to confront and address different implications of advancements in datafication. These activities indicate the extent to which such concerns have become mainstreamed and the widespread recognition of the need to engage with a range of justice concerns. No longer sufficiently framed as an issue of efficiency, developments in technology, and digital technologies in particular, have required an engagement with what is at stake for people and societies (Dencik et al., 2022). At the same time, the activities and discourses that have emerged as responses are also indicative of the contentious and political nature of translating justice concerns into practice. These responses establish certain parameters for how we are to understand both the nature of problems as well as what might be suitable solutions. We are, in other words, confronted with a distinct *politics* of data justice.

In this article, I engage with this politics by outlining what I consider to be dominant interpretations and translations of justice in engagements with data justice. In particular, following Nancy Fraser, I focus on different understandings of the ontology, process and scope of data justice prevalent amongst central stakeholders, including policy-makers, industry and civil society. My analysis primarily draws on examples from Europe, but several of these stakeholders and their activities have global relevance. At the same time, Europe is an interesting setting for analysing approaches to data justice as it often rhetorically positions itself as politically and ethically distinct from the surveillance capitalism of the United States and the digital authoritarianism of China (Irion et al., 2021). I make the case that dominant responses to datafication and its injustices across stakeholders within Europe have tended towards a translation of justice that privileges processes of *individualisation* and *marketisation*. In light of this, I draw on Gerald Cohen's notion of 'rescuing justice' as a way to assert an alternative vision for data justice that centres collectivity in its approach. I do so by considering two key traditions in scholarship on justice: the Marxist/socialist tradition that understands justice as critique; and the feminist tradition that understands justice as empowerment. Central to both of these traditions is an emphasis on engaging with justice within existing social relations and the structural conditions against which injustices are experienced. On this basis, I argue that an emphasis on collectivity can be an avenue through which data justice can (re)claim more radical understandings of justice that take account of how technology is embedded in wider power dynamics and ways in which they might be challenged.

Data justice

The concept of data justice draws from a range of long-standing traditions that have concerned themselves with the social justice implications of the nature of information and communication systems. Contextualised by a growing focus on so-called big data (and the more recent iterations of machine learning and artificial intelligence), a central contribution of data justice has been in advancing a framework for research that seeks to explore what is at stake with datafication beyond the narrow confines of efficiency and

privacy that has often framed the debate (Hintz et al., 2018). Extensive research has show-cased how developments in data-driven technologies are linked to and contingent upon existing and new forms of inequality and domination. The pioneering work of Oscar Gandy (1993), for example, provided an early account of data-centric information systems as systems of control, not just by increasing the potential for monitoring, but as sorting mechanisms of populations. In the pursuit of detecting and predicting patterns, data-driven technologies are used to identify, categorise and profile groups based on a range of activities and behavioural data. This has been shown to disproportionately impact those already marginalised and can lead to forms of stereotyping, stigmatisation and discrimination (Eubanks, 2018; Gangadharan, 2015). Furthermore, as data-driven technologies become embedded in central areas of social and public life, how we are recognised and the treatment we might receive based on such recognition is increasingly bound up with the creation of algorithmic identities that may or may not correspond to our lived experiences (Cheney-Lippold, 2017). At the same time, such processes often lack adequate transparency or accountability mechanisms and are predominantly con-trolled by opaque and unaccountable private commercial providers (Pasquale, 2015). More recently, Fourcade and Healy (2024) have made the case that we are moving towards an 'ordinal society' in which data-driven technologies are instrumental in forms of ordering and classification systems that lead to new forms of capital that advan-tage some and disadvantage others, generating new forms of societal struggles.

As such, the advancement of datafication and how it relates to historical contexts, social structures and political and economic interests is not just a question of individual privacy, but one of justice. This focus is significant because although it is clear that how we make sense of the social world is central for how we also make claims about it, systems of communication and information infrastructures have tended to be neg-lected in prevalent theories of justice, often in favour of a focus on political institutions and moral ethics (Bruhn Jensen, 2021). Although such a focus continues to be impor-tant for ideas of justice, the nature of institutions and the parameters for moral ethics are increasingly bound up with the nature of our information and communication systems. To speak of data justice is thus to recognise not only how data, its collection and use, increasingly impacts on society, but also that datafication is enabled by particular forms of political and economic organisation that advance a normative vision of how social issues should be understood and resolved. That is, data is both a matter *in* and *of* justice; datafication embodies not only processes and outcomes of (in)justice, but also its own justifications.

Yet how we make sense of the relationship between data and justice is far from settled. This is unsurprising in light of the uncertainties that surround not only the nature of data but the meaning of justice itself. As Fraser (2008) has argued, despite the many theories of justice that inform the architecture of institutions and laws to uphold justice, we rarely share a common 'grammar' of justice. We lack a shared understanding of what Fraser refers to as the three 'nodes' of justice; the what (ontology), the who (scope) and the how (procedure) of justice. This condition of 'abnormal justice,' she argues, is apparent during disruptive developments (e.g., globalisation) that highlight conflicts over what we want to make claims to when we make claims to justice, who those claims apply to, and the processes through which they may be realised. As we have seen, rapid advancements in technology have furthered the instability of these nodes as datafication intersects with

how, where and on what terms we experience forms of (in)justice (Dencik et al., 2018). It therefore becomes imperative to examine the different ways data justice is approached and applied amongst key stakeholders.

Translations of data justice

As social justice concerns regarding the rapid advancements in data-driven technologies have become prevalent, different actors have sought to engage with ways to address such concerns. In outlining some of the dominant responses from key actors, I am interested here in how justice is understood and applied in relation to datafication. In particular, my analysis is informed by the tradition of critical social science that seeks to uncover power relations, focusing on the processes by which justice concerns are translated into practice and the different interests and social forces that shape such processes (Fay, 1975). My account of responses therefore seeks to tease out *general* trends and tendencies with the view to identify trajectories that can help advance understandings of data justice. It is primarily informed by developments within Europe, but the aim here is to map out approaches to data justice that have wider applicability. In what follows, I outline dominant translations of data justice amongst central stakeholders in the advancement of datafication.

A significant translation of data justice has been a focus on individual rights, particularly consumer and political rights, which has been prominent in both policy debates as well as advocacy campaigns from civil society. Digital policy in Europe, for example, has sought to advance a digital strategy that sets it apart from key geopolitical actors, most notably the United States and China that has emerged out of a long history of advancing and regulating information and communication technologies that has been oriented towards a dual objective of strengthening a common competitive market for services and products on the one hand and introducing measures for market correction on the other (Newman, 2020). This has meant a general liberalisation of telecommunications and financial incentives for digital innovation alongside an emphasis on the protection of consumer and fundamental rights such as privacy, anti-monopoly, and taxation which at times has been the cause of tension and struggle (Niklas & Dencik, 2024). However, this dual objective has also provided a strategic framework for advancing emerging technologies while engaging with questions of values and concerns for data justice.

A key marker for addressing concerns about data collection and use was the development of a General Data Protection Regulation (GDPR) adopted in 2018. This regulation saw active engagement with some of the concerns highlighted in the aftermath of the Snowden leaks and is premised on an understanding that individuals should be able to claim some rights with regards to information collected about their person, and that collecting such information requires some form of consent. Although questions remain about both its scope and enforceability, this regulation has asserted data protection as the primary frame for addressing key justice concerns. As such, the GDPR has been leveraged in significant areas, including issues around discrimination and democracy, based on notions such as data minimisation, human-in-the-loop, and explainability that centre on the individual data subject and a particular set of data rights (De Stefano, 2018; Nolan, 2023).

This approach has also been significant for advancing debates on how data might therefore be governed. A prominent focus has been on data stewardship, for example,

such as the establishment of 'data trusts' that would provide a legal mechanism to 'empower' data subjects to 'take the reins' of personal data by introducing an independent intermediary between data subjects and data collectors (Delacroix & Lawrence, 2019). Such an approach is also prevalent in civil society activities relating to the governance of data from a data justice perspective. We see this, for example, in trade union responses that have advocated for the need to establish a set of workers' data rights as a way to protect against misuses of new technologies in the workplace and to access data as a way to gain greater control in the labour process (Dencik et al., 2024). Often this emphasis on data rights is a way to ensure protections in the absence of adequate or properly enforced existing more domain-specific regulation (e.g., employment regulation) and also highlights the specific challenges of particular technologies. Data rights as a framework have therefore also appealed to other areas of advocacy, such as health and welfare, in which invoking such rights has particular relevance in the absence of avenues for other forms of leverage (see for example campaigns run by the non-profit legal advocacy organisation Foxglove based in the UK [Foxglove, 2024]).

Importantly, to avoid narrowing the frame or distracting from other debates, many civil society organisations have advocated for data rights as part of an emphasis on human rights more broadly that can encompass a wider spectrum of concerns that may not centre on data *per se*. Using international human rights as a frame in relation datafication details the specificity of potential harms by linking them to particular rights, such as the right to freedom of association or the right to a fair trial, that can apply to different parts of social life (HRBDT, 2020). These assertions of rights can help inform impact assessments, for example, when new data and AI systems are being developed or deployed (Jansen, 2020; Jørgensen et al., 2019). By relying on universal terms of reference, a human rights framework is also effective for advocacy as an internationally recognised agreement, however much this may not play out in practice. A prominent court case brought forward by NGOs in the Netherlands, for example, to challenge the use of the data-driven system SyRI in the welfare sector won on the basis that it was considered an infringement on human rights and supported on-going efforts by the human rights community to demand assessments of AI systems beyond the required initial data protection impact assessment (Toh, 2020). A human rights perspective can therefore provide an avenue for a more holistic engagement with data-driven systems that considers a broad range of rights that pertain to people's lives.

However, in doing so, there have also been significant tensions within civil society about what rights are therefore privileged or centred in data justice debates. Indeed, as a framework, human rights approaches have traditionally centred on the individual and civil and political rights in a way that has struggled to account for collective rights and that has tended to neglect social and economic rights (Alston, 2005). This has also been evident in dominant translations of data justice, perhaps particularly in Europe, where research has showcased the extent to which a hierarchy of rights has been prominent in civil society engagement with data justice, often privileging individual rights such as privacy and freedom of expression over more complex structural issues, such as racism and poverty (Jansen, 2022). This has also been reflected in what civil society voices therefore tend to be heard in broader data and AI policy and governance debates, with digital and human rights organisations dominating, often at the expense of social justice and community groups or marginalised perspectives (Gangadharan & Niklas, 2019).

Alongside a focus on individual rights, the burgeoning field of data and AI ethics has been significant for translations of data justice, especially as this field has moved from academia to dominate corporate engagement with concerns about the societal implications of datafication in the early stages. Taylor and Dencik (2020) argue that data ethics, as a field, can be thought of as a network of nodes representing frequently entangled and interacting but different streams of thought and practice. A philosophical node stemming from the academy, defines data ethics as a branch of ethics that studies and evaluates moral problems related to data, algorithms and corresponding practices with a view to formulate morally good solutions (Floridi & Taddeo, 2016). Applied ethics, as a different node, refers to the frequent collaboration of philosophers, computer and social scientists with the commercial realm on elements such as value-sensitive design and procedures for how people access, analyse and manage data. This often includes key issues such as re-identification, risks to privacy, forms of discrimination, trust, transparency and accountability (Metcalf & Crawford, 2016; van de Poel & Royakkers, 2007).

The technology sector, and the largest companies ('Big Tech') in particular, has been swift in setting up their own ethics associations, creating their own guidelines and codes to make assurances about their responsible handling of technological innovation. These efforts have also been central to how regulators have sought to address justice concerns. The approach of corporate data ethics initiatives have overwhelmingly focused on what we might consider *micro-ethics*, an orientation around the individual practitioner, setting up a compliance regime that could be described as a box-ticking exercise that, in effect, ensures no friction with the bottom-line or any engagement with fundamental questions of premise (Stark & Hoffmann, 2019). As Taylor and Dencik (2020) argue, data ethics within the technology sector has tended to translate into processes that shy away from an engagement with the overall function of technology companies in society, who and what they are providing services for, or what the impact of such services might be at a collective level.

The prevalence of data and AI ethics to address justice concerns pertaining to data-driven technologies has also extended to significant parts of civil society who have sought to advance ethics frameworks in the absence of sufficient regulation (Fenton et al., 2020). Indeed, Taylor and Dencik (2020) identify civil society advocacy where data ethics is providing a framework for guidelines to advance technology 'for good' as a further node of data ethics. Often these initiatives are focused on creating technology solutions targeted at improving well-being or seek to consider how existing technologies can be made 'responsible,' and have been especially prominent in the humanitarian realm (Rahman, 2023). Alongside this, data and AI ethics as a framework within civil society has also been prominent for advocacy targeting corporate actors, often as an extension of corporate social responsibility measures. The argument put forward echoes that of environmental advocacy that posits that ethical data and AI development appeals to users and can serve as a competitive advantage (Hasselbalch & Tranberg, 2016). As such, civil society organisations can pressure corporations on market-friendly terms, and are able to secure sponsorship and funding in support of an ethics agenda. This has been particularly noteworthy in terms of research, with extensive funding from technology companies dedicated to research related to data and AI ethics (Williams, 2019).

Yet it is not always clear how the proliferation of guidelines for ethical and responsible AI has actually translated into practice, and how data justice concerns might actually be

addressed. In a review by Jobin et al. (2019) they identify a prominent translation of justice as a principle in the advancement of data-driven technologies in terms of fairness in design, particularly oriented towards the monitoring and mitigation of so-called algorithmic 'bias' as a way to address discrimination. That is, discrimination by algorithms is understood as the result of existing discrimination patterns present in the training data (using demographic categories such as gender, age, ethnicity, or disability), or in more comprehensive accounts, might also consider biases introduced via assumptions in labels or biases introduced due to particular contexts of use (Hallensleben et al., 2020). In some respects, fairness in technology advances on the longer standing tradition of 'privacy-by-design' in computer science towards a commitment to 'fairness-by-design.' However, as Gürses et al. (2015) have pointed out, the abstract nature of privacy can lead to very different systems as a result of choosing one or several particular privacy design patterns and privacy enhancing technologies. With a notion such as fairness, there is even less of a shared criteria for what this might mean for computational systems, and what the guiding principles of fairness actually are (Castelnovo et al., 2021). Moreover, as the community of computer scientists and engineers dedicated to establishing such fairness criteria, especially through a focus on 'de-biasing' and algorithmic discrimination, has grown, prominent questions have been asked about the limits of this interpretation of data justice and the legitimacy of technologists to define and be the arbiters of justice claims (Gangadharan & Niklas, 2019). Often such critique highlights how technologists assert not only the 'what' of data justice, but also the 'how' of data justice without much consideration or engagement with the 'who' of data justice and those communities most adversely impacted by technological advancements.

Positioning data ethics as the primary framework within which we are to situate what is at stake with datafication therefore risks neutralising the kind of responses that might emerge from that. Some have described the approaches we have seen in recent years as forms of 'ethics-washing,' essentially providing pathways through which the technology sector can be seen to engage with public concerns about their activities while continuing to avoid regulation or any fundamental challenges to the dominant business model that sustains it (Wagner, 2018). Moreover, by actively capturing the space of data ethics, the very players who are creating, developing and directly profiting from the issues that are compounded in the datafied society, have also been the ones who have been able to dictate the terms upon which we are to understand both the nature of problems and what might be suitable responses. In many cases, this has, unsurprisingly, meant a narrowing of focus to the data-sets or algorithms themselves, positing that the causes of harms that may emerge from data collection and use can be traced to 'insufficiencies,' 'errors' or 'bias' in the design or application; causes that essentially have technological or market solutions, preferably through further data collection and innovation. Indeed, efforts towards widening the scope of data ethics to include more critical engagement with business models and corporate power have been met with push-back, and in some cases dismissal of employees raising concerns (Simonite, 2021). Moreover, recent years have illustrated the dangers of relying on corporate data ethics to address justice concerns as initiatives are largely dictated by growth and financial stability, evidenced by the widespread removal of ethics teams and advisory boards if they stride against market interests (Schiffer & Newton, 2023).

These are pressing concerns as the computational translation of fairness within a broader framework of ethics as an approach to data justice has also come to dominate more recent developments in policy and regulation, most notably in relation to Artificial Intelligence (AI). The development of EU's AI Act, for example, formally agreed in 2023, is intended to complement or advance the GDPR but is premised on what is referred to as a 'risk-based approach.' This approach is rooted in a long-standing tradition of state engagement with modern technology which simultaneously supports the development of such technologies and regulates the risk of their diffusion (Jasanoff, 2007). More specifically, the risk-based approach adopted for the AI Act is a way to tailor legal intervention to concrete AI applications and the level of risk they pose, seeking to differentiate between four levels of risk (Niklas & Dencik, 2024). Justice concerns here are predominantly captured in the risk to fundamental rights, most notably privacy and non-discrimination. Importantly, the risk to fundamental rights that might come from AI and its applications is overwhelmingly oriented towards the specific technological features of AI systems, highlighted in policy documents as issues such as transparency, opacity and forms of algorithmic and data bias (Baylan & Gürses, 2021). This, in turn, facilitates a response to such risk that privileges bureaucratic safeguards (e.g., impact assessments and governance measures) and technological solutions (e.g., further data collection or ways of 'debiasing' algorithms). Importantly, these efforts are in turn seen to allow for the creation and advancement of a European data and AI market that upholds and responds to justice concerns through such measures of market correction (Niklas & Dencik, 2024).

Individualising and marketising data justice

Prominent approaches to data justice across policy, industry and civil society therefore illustrate how translations of justice are often contingent on particular institutional processes and historical contexts and are dictated by a combination of powerful interests and different opportunity structures. The policy environment within Europe is underpinned by a long-term strategic objective oriented towards market creation and correction. Data justice, in this context, struggles to go beyond an engagement with fundamental rights as inevitable risks of new technologies. The creation of mechanisms to assess and safeguard against risk based on fixed criteria provides an avenue through which the advancement of a data and AI market can maintain legitimacy in the face of a growing concern with data justice. Pro-market policies, as Greer and Umney (2022) argue, often involve awkward bureaucratic manoeuvring, the creation of new institutions, processes, rules and incentives. While these bureaucratic measures are put in place to monitor and oversee development and experimentation in emerging technologies, they also act as absorbers of frictions that can facilitate investment in such technologies.

Furthermore, the marketisation and individualisation of data justice is bound up with concerted efforts within the technology industry to take hold of how we understand what is at stake with datafication and what might be suitable responses, including within regulation. Indeed, Bank et al. (2021, p. 28) view the ethical turn in regulation as an outcome of Big Tech's realisation that 'they can no longer fundamentally prevent stricter laws. Thus, they want to have as much say and influence as possible over what is in those laws', working to steer the debate towards individual technical aspects and 'distract from the big picture.' Some see this agenda being furthered by the more recent

'existentialist' turn in public debate on AI, which has sought to focus attention on potential future scenarios rather than actual harm and existing power dynamics (Tucker, 2023). Within this context, large parts of civil society have struggled to move advocacy beyond ethics debates, and rights-based formulations have tended to privilege digital rights that are predominantly individual and consumer oriented as a way to advance influence on policy and industry.

While some of these efforts have been significant for mainstreaming data justice concerns and introducing measures for addressing important issues, dominant translations of data justice also establish parameters for definitions of problems and appropriate solutions that do not necessarily correspond to the intentions of the field. Reducing data justice to individual harm and seeking remedies to such harms in the market not only neutralises critique but creates a grammar of data justice that overwhelmingly serves the interests of the already powerful. As Hoffmann (2019) puts it, we cannot afford to continue to fail to address the logics that produce advantaged and disadvantaged subjects and the underlying structural conditions against which we come to understand data harms and injustice. For the field of data justice, this is a key challenge as it showcases the terms under which concerns about the social justice implications of data-driven technologies are bound to particular processes and interests once they enter into practice. Moreover, it positions data justice in a contentious role in which advancing justice claims may simultaneously serve to legitimise efforts towards individualisation and marketisation that directly undermine broader struggles for social justice (Niklas & Dencik, 2024). In many respects, this echoes other struggles over the grammar of justice that seek to challenge the way radical claims for social change become neutralised as they move into different spheres of activity and the way social actors come to occupy positions that do not necessarily correspond with their intentions. A key aspect of this is the way some approaches to justice align with dominant interests that undermines more substantive justice claims seeking to overturn status quo. How, then, can we rescue data justice from such processes and (re)claim a more radical agenda?

'Rescuing' data justice

In his engagement with justice, Cohen (2008) seeks to rescue equality and justice from Rawlsian liberal thought which undermine and narrow such notions in order to privilege fairness procedures in public institutions pertaining to the individual. Informed by Marx' thesis in *On the Jewish Question,* Cohen makes a case for reasserting egalitarianism as a central pillar of justice and foregrounding the significance of understanding justice not on the basis of the individual, but within social relations. His focus is not on the content of justice as such, but on the concept of justice and what it refers to, not so unlike Fraser's orientation towards the 'grammar' of justice. In particular, Cohen is concerned with the restriction of justice to public institutions advanced by Rawls and liberal theories and the consequent divide between public and private spheres that privileges the individual over the collective. For Cohen, justice is rather centred on human relationships in all aspects of society, so that the equality s/he seeks is the equality of a fully social being whose commitment to the well-being of others does not stop at the borders of privacy (Campbell, 2010).

The overwhelming focus on rights, for example, is often problematised in the Marxist and socialist tradition of justice in which Cohen is situated. Rights present themselves as

the embodiment of universal truths and presuppose a form of individualism that ignores the interdependent and socially variable nature of humans. For some in that tradition, rights are therefore inherently bound to competitive individualism. As Menke (2020, p. 8) puts it: 'The modern form of rights does not exist because there are autonomous subjects, but autonomous subjects exist because the modern form of rights does.' As such, the critique is not about the content of rights, but about their form, not about 'their moral intention, but with their genesis, their basis.' (Menke, 2020) However, it is worth noting that for some in the socialist tradition there might be scope for engaging with rights as long as they are properly tied to human needs rather than individual liberty (Campbell, 1983). This would require an engagement with the conditions within which human needs may or may not be met and the social relations that shape them. As such, rights in this context are necessarily collective, both in their emergence and in their expression.

Rather than seeking to set out blueprints of an ideal form of society, Marxist and socialist conceptions of justice therefore tend to focus on critique as its main contribution. Critique is particularly oriented towards capitalism and tends to be understood in terms of exploitation. In technical terms, exploitation is linked to a narrow interpretation of the labour theory of value, but more generally it can be seen as a social situation where one group is in a position to take advantage of other groups in a way which is unfair (Campbell, 2010). For data justice debates, this is an important vantage point as it brings into focus how datafication is wedded to existing social relations that shape experiences of (in)justice. While Marxist understandings of the collective subject tends to reside in social classes, Andrejevic (2014) has argued that datafication is advancing a different set of (data) class divisions based on those who have the power and resources to generate, collect and use data and those who are subject to such collection and use. Perhaps more pointedly, Wark (2019) refers to a power shift away from the capitalist class who own the means of production (as we have traditionally understood power in capitalism) towards a new 'vectorialist class' who own the vectors along which information is gathered and used (the patents, the brands, the trademarks, the copyrights, and the logistics of the information vector). While a capitalist class owns the means of production, a vectorialist class owns the means of organising the means of production. Data justice debates therefore need to contend with the way datafication shape contemporary social relations as part of a broader systemic critique.

Moreover, an emphasis on critique in data justice debates privileges an interrogation of the power dynamics that shape the advancement and impact of datafication and seeks to find ways to challenge or overturn such power dynamics to alleviate suffering and satisfy human needs. A significant strand in this regard is the work of Sen who argues that a theory of justice that can serve as the basis of 'practical reasoning' must include ways of judging how to reduce injustice and advance justice, rather than aiming only at the characterisation of a perfectly just society. In this respect, a focus on actual lives in the assessment of justice is what informs the nature and reach of the idea of justice. In the field of media and communication studies, this has found notable expression in the use of Sen's 'capability' approach, which understands justice in terms of human lives and the freedoms that the persons can respectively exercise. This approach contends that preferences are not naturally occurring but are themselves socially formed; people start out from different bodily and other resources and so have different needs, and

may need different resources to actually achieve their preferences or may just chose different functionings (Moss, 2017). In considering the advent of datafication, Couldry (2019) argues that Sen's insistence on the diversity of value, understood as pluralist rather than relativist, is particularly attractive as it rejects the kind of false universalism referred to above. Moreover, a capabilities approach as advanced by Sen, Couldry argues, invites reflections on what functionings might be valued in media and communications (such as not being misrepresented, having opportunities of voice, or attributions of recognition), and the complexity of such functionings with the accelerated development of new information infrastructures.

Similarly, a central contribution from the critical feminist tradition has been to shift the focus away from the 'distribution paradigm' in ideas of justice and to consider instead the structural dynamics of social (in)justice in shaping what choices people can and want to make about their lives and the role of collective communication and cooperation (Young, 2011). Nancy Fraser (2005) has sought to broaden the lens through which we might understand justice beyond the distribution of primary goods, most notably by situating economic dynamics of (mis)distribution alongside cultural dynamics of (mis)recognition and political dynamics of (mis)representation. In doing so, Fraser privileges an engagement with justice that shifts the axes through which 'participatory parity' might be pursued. For data justice debates, these insights provide an avenue through which we can investigate the limitations of the individualisation and marketisation of justice discourse. Gangadharan and Niklas (2019), for example, make the case that there is a need to 'decentre' technology in data justice debates, and instead situate technology within systemic forms of oppression in which the harms that emerge from data-driven systems are articulated by those who are predominantly impacted and those who have a history of struggle against such oppression. That is, the concern with data needs to be part of an integrated social justice agenda, one in which definitions of problems and solutions may not actually be about data. In practice, this would mean a radical shift in the make-up of the decision-making table and the actors currently shaping dominant translations of data justice.

Furthermore, in line with Viljoen (2021), such an approach redefines the societal harms of datafication as not just concerning infringements on an individual's rights or autonomy, but that it materialises unjust social relations by enacting or amplifying social inequality. This, she argues, is not just a by-product of unjust data collection but is an injustice of concern in data production in its own right. By understanding datafication as fundamentally relational, Viljoen therefore makes a case for engaging with data justice not in terms of individual legal interests but at population-level interests. This, in turn, has implications for how data justice concerns may therefore also be addressed. In particular, Viljoen advocates for a shift in digital policy and data governance debates away from a sole focus on data subject protection and control to also account for the sociality of datafication and, crucially, how to balance overlapping and competing interests that comprise population-level effects of datafication. This, she argues, requires 'democratic governance' that consists of a commitment to collective institutional forms of ordering that are oriented towards processes that can subject datafication to serve the public interest or public good. They may also be oriented towards the democratisation of other spheres of life in which datafication might feature. For example, research has showcased how democratised workplaces, such as the presence of co-determination laws or works

councils as is common in places such as Sweden and Germany, are much better equipped to address data justice concerns in the face of an increasingly datafied workplace (Doellgast et al., 2023). This may also influence how civil society actors seek to translate data justice into practice. Indeed, many trade unions in Europe and elsewhere are increasingly seeking to focus efforts on wider mobilisation and organisation strategies to strengthen worker voice as a way to tackle the injustices of datafied workplaces rather than the narrow focus on securing data rights (Dencik et al., 2024).

In this sense, justice concerns can also not be confined to fairness-informed design or debiasing algorithms. As outlined by the US-based community group the StopLAPDSpying Coalition (2020) in what they refer to as a framework of 'algorithmic ecology,' an 'algorithm is designed to *operationalize* the *ideologies* of the *institutions* of power to produce intended *community* impact.' This framework draws on abolitionist approaches and also serves as an organising tool in which the algorithm is decentred in order to look at the different actors that shape the algorithm, illustrate whose interests the algorithm serves, with the ultimate goal of dismantling the actors creating algorithmic harm. The model is relational, scrutinising algorithms in the context of the ideologies, institutions, operations and communities embedding any algorithmic system. Similarly, the European Network Against Racism (ENAR) has sought to propose toolkits that can account for issues such as discrimination beyond technical features that instead situates technological systems in existing structural discrimination (ENAR, 2020). Further examples come from advocates of disability justice who have sought to move beyond technical adjustments to instead address how ableist norms and structures ostensibly configure technological systems and advocate for a social rather than medical model of disability (Tilmes, 2022). As such, a value of justice applies not only to the many abstraction layers in which a system operates but also how justice is experienced. This is important because the universal scope of a system often assumed in computational definitions of fairness in order to also accommodate population-level optimisation falls short in accounting for the way systems are often used to target or exclude specific groups. Furthermore, principles need to be incorporated into not just the system, but the design process itself and the role and relation of technologists towards other stakeholders (Costanza-Chock, 2020). Such understandings invite more holistic views of computer science and software engineering methodologies as decidedly socio-technical and radically transforms the translations of data justice.

As outlined by Dencik and Sanchez-Monedero (2022), calls have therefore been made to focus justice concerns in computer science less on the input and output data and more explicitly on the connection of the optimisation process with the real-world task. While the optimisation task of a system can be more or less explicit, the issue of misalignment between optimisation tasks and performance metrics and real-world problems is gaining traction within the field (Hooker, 2021). It points to the limitations of fairness claims without an understanding of the effect of data collection, designer/corporations' world views, and embedded values. As McQuillan (2019) has argued, the optimisation process tends to implement societal structures and logics and secure the 'institution in the loop' in any system. At a technical level, such structures and logics can be challenged by moving from process optimisation to community well-being (Musikanski et al., 2020) or by counter-optimising a system to protect impacted communities that might be harmed by institutional optimisation logics (Kulynych et al., 2020).

These resistance strategies play an important role in how we might think of translations of data justice. They point to the importance of situating technological developments in social, economic, political and cultural context and to consider data issues in relation to historical struggles for justice. That is, data justice needs to be levied at system-level critique in which the parameters of the debate do not begin and end with the technology itself. An emphasis on the collective and collectivity, drawing from Marxist and feminist traditions of justice, can aid such an approach by firmly situating data justice within social relations and using existing lived experiences of (in)justices as an entry-point into engaging with and situating datafication.

Conclusion

In this paper, I have sought to tease out what I refer to as the emergence of a politics of data justice evident in the nature of responses to concerns about datafication amongst key stakeholders. Substantial efforts have been made to translate data justice into policy, technology and advocacy, yet the terms of this translation illustrate an understanding of data justice that centres on individual harms and rights, technological fixes, and market solutions that also serves to neutralise challenges and even legitimise technological advancements that may cause harm. In light of this, there are grounds for finding ways to rescue data justice from this corporate and techno-liberal capture to assert a more radical agenda. An emphasis on collectivity shifts attention towards population-level effects of datafication and foregrounds social relations, both as how they currently exist as well as how they may be different. Drawing on insights from both the Marxist/socialist tradition and feminist approaches to justice, data justice can be understood differently by asserting the need to engage with data systems as situated within particular ideological, institutional, and operational contexts that require critique and foregrounding how injustices manifest in actual lived experiences. Such an agenda is desperately needed in order for data justice to garner meaning on terms that centres justice in human relationships in all aspects of society and seeks to empower the collective in struggles against domination and oppression.

Disclosure statement

Funding

Notes on contributor

Lina Dencik is Professor and University Research Leader in AI Justice at Goldsmiths, University of London, UK. She was Principal Investigator on DATAJUSTICE funded by a Starting Grant from the European Research Council (grant number 759903) [email: L.Dencik@gold.ac.uk].

References

Alston, P. (2005). Assessing the strengths and weaknesses of the European Social Charter's Supervisory System. In G. Búrca, B. Witte, & L. Ogertschnig (Eds.), *Social rights in Europe*. Oxford University Press.

Andrejevic, M. (2014). The big data divide. *International Journal of Communication*, 8, 1673–1689.

Bank, M., Duffy, F., Leyendecker, V., & Silva, M. (2021). *The Lobby Network: Big Tech's web of influence in the EU*. Corporate Europe Observatory and Lobby Control.

Baylan, A., & Gürses, S. (2021). *Beyond debiasing: Regulating AI and its inequalities*. EDRi. https://edri.org/wp-content/uploads/2021/09/EDRi_Beyond-Debiasing-Report_Online.pdf

Bruhn Jensen, K. (2021). *A theory of communication and justice*. Routledge.

Campbell, T. (1983). *The left and rights*. Routledge.

Campbell, T. (2010). *Justice* (3rd ed.). Palgrave Macmillan.

Castelnovo, A., Crupi, R., Greco, G., & Regoli, D. (2021). The zoo of fairness metrics in machine learning.

Cheney-Lippold, J. (2017). *We are data*. New York University Press.

Cohen, G. (2008). *Rescuing justice and equality*. Harvard University Press.

Costanza-Chock, S. (2020). *Design justice. Community-led practices to build the worlds we need*. MIT Press.

Couldry, N. (2019). Capabilities for what? Developing Sen's Moral Theory for communications research. *Journal of Information Policy*, 9, 43–55. https://doi.org/10.5325/jinfopoli.9.2019.0043

Delacroix, S., & Lawrence, N. D. (2019). Bottom-up data trusts: Disturbing the 'one size fits all' approach to data governance. *International Data Privacy Law*, 9(4), 236–252.

Dencik, L., Brand, J., & Murphy, S. (2024). What do data rights do for workers? A critical analysis of trade union engagement with the datafied workplace. *Transfer: European Review of Labour and Research*, https://doi.org/10.1177/10242589241267006

Dencik, L., Hintz, A., Redden, J., & Treré, E. (2019). Exploring data justice: Conceptions, applications and directions. *Information, Communication & Society*, 22(7), 873–881. https://doi.org/10.1080/1369118X.2019.1606268

Dencik, L., Hintz, A., Redden, J., & Treré, E. (2022). *Data justice*. Sage Publications.

Dencik, L., Jansen, F., & Metcalfe, P. (2018). A conceptual framework for approaching social justice in an age of datafication. *Working Paper*, DATAJUSTICE project. https://datajusticeproject.net/2018/08/30/a-conceptual-framework-for-approaching-social-justice-in-an-age-of-datafication/

Dencik, L., & Sanchez-Monedero, J. (2022). Data Justice. *Internet Policy Review*, 11(1), https://doi.org/10.14763/2022.1.1615

De Stefano, V. (2018). 'Negotiating the algorithm': Automation, artificial intelligence and labour protection. *Comparative Labor Law & Policy Journal*, 41(1), https://doi.org/10.2139/ssrn.3178233

Doellgast, V., Wagner, I., & O'brady, S. (2023). Negotiating limits on algorithmic management in digitalised services: Cases from Germany and Norway. *Transfer*, 29(1), 105–120.

ENAR. (2020). *Artificial intelligence in HR: How to address racial biases and algorithmic discrimination in HR?* Report, Brussels. https://www.enar-eu.org/artificial-intelligence-in-hr-how-to-address-racial-biases-and-algorithmic-discrimination-in-hr/

Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. St. Martin's Press.

Fay, B. (1975). *Social theory and political practice*. Unwin Hyman.

Fenton, N., Freedman, D., Schlosberg, J., & Dencik, L. (2020). *The media manifesto*. Polity Press.

Floridi, L., & Taddeo, M. (2016). What is data ethics? *Philosophical Transactions of the Royal Society*, 374(2083).

Fourcade, M., & Healy, K. (2024). *The ordinal society*. Harvard University Press.

Foxglove. (2024). Foxglove news. https://www.foxglove.org.uk/news/

Fraser, N. (2005). Mapping the feminist imagination: From redistribution to recognition to representation. *Constellations (Oxford, England)*, *12*(3), 295–307. https://doi.org/10.1111/j.1351-0487.2005.00418.x

Fraser, N. (2008). Abnormal justice. *Critical Inquiry*, *34*(3), 393–422. https://doi.org/10.1086/589478

Gandy, O. (1993) *The Panoptic sort: A political economy of personal information.* Routledge.

Gangadharan, S. P. (2015). *Data and discrimination: Collected essays.* New America Foundation. https://d1y8sb8igg2f8e.cloudfront.net/documents/data-and-discrimination.pdf

Gangadharan, S. P., & Niklas, J. (2019). Decentering technology in discourse on discrimination. *Information, Communication & Society*, *22*(7), 882–899. https://doi.org/10.1080/1369118X.2019.1593484

Greer, I., & Umney, C. (2022). *Marketization: How capitalist exchange disciplines workers and subverts democracy*. Bloomsbury Academic.

Gürses, S., Troncoso, C., & Diaz, C. (2015). *Engineering privacy by design reloaded*. Amsterdam Privacy Conference 2015. https://cosicdatabase.esat.kuleuven.be/backend/publications/files/conferencepaper/2589

Hallensleben, S., Hustedt, C., Fetic, L., Fleischer, T., Grünke, P., Hagendorff, T., Hauer, M., Hauschke, A., Heesen, J., Herrmann, M., Hillerbrand, R., Hubig, C., Kaminski, A., Krafft, T., Loh, W., Otto, P., & Puntschuh, M. (2020). *From principles to practice. An interdisciplinary framework to operationalise AI ethics* (AI Ethics Impact Group). https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/WKIO_2020_final.pdf

Hasselbalch, G., & Tranberg, P. (2016). *Data ethics - the new competitive advantage.*

Hintz, A., Dencik, L., & Wahl-Jorgensen, K. (2018). *Digital citizenship in a datafied society*. Polity.

Hoffmann, A. L. (2019). Where fairness fails: Data, algorithms, and the limits of antidiscrimination discourse. *Information, Communication & Society*, *22*(7), 900–915. https://doi.org/10.1080/1369118X.2019.1573912

Hooker, S. (2021). Moving beyond "algorithmic bias is a data problem." *Patterns*, *2*(4), 100241. https://doi.org/10.1016/j.patter.2021.100241

HRBDT. (2020). The human rights, big data and technology project. https://www.hrbdt.ac.uk/ https://www.enar-eu.org/artificial-intelligence-in-hr-how-to-address-racial-biases-and-algorithmic-discrimination-in-hr/

Irion, K., Burri, M., Kolk, A., & Milan, S. (2021). Governing 'European values' inside data flows. *Internet Policy Review*, *10*(3). https://doi.org/10.14763/2021.3.1582

Jansen, F. (2020). Consultation on the white paper on AI – a European approach. Submission. *DATAJUSTICE project*. https://datajusticeproject.net/wp-content/uploads/sites/30/2020/06/Submission-to-AI-WP-Fieke-Jansen.pdf

Jansen, F. (2022). *Data-driven policing: Negotiating the legitimacy of the police*. PhD Thesis.

Jasanoff, S. (2007). *Designs on nature: Science and democracy in Europe and the United States*. Princeton Univ. Press.

Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. *Nature Machine Intelligence*, *1*(9), 389–399. https://doi.org/10.1038/s42256-019-0088-2

Jørgensen, R., Bloch Veiberg, C., & ten Oever, N. (2019). Exploring the role of HRIA in the information and communication technologies sector. In N. Götzmann (Ed.), *Handbook on human rights impact assessment* (pp. 205–218). Edward Elgar Publishing.

Kulynych, B., Overdorf, R., Troncoso, C., & Gürses, S. (2020). POTs: Protective optimization technologies. *Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency*, 177–188. https://doi.org/10.1145/3351095.3372853

McQuillan, D. (2019, June 7). *AI realism and structural alternatives*. Danmcquillan.Io. ./ai_realism.html.

Menke, C. (2020). *Critique of rights*. Polity.

Metcalf, J., & Crawford, K. (2016, June). Where are human subjects in big data research? The emerging ethics divide. *Big Data & Society*, 1–34. https://doi.org/10.1177/2053951716650211

Moss, G. (2017). Media, capabilities and justification. *Media, Culture & Society*, *40*(1), 94–109. https://doi.org/10.1177/0163443717704998

Musikanski, L., Rakova, B., Bradbury, J., Phillips, R., & Manson, M. (2020). Artificial intelligence and community well-being: A proposal for an emerging area of research. *International Journal of Community Well-Being*, *3*(1), 39–55. https://doi.org/10.1007/s42413-019-00054-6

Newman, A. L. (2020). Digital policy-making in the European Union: Building the new economy of an information society. In A. L. Newman (Ed.), *Policy-making in the European Union* (pp. 275–296). Oxford University Press.

Niklas, J., & Dencik, L. (2024). Data justice in the 'twin objective' of market and risk: How discrimination is formulated in EU's AI policy. *Policy & Internet*, *16*(3), 509–522. https://doi.org/10.1002/poi3.392

Nolan, K. (2023). The multi-faceted role of the individual in EU data protection law. *SSRN*. https://doi.org/10.2139/ssrn.4853540

Pasquale, F. (2015). *The Black Box Society: The secret algorithms that control money and information*. Harvard University Press.

Rahman, Z. (2023). *Machine readable me*. 404 Ink.

Schiffer, Z., & Newton, C. (2023). Microsoft lays off team that taught employees to make AI tools responsibly. *The Verge*. https://www.theverge.com/2023/3/13/23638823/microsoft-ethics-society-team-responsible-ai-layoffs

Simonite, T. (2021). What really happened when Google ousted Timnit Gebru. *Wired*. https://www.wired.com/story/google-timnit-gebru-ai-what-really-happened/

Stark, L., & Hoffmann, A. L. (2019). Data is the new what? Popular metaphors & professional ethics in emerging data culture. *Journal of Cultural Analytics*, *4*(1).

Stop L.A.P.D.Spying Coalition & Free Radicals. (2020). Algorithmic ecology: An abolitionist tool for organizing against algorithms. *Free Radicals*. https://freerads.org/2020/03/02/the-algorithmic-ecology-an-abolitionist-tool-for-organizing-against-algorithms/

Taylor, L., & Dencik, L. (2020). Constructing commercial data ethics. *Regulation & Technology*, *2*, 1–10.

Tilmes, N. (2022). Disability, fairness, and algorithmic bias in AI recruitment. *Ethics and Information Technology*, *24*(2), 21. https://doi.org/10.1007/s10676-022-09633-2

Toh, A. (2020). Dutch ruling a victory for rights of the poor. *Human Rights Watch*. https://www.hrw.org/news/2020/02/06/dutch-ruling-victory-rights-poor

Tucker, I. (2023, June 11). Signal's Meredith Whittaker: 'These are the people who could actually pause AI if they wanted to.' *The Observer*.

van de Poel, I., & Royakkers, L. (2007). The ethical cycle. *Journal of Business Ethics*, *71*(1). https://doi.org/10.1007/s10551-006-9121-6

Viljoen, S. (2021). A relational theory of data governance. *The Yale Law Journal*, *131*(2), 573–654.

Wagner, B. (2018). Ethics as an escape from regulation: From 'ethics-washing' to ethics-shopping? In E. Bayamlioglu, I. Baraliuc, L. A. W. Janssens, & M. Hildebrandt (Eds.), *Being profiled, Cogitas ergo sum* (pp. 84–90). Amsterdam University Press.

Wark, M. (2019). *Capital is dead: Is this something worse?*. Verso.

Williams, O. (2019). How big tech funds the debate on AI ethics. *New Statesman*, June 6. https://www.newstatesman.com/science-tech/technology/2019/06/how-big-tech-funds-debate-ai-ethics

Young, I. M. (2011). *Justice and the politics of difference*. Princeton University Press.