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Beyond data bodies: New directions for a feminist theory of data sovereignty

Anita Gurumurthy and Nandini Chami, IT for Change

Data Governance Network

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IT for Change aims for a society in which digital technologies contribute to human rights, social justice and equity. Our work in the areas of education, gender, governance, community informatics and internet/digital policies push the boundaries of existing vocabulary and practice, exploring new development and social change frameworks.

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Abstract

A global market in menstrual apps illustrates a new datafied regime of governmentality that erodes personal autonomy. Emphasizing that bodily sovereignty is integral to data sovereignty, feminist intervention has sought to tackle such violations of personhood by putting bodies back into data governance debates. This paper demonstrates that such an approach may not be adequate to challenge the relations of domination encoded in data. It argues that what is needed, instead, is a shift in focus from reclaiming the materiality of embodiment to restructuring the material relations of data as a social knowledge commons. Centering a feminist relational ontology and ethics, the paper offers some concrete directions for collective social control over the health data commons. It shows how, in the final analysis, equality of autonomy in the datafied social is predicated on an expanded idea of data sovereignty – one that promotes the public commons of social knowledge, even as it strives to prevent incursions into the private space.

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1. Feminist spotlight on data bodies

The burgeoning market for period tracking apps, or menstruapps,¹ has come under critical scrutiny for unethical data practices. Privacy International (2018, 2020), which conducts periodic audits of the data practices of popular menstruapps, has called attention to questionable privacy and consent frameworks, excessive collection of sensitive personal data without due regard to purpose limitation and data minimization, and the lack of robust protection against data breaches. Exposés and official investigations have revealed how these apps share sensitive private health information with third-party firms, including lead tech firms such as Facebook and Google, in stark violation of their stated privacy policy (Schiffer, 2021). Big Tech firms are also known to have entered into data sharing tie-ups with menstruapps in jurisdictions with weak/non-existent data protection legislation to exploit prevailing governance deficits for their business advantage. Facebook's collaboration with the India-based app Maya is one such instance.²

IT for Change's research study (Chami et al. 2021) exploring menstruapps from a feminist political economy lens points to similar concerns for bodily privacy and personal autonomy. Two insights from the study are pertinent. Firstly, menstruapps assimilate the gendered body into digital capitalism, extracting women's sexual and reproductive health data for private profit. Auto-ethnographic accounts highlight how the "trusted community" to discuss stigmatized issues of body and sexuality without fear, shame, and judgment promised by such apps must be critically unpacked for the predatory market in personal data that such apps represent (Khan, 2019).

Secondly, menstruapps signify a new regime of governmentality³ in which datafied cultures of the quantified self produce a post-feminist subjectivity where menstrual health is converted into an individual problem of exercising the required discipline for diligent tracking of one's period cycle to generate appropriate self-knowledge (Evans et al., 2020). Benchmarking the body against a set of desirable norms, they produce a self-policing subject who must reshape their body in directions that stabilize heteronormative patriarchy. As has also been noted in the literature, menstrual sense-making pre-coded into the predictive modelling of such apps is based on the inherent assumption that users are both heterosexual and cisgender (Fox et al., 2020). The design of these apps has been found to create feelings of exclusion for gender and sexual minorities, whose reproductive and sexual health needs may not conform to such assumptions (Epstein et al., 2017).

¹ Mobile applications that track a user's reproductive cycle, sex life, and menstrual health to provide them algorithmically derived insights about their body.

² Privacy International's traffic analysis revealed that women's health app, Maya, informs Facebook when users open the interface and starts sharing data with the latter even before the user agrees to its privacy policy, raising serious transparency concerns. See Women's health app Maya sharing users personal data with Facebook. (2019). The Economic Times. https://economictimes.indiatimes.com/tech/software/womens-health-app-maya-sharing-users-personal-data-with-facebook/articleshow/71073449.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cpst

³ Governmentality is a term coined by the social theorist Michel Foucault to refer to the 'conduct of conduct', the rationality, techniques and procedures through which power operates in the modern world. In the current epoch, theorists have highlighted a new form of governmentality, data governmentality, in which the network-data matrix refashions individual and interpersonal behaviour in all domains to maximize data mining and algorithmic behavioral nudging for capital accumulation from the social world. See Souto-Otero & Beneito-Montagut (2016).

The menstruapp market presents a quandary; how can period tracking to enhance the individual understanding of, and control over, reproductive and sexual health be recovered from the realpolitik of commercial surveillance in data capitalism? Resolutions to this problematic can be found in an impressive line-up of feminist and digital rights scholarship that broadly underlines the need to reject data governmentality, and re-center personal sovereignty⁴ over one's data by bringing our bodies back into data governance debates (Varon, 2020; Gangadharan, 2020; Radhakrishnan, 2021; Mager & Mayer, 2019). Two strands are particularly striking. One strand – focusing on tech design principles – argues the need to restore control to the user, whereby user data is stored only on their device, without being transferred to the cloud (Fox et al., 2020; Chami et al., 2021). Intersectional feminist writings (D'Ignazio & Klein, 2019) exhort the need to inject the differentials arising from social power into data science and data ethics, giving corporeality and embodied subjectivity its due. Submitting that the distinction between our physical bodies and our data bodies is increasingly irrelevant (Kovacs & Jain, 2020), other feminist work on data and privacy views the personal sovereignty over our “living, breathing bodies” as inextricably tied to that of our data bodies (Kovacs, 2020).

The overarching conceptual framing of digital bodies as equivalent to our physical bodies, and hence deserving of the same rights as our physical bodies, is thus a key feminist assertion in challenging data capitalism. To tackle the conundrums for individual autonomy and personhood arising from predatory and unethical data markets, feminist contributions underline an important insight – that bodily sovereignty and data sovereignty be conceived as two sides of the same coin. Acknowledging that this is an important theoretical starting point, we take this debate further by asking whether this theoretical direction covers the political terrain of the data sovereignty question in all its implications. Considering that feminist visions of data also require social-relational ontologies and ethics,⁵ what does such sovereignty look like in practice?

This paper proceeds from these two questions to explore how a feminist theory of data sovereignty can move the spotlight beyond a singular emphasis on reclaiming data bodies from the matrix of data governmentality. Section 2 argues that the domination coded into bodies cannot be addressed by a call to restore individual control over our bodies, or by coding data with subjective feelings. The focus of data sovereignty needs to be on restructuring the material relations of social knowledge. The social body of datafied relations needs a feminist relational ontology and ethics of collective controls. Section 3 explores how this alternative vision of data sovereignty can be realized in the context of a privatized health data commons. It suggests potential directions for deploying the social data commons towards the creation of an intelligence infrastructure of care based on a feminist model of data collectivism. The final section reflects on the contributions of the paper in relation to mainstream data governance debates.

2. From ‘data bodies’ to the ‘social body of datafied relations’: Expanding the idea of data sovereignty

The feminist exhortation to ‘bring back bodies’ into data illuminates the most critical deficit in the prevailing data governance paradigm – the assumption that it is possible to separate considerations of

⁴ Personal sovereignty is the concept of property in one's own person expressed as the moral or natural right of a person to be the exclusive controller of one's own body and life.

⁵ For more details, see *Feminist Epistemology and Philosophy of Science*, 2020.

personal sovereignty from the resource governance regime for data. It exposes the limitations of the European personal data protection approach (imported to many parts of the world) that seeks to establish “a new form of human rights for data subjects, while keeping up the narrative of a dematerialized conception of data as separate and separable from humans” (Käll, 2017). Instead, by foregrounding datafication as a “double movement” in which social reality is both discerned and reconstructed, this feminist intervention calls attention to how the body never goes away (*ibid*). Sovereignty, therefore, is implicated not only in the terms on which human bodies are dematerialized into a resource for digital capitalism, but equally in the re-materialization of data bodies and its material impacts on our ‘ability and means to choose our life course’ – what Amartya Sen (2001) terms ‘equality of autonomy’.

Challenging projects of governmentalization (Legg, 2018), feminist work linking bodies to data mirrors the Foucauldian idea of power as “circulating throughout the social body rather than emanating from the top down” (Sawicki, 1998). Feminist analysis also unpeels the aura of objectivity and truthfulness that surrounds data discourses in digital capitalism, foregrounding the Foucauldian assertion that power does not simply subjugate or ‘repress’ individuals but, in fact, ‘produces’ them (Golder, 2009). The reality is that “neither bodies nor data exist outside of the social world – and so neither do bodies-as-data” (Kovacs, 2020). In other words, the social cannot be extricated from the resource of data, and consequently, from conceptions of data governance.

But what does it mean to re-center the social in the governance of data to protect the ‘equality of autonomy’? Feminist thinking on data locates the solution in ‘reclaiming our data bodies’. In other words, it advocates for governing the terms on which bodies-as-data rematerialize socio-structural hierarchies of gender, race, class, caste, and other social categories – the purportedly objective sorting and ordering apparatus of data-based intelligence. The political project here is to end inequality and discrimination by challenging the “informatics of domination” (Haraway, 1991, cited in Ponterotto, 2016) and creating a social data personhood that valorizes individual sovereignty.

The infrastructures of data underpin a new cognitive structure of social power that reshapes the very nature of social knowledge, and the power that arises from its control. The embodied subjectivity interpellated into this datafied “cognisphere” (Hayles, 2006), and the social personhood of bodies-as-data that materializes in it are sustained and reproduced through the particular workings of digital capitalism.

As Shoshana Zuboff (2019) theorizes, digital capitalism relies on the generation of insight from aggregated patterns about social interactions, converting every moment of existence into behavioral surplus through relentless datafication. Even if one were to opt out of sharing personal data, the aggregation of the data of others – collective data footprints – has already fashioned the social body, implicating everyone. As the data business model moves from the surveillant advertising economy of the Internet into all domains of social and economic life through the Internet of Things, even rejecting Internet platforms altogether will not really enable escape from digital capitalism’s control of social relations.

Harking back to the materiality of embodiment, crucial as it may be, will, therefore, not be enough to challenge the relations of domination recoded in bodies-as-data. The “decision about what to reveal – or what not to reveal – about ourselves” to resist the invasion of our data privacy, unfortunately, is not one of “autonomous management” (Kovacs, 2020). Structures of datafied governmentality constrain the agentic choices of subjects and their capacity for self-determination, and so, a strategy of opting out cannot restore our sovereignty over our bodies and selves.

Strategies to “bring back the bodies” by coding data with subjective feelings (D’Ignazio & Klein, 2019) would also fall short. With human experience becoming fodder for the cognitive structures of digital capitalism, repositioning data subjectivity within these structures cannot redefine the materiality of power in the social body. On the contrary, valorizing “multiple forms of knowledge, including the knowledge that comes from people as living, feeling bodies” (*ibid*), may further an intersectional politics of recognition – restoring “equal admission for marginal identities in the existing structures” of digital capitalism, but will likely miss the “foundational transformation of unequal socio-economic arrangements” (Srinivasan, 2021). Alibaba’s famed ‘Singles Day’⁶ illustrates this paradox. Even as it challenges the patriarchal cultural coding of Valentine’s Day, it renders human subjectivity more intelligible to the capitalist grid.

Today, corporations that control social knowledge have appropriated the language of rights and ethics to validate ever-multiplying embodiments. They detract attention from digital capitalism’s primitive instinct for datafying the social and mining the datafied social, ad infinitum, and peddle “AI bias bounties and fairness fixits that stage tech-enabled discrimination as a problem of bad code” (Whittaker, 2021).

A framework for equality of autonomy in datafied sociality, hence, needs a different path – one that avoids the twin traps of sovereignty as ‘possessive individualism’⁷ that undermines the ethics of relationality, and as an identity politics of recognition that does not fundamentally shift social power. Shifting the focus from reclaiming bodies to restructuring the material relations of social knowledge, the idea of data sovereignty must move beyond “individual controls” to a feminist relational ontology and ethics of “collective controls” rooted in the values of solidarity and justice (Prainsack, 2019).

3. Reclaiming the data commons for an ‘intelligence infrastructure of care’

What would it take to apply this expanded conception of data sovereignty? More specifically, how can we reclaim the social commons of data from its capitalist enclosures?

The modus operandi of digital capitalism is to accord primacy to newer and better techniques for cannibalizing the social in the pursuit of profit. As feminist scholarship on knowledge and intellectual property rights has long recognized, protecting the inappropriable public domain of social knowledge from being expropriated for capital accumulation is integral to the feminist decolonial project of fighting alienation, exclusion, and injustice in life under capitalism (Mathew, 2021).

The task for data governance then is to ensure that subjects not only have the right to dignity, privacy, and personal autonomy – corporeal and datafied – and the right to be represented in decisions about their data, but also the right to collectively determine how the social commons of data are preserved and promoted for “public value and public benefit” (Prainsack, 2019). The boundary between private and public claims in data will need to be defined through the recognition of data as an inappropriable social commons in which economic entitlements are bound to a feminist relational ethics of distributive

⁶ For details, see Barclay, 2019.

⁷ A form of individualism in which the individual is “seen as essentially the proprietor of his own person or capacities, owing nothing to society” (Lindsay, 2012).

justice (Gurumurthy & Chami, 2021). No data holder will have absolute possession of the data they collect and aggregate; and different data users will have conditional rights to access aggregate, anonymized data resources depending on whether they are seeking such access for commercial, non-commercial, or public sector decision-making purposes (*ibid*). Social knowledge from the social commons of data will then no longer subsidize capital. Instead, it will subvert the regime of data governmentality, effectively redistributing data power.

Going back to the menstruapp conundrum, a post-individualist, feminist approach that puts back control in the collective-social would call for data to be encoded differently: outside of platform enclosures, and through a reproductive justice lens attentive to the markers of social power and the right to information and health for all, especially the disenfranchised. Southern feminists have long argued that a liberal rhetoric of bodily rights cannot amount to much unless integrated with a sexual and reproductive health and rights (SRHR) framework that addresses the resource inequalities characterizing the global political order (Corrêa & Petchesky, 2006).

The entry of data into the circuits of capital has paved the way for a new political economy of international development in which inequity and injustice arise in the hierarchies of digital intelligence that stratify the world. The knowledge agenda on women's health – based as it is in a growing market for big data and AI – is now set by Big Tech and Big Pharma. The spate of healthcare business acquisitions by Big Tech in recent years points to this shifting terrain of data power in the health domain.⁸ A partnership of convenience between private data services and public health systems is also poised to buttress this power shift. The future seems to be one where poor and marginalized groups dependent on resource-starved public health systems will be forced to "pay with their data" for minimal healthcare (Fitzgerald & Crider, 2021). Such privatization of the public health data commons is worrisome because of the loss of collective controls, as the ends towards which the data commons will be deployed are determined privately, outside the deliberative decision-making process of institutional democracy. Facebook's 'Data for Good' initiative is an instance of intermediation of public good by Northern corporate actors who control global data ecosystems critical to public interest decision-making.⁹

The digital disenfranchisement that women and gender minorities typically confront places them in a highly disempowered location in this datafied order. Already, developing countries lack strong legacy data systems that can act as barriers to public data science (Cory & Stevens, 2020). Going by market trends, it is clear that private investments in big data and AI are unlikely to prioritize knowledge for social and health equity (Rial-Sebbag, 2014). Market-based, appified cultures of information and knowledge delegitimize the role of public health data infrastructures, displacing the provisioning of such information to the market. They obfuscate the affirmative obligation of states to invest in knowledge production and related infrastructures as part of upholding the right to health for all.

⁸For instance, Amazon's acquisition of the online pharmacy, Pillpack, in 2018; Google's acquisition of the wearables business, Fitbit, in 2021; and Microsoft's acquisition of the AI-based speech recognition company, Nuance Communications, in 2021 to expand its repertoire of cloud services for medical professionals. See Mitchell, 2021.

⁹At the height of the pandemic, Facebook launched a COVID-19 preventive health survey in partnership with the Massachusetts Institute of Technology and John Hopkins University as part of its 'Data for Good' initiative. The survey, conducted in over 67 countries, with advisors from the World Health Organization and Global Outbreak Alert and Response Network, was ostensibly aimed at "enabling policymakers and health researchers better monitor and understand people's knowledge, attitudes and practices". The results of the initiative have been lauded as extraordinary – made possible only because of Facebook's scale and so on, and the aggregate infographics and findings from the study are available on Facebook's website. Requests to access non-aggregated data from the survey, including files with survey data from MIT and survey weights from Facebook have to be jointly approved by Facebook and MIT. See <https://dataforgood.fb.com/docs/preventive-health-survey-request-for-data-access/>

When it comes to the data-hungry app market, concerns on menstrual tracking or financial services or for that matter, any other datafiable service, are not so distinct (Fox et al., 2020). Digital capitalism's algorithmic models are perpetually on the lookout for markets-in-the-making, ceaselessly encroaching on and subordinating the social to extract value. There is hence an immediate urgency to reclaim data as a collective-social resource to repoliticize the datafied social body, infusing it with a feminist vision of public value and public benefit.

The feminist challenge then is to dismantle and replace the dominant 'intelligence infrastructure of extractivism' with contextually-relevant and democratically accountable data systems. The realization of this vision towards a radically different 'intelligence infrastructure of care' is an institutional question. Based on an overarching policy that enhances decentralized data control, a governance framework for data as a collective-social resource will strive to navigate the delicate balance between inviolable personal autonomy in determining the extent of data sharing (the imperative for data minimalism) and the public interest consideration of data access (the impulse for data maximalism).

A feminist model of data collectivism would also urge complementarities between public and community health data systems forged through different models. For instance, patient health data commons generated in public health systems could be managed through data trusts. Solidarity-based data communities could also manage data pools for open science through democratic processes of norm-setting and rule-making. Health data cooperatives are yet another route, providing localized and context-appropriate healthcare services (which could include menstruapps), especially in Global South contexts where public health systems are overstretched (ICA, 2020). Such collectives would require appropriate data stewardship rules and institutional mechanisms to guard against elite capture, local patriarchies, and the risk of individual/collective harm, and to ensure equitable distribution of benefits (Evans, 2016).

4. Concluding reflections: What a feminist vision of data sovereignty offers mainstream data governance debates

Data sovereignty is invoked at two levels in mainstream data governance discussions. First, at the individual level, it is deployed as the norm underlying the right to personal data protection. Here, 'informed consent' and 'privacy' are used as boundary objects to define data sovereignty in the context of the market of data flows. This notion leaves intact the extractive and neo-colonial foundations of the data economy. Second, in its more common form, data sovereignty is used as the rationale to justify the power of nation states over the economic resource of data generated in their jurisdictions, including the right to regulate cross-border data flows. In this sense, data sovereignty serves as the premise for national economic securitization, for nation-states to establish the strategic autonomy of digital and data infrastructure for domestic digital innovation (Basu, 2021).

However, this two-pronged imaginary of data sovereignty, limited to personal sovereignty and state sovereignty, does not consider the idea of sovereignty as collective will formation (Queiroz, 2018; Jacobsson, 1997) – the right to democratically determine the ends to which data and data-enabled intelligence will be used.

This paper has attempted to show – through the case of menstruapps – why the emerging body of work that often goes by the moniker of data feminism needs to foreground material structures of knowledge production under digital capitalism in unravelling embodiment in data governmentality. Using a feminist conceptualization of data sovereignty, it has underlined why data governance is not only about putting back bodies in data. Rather, it is about ensuring that the datafied knowledge commons can protect and promote equality of autonomy.

Although not a focus of this paper, the commonsification of data as the ‘global cognisphere’ depends on how the Internet, as the global network scaffolding data flows, can be reclaimed as the infrastructure for decentralizing data power rooted in feminist ontologies and ethics. This requires that the control of the Internet architecture is wrested back from the privatized platforms that centralize epistemic power, enabling a commons-based knowledge society to flourish (Peters, 2019). An Internet that enables such an informatics of emancipation will further a feminist social order (and ordering) in which data subjects can forge multiple communities – geographically proximate or translocal – in real freedom and solidarity. This vision of equality of autonomy will also recognize the collective claim of each data community in their datafied social knowledge.

In the final analysis, what such a southern feminist vision of data sovereignty exhorts us to do is to devote as much attention in data governance debates to addressing the preservation of the public commons of social knowledge as the project of preventing incursions into the private space.

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About the Authors

Anita Gurumurthy is a founding member and executive director of IT for Change, where she leads research on the platform economy, data and AI governance, democracy in the digital age, and feminist frameworks on digital justice. Anita actively engages in national and international advocacy on digital rights and contributes regularly to academic and media spaces. She serves as advisor and expert on various bodies including the United Nations Secretary-General's 10-Member Group in support of the Technology Facilitation Mechanism, the Paris Peace Forum's working group on algorithmic governance, Save the Children's ICT4D Brain Trust, and Minderoo Tech & Policy Lab's Board.

Nandini Chami is Deputy Director and Fellow, IT for Change. Her work focuses on research and policy advocacy in the domains of digital rights and development, and feminist digital justice.

 datagovernance.org  dgn@idfcinstitute.org

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