OPEN DATA OPEN DATA OPEN DATA

BY
MALAVIKA RAGHAVAN*

OPEN DATA
OPEN DATA
OPEN DATA

OPEN DATA

By Malavika Raghavan

Introduction

This essay considers the term "open data" and the evolving role of open data initiatives in modern datafied states. Broadly, open data refers to data that is released in accessible formats for reuse and sharing by anyone. Governments around the world have adopted open data policies to support the timely publishing of data held by public bodies in a reusable, accessible manner using structured or machine-readable formats without restrictions or charges for their use.¹

The focus of open data initiatives is often centered on form. Supporters of open data champion the release of digital datasets in structured, machine -readable formats to ensure they can be accessed and processed by actors and computers outside the state. In doing so, open data initiatives appear to implicitly acknowledge the role of big data within the datafied state. They also appear to be premised on the existence of citizenry with the ability to analyze and engage with such datasets. Open data emerges as a digital-first response to government accountability and civic engagement.

"Open data" and "open government data" are often used interchangeably in key policy documents and forums. This is despite the fact that the technical and legal arrangements that enable the "opening up" of data can apply to datasets irrespective of whether they originate in the public or private sector. However, the discourse around open data has been overwhelmingly

- * The author would like to thank Zainab Bawa for contributions to this piece through conversations about open data initiatives in India. All errors and omissions remain those of the author.
- Yingying Gao, Marijn Janssen, and Congcong Zhang, "Understanding the Evolution of Open Government Data Research: Towards Open Data Sustainability and Smartness Yingying Gao, Marijn Janssen, Congcong Zhang, 2023," International Review of Administrative Sciences 89, No. 1 (April 28, 2021), https://journals.sagepub.com/doi/10.1177/00208523211009955; Evangelos Kalampokis, Efthimios Tambouris, and Konstantinos Tarabanis, "Open Government Data: A Stage Model," in Proceedings of the 18th Annual International Conference on Digital Government Research (dg.o '17: 18th Annual International Conference on Digital Government Research, Staten Island, NY USA: ACM, 2017), 235-246, https://doi.org/10.1007/978-3-642-22878-0_20; Public Resource, "Open Government Data Principles," December 8, 2007, https://public.resource.org/8_principles.html.
- Maximilian Heimstädt, Fredric Saunderson, and Tom Heath, "Conceptualizing Open Data Ecosystems: A Timeline Analysis of Open Data Development in the UK," in Proceedings of the International Conference for E-Democracy an Open Government (CeDEM14), (2014), 245–256, http://dx.doi.org/10.17169/FUDOCS_document_00000020332; Harlan Yu and David G. Robinson, "The New Ambiguity of 'Open Government," UCLA Law Review 59, (March 2012), https://doi.org/10.2139/ssrn.2012489.

centered on the role of government and the opening up of public datasets to support societal objectives. This raises an important conceptual distinction that we must confront: that concepts relating to "open government" with "open data" are distinct ideas that may *not* intersect in practice. Harlan Yu and David G. Robinson³ point out that "open government data" can refer to either of the following:

- "Open government" + "data." This refers to politically important disclosures that contribute to the openness and transparency of governance, irrespective of whether such data is delivered digitally.
- "Open" + "government" + "data." This data related to the government is made easily accessible, irrespective of its political significance in holding the government to account.

Open data policies adopted by states generally reflect the latter conception: they focus on the form and conditions release of digital datasets to the public. In doing so, they are motivated by broader policy objectives of transparency, participation, or citizen engagement. This raises the question of how (and whether) we can maintain distinctions between the technologies of open data, and the politics of opening up government data.

We consider this question by tracing the emergence of ideas of open data, before focusing on India's experience with open data initiatives. India provides a unique vantage point to understand the role of open data in a datafied state, as a country in the Global South that committed early to public sector digitalization and sweeping e-governance reforms.⁴ India's approach also reveals the unexpected ways the open data agenda can evolve inside and outside the state. Reflecting on these shifts, the essay concludes by considering future directions and questions for open data.

- 3 Yu and Robinson, "The New Ambiguity," 181.
- 4 Radha Chauhan, "National E-Governance Plan In India," United Nations University, May 2009, http://i.unu.edu/media/unu.edu/publication/1377/ report414.pdf.

The Emergence of Open Data

Ideas of open data have diverse roots. Researchers have traced ideas of open data to national movements calling for greater transparency in government records management and freedom of information legislation in the mid-20th century.⁵ Others trace their emergence to calls from a committee of the United States' National Research Council for an international system of "full and open exchange" of data to improve the scientific understanding of complex global problems.⁶ However, the first clear milestone catalyzing principles for open government data came from US-based civil society and internet activists in the 2000s.

In 2007, thinkers and activists gathered in Sebastopol, California, calling for the opening up of government-held data.⁷ The gathering included figures such as Lawrence Lessig, Carl Malamud, Aaron Swartz, and Tim O'Reilly, and others from civil society and the free and open source software and resulted in the articulation of eight Open Government Data (OGD) Principles.⁸ They consider government data to be open if "it is made public in a way that complies with the principles below:

- 1. *Complete:* All public data is made available. Public data is data that is not subject to valid privacy, security, or privilege limitations.
- 2. *Primary:* Data is as collected at the source, with the highest possible level of granularity, not in aggregate or modified forms.
- 3. *Timely:* Data is made available as quickly as necessary to preserve the value of the data.
- 4. Accessible: Data is available to the widest range of users for the widest range of purposes.

- 5 Stefan G. Verhulst, Andrew J. Zahuranec, and Andrew Young, "What the Drive for Open Science Data can Learn from the Evolving History of Open Government Data," *The Conversation*, March 17, 2021, http://theconversation.com/what-the-drive-for-open-science-data-can-learn-from-the-evolving-history-of-open-government-data-156778.
- 6 Shaida Badiee, Jamison Crowell, Lorenz Noe, Amelia Pittman, Caleb Rudow, and Eric Swanson, "Open Data for Official Statistics: History, Principles, and Implementation," Statistical Journal of the IAOS 37, no. 1 (January 2021): 139–59, https://doi.org/10.3233/SJI-200761; National Research Council, On the Full and Open Exchange of Scientific Data (Washington DC: National Academic Press, 1995).
- 7 Simon Chignard, "A Brief History of Open Data," Paris Tech Review, March 29, 2013, https://www.paristechreview.com/2013/03/29/brief-history-open-data/; Joshua Tauberer, "History of Movement," in Open Government Data: The Book (2014), https://opengovdata.io/2014/civic-hacking/.
- 8 "Open Government Data Principles"; "Memorandum: Open Government Working Group," October 22, 2017, https://public.resource.org/open_government_meeting.html.

5. *Machine processable:* Data is reasonably structured to allow automated processing.

- 6. Non-discriminatory: Data is available to anyone, with no requirement of registration.
- 7. *Non-proprietary:* Data is available in a format over which no entity has exclusive control.
- 8. *License-free*: Data is not subject to any copyright, patent, trademark, or trade secret regulation. Reasonable privacy, security, and privilege restrictions may be allowed."

These principles present a conception of open data as enabling the release of public data⁹ at the highest possible level of granularity in a timely, accessible, and machine-processable manner.¹⁰ The focus is predominantly on the **form of the data released:** its completeness and interoperability with different systems that may process it. However, the **conditions of data releases** — that they are non-discriminatory, nonproprietary, and license-free — reflect political and economic choices relating to the "opening up" of government data. They articulate that the government should open up data *freely* and *for free* to the public.

- **9** The term "public data" is central to the OGD Principles, but a choice was made specifically not to define the term, and focus only on the conditions of its use and management (Public.Resource.Org, 2007b).
- **10** "Open Government Data Principles."

These conceptions have evolved in subsequent years as governments around the world have operationalized open data initiatives. Some shifts are evident from a review of how different policies articulate their conception of open data (as presented in Table 1).

Table 1: Definitions and Conceptions of Open Data Source: Author's representation based on cited sources		
Institution / Instrument	Conception of Open Data	Key Concepts
Open Knowledge Foundation ¹¹	Data that can be freely used, modified, and shared by anyone for any purpose.	Free use / UsabilitySharingModification
US Open Data Policy (Part I (Definitions)) ¹²	Publicly available data structured in a way that enables the data to be fully discoverable and usable by end users.	 Free use/ Usability Discoverability Accessibility (public availability) Data format (structured)
EU Open Data Directive ¹³ (Recital 16)	Open data as a concept is generally understood to denote data in an open format that can be freely used, re-used, and shared by anyone for any purpose.	Free useSharingData format (open format)
UK National Data Strategy (Glossary) ¹⁴	Data that can be freely used, re-used, and re- distributed by anyone, subject only, at most, to the requirement to attribute and share alike	Free useRedistributionAttribution
Government Open Data License - India (Part 1. Preamble) ¹⁵	Structured data available in open format and open license for public access and use.	 Accessibility (public access and use) Data format (structured, open format) Attribution (open license)

Table 1 reveals some commonalities across the definitions of open data presented. They reflect the common premise of open data efforts as enabling accessibility and use of government data by the general public. They are aligned on *the form* of data released (structured, open formats) to support the accessibility and usability of data.

- **11** Open Knowledge Foundation, *Open Definition: Defining Open in Open Data, Open Content and Open Knowledge* (2023), http://opendefinition.org/.
- 12 Office of Management and Budget, "Open Data Policy: M-13-13 Memorandum for the Heads of Executive Departments and Agencies," Executive Office of the President of the United States, May 9, 2013, https://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/memoranda/2013/m-13-13.pdf.
- 13 Council of the European Council, & European Parliament, "Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information (recast)," Official Journal of the European Union 172, no. 56 (2019).
- 14 Department of Digital, Culture, Media and Sport, "National Data Strategy," GOV.UK, December 9, 2020, https://www.gov.uk/government/publications/ uk-national-data-strategy/national-data-strategy.
- 15 Ministry of Electronic and Information Technology, "Government Open Data License," 2017.

However, some shifts are seen in terms of *the conditions* safeguards, to which open data are subject. The definition in UK's national data strategy, and the license arrangements under India's National Data Sharing and Accessibility Policy (NDSAP), refer to attribution prior to sharing open data. In the Indian context, the requirement for an open license to access open data (and adherence to its conditions) is justified by the need to ensure "such data is not misused or misinterpreted." Open licenses are also commonplace in most other OGD programs. While this reflects the growing understanding of risks of data sharing, it is nevertheless in contrast to the license-free and non-discriminatory (or registration-free) vision under the OGD Principles.

This broad framing sets the scene for a deeper consideration of the extent to which technological operationalization of open data intersects with political and social considerations within the Indian context.

Open Data in India

Formal open data efforts in India have been driven by government actors, emerging in 2011–2012 from a joint initiative between the government of India and the US government.¹⁷ This is in contrast to the US experience of civil society-led calls for open data. Nevertheless, India's open data policies did arrive into a national context where the public was making heightened calls for government accountability following the success of India's right to information (RTI) movement.¹⁸ The RTI movement was a long-running grassroots campaign primarily by marginalized laborers and rural communities to overturn colonial-era laws limiting access to official records.¹⁹ This mass social movement demanding transparency and accountability in government information led to the passage of India's Right to Information Act 2005, akin

- 16 Ministry of Electronic and Information Technology, "Government Open Data License."
- 17 "Open Government Data (OGD) Platform India," January 21, 2022, https://data.gov.in; Anupam Saxena, "Indian Government Launches Data. Gov.In," Medianama, September 4, 2012, https://www.medianama.com/2012/09/223-indian-government-launches-data-gov-in/.
- 18 Sumandro Chattapadhyay, "Opening government Data Through Mediation: Exploring the Roles, Practices and Strategies of Data Intermediary Organisations in India," Open Data in Developing Countries Research Network, 2014, http://hdl.handle.net/10625/60640
- 19 Aruna Roy and Nikhil Dey, "Fighting for the Right to Know in India," Development Dialogue.

to freedom of information legislation in many countries.²⁰ The RTI Act is cited in the preamble to India's open data policy, NDSAP, as a key motivation.²¹

Government-led Open Data Efforts in India: Openness Versus Control

In 2012, the NDSAP sought to make government data available for better public debate, decision-making, and to meet civil society's needs. ²² To operationalize the policy, the government launched India's open data portal (data. gov.in) to act as a platform through which users could access open datasets, modeled on the US's OGD portal (data.gov). The portal is designed to enable all ministries and public agencies of the Indian government to publish their shareable, nonsensitive datasets in an open format. The form, or "front end," of open data, therefore, is comparable to initiatives in the US and other parts of the West, requiring common standards and formats to release and integrate datasets.

Some provisions stand out regarding the conditions for data release included in India's open data policy. The policy enables government departments to decide on which datasets to share. This means each department can determine whether a dataset is shareable or non-shareable.²³ Only shareable data is contributed to the open data portal. This approach is distinct from global models which tend toward an open-by-default standard, other than where disclosure is barred by data protection or intellectual property laws.

Further, even when a department designates a dataset as shareable, the Indian policy allows access to such data to be subject to registration. Under

- 20 Aradhana Sharma, "State Transparency after the Neoliberal Turn: The Politics, Limits, and Paradoxes of India's Right to Information Law," PoLAR: Political and Legal Anthropology Review 36, no. 2 (2013): 308–25, https://doi.org/10.1111/plar.12031.
- **21** Government of India, "National Data Sharing and Accessibility Policy," 2012, https://data.gov.in/sites/default/files/NDSAP.pdf
- 22 Government of India, "National Data Sharing."
- 23 See paragraph 7 in "National Data Sharing."

the NDSAP access can be granted at three levels to "open" datasets: open access, registered access (after registration or authorization), or restricted access (only after specific authorization).²⁴ This graded access diverges from the vision for open data access to be non-discriminatory and not subject to registration. Taken together, these conditions provide a large degree of control to government departments to decide whether they release datasets, the types of data, and the type of access granted. They reflect tensions between aspirations of openness and the large degree of control over data releases by government agencies enabled by these arrangements.

Another distinct aspect of India's open data policy is its assertion of the government's "ownership" of public datasets. Even though the NDSAP recognizes that such data is gathered by public investment, its preamble frames data as an "asset." The policy repeatedly mentions its role in enabling access to "Government of India-owned data." It also includes provisions that enable datasets to be priced by the "data owner" in line with government policies. In 2022, the Indian government released new policy documents that propose frameworks to replace the NDSAP. These proposals continue to assert ownership and control of such data by the government reflected in objectives of promoting "transparency, accountability, and ownership in Nonpersonal data and Datasets access [sic]" and the inclusion of provisions to charge "user charges/fees" toward the maintenance of open data services. 28

These aspects indicate dual objectives within India's open data policy. While accountability and transparency are motivating factors, the policy also frames data as an asset (owned by the government) whose value is sought to be unlocked through the OGD portal. The government's assertions of ownership and control over data must be understood against the backdrop of decades of government investment in India's vast public digital

- 24 See paragraph 8 in "National Data Sharing."
- **25** See paragraphs 1.3, 3, 4, 6 in "National Data Sharing."
- 26 See paragraph 11 in "National Data Sharing."
- 27 Government of India, "India Data Accessibility and Use Policy," Ministry of Electronics and Information Technology, February 2022, https://www.meity.gov.in/writereaddata/files/India%20Data%20Accessibility%20 and%20Use%20Policy.pdf; Government of India, "National Data Governance Framework Policy," Ministry of Electronics and Information Technology, May 2022, https://www.meity.gov.in/writereaddata/files/National-Data-Governance-Framework-Policy.pdf.
- 28 Government of India, "National Data Governance."

systems, based on a vision of the Indian government as a platform of services.²⁹ As Ranjit Singh's ethnography of the design team of one of India's core digital infrastructures revealed, members shared a vision in which the Indian state was cast as a database of citizen records, and the government as the arbiter in relation to such data.³⁰

Such imaginaries are useful to bear in mind when unpacking the role of government in India's proposals for open data and data sharing. India's position appears to be a harbinger of things to come, given the broader trend in policy documents of governments around the world that are framing data as a strategic asset or national resource whose value must be harnessed. Nevertheless, this shift indicates a departure from early non-commercial conceptions of open data. It also surfaces the difficulty of maintaining a separation between technocratic efforts to release government datasets in interoperable formats, and the political imperatives of the state as it asserts control over the same datasets.

At this juncture, it is relevant to note that the growth of the OGD platform in India has floundered in reality. The platform has suffered due to important, data-rich public agencies and departments refraining from contributing datasets to the portal, or updating past contributions.³² Even where data is shared, its reliability and accessibility varies because departments upload PDF files instead of accessible, machine-readable formats, often with missing or incomplete data.³³ This could be interpreted as one of the consequences of the broad conditionality and delegation to government departments of the choice to share datasets in the open data policy. It could also reflect basic challenges of capacity and digital capabilities within government departments in India, or deeper issues related to the disinclination of state actors to release data.³⁴ These dynamics once again reveal the difficulties of

- **29** Ranjit Singh, "Give Me a Database and I Will Raise the Nation-State," *South Asia: Journal of South Asian Studies* 42, no. 3 (May 2019): 501–18, https://doi.org/10.1080/00856401.2019.1602810.
- **30** Singh, "Give Me a Database," 516.
- **31** Clarisse Girot, "Introduction," in Regulation of Cross-Border Transfers of Personal Data in Asia, ed. Clarisse Girot (Singapore: Asian Business Law Institute, 2018).
- 32 Thejesh G N, "Open Data in India: In a Restrictive Copyright Regime, Voluntary Organisations Pitch in to Make Data Accessible," Engage 55, no. 23 (2020), https://www.epw.in/engage/article/voluntary-organisations-india-counteract-states-copyright-regime-open-data.
- 33 Natasha Agarwal, "Unleashing the Full Potential of India's 'Open Government Data' Initiative," Ideas for India, January 25, 2016, http://www.ideasforindia.in/topics/macroeconomics/unleashing-the-full-potential-of-indias-open-government-data-initiative.html; Natasha Agarwal, "Lessons from India's (Un)Open Data," Medium, January 2, 2018, https://medium.com/@agarwana3/lessonsfrom-indias-un-open-data-on-india-s-online-visa-policy-c673469a1ad3.
- 34 Isha Parihar, "On the Road to Open Data: Glimpses of the Discourse in India," World Bank Blogs, February 17, 2015, https://blogs.worldbank.org/digital-development/road-open-data-glimpses-discourse-india; Neeta Verma and M. P. Gupta, "Open Government Data: Beyond Policy & Portal, a Study in Indian Context," in Proceedings of the 7th International Conference on Theory and Practice of Electronic Governance, ICEGOV '13 (New York, NY, USA: Association for Computing Machinery, 2013), 338-41, https://doi.org/10.1145/2591888.2591949.

considering the technologies of open data as operating independently from the politics and lived realities of the datafied state.

Open Data Outside the Indian State

Open data efforts in India have complex, nonlinear trajectories: one that is documented in formal policy documentation, and another that exists outside and independent of formal structures. Informal efforts to open up datasets led by software developers and independent practitioners have always existed alongside the official initiatives.³⁵ Even prior to the release of the NDSAP in 2012, small communities of non-government organizations and individuals had begun experimenting with aggregating, using, and resharing data and insights using datasets from government and other non-government/public sources. Coding camps on accountability and transparency in public data among networks of open data and data science enthusiasts took place before the NDSAP and continue — albeit in loose collectives, to work on issues of public interest.³⁶

In recent years, clusters of volunteer-based organizations in India's tech hubs have become visible and prominent. Organizations like DataMeet, WikiData, lawresource.org, OpenStreetMap, and others were framed as "filling the gap for open data" given the floundering of the OGD portal.³⁷ Examples include DataMeet and DataKind Bengaluru building "data pipelines" of machine-readable data to enable greater accountability in governance by aggregating and analyzing budget data from public agencies.³⁸ Organizations such as Civic Data Labs and How India Lives curate data from public sources and build tools to render these datasets searchable. They are supported by web platforms, enabling users to engage with datasets through

- 35 Guneet Narula, "Collecting Open Data: Data Practices, Tools, Limitations and Politics," in Lives of Data: Essays on Computational Cultures from India, ed. Sandeep Mertia (Amsterdam, The Netherlands: Institute of Network Cultures, 2020), 108–112, https://networkcultures.org/wp-content/uploads/2020/12/LivesofData.pdf.
- 36 Accountability Initiative, "Code for India Accountability & Transparency Camp," April 1, 2011, https://accountabilityindia.in/blog/code-for-india-accountability-transparency-camp/; DataMeet, "About," Data{Meet}, March 21, 2014, https://datameet.org/about/.
- 37 Thejesh G N, "Open Data in India."
- 38 Gaurav Godhwani, "Making India's Budgets Machinable," in Lives of Data: Essays on Computational Cultures from India, ed. Sandeep Mertia (Amsterdam, The Netherlands: Institute of Network Cultures, 2020),113-127, https://networkcultures.org/wp-content/uploads/2020/12/LivesofData.pdf.

dynamic data visualizations. Such independent platforms invest time and resources to clean, structure, and combine data from the government with other datasets available online or independently sourced.³⁹

Community-led open data efforts have often responded more immediately to the needs of the public, for instance, during the COVID-19 pandemic. Several of the most effective sources of COVID-19 data came from open source collaborations and an army of volunteers who independently sourced, verified, managed, and presented data from various authorities and hospitals, due to the lack of streamlined government information. The government's reasons for the failure to release effective, centralized data are complex, given that health information is often generated at the state level within India's federal structure. Researchers are beginning to unpack the reasons for these issues, including state-level disparity in the quality of COVID-19 data reporting by public bodies and issues relating to coordination and sharing of resources. The same of the same of

The role of the official OGD portal was minimal during the pandemic. Meanwhile, despite the green shoots of community-led open data efforts being exciting, they risk becoming ad hoc or sporadic in the absence of institutionalization and consistent funding. This raises questions about the extent to which open data efforts can be truly effective in enabling accountability and civic engagement in a country like India, in the absence of genuine collaboration on open data efforts between civil society and government actors. This foregrounds the role of underlying political and social dynamics in shaping the success of technologies of open data.

- **39** Narula, "Collecting Open Data"; Godwhani, "Making India's Budgets Machinable."
- 40 Ananya Bhattacharya, "India's Best Covid Data Are Coming From Open-Source Collaboration," Quartz, January 28, 2023, https://qz.com/india/2118783/indias-best-covid-data-is-coming-from-open-source-collaboration; Manavi Kapur, "A COVID-19 Data Wish List For India," Quartz, January 17, 2022, https://qz.com/india/2113484/how-india-can-fix-its-poor-quality-covid-19-data.
- 41 Varun Vasudevan, Abeynaya Ganasekaran, Varsha Sankar, Siddarth A. Vasudevan, and James Zou, "Disparity in the Quality of COVID-19 Data Reporting across India," BMC Public Health 21, no. 1 (June 2021): 1211 https://doi.org/10.1186/s12889-021-11054-7.

Future Directions: Open Data as Technopolitical

Reflecting on India's experience with open data, it becomes evident that open data initiatives are technopolitical efforts. They reveal the difficulties of maintaining the distinction between the political aspects of opening up government data and the technocratic and technological efforts around open data that aim to release structured, machine-readable datasets.

Within such a technopolitical effort, the priorities of the datafied state matter profoundly — especially as the custodian or steward of vast troves of data gathered during its operation. Where priorities of the state shift in relation to the data it holds, they can reshape the approach or commitment to open data. A key change in the conception of government-held data emerging from the Indian case is the framing of data as an asset. This framing finds resonance in recent policy documents of other contents. The EU's Data Strategy refers to data as an "essential resource for economic growth, competitiveness, innovation, job creation and societal progress in general." The UK's recent national data strategy refers to data as a "resource" for businesses, a "vital national asset" and a "strategic asset"; ⁴³ the US Federal Data Strategy refers to data as "a strategic asset," and China has characterized big data as "a fundamental strategic resource" for the country in its 13th five-year plan (2016–2020). ⁴⁵

These statements are relevant indications of legislative intent, as seen in new proposals emerging from governments to introduce additional regulations aimed at harnessing value from sharing "non-personal data" and high-value datasets, including by structuring how they are shared across public and private actors, or across borders. ⁴⁶ As these positions are fleshed out and take effect, it will invite deeper analysis of the intersection with (and influence on) the re-shaping of open data regimes.

- **42** European Commission, "A European Strategy for Data," 2023, https://digital-strategy.ec.europa.eu/en/policies/strategy-data.
- 43 Department of Digital, Culture, Media and Sport, "National Data Strategy."
- 44 Office of Management and Budget, "Open Data Policy: M-13-13."
- 45 Communist Party of China, The 13th Five-Year Plan for Economic and Social Development of The People's Republic of China (2016-2020) (Beijing: Central Compilation & Translation Press, 2016), https://en.ndrc.gov.cn/policies/202105/P020210527785800103339.pdf.
- Asmita Verma and Anjula Gurtoo, "Evaluating Global Data Policies Around Non-personal Data," Indian Institute for Science Centre for Society and Policy, 2022, https://csp.iisc.ac.in/wp/wp-content/uploads/2022/02/Evaluating-global-data-policies-around-NPD.pdf; Olga Batura, Axel Wion, Sofia Noelle Gonzalez, J. Scott Marcus, Ilsa Godlovitch, Lukas Wiewiorra, Peter Kroon, Serpil Tas, and Nico Steffen, "The Emergence of Non-personal Data Markets," European Union, October 2023, https://www.europarl.europa.eu/RegData/etudes/STUD/2023/740098/IPOL_STU(2023)740098_EN.pdf

On the other hand, the Indian experience of open data also invites further interrogation of the expectations implicit in such technocratic initiatives regarding the citizenry in a datafied state. As some scholars have noted, shifting to the average citizen's perspective could reframe expectations of the form and conditions to which open data initiatives aspire. Attending to the capacity of consumers of the data to effectively use the data could increase attention to factors such as internet access, technical requirements to use data, the usability of interfaces, language of data, etc. Such an approach would focus on meeting the citizenry where they are, in contrast to the technocratic operationalization of open data portals to date — which envision tech-savvy civic-minded coders as their main audience, rather than the average citizen within the context of each country.

This essay also invites deeper reflection on open data initiatives' political role. For instance, the selective release of digital datasets may enable perceptions of greater transparency in government, regardless of whether this is actually the case. Governments may routinely release datasets and perform accountability in politically insignificant areas, even while remaining opaque in critical areas of governance.⁴⁹ Ultimately, this highlights the difficulty of separating discussions of technologies and formats of data releases from questions about the political imperatives that drive open data efforts (or resistance to them) within the datafied state.

- 47 Edward S. Dove, "Reflections on the Concept of Open Data," SCRIPTed: A Journal of Law, Technology, and Society 12, no. 2 (December 2015): 154–166, https://script-ed.org/article/reflections-on-the-concept-of-open-data/.
- 48 Dove, "Reflections," 159.
- 49 Yu and Robinson, "The New Ambiguity," 181