Technology and Regulation

Through thick and thin: data commons, community and the struggle for collective data governance

Author(s)	Tommaso Fia and Gijs van Maanen
Contact	tommaso.fia@uni-tuebingen.de, g.vanmaanen@tilburguniversity.edu
Affiliation(s)	Tommaso Fia is a Postdoctoral Researcher in the Chair of Law and Artificial Intelligence of the Faculty of Law of the University of Tübingen, Germany. Gijs van Maanen is an Assistant Professor at Ethics, Law, and Policy of New Data Technologies at the Tilburg Institute for Law, Society, and Technology, Tilburg University, the Netherlands.

Keywords	data commons, community, collective data governance, political philosophy, policymaking
Published	**Received**: 23 Jan 2025 **Accepted**: 27 Apr 2025 **Published**: 04 Jun 2025
Citation	Tommaso Fia and Gijs van Maanen, Through thick and thin: data commons, community and the struggle for collective data governance, Technology and Regulation, 2025, 114-136 • 10.71265/tk2x3d39 • ISSN: 2666-139X

Abstract

Collective data governance mechanisms such as data commons have recently gained traction in both theoretical and policy-oriented discussions as promising alternatives to the shortcomings of data protection law and data markets regulation. Many of these approaches centre around the idea of community as the key social institution overcoming these limitations. Yet, far less attention has been paid to the meaning, features and implications that the language of community can have for data commons. This paper investigates the relationship between data commons and the community involved therein, with a focus on the kinds and features of such communities. It argues that analysing their key characteristics and moral-political affordances furnishes key implications for devising and implementing policies on collective data governance.

1. Collective data governance, data commons, and the problem of community

1.1 Introduction

Scholars in the socio-political sciences and law have emphasised the societal or collective dimensions of the problems that big tech companies pose to society for some time now.[1] Terms like data relationality,[2] informational capitalism[3], and data colonialism[4] remind us of the more than individualistic nature of the challenges we face. In response, academics and policymakers developed data governance models and mechanisms that transcend the liberal underpinnings of data protection law and the welfarist foundations of data markets regulation.[5] Data cooperatives, data commons, data trusts, data intermediaries, community rights in data, data solidarity,[6] and Indigenous Data Sovereignty are only some of the ideas put forward. Contributions to this debate are often couched in lists of more or less practical options of collective data governance from which, among others, regulators can choose.[7] Mozilla, for instance, has published an overview of collective data governance models as a means for contributing to a shift in 'power dynamics'.[8] Similarly, the Open Data Institute and the Ada Lovelace Institute have explored frameworks and models in which individuals jointly decide what should be done, with what kinds of data, for various kinds of reasons.[9] Academic and policy researchers, too, have been composing frameworks and typologies with lists of governance options.[10] Lists like these convey the importance of alternatives, variously labelled as collective, collaborative, communal, inclusive, sustainable and so forth.

These models of data governance hail from a longstanding academic debate on how information technologies affect the way groups govern digital resources collectively.[11] Exemplary are peer-to-peer[12] and knowledge commons initiatives from the 2000s and early 2010s.[13] Collaborative materials such as OpenStreetMap[14]

1. We are aware of the multiple meanings and notions around 'data governance'. For present purposes, we broadly understand it as a system of interests, rights and responsibilities by which various actors determine "who can do what" with respect to data. For an organisational management definition, see Dimitrios Sargiotis, *Data Governance: A Guide* (Springer 2024). For a synthesis on the usage of the term in the law realm, see Charlotte Ducuing, 'Data as a Contested Commodity' (2024) 24 Global Jurist 277, 279-80.
2. Salomé Viljoen, 'Democratic Data: A Relational Theory For Data Governance' (2021) 131 Yale Law Journal 573.
3. Julie E Cohen, *Between Truth and Power: The Legal Constructions of Informational Capitalism* (OUP 2019).
4. Nick Couldry and Ulises A Mejias, 'Data Colonialism: Rethinking Big Data's Relation to the Contemporary Subject' (2019) 20 Television and New Media 336.
5. Viljoen (n 2); Ducuing (n 1); Tommaso Fia, 'Non-personal Data in the EU: Governance, Law and Justifications' (Cambridge University Press, forthcoming). By 'liberal underpinnings' we refer to normative accounts of data protection law that focus on individual rights and personal freedoms as foundational for protecting individuals' autonomy. By 'welfarist foundations' instead we refer to those perspectives that posit that socio-political institutions should maximise the welfare, or well-being, of society as a whole. See also Blayne Haggart and Natasha Tusikov, *The New Knowledge: Information, Data and the Remaking of Global Power* (Rowman & Littlefield 2023) 233-34.
6. Barbara Prainsack and others, 'Data Solidarity' (2022) Governing Health Futures White Paper December 2022 https://www.governinghealthfutures2030.org/wp-content/uploads/2022/12/DataSolidarity.pdf accessed 23 January 2025.
7. Jamie Duncan, 'Data Protection Beyond Data Rights: Governing Data Production Through Collective Intermediaries' (2023) 12 Internet Policy Review 1.
8. Mozilla Insights, Jonathan van Geuns and Anna Brandusescu, 'Shifting Power through Data Governance" (2020) Mozilla Paper https://assets.mofoprod.net/network/documents/ShiftingPower.pdf accessed 18 December 2024.
9. Adalovelace Institute, 'Participatory Data Stewardship: A Framework for Involving People in the Use of Data' (2021) Adalovelace Institute Report www.adalovelaceinstitute.org/report/participatory-data-stewardship/ accessed 18 December 2024; Open Data Institute, 'Data Trusts: Lessons from Three Pilots' (2019) Open Data Institute Report https://theodi.org/article/odi-data-trusts-report/ accessed 18 December 2024. The not-for-profit Connected By Data is conducting similar research and work (https://connectedbydata.org/about, accessed 23 January 2025).
10. Marina Micheli and others, 'Emerging Models of Data Governance in the Age of Datafication' (2020) 7 Big Data and Society 1; Joao Lopez Solano and others, *Governing Data and Artificial Intelligence for All: Models for Sustainable and Just Data Governance* (European Parliament 2022) https://www.europarl.europa.eu/RegData/etudes/STUD/2022/729533/EPRS_STU(2022)729533_EN.pdf accessed 23 January 2025; Marina Micheli and others, *Mapping the Landscape of Data Intermediaries: Emerging Models for More Inclusive Data Governance* (Publications Office of the European Union 2023).
11. See eg Felix Stalder, *The Digital Condition* (Polity Press 2018), ch 3.
12. Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (Yale University Press 2006).
13. Brett M Frischmann, Michael J Madison and Katherine J Strandburg, 'Introduction: Governing Knowledge Commons' in Brett M Frischmann, Michael J Madison and Katherine J Strandburg (eds), *Governing Knowledge Commons* (OUP 2014).
14. https://www.openstreetmap.org.

and Wikipedia[15] are some of the practical cases stemming from these frameworks, bringing together diverse intellectual resources and cultural materials.[16] Practical and local initiatives abound in the realm of data, as mentioned above. Examples such as Midata,[17] SalusCoop[18] and JoinData[19] present themselves as 'data cooperatives' based on the actions and interactions of individuals that share and pool data together to create a common ground 'for mutual benefits'.[20] Calls for Indigenous Data Sovereignty in Canada, Australia, New Zealand, India, and the United States[21] are also illustrative of these burgeoning lines of inquiry in collective data governance.

1.2 'Governing' collective data governance

This paper contributes to debates on collective data governance by investigating the relationship between data commons and the community involved in commons-based data governance, with a focus on the kinds and features of said community.[22] We argue that understanding 'community' contributes to gaining a more thorough understanding of the moral-political affordances of collective data governance, which in turn proves helpful when devising and implementing data governance tools and measures through policy.

The remainder of the section explores four problems associated with policymaking on collective data governance against which we build our inquiry: the emphasis on *communities* as important actors involved in data governance; the presentation of *models, blueprints, and frameworks*; the ordering of these frameworks and models into *lists* of options to choose from; and the emphasis on *data* as the object to be governed.

1.2.1 On 'community'

Various literatures in collective data governance frequently conjure up the notion of community.[23] What this exactly means when they do so is ambiguous and deserves attention.[24] The term 'community', for instance,

15. www.wikipedia.org.
16. Frischmann, Madison and Strandburg (n 13) 2-6.
17. https://www.midata.coop.
18. https://www.saluscoop.org.
19. https://join-data.nl.
20. Chih-hsing Ho and Tyng-ruey Chuang, 'Governance of Communal Data Sharing' in Angela Daly, S Kate Devitt and Monique Mann (eds), *Theory on Demand #29: Good Data* (Institute of Network Cultures 2019).
21. Diane E Smith, 'Governing Data and Data for Governance: The Everyday Practice of Indigenous Sovereignty' in Tahu Kukutai and John Taylor (eds), *Indigenous Data Sovereignty: Toward an Agenda* (ANU Press 2016).
22. We consider data commons to be one key development of recent work on collective data governance. For present purposes, we understand data commons as mechanisms and arrangements composed of a (a) community engaged in the (b) governance of both the data it produces and itself in a (c) sustainable manner. This working definition is broad enough to encompass initiatives that label themselves as eg data cooperatives, data stewardships or data trusts, though excludes initiatives that focus nor or to lesser extent on data in their governance. This paper homes in on the notion of community (a), leaving aside matters on the object of governance in data commons (b) and sustainability (c). Suffice it to say that sustainability is a normative benchmark applying to the sustainable (re)production of data, the self-governance of the community, and the environment or ecosystem in which the data commons is situated. For more on this definition of 'data commons', see generally Gijs van Maanen, Charlotte Ducuing and Tommaso Fia 'Data Commons' (2024) 13 Internet Policy Review 1; Charlotte Ducuing, Tommaso Fia and Gijs van Maanen, 'Legislating on Data Commons: What It Should (Not) Be' (*Platform Cooperativism Consortium*, 3 April 2024) https://platform.coop/blog/legislating-on-data-commons-what-it-should-not-be/ accessed 23 January 2024. More generally commons-based approaches to data governance, see Tommaso Fia, 'An Alternative to Data Ownership: Managing Access to Non-Personal Data through the Commons' 21 Global Jurist 181.
23. Bruno Carballa Smichowski, 'Data as a Common in the Sharing Economy: A General Policy Proposal' (2016) CEPN Document de travail no. 2016-10 https://hal.science/hal-01386644/file/Carballa%20Smichowski%20Bruno%20(2016)%20-%20Data%20as%20a%20common%20in%20the%20sharing%20economy%20a%20general%20policy%20proposal%20(CEPN%20WP).pdf accessed 6 January 2025; Alek Tarkowski and Zuzanna Warso, 'Commons-Based Data Set Governance for AI' (2024) Open Future Paper, 20 https://openfuture.eu/wp-content/uploads/2024/03/240325_Commons_Based_Data_Set_Governance_for_AI.pdf accessed 6 January 2025; Robert L Grossman, 'Ten Lessons for Data Sharing with a Data Commons' 10 Scientific Data 120; Dan Wu and others, 'How Data Governance Technologies Can Democratize Data Sharing for Community Well-Being' 3 Data & Policy e14; Michael M Bühler and others, 'Unlocking the Power of Digital Commons: Data Cooperatives as a Pathway for Data Sovereign, Innovative and Equitable Digital Communities' 3 Digital 146.
24. Prainsack and others (n 6), which draws attention to the understudied differences between 'communities' related to natural resources, and 'communities' in the 'digital sphere', 40.

has been employed to refer to groups of affected people when it comes to data-related harms,[25] individuals that band together to enhance bottom-up participatory data governance,[26] to urban dwellers that try to find data-driven solutions to their needs,[27] and to the socio-political cultures of groups affected by and participating in data governance in the Global South.[28]

Yet, policy-oriented analyses on collective data governance usually refrain from carefully examining community as a key component of data governance. Specifically, they do not put any substantial effort into trying to grasp the concept in a way that goes beyond mere analytical contingency.[29] Using the concept of community nearly interchangeably ends up confusing the stakes involved in collective data governance.[30] Different (kinds of) communities, each with their own ideas and conceptions of what defines a community, reflect diverse understandings, ideals, and beliefs about how to live together. The interests of one 'community' are rarely comparable to others, and neither are the stakes involved in doing communal data governance well. These stakes and credentials – and hence the *existential importance* of some instances of collective data governance[31] – need explication by paying substantive attention to the political dimensions that models of collective data governance feature – or, in other words, what data governance means and implies for how people come and live together.[32]

1.2.2 On models, blueprints, and frameworks

Scholars in collective data governance are keen to present data commons in the form of ideal reforms of existing local and wider legal systems.[33] Such models, blueprints and frameworks[34] usually detail the

25. Margot E Kaminski and Gianclaudio Malgieri, 'Impacted Stakeholder Participation in AI and Data Governance' (2024) Yale Journal of Law and Technology (forthcoming). Cf Shelly Kreiczer-Levy, 'The Data Crowd as a Legal Stakeholder' (2024) 44 Oxford Journal of Legal Studies 645, speaking of 'data crowd'.
26. Bruno Carballa Smichowski, 'Alternative Data Governance Models: Moving Beyond One-Size-Fits-All Solutions' (2019) 54 Intereconomics 222, 223 (briefly mentioning the concept of community in reference to 'crowdsourced data commons').
27. Michiel de Lange, 'The Right to the Datafied City: Interfacing the Urban Data Commons' in Paolo Cardullo, Cesare Di Feliciantonio and Rob Kitchin (eds), *The Right to the Smart City* (Emerald 2019).
28. Singh, Aditya, and Divij Joshi. "The Histories, Practices and Policies of Community Data Governance in the Global South." It For Change, 2023. https://itforchange.net/sites/default/files/2403/ITFC_UDVC_Community%20Data%20Governance.pdf.
29. Carballa Smichowski (n 26) 226, arguing that '[t]he community is hence at the core of the notion of a common', but never defining what they mean by it. The same applies to Alek Tarkowski and Jan Zygmuntowski, 'Data Commons Primer: Democratising the Information Society' (2022) Open Future Paper 26; Seliem El-Sayed, Ilona Kickbusch and Barbara Prainsack, 'Data Solidarity: Operationalising Public Value Through a Digital Tool' (2025) 20 Global Public Health 1; Jan Krewer, 'From Open Access to Collective Governance Two Decades of Digital Commons Policies in the European Union' (2025) Open Future and NGI Commons Paper https://openfuture.eu/wp-content/uploads/2025/01/250129_FromOpenAccesstoCollectiveGovernance.pdf accessed 29 April 2025. Lina Dencik, 'Rescuing' Data Justice? Mobilising the Collective in Responses to Datafication' [2025] Information, Communication & Society 1 instead utilises the term 'collectivity' in an unclear fashion. On further research needed on 'community', see Prainsack and others (n 6) 40, pointing out that defining community in benefit sharing agreements as an alternative way of data governance 'could be a difficult task that deserves dedicated analysis'.
30. See for a similar worry about the ambiguous usage of the notion of 'community' in both policy and theory, Elizabeth Frazer, *The Problems of Communitarian Politics: Unity and Conflict* (OUP 1999). Our paper is indebted to many of the questions Frazer' asked about the concept in her book.
31. See generally Sections 3.3 and 4.
32. One of us defined 'politics' within the context of open data as having to do with 'the capacities of collectives to engage in self-transformation, to construct worlds and realities, and to start something new' (Gijs van Maanen, 'From Communicating to Distributing: Open Government and Open Data in the Netherlands' (PhD thesis, Tilburg University 2023) 58).
33. An early 'data commons policy proposal' is Carballa Smichowski (n 23). More recent examples are, among others, Jan Zygmuntowski, Laura Zoboli and Paul F Nemitz, 'Embedding European Values in Data Governance: A Case for Public Data Commons' (2021) 10 Internet Policy Review 1 (who discussed various data commons models and proposed a 'public data commons' model for the regulation of data of EU member states); Janis Wong, Tristan Henderson and Kirstie Ball, 'Data Protection for the Common Good: Developing a Framework for a Data Protection-Focused Data Commons' (2022) 4 Data & Policy 1 (developing a 'data protection-focused data commons' framework); Jong C Jeong and others, 'Local Data Commons: The Sleeping Beauty in the Community of Data Commons' (2022) 23 BMC Bioinformatics 386 (who put forward a medical data commons model); Stefano Calzati and Bastiaan van Loenen, 'A Fourth Way to the Digital Transformation: The Data Republic as a Fair Data Ecosystem' (2023) 5 Data & Policy 1 (who combined ideas on data ecosystems and data commons to develop a data governance framework called 'data republic'); Jaya Deshmukh and Alessandro Galtieri, 'The Case for Data as a New Common Good: The Example of Water' in Preeti Shroff-Mehta and others (eds), *The Routledge Handbook of Global and Digital Governance Crossroads* (Routledge 2024) 374 (who argue for new data governance frameworks that should allow for the flowing of data 'like water').
34. While Ostrom differentiated between models, frameworks, and theories, the literature on data governance more generally often uses these terms interchangeably.

necessary legal and technical conditions of a particular data sharing arrangement. However, within the context of collective forms of data governance the popularity of such models presents several thorny questions.

In particular, there is the paradoxical nature of arguments in favour of self-governance itself.[35] Although one thing is to review and take stock of the various real-world initiatives and arrange them in options for governance, putting them forth as blueprints for legal reform is a completely different story. How to evaluate the act of prescribing with the help of frameworks how individuals and communities should govern data and themselves? To what extent are such ideal models legitimate for the people to whom they refer, if applied from the top down? Furthermore, using blueprints acquires a potentially problematic character if one considers Elinor Ostrom's seminal work on the commons. In fact, she made it clear that her work on the commons, and the 'design principles' distilled from her empirical research in particular, cannot directly be transformed into a blueprint or governance model/framework.[36] Surprisingly, many have been doing exactly this, and by doing so seem to blend Ostrom's empirics-based conclusions about non-digital commons with policy recommendations and governance solutions for the digital realm.[37] This warrants critically reviewing what can be expected from the commons-based initiatives as solutions to certain problems.

1.2.3 On lists and inventories

Policy-oriented contributions to the literature on collective data governance often arrange models and frameworks into lists and inventories,[38] which typically feature 'items' such as data trusts, data stewardships, data pools etc.[39] This is undoubtedly important work to be done because it sheds light on the 'state of the art' in research and practice – something to be appreciated in a domain where 'one size fits all' solutions are not expected to be desirable.[40] But the fact that there is no one single model, framework, or ideal to be applied or implemented everywhere, does not mean that each and every proposal is equally valuable and praiseworthy in terms of its moral-political underpinnings and implications.

First, lists suggest that institutionalised policymakers and regulators are free to *choose* any of the options from a 'data governance menu' of some sort, yet without passing substantive moral or legal judgement regarding the policy choices made. Major contentions and debates on data governance concepts holding high moral-political stature are frequently brushed over. In their review of the literature on data intermediaries, Micheli and her coauthors view the potential for an alternative in such intermediaries in that they 'can contribute to promoting a fairer data ecosystem, by strengthening the power of data holders and data subjects and by fostering data sharing for both economic growth and societal wellbeing'.[41] Their

35. Wong and others (n 33), in their discussion on commons, emphasise a commons' autonomous and bottom-up character (while drawing from Ostrom).

36. Elinor Ostrom, Marco A Janssen and John M Anderies, 'Going beyond Panaceas' (2007) 104 Proceedings of the National Academy of Sciences 104 15176; Brett M Frischmann, 'Two Enduring Lessons from Elinor Ostrom' (2013) 9 Journal of Institutional Economics 387; Daniel H Cole, 'Learning from Lin: Lessons and Cautions from the Natural Commons for the Knowledge Commons' in Brett M Frischmann, Michael J Madison, and Katherine J Strandburg (eds), *Governing Knowledge Commons* (OUP 2014); Michael J Madison, 'Knowledge Commons Past, Present, and Future' (2024) 28 Lewis & Clark Law Review 303.

37. See, for example, Anouk Ruhaak and others, 'A Practical Framework for Applying Ostrom's Principles to Data Commons Governance' (2021) Mozilla Foundation https://foundation.mozilla.org/en/blog/a-practical-framework-for-applying-ostroms-principles-to-data-commons-governance/ accessed 23 January 2025; Wong and others (n 33); Sara Marcucci and others 'Mapping and Comparing Data Governance Frameworks: A Benchmarking Exercise to Inform Global Data Governance Deliberations' (2023) The GovLab Paper https://unsceb.org/sites/default/files/2023-05/Annex%201%20-%20Mapping%20and%20Comparing%20Data%20Governance%20Frameworks.pdf accessed 23 January 2025.

38. The same caveat in fn 34 applies here. We use terms like 'inventories' and 'lists' interchangeably.

39. See among others Marcucci and others (n 37); Marcucci and others. 'Informing the Global Data Future: Benchmarking Data Governance Frameworks' (2023) 5 Data & Policy 1; Stefaan G Verhulst, Hannah Chafetz and Andrew Zahuranec, ''Data Commons': Under Threat by or The Solution for a Generative AI Era? Rethinking Data Access and Reuse' (*Data & Policy Blog*, 30 May 2024) https://medium.com/data-policy/data-commons-under-threat-by-or-the-solution-for-a-generative-ai-era-rethinking-9193e35f85e6 accessed 23 January 2025. For an early review of various of these models, see Micheli and others (n 10). See also Solano and others (n 10).

40. Carballa Smichowski (n 26) 227. Cf Azadeh Akbari, 'Situating Data: A Critique of Universalist Approaches to Data' in Tess Osborne and Phil Jones (eds), *A Research Agenda for Digital Geographies* (Edward Elgar 2023) 127-132.

41. Micheli and others (n 10) 41.

report's main focus on business or economic considerations of various data governance models – while undoubtedly important – pushes to the side a more substantive analysis and comparison of key values such as 'fairness', 'power', 'economic growth' and 'societal wellbeing' present in the analysed frameworks.

Lists imply, secondly, that participants in data governance arrangements are *free* to choose how to organise their lives. In other words, lists (but also models) tend to presuppose that those expected to be involved in governance have the capacity to do so to varying degrees. This is not something to be expected, especially not from those most disadvantaged by tech and data-fueled policy.[42]

As a result, lists (and the models therein) tend to prioritise the techno-solutionist[43] ways of doing collective data governance while downplaying moral, political, legal, but also practical dimensions that are arguably important to evaluate whether these solutions are appropriate for the specific problems in question. Hence the tendency to present communities, including commons, as socio-technical solutions for problems caused by eg malfunctioning public regulation.[44]

1.2.4 On data

Governance solutions presented in these lists are usually *data-centric*. In other words, they tend to view data as a regulatory object, abstracting them from context and centring on them to design governance responses.[45] While data are an important element of many of the problems present in our digitised societies, simply focusing on them ends up obscuring the implications of data governance models for those that put them in place, ie individuals and groups. In most cases, data are rather means towards certain ends,[46] and ought not to be confused with the aims and purposes that collective data governance solutions are intended to pursue.

1.2.5 In sum

The aforementioned four problems impinge on an area of academic and policy research that focuses on forms of supposedly bottom-up societal organisations. To varying degrees, their combination reinforces forms of policy-making and implementation in which experts and political-technical elites impose 'solutions' onto others that are led by these experts and elites, the latter presuming to know how data governance should best be (technically) devised. In turn, these preempt forms of social organisation by communities themselves, and also assume that citizens and communities are capable of (self-)organising.[47]

Our paper thus responds to well established trends in theorising and policymaking on data governance, and contributes to both earlier and more recent lines of work that emphasise in various ways the importance of context and politically sensitive nature of research on collective data governance.[48] We argue that focusing on community ultimately offers crucial insights into how policy responses can be adjusted and calibrated to address the problems raised in the above subsections, considering the specific characteristics and stakes of the collective data governance system at hand.

---

42. Azadeh Akbari, 'The Politics of Data Justice: Exit, Voice, or Rehumanisation?' (2024) Information, Communication & Society 1, 11.
43. Lotje E Siffels and Tamar Sharon, 'Where Technology Leads, the Problems Follow. Technosolutionism and the Dutch Contact Tracing App' (2024) 37 Philosophy and Technology 125.
44. Nadya Purtova and Gijs Van Maanen, 'Data as an Economic Good, Data as a Commons, and Data Governance' (2024) 16 Law, Innovation and Technology 1.
45. Charlotte Ducuing, 'Beyond the Data Flow Paradigm: Governing Data Requires to Look beyond Data' [2020] Technology and Regulation 57; Maanen and others (n 22); Ducuing and others (n 22); Nadezhda Purtova and Bryce Clayton Newell, 'Against Data Fixation: Why 'Data' Fails as a Regulatory Target for Data Protection Law and What to Do About It' (2024) SSRN Paper http://dx.doi.org/10.2139/ssrn.4878564 accessed 18 December 2024.
46. Cf Brett M Frischmann, *Infrastructure: The Social Value of Shared Resources* (OUP 2012) (defining infrastructures as means to certain ends); Purtova and Maanen (n 44).
47. We draw here from a criticism of 'policy' by Graeber (David Graeber, *Fragments of an Anarchist Anthropology* (Prickly Paradigm Press 2004) 9) and Prainsack's discussion of the limitations of 'engineering'-modelled forms of policy-making (Barbara Prainsack, 'The Roots of Neglect: Towards a Sociology of Non-Imagination' 13 Tecnoscienza: Italian Journal of Science & Technology Studies 13. Our research adds here to previous critiques of the ideal or model-based nature of research on the commons. See, for example, Jacqueline Hicks, 'The Future of Data Ownership: An Uncommon Research Agenda' (2023) 71 The Sociological Review 544, and the references in fn 36 above.
48. Eg Micheli and others (n 10); Prainsack and others (n 6); and the references in fn 36 above.

1.3 Questions, relevance, and structure

Our paper is concerned with the following overarching question: what is the relevance of the concept of community to data commons policy making? We approach an answer to it by breaking it down into the following sub-questions:

1. What is the relationship between data commons and community?
2. What kinds and characteristics of community emerge in the data commons literature?
3. What are the implications for policymaking when taking the (especially moral-political) characteristics of community into consideration when devising policy?

Question no. 1 will be answered in the second section of this paper. After briefly touching upon the concept of community in social and political sciences, Section 2 introduces the relationship between community and (data) commons with the help of a debate between commons scholar Elinor Ostrom and colleagues Sara Singleton and Michael Taylor (Section 2.1). We then unpack the components of 'community' in data commons theories by relying on network scholar Taylor Dotson's analysis of 'networked communities'[49] (Sections 2.2-2.4), and situate them on a 'spectrum' at which various types of community in view of their degree of 'thinness' or 'thickness' can be located. Some communities are relatively 'thin', which allows, for instance, members to easily leave them. Others are more 'thick', which on the contrary increases the 'exit costs' of individual members, and hence the importance of organising their collective governance well.

Question no. 2 will be answered in Section 3. Here we are especially interested in the kind of 'community' present or taken into consideration in three literature strands on data commons (the Governing Knowledge Commons framework, radical-relational strands of data commons thinking, and Indigenous Data Sovereignty initiatives and movements).

Section 4 ties the inquiry on community back to debates on data commons policy-making through answering the third research question. Based on the kinds and features of community in data commons theorisations, it is possible to extract important lessons for policymaking on collective data governance vis-à-vis the problems outlined in Sections 1.2.1-1.2.4. Insights into the types and characteristics of community, we will come to realise, aid in navigating what we term 'commonswashing' and 'community-washing' (Section 4.1), orient the development of data governance models (Section 4.2), make sense of more or less 'freely chosen' options of lists (Section 4.3), shift the focus from just data itself towards their distribution (Section 4.4). Section 5 concludes.

2. Unpacking the community in data commons

The concept of community has a long story in social and political science. From discussions in 19th century sociology on society's transformation from *Gemeinschaft* ('community') to *Gesellschaft* ('society'), to worries in the 1920s and 1930s about the downsides of an increasingly urbanised world, 'community' has been a point for discussion for a long time.[50] Although that certainly does not mean that community always had the same meaning, it is possible to – following Nikolas Rose's work – identify three key changes brought about by the reemergence and intensification of debates on 'community' since the 1960s.[51]

Firstly, did these debates lead to a reconceptualisation of *space*. The notion of community fragmented and localised the areas in which political decisions had to be made through the increase of the number of political actors to be taken into consideration.[52] They, secondly, introduced *ethical* questions about

49. Taylor Dotson, *Technically Together: Reconstructing Community in a Networked World* (MIT Press 2017).
50. Nikolas Rose, *Powers of Freedom: Reframing Political Thought* (CUP 1999), 172; Felix Stalder, *The Digital Condition* (Polity Press 2018), 81-85.
51. Peter Miller and Nikolas Rose, *Governing the Present: Administering Economic, Social and Personal Life* (Polity 2008); Rose 1999 (n 50) ch 5.
52. Miller and Rose 2008 (n 51) 90. For a recent contribution on this, see Roberta Fischli and James Muldoon, 'Empowering Digital Democracy' (2024) 22 Perspectives on Politics 819.

the responsibilities of individuals to the communities to which they were thought to belong, and the responsibilities of communities as collective actors toward themselves and other new political actors. These new responsibilities either accompanied or replaced older duties citizens had vis-à-vis states.[53] Thirdly, questions were brought up about the meaning and importance of *identification* with certain communities and motivated asking who is in charge of making people identify with this or that community.[54]

Community is, as Rose writes, 'Janus-faced': while on the one hand does it presuppose the existence of certain collectives or groups, on the other hand it is accompanied by a lot of work to bring these communities into existence.[55] This work was and is done by academics and activists that, through this rendering of community as 'the third sector', seek to take back space from controlling governments and bureaucrats, but also by governments themselves when they make their policies more aligned with specific communities.[56]

Accordingly, communities become objects of academic and policy research, resulting in what Rose calls 'government through community'. While from one angle community could be the solution to a problem; from the other, it is an element of governmental policy aimed at incorporating spaces previously considered to be 'private' underneath the warm but sometimes suffocating blankets of regulation and reform. Because 'community' is often considered to be both the diagnosis of a problem and its solution,[57] it is key to explicate who is using it, who is trying to bring it about, and how such forms of community governance alter the characteristics and relationships between market and state.

In present times, the notion of community has not disappeared. In fact, it has gained traction in debates around data commons, as Section 1.2 has shown.[58] Seeking to answer our first research question, the subsequent sections expand on the relationship of (data) commons and community.

2.1 Commons and community: a problematic interplay

One key element of most, if not all, theories and proposals to develop data commons is the idea of 'community'. Examples of similar definitions abound. For Mélanie Dulong de Rosnay and Felix Stalder, for instance, (digital) commons are best understood as

> 'a plurality of people (a community) sharing resources and governing them and their own relations and (re)production processes through horizontal doing in common, commoning'.[59]

Others use the concept of community to refer to the groups engaged in the institutionalised and (in)formal governance of a resource.[60] But what does the idea of community add to conceptualising the commons?[61] Is it one of its core components ? Is it just a hollow term? Or is it a useful identifier of the commons itself?

Questions and discussions on the role of the community in the commons and their interplay are not new. In an illuminating debate between Elinor Ostrom, Sara Singleton and Michael Taylor, the authors discussed whether using the concept of 'community' adds to how a 'commons' (in the Ostromian sense) can be understood. The debate revolved around a disagreement regarding which elements of a commons contribute to successful resource governance. In their paper, Singleton and Taylor argue that in most parts of Ostrom's empirical research on the commons, Ostrom is not fully able to *explain* why a particular form of collective resource management is successful. More specifically, according to Singleton and Taylor, it

53. Miller and Rose 2008 (n 51) 91.
54. ibid.
55. ibid 92.
56. Rose 1999 (n 50) 175.
57. ibid 175.
58. For a recent analysis on many of the tensions discussed by Rose in the urban context, see Igor Calzada, 'Deciphering Smart City Citizenship: The Techno-Politics of Data and Urban Co-Operative Platforms' (2018) 63 RIEV International Journal on Basque Studies 42.
59. Mélanie Dulong de Rosnay and Felix Stalder, 'Digital Commons' (2020) 9 Internet Policy Review 1.
60. Michael J Madison, 'Tools for Data Governance' [2020] Technology and Regulation 29; Frischmann 2023 (n 36) 401 ('[c]ommons is an institutionalized community practice, a form of community management or governance'); Smichowski (n 23) 26.
61. Compare here Frazer's critical analysis of the usage of 'community' in political and philosophical debates in Frazer (n 30).

is unclear whether the eight 'design principles' put forward by Ostrom (and which are reused in many recent Ostrom-based work on digital and data commons)[62] are 'features or consequences' of the solution a commons offers. Is, for example, the presence of effective monitoring mechanisms (design principle no. 4) best understood as an *explanation* of the success of a commons, or a *description* of the situation?[63] Singleton and Taylor argue that the successful functioning of a commons is better explained by the extent to which a group shares 'community'. Community here refers to a

> '... set of people (i) with some shared beliefs, including normative beliefs, and preferences, beyond those constituting their collective action problem, (ii) with a more-or-less stable set of members, (iii) who expect to continue interacting with one another for some time to come, and (iv) whose relations are direct (unmediated by third parties) and multiplex.'[64]

When a commons has the characteristics of community thus understood, its success in governing a resource is higher in comparison with commons presenting a lesser degree of community. Even more fundamentally, a high sense of community shared by resource users makes developing endogenous (ie internal to the community) governance solutions more likely than in situations where this is sparse or missing.[65]

In her rejoinder to the other authors, Ostrom explains the circumstances in which 'community' would be a significant factor to take into consideration when analysing the success of commons. Key here is that Ostrom does not disagree with the importance of 'community' in Singleton and Taylor's sense. Also for her, community is an important ingredient of the success of a commons, though not the only one. Also (and thus over and beyond 'community') to be considered are, for instance, the characteristics of the resources to be governed, exogenous economic factors, and the actions of external political actors.[66] Not only how 'community' is and should relate to all sorts of 'internal' and 'external' factors is an important question to answer, but also how chronologically speaking these factors interact is a key component of one's analysis of a commons. Ostrom, for instance, explains that it is possible to solve common-pool resource ('CPR') problems with the help of eg governmental policies facilitating the collaboration of those implicated in the CPR. In such circumstances, the characteristics of 'community' are not present in their entirety from the very start, but develop over time and are better to be understood as the result of governmental policy. However, if one is interested in governing such a CPR for a longer period of time, the likelihood that the shared sense of 'community' in the form of for example shared understandings and beliefs plays a pivotal role, increases. Long-term successful commons-based governance, thus, requires some degree of community, Ostrom's argument suggests.

While the above debate cannot be reconciled under a common conceptualisation of community, both accounts suggest that community, as an empirical phenomenon, is an integral element of the commons. So far, we partially answered question no. 1 stated in Section 1.3. But in what way does community specifically matter for data commons? Section 2.2 answers this question by unpacking the various features and components of community in data commons.

2.2 Elements of networked communities

While Singleton and Taylor's conception of community revolved around the direct or unmediated sharing of beliefs by a relatively stable group of individuals for a longer period of time, network scholar Taylor Dotson investigated the concept of community in digital contexts and showed the various 'technologically

62. See eg Wong (n 33)
63. Sara Singleton and Michael Taylor, 'Common Property, Collective Action and Community' (1992) 4 Journal of Theoretical Politics 309, 314. Empirically minded readers should bear in mind that the distinction between explanations and description is a topic of complex debate and should not be taken for granted. See for a provocative starting point in this debate eg Bruno Latour, Reassembling the Social: An Introduction to Actor-Network-Theory (OUP 2005) 141-155, and, for a recent contribution to it, Noortje Marres, 'Articulation, or the Persistent Problem With Explanation' (2024) 75 The British Journal of Sociology 354, 354–359.
64. Singleton and Taylor (n 63) 315.
65. ibid 319-20.
66. ibid 345-47.

enabled forms of togetherness'[67] that connect people to one another in digital environments ('networked communities'). This section will complete the response to question no. 1 on the relationship between community and data commons by presenting what characteristics communities can generally have. To do so, we rely on Dotson's analysis of community, which locates different kinds of community on a spectrum ranging from 'thin' to 'thick'.[68] His spectrum provides a solid basis for analysing the kind of community data commons may embody, as we will show in Section 3.

The seven dimensions of community considered by Dotson are the following:[69]

1. The presence of social ties,
2. The relational exchanges and support among members,
3. The talking between them,
4. The symbolic and psychological sense associated with being part of a community,
5. The presence of communal economic activities,
6. More or less common political and justice conceptions, and
7. A shared moral order.[70]

A first characteristic of communities is the presence of various social ties.[71] Social ties hold different degrees of intensity, depending on how thick or thin the community is. For thicker communities, these are 'dense', 'multiplex', and 'systematic': community members tend to know one another whether directly or indirectly, are connected in different ways, and often in a non-instrumentalist fashion. Moreover, their relationships are sometimes ordered on a higher level in families, clans, or bands. Thinner communities, by contrast, are more 'transitory', contract-based, and fragmented. Illustrative here are urban environments in which community members' relationships are more superficial, less intimate, and often materialise in one-off barters resulting in commercial benefit for those involved.

Secondly, specific practices of exchange and support feature in communities.[72] The degree of reciprocity distinguishes thick communities from thin communities. In thick communities, relationality conjures up unspecific, non-immediate reciprocity that goes beyond mere remuneration of an arrangement or satisfaction of egoistic gains. For example, volunteering at a nursing home or at a healthcare facility illustrates this kind of prosocial behaviour that characterises thick communities. In thinner ones, reciprocity takes the form of contractual-like relationships in which one expects to receive something in return for one's provision of goods, services or activities.[73]

Thirdly, Dotson identifies communication or talking as an important element of communities.[74] Key criteria for a community's location on the thick-thin spectrum are 'the frequency and intimacy of face-to-face talking'.[75] The more frequent and the more intimate the types of communication are, the more likely the kind of community in question is on the 'thick' end of the spectrum. Thin(ner) communities are often characterised by less frequent and intimate, and even non-face-to-face forms of communication.

A fourth characteristic of community is the symbolic and psychological importance of membership for its members.[76] The kind of community one is a member of determines the kind of belonging one feels and experiences towards it, as well as one's identity in terms of a shared collective mental construct. There are complicated questions to be asked about how individuals start to have the experience that they belong to

67. Dotson (n 50) 5.
68. ibid ch 3.
69. ibid.
70. ibid 60.
71. ibid 34-36.
72. ibid 36-39.
73. ibid 36-39.
74. ibid 39-40.
75. ibid 40.
76. ibid 40-45.

a larger societal structure (eg the nation-state, the queer community), and whether these experiences are to be qualified as mere symbolism, possibly to be leveraged for commercial purposes. Dotson emphasises that the kind of identification within and importance ascribed to a communal identity is stronger, genuine, and less exploitative in thicker communities. Regardless of the intricacies around the issue of communal identification, an initial question to ask is whether exiting a community would damage or harm an individual – how could not being a member of one's family Whatsapp group, for instance, affect one's relationship with that community? If not, one is probably on the thin side of the spectrum. In thin communities, the low presence of a shared psychological sense of the community leaves, according to Dotson, more leeway for commercial and other types of influence (even manipulation) affecting the autonomous or independent character of community members.[77]

Fifthly, the economic practices of its members also characterise a community.[78] At bottom, arranging economic practices in one way or another indicates that a community is able to maintain its inner relationships according to shared understandings of individual and public welfare. For communities on the thick side of the spectrum, communal relationships of exchange, mutual aid, and the already introduced forms of generalised reciprocity, take priority. Thin communities, by contrast, usually feature ways of thinking geared toward the maximisation of individual preferences. This illustrates the intimate connection between the distribution of resources in society with liberal accounts that prioritise and value individuals' capacity to decide for themselves on how to lead a good life.[79] Exemplary here is shopping as a mode of interaction in which one does not have to know the other, and one only interacts for a short period of time.[80]

Dotson's sixth dimension is concerned with a community's legal-political constitution.[81] As for the former, thin communities are more inclined to rely on representative institutions, causing members to abstract themselves from a shared perception of public issues, which are then delegated to these institutions. Opponents of thin communities would argue that these rely on almost impersonal, neutral institutions that are tasked with dealing with matters of common interest for them. Thicker communities, by contrast, are more concerned with finding ways to promote participatory forms of governance. In fact, thick communities 'govern behavior and resolve disputes in ways that preserve or enhance participants' relational bonds'.[82]

A community's political structures are interrelated with its theories and practices of what law and justice amount to. Whereas thick polities are more inclined to safeguard harmonious relationships within the community itself through political talking and interactions, thin communities usually resort to neutral institutions that adjudicate disputes through neutral, impartial systems such as judiciaries. A good illustration of the former conception of justice is how a conflict between different families was handled in the aftermath of a car accident in which a young man was killed. The informal handling between families points to the resolution of conflict without involving formal legal authorities – something that in thin polities would be accepted less easily.[83]

Lastly, being part of a community involves being part of 'the creation, maintenance, and evolution of shared moral values concerning the 'right' way to live and how to make sense of everyday practices.'[84] It concerns, in other words, ideas on how to live together that inform who one thinks one is. In thin communities, the identities of its members are relatively independent from the community under consideration - individual identity 'precedes' community.[85] This is due to the fact that thin conceptions of life promote individual well-being through theories of justice that[86] emphasise the moral equality of individuals, and therefore

77. ibid 42-45. Cf Stephan A Marglin, *The Dismal Science: How Thinking Like an Economist Undermines Community* (Harvard University Press 2010), ch 2.
78. ibid 45-48.
79. Will Kymlicka, *Contemporary Political Philosophy: An Introduction* (2nd edn, OUP 2002) 220.
80. Dotson (n 50) 46. Cf Maanen, Ducuing and Fia (n 22).
81. ibid 48-52.
82. ibid 49.
83. ibid 48-52.
84. ibid 52.
85. ibid 52.
86. Cf Raymond Geuss, *Not Thinking Like a Liberal* (Harvard University Press 2022) ch 2.

their equal treatment because individuals are unequal in almost any other respect.[87] Thin communities are thus blamed to 'enculturate' and 'naturalise' their shared narratives in such a way as to perpetuate an impersonal, neutral identity in market societies. In thick communities, by contrast, shared moral values are both a *precondition* for individual members and a *result* of living together. This reflects a communitarian ethos of justice, which could also result in imposing some limitations of the choices available to individual members of their community, and therefore a reduction of individual member's responsibility for their choices, resulting in a redrawal of the line between choices, and circumstances.[88]

'The choice for members of technological societies,' Dotson concludes,

> 'is not between oppressive thick community and unequivocally free individualism, but rather between myriad combinations of communal and individualistic freedoms and responsibilities, ensured by institutions running the gamut of authoritarian to democratic and rooted in understandings of "we" ranging from open and difference loving to insular and exclusionary.'[89]

Overall, the more one of Dotson's community factors is present, the thicker is the shared sense of community itself (see table 1). Conversely, thinner communities exhibit a lesser presence of these characteristics. Each of the seven factors can thus be depicted as a spectrum, depending on their salience for a given social aggregation. Overall, the various bits of community theory contribute to better understanding why data commons are what they are, or could be.

Table 1. slightly amended overview of characteristics of Dotson's dimensions of community. Dotson (n 50) 60.

	Dimension	Thin Communities	Thick Communities
1	Social ties	Diffuse, segmented, Dyadic	Dense, multiplex, systematic
2	Relational exchange/support	Specific, contractual, self-interested	Mutual aid, generalised reciprocity
3	Talk	Infrequent, mediated, premised on information sharing	Frequent, embodied, affectively rich/bonding
4	Symbolic/psychological sense	Influence of market values	Rhetoric communion rooted in relational interdependence
5	Communal economics	Economic interdependence and cooperation agreements	Sustains bonds to place and others/ collective ownership
6	Political community/ communal justice	Shared legal/political framework, civil interactions in procedural conflict resolution	Participatory governance, resolving conflict sustains relations, citizens capable of 'political talk'
7	Community as a shared moral order	Presence and enculturation of shared values, understandings of everyday life and identify formation	Shared values, understandings, and identifies framed around collective goods, not simply of private interests or choice

The dimensions of communities described by Dotson are broad and 'malleable' enough to consider people engaging in digital activities of some sort, such as members of data commons, as forming a community. The next section will shed light on this matter, through showing how different kinds and features of community come up in the data commons literature.

87. Marx instead argued against such forms of equality. See Jessica Whyte, *The Morals of the Market: Human Rights and the Rise of Neoliberalism* (Verso 2019) 220.
88. Dotson (n 50) 240.
89. ibid 59.

3. Through thick and thin: community in data commons

After having ascertained a relationship between data commons and community and having presented Dotson's seven dimensions as a methodological tool to investigate it, we will now analyse how these characteristics of community feature in three different theoretical frameworks of data commons. In doing so, we answer question no. 2: what kinds and characteristics of community are present in data commons literature? We have selected the following three literature strands that consider governance arrangements which fall under our working definition of 'data commons':[90] the Governing the Knowledge Commons framework, radical-relational renderings of data commons, and Indigenous Data Sovereignty movements.[91] We have selected those contributions to data commons theorising that allow us to cast light on the various types of community emerging in the debates. Accordingly, these strands of literature do not have to present or define their work as a contribution to 'data commons' to be studied as such. We study how data commons literature uses, discusses and engages with elements we consider to be indicative of 'community'. An emphasis on the importance of a strong identification of individuals with the group could be read, for instance, as indicative of the presence of a more 'thick' instance of Dotson's fourth dimension.

3.1 Data commons as a knowledge commons (GKC)

3.1.1 Introduction

The Governing Knowledge Commons framework ('GKC framework') analyses how the commons as an institutional framework can apply to information and data. Departing from the Ostromian Institutional Analysis and Development's (IAD)[92] assumption that members of the community of reference are rational actors,[93] GKC scholarship essentially provides descriptive (rather than normative) guidance to analyse commons.[94] In outline, it does so by addressing a set of questions on the background environment, the (pooled) resources, community members, goals and objectives, governance mechanisms, and patterns and outcomes.[95] Answering these questions offers

> 'an ecological and evolutionary perspective on data and data governance, a perspective that includes accounts of the roles of different actors, agents, and resources in producing both productive and unproductive outcomes of data-related systems'.[96]

The GKC framework's main aim is to offer scholars guidance in studying commons empirically, while not providing for a substantive normative evaluation. While Ostrom and others working on natural resources commons (implicitly) evaluated the success of commons based on their capacity to sustainably reproduce the resource in question, GKC accounts often interpret a commons' 'success' as its capacity to do whatever the community thinks that needs to be done.[97] But is there more to say about the notion of community from within a GKC framework?

90. On what we mean by 'data commons', see Maanen and others (n 22).
91. We draw here from Purtova and Maanen (n 55).
92. Elinor Ostrom, *Understanding Institutional Diversity* (Princeton University Press 2005).
93. ibid.
94. As put by Madison and his coauthors, 'GKC-based research aims at descriptive completeness' (Michael J Madison and others, 'Too Much of a Good Thing? A Governing Knowledge Commons Review of Abundance in Context' (2022) 7 Frontiers in Research Metrics and Analytics 1, 7). See also Michael J Madison, Katherine Strandburg and Brett M Frischmann, 'Knowledge Commons' in Ben Depoorter, Peter Menell and David Schwartz (eds), *Research Handbook on the Economics of Intellectual Property Law: Volume 2: Analytical Methods* (Edward Elgar 2019) 670 and 672. More accurately, what seems to be closest to being a normative argument in the GKC research is the evaluation of the outcomes that the specific community has set for itself in the first place. Outcomes can be more or less successful (Brett M Frischmann, Michael J Madison and Katherine J Strandburg, 'Introduction: Governing Knowledge Commons' in Brett M Frischmann, Michael J Madison and Katherine J Strandburg (eds), *Governing Knowledge Commons* (OUP 2014) 36). Nonetheless, '[m]ore precise guidelines and measures for understanding success are missing, at present [...]. The fact that knowledge commons offers prospects for sustained governance of an innovation domain [...] offers an implied normative claim regarding the value and purpose of knowledge commons. That normative claim has not yet been developed in detail' (Madison, Strandburg and Frischmann (n 94) 672).
95. Madison, Frischmann and Strandburg (n 94) 84-85.
96. Madison (n 42) 30.
97. Michael J Madison, Madelyn R Sanfilippo and Brett M Frischmann, 'Smart Cities and Knowledge Commons' in Brett M Frischmann, Michael J Madison and Madelyn Rose Sanfilippo (eds), *Governing Smart Cities as Knowledge Commons* (CUP 2023) 18. Cf Madison (n 60) 33 ('Governance means individuals working together to form groups to solve their own problems').

3.1.2 The community in GKC-esque data commons

In analysing matters of governance, the GKC research focuses on how communities create the institutional mechanisms for 'successfully' sharing data. As Madison writes, '[t]he community as such may be the central analytic focus [of knowledge commons research]'.[98] Similarly, Sanfilippo and Frischmann observe that '[t]he GKC framework is useful to help us understand how communities reconfigure their environment via governance within complex sociotechnical systems'.[99] Thus broadly understood, communities can be more or less circumscribed and open to welcoming new members, while also individual members are to varying degrees free to enter or leave said communities. This is an adaptable and flexible concept that renders relationships within each community closer to the 'thin' kind. Under a GKC perspective, community typically emerges in contractually arranged data pools[100] wherein individuals or organisations are interested in transacting data in conditions of reciprocity. Relating this to Dotson's conceptualisation, the social ties dimension and the relational exchanges one in GKC-esque inquiries lean towards the thin camp. Overall, questions of membership are to be dealt with by communities themselves. The GKC framework, therefore, does not endorse specific ways in which it could be decided who should be included or not in a community.[101]

A 'thin' kind of relationships also characterises the GKC analyses of community in data commons governance in smart city environments. In this respect, Sanfilippo and Frischmann define community loosely as an 'ambiguous and contested' term that can be gauged 'geographically, politically, or by some other means or measure'.[102] When writing about community, the authors argue that cities are 'a rough but widely used conception of community (set of communities) of people that share resources, interdependent relations, goals and dilemmas'. These definitions can be 'easily extended to other communities'.[103] Such an overreaching conception of community is open enough to simply refer to 'community members' and 'community expectations' that aim to achieve some prefixed goals and objectives. Put differently, it is what the data commons is expected to deliver that functionally defines the community itself. Community thus features thin characteristics in this line of thinking, not only in terms of its underpinning social ties (first dimension in Dotson's conceptualisation) and webs of relational exchange (second dimension), but also of the economic modes of production (fifth dimension) and the legal-political framework (sixth dimension).

As a result, the involvement of various actors pursuing different goals and motivations (eg citizens, technology providers, municipal bodies) will most likely result in dispersed and contract-based relationships for which more substantive understandings or worldviews on how to live together are less relevant. In keeping with its (mostly) descriptive pedigree, GKC is however not primarily interested in prescribing distributional patterns that apply to all intangibles, such as data. That said, the communities that the GKC framework has in mind rather endorse the broader liberal-democratic system in which they are situated, together with the liberal underpinnings of its legal institutions (property law, contract law). They do not question them, but rather build governance solutions around and in accordance with them.

3.2 3.2 Radical-relational data commons

3.2.1 3.2.1 Introduction

The second strand of literature we discuss can be dubbed as radical and/or relational, often has a Marxist or socialist foundation, and in general presents itself as fundamentally opposed to dominant conceptions of eg property, and commercial practices of exchange. In contrast to the GKC framework, this radical-relational strand of the (data) commons literature has a more conceptual (instead of empirical) character, and many of its normative conclusions have not found their way into practice yet. Therefore, it is sometimes difficult to grasp what their normative conclusions would mean in more practical terms.

98. Madison (n 36) 310.
99. Madelyn R Sanfilippo and Brett M Frischmann, 'Beyond Design Principles' in Brett M Frischmann, Michael J Madison and Madelyn Rose Sanfilippo (eds), *Governing Smart Cities as Knowledge Commons* (CUP 2023) 299.
100. Madison (n 60) 36.
101. Michael J Madison, Brett M Frischmann and Katherine J Strandburg, 'Knowledge Commons' in Blake Hudson, Jonathan Rosenbloom and Dan Cole (eds), *Routledge Handbook of the Study of the Commons* (Routledge 2019) 82.
102. Sanfilippo and Frischmann (n 99) 297.
103. ibid.

The conceptual starting point of this scholarship is a rejection along Marxian lines of Western, liberal property as a mode of governing resources. According to two major critical theorists, common (property) is a form of 'nonproperty'. In short, it indicates a regime of inappropriability that radically counters capitalist modes of wealth management.[104] Their idea of data commons, accordingly, is thus to set the normative boundaries of 'data inappropriability', which aims to safeguard the gathering of knowledge, information and intangible assets against appropriation by capitalist forces.[105] But what role does 'community' have in these perspectives?

3.2.2 The community in radical-relational accounts

Radical-relational theories of data commons present individual and collective or communal autonomy as interdependent. Personal autonomy thus is meaningful to the extent that it is compatible with collective autonomy. As Broumas observes, 'human agency is dialectically interrelated with social structure'.[106] The activities of individual members are positively connected to that of the commons. While individual input of data production calls for collaborative endeavours among peers, participating in such a productive community also shapes the commoners' personal values and identity.[107] This invokes rather thick understandings of the community undergirding the data commons where the commoners' identity is informed by the social practices that make data production possible. These underpin data commons in such a way as to enhance and sustain dense and systematic social ties at the local level (Dotson's first dimension). Relatedly, the commoners (should)[108] engage in practices of mutual assistance and relational exchange (his second dimension). This is significantly inspired by the local experiences of occupation of abandoned public spaces under the aegis of the commons to find solutions to what the community needs.[109]

Maintaining a data commons amounts to preventing extractivism and value capture by market forces. As Negri and Hardt observe, '[b]ehind the value of data, in other words, stands the wealth of social relationships, social intelligence, and social production.'[110] The data commons is thus conceptualised as a site of inappropriable data produced and pooled by the commoners. As such, it is a system that should be radically autonomous from the capitalist order. Such detachment conjures thick understandings of the cooperative socio-economic practices (Dotson's fifth dimension) around data and justice considerations that radically reject capitalist production modes (sixth dimension). Within the data common, commoners can set the rules of data governance on their own, and thus build the social relations leading to sharing and using the resource (data).[111]

In light of such an understanding, distributional concerns are key to relational-radical accounts of data commons. Data commons as a set of social relations signals an equal status of the commoners involved in data creating, sharing and maintaining. What is crucial is to make sure that the data commons results in constant use value production in light of a 'non-mercantile logic'.[112] In other words, to sum up, radical-relational data commons are autonomous, anti-capitalist governance arrangements where the results of the commons' activities are (or should be) distributed equally over its members.

104. Michael Hardt and Antonio Negri, *Commonwealth* (Harvard University Press 2009).
105. Francesco Brancaccio, 'Appropriation, Common Property, the Inappropriable: Notes on the Law of the Common in Platform Capitalism' (2019) 118 South Atlantic Quarterly 857, 873.
106. Antonios Broumas, *Intellectual Commons and the Law: A Normative Theory for Commons-Based Peer Production* (University of Westminster Press 2020) 132.
107. ibid.
108. As shown in Section 3.2.1., radical-relational accounts are more conceptual and normative.
109. Alessandra Quarta and Tomaso Ferrando, 'Italian Property Outlaws: From the Theory of the Commons to the Praxis of Occupation' (2015) 15 Global Jurist 261; Ugo Mattei and Alessandra Quarta, 'Right to the City or Urban Commoning? Thoughts on the Generative Transformation of Property Law' (2015) 1 The Italian Law Journal 303.
110. Michael Hardt and Antonio Negri, *Assembly* (OUP 2017) 169.
111. Brancaccio (n 105) 872.
112. ibid 868.

3.3 Data commons and Indigenous Data Sovereignty

3.3.1 Introduction

Indigenous Data Sovereignty (IDS) denotes the attempts by Indigenous peoples and communities to 'control the collection, access, analysis, interpretation, management, dissemination and reuse of Indigenous data'.[113] Discussing IDS as a form of commons-based data governance is interesting for various reasons.

First, contributions to these movements explicitly situate themselves in the decolonial struggles of peoples and communities all over the globe, of which data is only one element.[114] Indigenous peoples such as the Inuits or Māori strive in various ways and for different reasons to strengthen their position vis-à-vis the central state authorities to which they have been subjected for centuries. Compared to the models mentioned in the introduction above, IDS movements thus exemplify attempts to engage in collective forms of data governance run by actually existing communities as means to increase their sovereignty, autonomy or independence.[115]

Second, the reason to focus on data as a resource to be controlled and governed by Indigenous Peoples has on the one hand to do with the often detrimental way data is being used by state actors to manage and control these peoples.[116] Attempts to control the governmental data-informed policies that affect the lives and well-being of Indigenous peoples thus aim to stop and mitigate the problematic effects of these same policies. On the other hand, IDS initiatives also argue that there is value in the control of Indigenous data irrespective of settler state's policies and laws. Good autonomous, sovereign or independent self-governance,[117] in other words, requires data that matters for the concerned community, and over which the latter has control.[118] As Smith aptly observes, for 'effective self-governance to occur, indigenous peoples need access to a range of culturally relevant and accurate information about themselves; they need data they can trust'.[119] What to make of the usage of the notion of 'community' in the IDS literature?

3.3.2 The community in IDS

In IDS accounts, community is a complex concept whose boundaries vary depending on the initiative in question. In their chapter on IDS and Māori self-determination, Kukutai and Cormack explain in what ways better data governance and policy could increase Māori self-determination.[120] They situate arguments for a radically different way of organising Māori self-governance and Māori data governance in the specific languages, knowledge (systems), self-understanding, and identity that the Māori have. Key here, among other aspects, is the Māori origin story that explains why they as a community cannot be taken into account via the settler's state data-based administrative system.[121] Their specific origin story makes the Māori illegible to the settler state's systems, and reinforces the urgent need to determine themselves what data they want to collect, process, and use.[122] This tension, if not incompatibility between how the Māori community self-identifies, and how they are being identified by the colonial state, explains Kukutai and Cormack's argument that Māori IDS cannot work within the current state-based system.[123] IDS as an instantiation

113. Tahu Kukutai and John Taylor, 'Data Sovereignty for Indigenous Peoples: Current Practice and Future Needs' in Tahu Kukutai and John Taylor (eds), *Indigenous Data Sovereignty: Toward an Agenda* (ANU Press 2016) 2.
114. Tahu Kukutai and Donna Cormack, ''Pushing the Space': Data Sovereignty and Self-Determination in Aotearoa NZ' in Maggie Walter and others (eds), *Indigenous Data Sovereignty and Policy* (Routledge 2021); Siddhart P de Souza, Hellen M Smith and Linnet Taylor, 'Decolonial Data Law and Governance' [2024] Technology and Regulation 1.
115. In IDS accounts, terms like 'sovereignty', 'autonomy' and 'independence' are often used interchangeably.
116. Maggie Walter and Stephanie Russo Carroll, 'Indigenous Data Sovereignty, Governance and the Link to Indigenous Policy' in Maggie Walter and others (eds), *Indigenous Data Sovereignty and Policy* (Routledge 2021); Haggart and Tusikov (n 5) 238.
117. Something which is sometimes understood as not being possible within settler state's structures (see Kukutai and Cormack (n 114)).
118. 'The ultimate goal is tribes assuming ownership of their own data process including design, collection, analysis, reporting, storage and use of data.' (Raymond Lovett and Carnell T Chosa, 'Growing Pueblo Data Sovereignty' in Maggie Walter and others (eds), *Indigenous Data Sovereignty and Policy* (Routledge 2021) 52). See also Haggart and Tusikov (n 5) 238-39.
119. Smith (n 21) 118.
120. Kukutai and Cormack (n 114).
121. ibid 31.
122. ibid 22.
123. ibid 22.

of data commoning for Māori results in forms of collective data governance that strongly emphasise the community's independence or autonomy from – in this particular case – the settler state.

Precisely because of the aforementioned usage of data-sets and statistics by states to control indigenous communities, IDS perspectives also advance claims for acknowledging their existence as sovereign communities in the data gathered and used to make policy by central governments.[124] Such a 'right to be counted' is an important component, and is also echoed in data-related debates that concern other 'misrecognised' and silenced groups and communities.[125]

Overall, IDS initiatives depend on relative 'thick' understandings of several of Dotson's dimensions. As shown above, IDS forms of data commons are therefore motivated by thick understandings of the roles social ties (Dotson's first dimension), language (third dimension), identity (fourth dimension), politics and justice (sixth dimension), and a shared moral order (seventh dimension) in the constitution of the group or community central to the data commoning. It is, to put it succinctly, of existential importance for Māori to be more in control of data relating to or resulting from them as a community.

From a distributive perspective, IDS initiatives combine claims about the right to acquire and access communities-related data, with claims to be recognised as communities themselves, often in and through data-sets produced by the government.[126] On the one hand, Indigenous peoples and communities need data to be able to strengthen their position vis-a-vis settler states along the lines sketched above. Control over community-related data should be considered as part of decolonial struggles, of which the data is one of the goods to be distributed next to, for example, forests, fisheries and knowledge resources.[127]

3.4 Interim conclusion

The preceding sections have examined the kinds and features of community that emerge from different theoretical frameworks of data commons, thus answering our second research question. The GKC framework approaches community in a flexible and context-specific way. GKC-esque data commons typically embed transactional relationships without profound social or moral ties between their members. For example, GKC's understanding of 'community' in data commons in the smart city is broad, often defined by geographic boundaries. Here, 'community' describes an assortment of members, including citizens, tech providers, and municipal bodies, who interact through dispersed, often contractual relationships rather than deeply shared values. Overall, this results in a relatively 'thin' rendering of the notion of community in analyses of data commons.

Radical-relational and IDS perspectives on data commons emphasise a deeper, interconnected relationship between individuals and collective autonomy, viewing community in data commons as inherently relational and socially embedded. Here, personal autonomy aligns with collective goals, as individuals' contributions are both shaped by and contribute to communal identity and values. This 'thick' view of the community highlights dense social ties and mutual support practices, inspired by local collaborative experiences.

We are now equipped to relate the above analysis to the problems in collective data governance policymaking we have identified in sections 1.2.1-1.2.4. Different features and understandings of community in data commons have implications for proposing and implementing policies in this realm. This is our question no. 3, to which the next section now turns.

---

124. Sarah-Jane Paine and others, 'Kaupapa Māori-Informed Approaches to Support Data Rights and Self-Determination' in Maggie Walter and others (eds), *Indigenous Data Sovereignty and Policy* (Routledge 2021) 192.
125. See the many examples of 'missing data' in Catherine D'Ignazio and Lauren F Klein, *Data Feminism* (MIT Press 2020).
126. See eg Paine and others (n 124).
127. Andrew Sporle and Carnell T Hudson, 'Indigenous Data and Policy in Aotearoa New Zealand' in Maggie Walter and others (eds), *Indigenous Data Sovereignty and Policy* (Routledge 2021) 65.

4. Discussion: implications of community theorising for data commons (policy-)making and collective data governance

As observed above, Nikolas Rose explained that the concept or idea of community has been used to challenge dominant forms of societal organisation, as well as to broaden the amount and types of actors involved in governance. The fact that multiple perspectives on collective data governance – including data commons – consider 'community' can be viewed as one of the latest iterations of these discussions. Recall the two important issues that Rose stressed.[128] First, the Janus-faced nature of 'community'. Debates on community both presuppose its existence, while simultaneously bring these communities into existence. The growth in collective data governance models exemplifies this well. Second, and relatedly, Rose reminds us of the fact that models and blueprints can be instances of 'government' itself,[129] or, more specifically, attempts to engage in the steering and modification of behaviour and reality through policy.

The foregoing has shown that Dotson's spectrum on communities helps to unpack several important dimensions of particular renderings of 'community' that emerge in these data commons theoretical and conceptual frameworks. Taken by itself, this is a methodological and analytical contribution which casts light on an under-discussed element of collective data governance. But beyond this, it allows for a reflection on data governance policymaking itself. The remainder of this section will answer question no. 3: 'What are the implications for policymaking when taking the (especially moral-political) differences in community into consideration when devising policy?' To do so, we will tie back our analysis of community in data commons theoretical frameworks to the four issues of the data policy work we have delineated in Sections 1.2.1 through 1.2.4.

4.1 Beware of community-washing

We have seen that accounts on collective data governance do not do justice to the concept of 'community'. At best, scholars note that further research has yet to be carried out;[130] at worst, they use it interchangeably, without explaining its meaning, kind and credentials.[131] Section 3 has shown a great assortment of moral-political conceptions of community. But what happens if one intends to turn such theoretical variety into policy practice?

We can imagine two scenarios.[132] One envisions a perfect alignment between the usage of a proposed model, framework, or blueprint and the actual characteristics of the community. The second arises when there is a problematic mismatch between a collective data governance policy and the community to which it is directed, or where there is no match whatsoever due to the absence of an actually existing community. Such mismatches typically occur when the rhetoric of the commons (and of community, more specifically) is co-opted for ulterior motives; thus, they can be characterised as a form of 'commonswashing' or 'community-washing'.

'Commonswashing' is a term coined by Mélanie Dulong de Rosnay and describes '(...) the appropriation of the semantics and the message of the commons for commercial purposes without endorsing its values (...).'[133] It points to the danger that data commons initiatives or initiators present themselves as engaged in good and praiseworthy work, while they in fact merely replicate the dominant data governance paradigm.

128. See Section 2.
129. On the notion of 'government' from a Foucauldian perspective, see Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (2nd edn, Sage 2010).
130. See Prainsack (n 6) 40, and more generally n 29 above.
131. See generally Section 1.2.1.
132. On the importance of narratives or stories for commons, see Brigham Daniels, 'Commons Storytelling: Tragedies, Comedies, and Tragicomedies' in Blake Hudson, Jonathan Rosenbloom and Dan Cole (eds), *Routledge Handbook of the Study of the Commons* (Routledge 2019).
133. Mélanie Dulong de Rosnay, 'Commonswashing – A Political Communication Struggle' (2020) 2 Global Cooperation Research - A Quarterly Magazine 11, 11. On the often confused usages of commons theories, see Ismael Vaccaro and and Oriol Beltran, 'What Do We Mean by 'the Commons?' An Examination of Conceptual Blurring Over Time' (2019) 47 Human Ecology 331.

Illustrative are commercial practices that turn data commons into an instrument to make profits out of matching and pooling data.[134]

Next to being commonswashed are data commons initiatives susceptible to being 'community-washed'.[135] Contrary to commons-washing, community-washing consists in misusing the language of community to misrepresent a data commons initiative's nature by attaching features, virtues, credentials, and values to it that do not link up to those involved in the governance itself. As our analysis has shown in that respect, the issue here is less whether a data commons is a community or not, but rather, *what kind* of community a data commons can be, or could become. Therefore, making policies that attach 'thick' community characteristics such as informality, reciprocity, solidarity or trust to initiatives which are in practice contract-based data sharing initiatives and lack a strong common identity among participants, results in community-washing.[136] For example, the failure of the proposed data governance scheme in Sidewalk Toronto demonstrates that building a city-wide data commons under the assumption that different communities within the urban locale share the same interests, worldviews and needs inevitably goes south.[137] Similarly, attaching features typical of 'thick communities' to thin ones may well inaccurately represent the more self-interested and market-oriented intentions of their members. Community-washing thus amounts to a disconnect between how communities are presented in policy and the communities themselves, possibly at the cost of the latter's capacity to determine themselves how to identify, and at the risk of being 'governed through community' by policymakers and tech solutionists.

Another repercussion of community-washing concerns the relationship between communities and their members.[138] Tying policy proposals to some characteristics of a community could harm structurally vulnerable minorities within these communities. If policy instruments tend towards a specific set of features, virtues and so forth, then someone may well be put 'at an unfair disadvantage when it comes to making sense of their social experiences' ('hermeneutical injustice').[139] Policy responses rooted in such community characteristics may 'foreground or background' how certain sub-groups relate to, and are affected by the envisaged measures.[140]

4.2 The *where* and *when* of models and blueprints

Above we have cautioned against the fact that some policy-oriented accounts on collective data governance offer prescriptions on top-down, ideal blueprints, abstracting them from empirical findings.[141] As said in Section 1, this invites asking questions concerning the conditions under which it is acceptable that academics and policymakers prescribe how others, in our context collectives, should organise their lives.

A complexity that is worth taking into consideration concerns the spatial and temporal reach of collective data governance models and frameworks.[142] With respect to the space or location in which data governance

134. Jason Potts and others, 'Profiting from Data Commons: Theory, Evidence, and Strategy Implications' (2024) 9 Strategy Science 1. It comes as no surprise that Potts and coauthors view data commons as 'pools of data, information, and/or knowledge, that are (1) digitally stored and transferable and (2) can be accessed by anyone for any purpose without payment and without limit' (ibid 2). See similarly Andrea Ottolia A and Cristiana Sappa, 'A Topography of Data Commons: From Regulation to Private Dynamism' (2022) 71 GRUR International 335.

135. Cf Ptak and coauthors, who use the concept of 'community washing' to refer to misleading usage of the notion of community in solar projects (Thomas Ptak and others, 'Rethinking Community: Analyzing the Landscape of Community Solar through the Community-Place Nexus' (2018) 31 The Electricity Journal 46.

136. An example is the Sidewalk Toronto data governance scheme, in which 'community' was used to describe the city as discussed above.

137. Teresa Scassa, 'Designing Data Governance for Data Sharing: Lessons from Sidewalk Toronto' [2020] Technology and Regulation 44, 56.

138. On this, see eg Iliana Monterroso, Peter Cronkleton and Anne M Larson. 'Commons, Indigenous Rights, and Governance' in Blake Hudson, Jonathan Rosenbloom and Dan Cole, *Routledge Handbook of the Study of the Commons* (Routledge 2019) 385.

139. Miranda Fricker, *Epistemic Injustice: Power and the Ethics of Knowing* (OUP 2007) 1.

140. Cf Martijn W Hesselink, *Justifying Contract in Europe: Political Philosophies of European Contract Law* (OUP 2021) 281 (in footnote).

141. Section 1.2.2. See Scassa (n 142) 56; Hicks (n 47).

142. See Madison 2020 (n 60) 43, who wonders: '[i]s governance durable and sustainable across time (generations) and space (relevant state and other organizational boundaries and borders)?'. See also Valente, J. C. L., & Grohmann, R. (2024). Critical data studies with Latin America: Theorizing beyond data colonialism. Big Data & Society, 11(1). https://doi.org/10.1177/20539517241227875

is implemented, the contrast between Indigenous Data Sovereignty movements, and data governance arrangements as proposed and developed in the Global North is relevant. While for the former the complex, unequal and coercive nature of the relationships between communities and settler states is an integral element of the nature of the data commons, such considerations are rather absent in more Global North-oriented proposals. Put differently, *where* policies on collective data governance are developed matters hugely for the (kind(s) of) communities implicated therein, and thus for the proposed governance tools, and the rules and rights that need to be in place. If a set of governance proposals tailored to one location is transplanted into a vastly different context, this can result in an imposition of a model that does not match the problems, interests and prerogatives of the community at stake.

With respect to the temporal dimension of collective data governance, to be noted are the dynamic and ever-changing characters of communities in data commons arrangements and policy blueprints' (in)capacity to take this into consideration. As Ostrom explained, some commons are instantiated through governmental policy, and only at a later stage acquire the relevant communal characteristics.[143] A more recent example is Enric Senabre Hidalgo and colleagues' narration of their attempt to build a data commons in practice, the community itself and the vast amount of work involved in doing so.[144] Models, frameworks, and blueprints are, by their very nature, ill-equipped to take the fundamental changes that communities undergo over time into account.

4.3 Lists and the paradox of choice in data governance

Much work on data governance comes in the form of lists: lists of models, solutions, recommendations, design principles and so forth. We have seen that the lack of moral-political contextualisation in which these are presented suggests that one is free to choose one's preferred governance solution, but also that communities are free to do so.[145]

Our analysis of the kinds of community present in data commons literatures helps to understand how claims about the engrained 'freedom to choose' are problematic. Crucially, collective data governance policy should not overestimate the capacity of people and communities involved. Greater degrees of freedom come with greater degrees of burdens and responsibilities. In thick communities, data governance can be an existential question that cannot easily be equated with the interests of those whose lives are only slightly affected if data sharing does not get off the ground.[146] Sharers of data, as GKC exemplifies, can decide to both enter and opt out of the data commons. This choice is rather absent – or less 'free', in liberal terms – as compared to those involved in thick communities (for instance, IDS movements).[147] As Akbari asks rhetorically: '(...) can one meaningfully participate in any decision-making process where the prerequisites and principles of participation, such as freedom of expression, fairness, impartiality, or equal access, are not respected or guaranteed?'[148] Presupposing that people can meaningfully and effectively govern data, as is especially done in more thin data commons proposals, might thus misidentify the challenges and problems in question. To put it in a slightly provocative and terse way: are they about reaping the benefits of efficient data-sharing, or about democratising a data-fueled authoritarian regime?

143. See Section 2.1. On commons as a historical phenomenon, see Tine De Moor, 'From Historical Institution to Pars pro Toto: The Commons and Their Revival in Historical Perspective' in Blake Hudson, Jonathan Rosenbloom and Dan Cole, *Routledge Handbook of the Study of the Commons* (Routledge 2019) 319. On space and scale of data commons, see for example Jennifer Shkabatur, 'The Global Commons of Data' (2019) 22 Stanford Technology Law Review 354; Felix Fritsch and others, 'Challenges and Approaches to Scaling the Global Commons' [2021] Frontiers in Blockchain 1.

144. Enric S Hidalgo and others, 'Co-creation of the Digital Democracy and Data Commons Manifesto: Alternative Sociotechnical Visions of Data' (2024) 4 Open Research Europe 45. A helpful analysis that contextualizes the DECODE project is Fischli and Muldoon (n 52). They offer some valuable lessons for those who want to translate 'data commons' into practice, especially in urban environments. For an overview of the implications of public-commons partnerships in urban locales, see Sébastien Shultz, 'Moving from Coproduction to Commonization of Digital Public Goods and Services' (2025) 85 Public Administration Review 60. The relationships between states and communities need not be inherently adversarial, contrary to the depiction usually found in IDS accounts (see Section 3.3).

145. See Section 1.2.3.

146. Akbari (n 42)

147. Ibid. See Section 3.3.2.

148. Akbari (n 42) 10.

4.4 Centring on data pre-/redistribution (rather than just data)

Many data governance proposals tend to be data-centric.[149] In view of analysing the concept of community in data commons, the fear that policy perspectives tend to ignore the people and groups while fixating on data is far from being an overstatement. Taking the features of community attunes data commons policymaking not to simply data as an object, but to what community members can actually do with data, how they can put them into existence, how they can devise the roles of each member as to data and so forth. Put shortly, these are crucial matters on how data is distributed in the data commons.[150]

Policymaking on collective data governance may learn multiple lessons on distribution from the various kinds and features of community. Above we have seen that thick communities (such as those envisioned by radical-relational frameworks and IDS conceptualisations) tend to favour communal forms of arranging economic relations (eg data inappropriability, collective ownership, community rights in data) which oppose commercial or capitalist forms of relations. Thin communities, by contrast, focus more on property of and access rights in data (and the related distributive benefits and responsibilities), usually grounded in (intellectual) property entitlements and contractual tools (eg licences, terms and conditions).

In other words, data distributive arrangements vary in thin and thick communities. A way to describe this difference is by distinguishing between pre-distribution and re-distribution. Distributive mechanisms arising from thick communities aim at building just background (pre-)conditions for data governance. In so doing, such data governance policies are pre-distributionist: they aim at 'preventing distributive injustice from occurring'[151] by affecting how data come to existence, and therefore how they are governed from inception.[152]

By contrast, thin communities tend to accommodate policies more concerned with data re-distribution. As Hesselink observes, 'redistribution presumes legal ownership in goods and other resources, without which there would be nothing to redistribute'.[153] Therefore, data redistributive policies endorse the broader liberal-democratic system in which they are situated, together with the liberal underpinnings of the most basic legal institutions (such as property law and contract law). They do not question them, but rather build governance solutions around and in accordance with them.

Not only does the choice between different distributive policies have different consequences for the character of the governance arrangement itself, but also for any 'spill-overs' resulting from it, that is to say the effects of particular data governance arrangements extending beyond communal boundaries. The presence of externalities implies that, although these are often justified by arguments for communal autonomy and independence, it is unavoidable to contemplate on the need to also devise 'inter-community' rules and regulation.[154] One community's increase in collective autonomy could result – again[155] – in a degradation of someone else's self-governance. Proponents of collective data governance models cannot but reflect on how the implementation of specific governance solutions interact with one another in such a way that the governance of one does not adversely affect the lives of another.[156] We consider Prainsack and co-author's

149. See Section 1.2.4.

150. Tommaso Fia, 'Doing Justice to Justice in EU Data Law' (Transformative Private Law Blog 24 October 2024) https://transformativeprivatelaw.com/doing-justice-to-justice-in-eu-data-law/ accessed 7 January 2025; Tommaso Fia, 'Governance of Urban Data Commons as a Matter of Value Redistribution in the Smart City' [2024] Sens Public 5.

151. Hesselink (n 140) 332.

152. On predistribution in data-driven contexts, see Michele Loi, Paul-Olivier Dehaye and Ernst Hafen, 'Towards Rawlsian 'Property-owning Democracy' Through Personal Data Platform Cooperatives' (2023) 26 Critical Review of International Social and Political Philosophy 769; Preeti Raghunath 'Critical Data Governance: A Southern Standpoint to the Study and Practice of Data' [2024] Technology and Regulation 37, 46 (observing that 'ownership is not only about owning our data(-sets), but also about serving as decision-makers on how the data are seen, collected, analysed and used, by whom and for what purpose'). More generally on predistribution as a political philosophical concept, see Martin O'Neill, 'Power, Predistribution, and Social Justice' (2020) 95 Philosophy 63.

153. Martijn W Hesselink, 'Reconstituting the Code of Capital: Could a Progressive European Code of Private Law Help Us Reduce Inequality and Regain Democratic Control?' (2022) 1 European Law Open 316, 332.

154. Maanen and others (n 22) sec 3.

155. See also the previous section.

156. Cf Madison (n 36) 323-24.

recommendation to move discussions on data governance from oriented toward different *types* of data (eg personal versus non-personal) to different categories of data *usage* valuable in that respect.[157] Debates on collective data governance, in other words, should both look into how kinds of data relate to communal well-being, but also the kinds of activities to be done (or not) with data-sets over and beyond their specific relevance to an individual data commons.

Lastly, and building onto the last point, is the question of what a collective data governance scheme should in the end result in. Should it aim at the reproduction of data-sets, possibly to be shared with outsiders? Should its priority be an increase of self-governance by a community, or a combination of both aims? In IDS movements, data governance is but one element of a more encompassing attempt to fight for independence. When data are, as in some more thin data commons proposals, the object of governance and the main reason for bringing such initiatives into existence, the chances are that the data commons will end up merely reproducing data-sets.[158] Whether this is the sole aim to be sought for when developing and implementing collective data governance is highly doubtful.

5. Conclusion

Community in collective data governance is not an interchangeable concept. This paper has contributed to discussions on collective data governance by examining how different data commons conceptualisations and theories attach a great variety of moral-political stakes, normative credentials and distributive arrangements to the (concept of) community. The ultimate aim of our inquiry is to contextualise such theories into their implications for policymaking on collective data governance, and more specifically on data commons. We take this on as an important political-methodological objective because of the tendency to discuss collective forms of data governance as ostensibly neutral governance models without political affordances. Yet, as Hicks aptly observes, '[t]he question which guides research on data commons is a normative one: Who should have the right to use personal data, and how should the value derived from the data be shared?'[159] Much can be derived from the concept of community to address this question, not only in terms of its theoretical significance, but also in its more practical implications for policymaking.

There are several take-home messages that are relevant when considering the model-oriented tendencies in policy discussions around making collective data governance, such as data commons. First, data commons as both theories and practical initiatives are in constant development and transformation. Seeking to capture the character of a data commons with the help of an ideal model, high-level theory, or list of requirements risks disregarding the character of the communities involved, including especially their historical evolution and prospects.[160]

Second, data governance models are not neutral, and arguing for a particular rendering of a data commons makes one subscribe to the (more or less implicit) moral-political norms on community and its members in which that commons theory is embedded. Sharing data in relative autonomy is a completely different problem than arranging data governance solutions to fight colonialism, or capitalism, or simply to solve innovation dilemmas. Therefore, building data commons is not a matter of mere, technocratic data management.[161]

157. Prainsack and others (n 6).
158. Purtova and Maanen (n 44).
159. Hicks (n 47) 556.
160. Compare John Dunn, *Setting the People Free: The Story of Democracy* (Atlantic Books 2005) 179, who writes about the difference between models of (institutional) democracy, and the social, cultural, economic and political characteristics of democratic practices.
161. Cohen (n 3) 144-145; Salomé Viljoen, 'Informationalism Beyond Managerialism' (2023) 86 Law and Contemporary Problems 257.

Third, while collective data governance is meant to overcome the shortcomings of data protection and data market regulation, it is not clear whether community is always the appropriate solution to those problems,[162] and whether making communities instead of individuals responsible really does the trick.[163]

Overall, building and developing collective forms of data governance like data commons is a complicated endeavour in which who is doing the work, with whom, for whom, when, and on the basis of what kind of theoretical or political lineage, are matters of great significance. It is thus important to acknowledge these complexities and see them as part of the work to be done to develop better methods and practices of data governance. Not doing so by using the language of the 'commons' and 'community' carelessly risks resulting in confusing means and ends and embracing initiatives that merely reproduce the status quo. Data commons, and especially the communities that actively fight for better data futures, deserve better than this.

5.1 Acknowledgements

Gijs van Maanen's contribution to the writing of this paper started during his postdoc work at the project 'Understanding information for legal protection of people against information-induced harms' ('INFO-LEG'; PI: Nadya Purtova; funded by ERC; grant agreement No 716971).

Tommaso Fia's research is part of the Machine Learning Cluster of Excellence, EXC number 2064/1 – Project number 390727645, funded by the *Deutsche Forschungsgemeinschaft* (DFG, German Research Foundation).

We thank Charlotte Ducuing, Germán Johannsen, Siddharth Peter de Souza, Jörg Pohle, Linnet Taylor, Alina Wernick, the participants at the 'Re-imagining Digital Public Spaces for Democracy' workshop which took place in Berlin, February 2025 (and especially Erik Tuchtfeld, Kebene Wodajo, and Armin von Bogdandy) and the anonymous reviewer for their helpful feedback on the earlier version of the paper.

162. Purtova and Maanen (n 44)

163. Gijs van Maanen would like to thank a participant of the 'A 'Brussels Effect' for EU Digital Governance?' workshop (Brussels, April 2023) for asking this question. See also Jesko Fezer, '(Un)Social Community' (*e-flux Architecture*, June 2023) www.e-flux.com/architecture/in-common/529686/un-social-community/ accessed 23 January 2025.