Openness, Inequity, and Injust

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Towards A Philosophy of Open Scientific Practices: Comparing Research Environments

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Conceptualizing Openness, inequity and injustice

1

Acknowledgement of the diversity of research environments around the world - Different ways in which OS infrastructures fit everyday research work in low-resourced settings.

2

Challenge assumptions about the technologies, skills and forms of knowledge that are required to produce reliable research.

3

Contribute a vocabulary to address existing disparities in method, resources and perception of the significance of scientific work.

Two key concepts

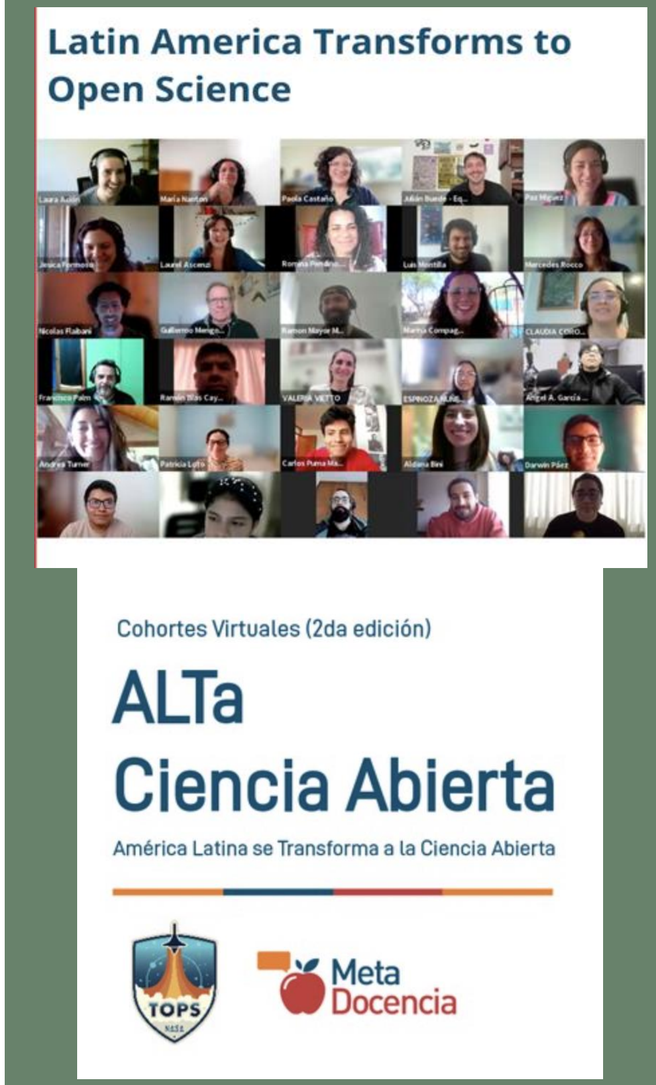
- Low-resourced setting
- Epistemic Harm

Low-Resourced Settings

- Growing body of evidence about different dimensions of inequities in OS (Bezuidenhout et al. 2017, Fell 2019, Ross-Hellauer 2022, Shanahan and Bezuidenhout 2022, Leonelli 2022, Cole et al 2024, Bezuidenhout 2025).
- Malleable normative concepts: “equity”, “justice”, “openness”.
- Commensuration efforts - standardized ways of constructing proxies for elusive qualities (Espeland and Stevens, 1998) – to measure them.
- “Low-resourced” is not unidimensional or dichotomous (low/high), and resources are diverse.
- Gaps are unbridgeable and there is no centralized instance of resource allocation when it comes to OS research globally.
- Focus on processes of redistribution.

Yinka Shonibare, “Earth Kid”, 2020

Case of Redistribution



- Paper: "More than a NASA Badge: MetaDocencia and Capacity Building for Open Science Communities in Latin America."

- Instance of redistribution: training resource developed in/for the US NASA context in 2022 and adapted to Latin American contexts.
  - ✓ Funded by NASA through a fiscal partner
  - ✓ Materials were translated and contextualized
  - ✓ Delivered to Latin American scientists (Three cohorts with 406 participants, 210 'badged', 45∞ with graduate degrees, 45,3% identified as being part of one or more underrepresented groups in science)
  - ✓ Connecting communities of practice + training for fund-seeking

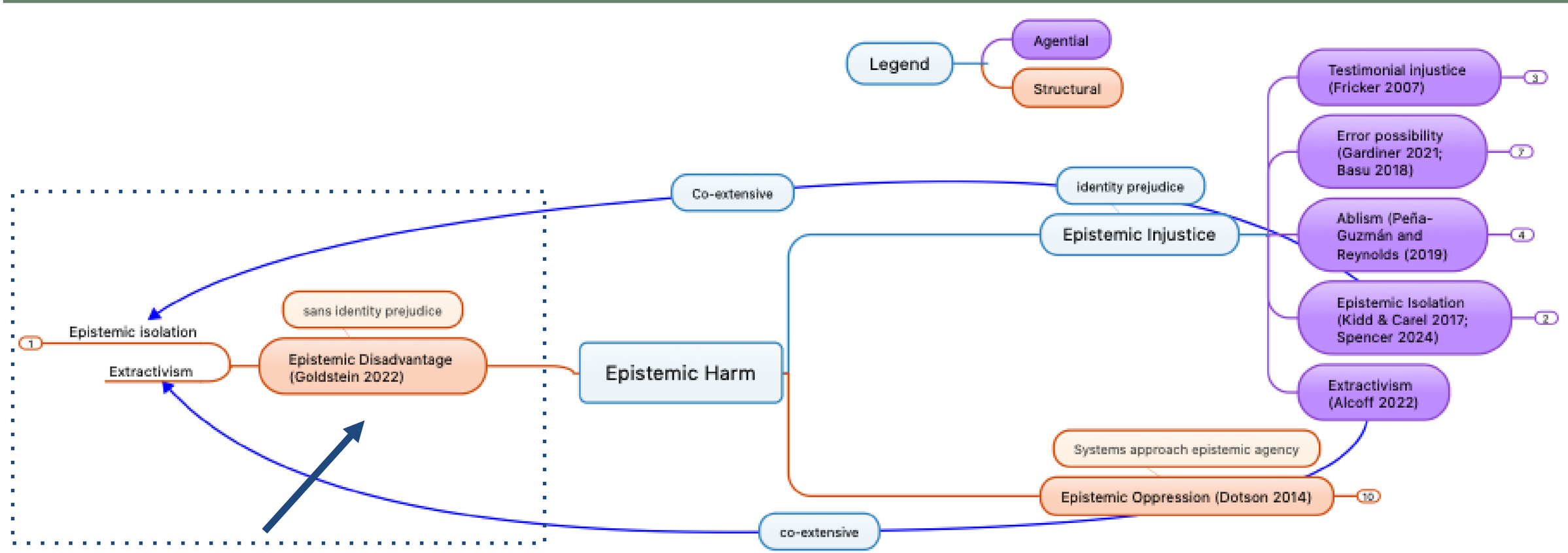
- Latin American communities of practice: limitations of universalizing proclamations about open science + importance of shifting ownership of funding and tools.

- These communities do not automatically represent alternative epistemologies but, in their diversity, strive for better means to operate in dynamic

Two key concepts

- Low-resourced setting
- Epistemic Harm

Epistemic Harm



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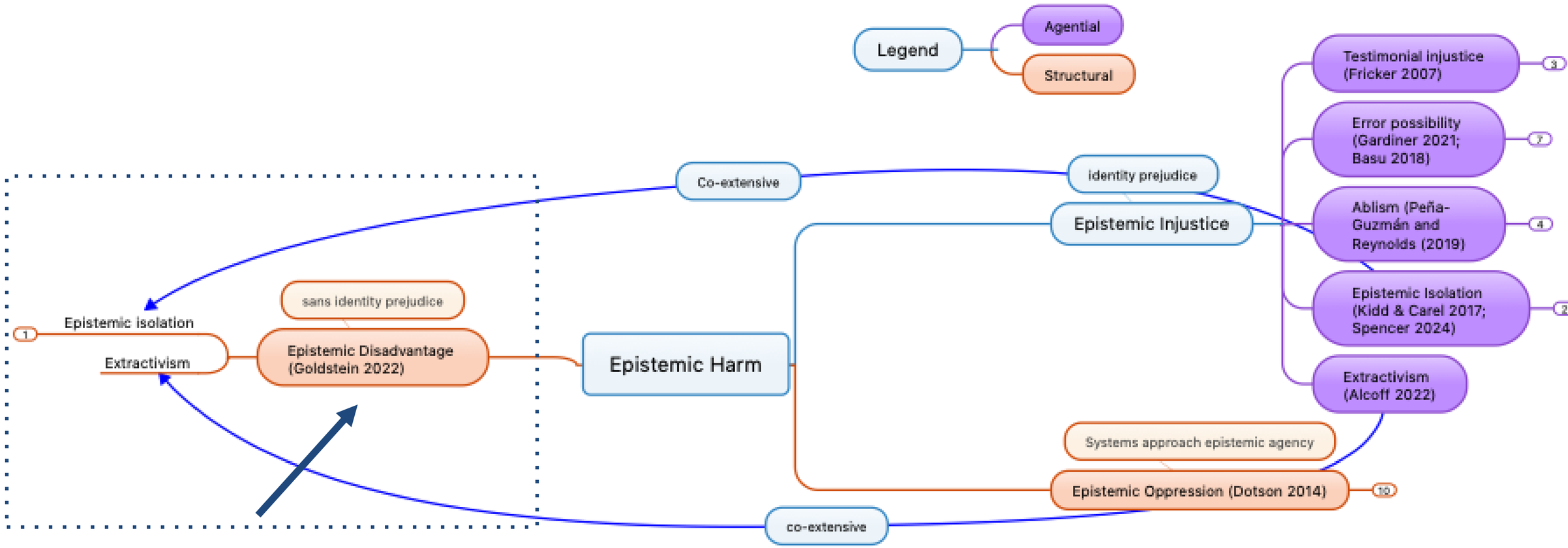
Question: In what sense are the testimonial channels and data sharing practices of open science ethically and epistemically charged?



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More than a NASA Badge: MetaDocencia and Capacity Building for Open Science Communities in Latin America by Laura Ación, Laura Ascenzi, Alejandra Daniela Calero, Paola Castaño, Jesica Formoso, Patricia Loto, Paz Míguez, Francisco Palm, Nicolás Palopoli, Romina Pendino, Maria Angela Petrizzo Páez, Driselda Sánchez-Aguirre, Irene Vazano, and Verónica Xhardez

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Extractivism and Epistemic Disadvantage in Open Science Practices by Rena Alcalay and Joachim Vandekerckhove

Not all research environments are created equal: Structural injustice in low-resourced scientific settings and its epistemic implications by Sabina Leonelli

Commentaries by Helen Longino and Rachel Ankeny.

SPECIAL ISSUE

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References

Alcoff, L.M. (2022) ‘Extractivist epistemologies’, *Tapuya: Latin American Science, Technology and Society*, 5(1), p. 2127231. Available at: https://doi.org/10.1080/25729861.2022.2127231.

Basu, R. (2018). Beliefs that wrong. Doctoral Thesis, University of Southern California.

Carel, H. and Kidd, I.J. (2014) ‘Epistemic injustice in healthcare: a philosophial analysis’, *Medicine, Health Care and Philosophy*, 17(4), pp. 529–540. Available at: https://doi.org/10.1007/s11019-014-9560-2.

Dotson, K. (2014) ‘Conceptualizing Epistemic Oppression’, *Social Epistemology*, 28(2), pp. 115–138. Available at: https://doi.org/10.1080/02691728.2013.782585.

Fricker, M. (2007) *Epistemic injustice: power and the ethics of knowing*. Oxford ; New York: Oxford University Press.

Gardiner, G. (2021) ‘Relevance and risk: How the relevant alternatives framework models the epistemology of risk’, *Synthese*, 199(1–2), pp. 481–511. Available at: https://doi.org/10.1007/s11229-020-02668-2.

Goldstein, R.B. (2022) ‘Epistemic Disadvantage’, *Philosophia*, 50, pp. 861–1878. Available at: https://doi.org/10.1007/s11406-021-00465-w.

Landström, K. (2024) ‘On Epistemic Extractivism and the Ethics of Data-Sharing’, *Philosophy of the Social Sciences*, 54(5), pp. 387–411. Available at: https://doi.org/10.1177/00483931241255253.

Peña-Guzmán, D.M. and Reynolds, J.M. (2019) ‘The Harm of Ableism: Medical Error and Epistemic Injustice’, *Kennedy Institute of Ethics Journal*, 29(3), pp. 205–242. Available at: https://doi.org/10.1353/ken.2019.0023.

Spencer, L.J. (2025) ‘Institutional Epistemic Isolation in Psychiatric Healthcare’, *Social Epistemology*, 39(2), pp. 215–228. Available at: https://doi.org/10.1080/02691728.2024.2403620.