

**SPECIAL ISSUE****Transitions in Science Communication: Continuity and Change****ESSAY**

Citizen science, cognitive justice and data sovereignty: a view from the South

Sarita Albagli **Abstract**

This essay examines citizen science, from a theoretical and conceptual perspective, as an evolving field situated within emerging agendas for rights that intersect with struggles for environmental, cognitive, and data justice. It contends that citizen science is a polysemic concept, encompassing practices ranging from instrumental data collection to democratic knowledge co-production. Drawing on diverse theoretical contributions and incorporating recent debates within the participatory sciences approach, the essay foregrounds perspectives from Global South authors, particularly decolonial and anti-colonial Latin American thought. The essay explores how citizen science may either challenge or reinforce power asymmetries. On the one hand, it can amplify diverse knowledge systems, foster intercultural dialogue, and act as a form of data activism, strengthening citizenship. On the other, it risks reinforcing platform capitalism, digital surveillance, and data extraction, thereby undermining community autonomy. Cognitive justice and data sovereignty are therefore not inherent conditions of citizen science, but outcomes dependent on equitable governance arrangements, ethical protocols and safeguards, and open infrastructures.

Keywords

Decolonising science communication; Citizen science

Received: 23rd September 2025

Accepted: 9th March 2026

Published: 13th July 2026

1 - Introduction

This essay¹ proposes a critical conceptual framework for analysing citizen science through the lenses of emerging rights agendas connecting environmental justice, cognitive justice and data sovereignty. It draws on diverse theoretical contributions with particular attention to perspectives from the Global South.

Its starting point is the ethical-political challenge posed by the Colombian sociologist Orlando Fals-Borda [1987]: What kind of knowledge do we want and need? What is scientific knowledge intended for, and who benefits or will benefit from it? To these questions, others are added: citizen science for what, for whom, by whom, and, above all, under what conditions?

2 - A concept under construction

Citizen science is a relatively recent term, first used in the 1980s and 1990s, although the contributions of so-called “amateurs” — those interested in science without professional training — can be traced back the 19th century. The very term scientist was coined in the first half of that century [Schulz, 2018], coinciding with the professionalisation of scientific activity

Over the last two decades, citizen science has expanded, driven by a set of factors such as:

- (i) the diffusion of open science movements, diversifying agendas and issues;
- (ii) the datafication of science, requiring the increasing production and digitisation of vast volumes of research data; and
- (iii) the intensification of planetary environmental crises posing new challenges to science, especially in its relationship with society.

Citizen science builds on historic accumulated learning from different experiences and approaches that do not necessarily, or explicitly, use this term — such as community science, participatory science, public engagement in science, and citizen data generation. Even though some semantic differences exist between them, these terms can be considered part of the same field. Various expressions are also used to describe participants in citizen science initiatives — citizen scientists, non-scientists, laypeople, amateurs, volunteers, participants, contributors, collaborators, stakeholders — with nuances in meaning [Eitzel et al., 2017].

Thus, citizen science is a polysemic term, encompassing diverse interpretations, practices, and methodologies. These range from contributory models focused on large-scale data collection in an instrumental sense [Bonney et al., 2009] to co-production and participatory research from horizontal and democratic perspectives [Irwin, 1995]. While these approaches may coexist and even complement each other, there may also be tensions between them, especially in contexts of controversy and conflict.

In response to such tensions, parts of the field have preferred the term ‘participatory sciences’ as a normative reorientation aimed at foregrounding shared governance practices.

1. This essay is based on a keynote talk presented by the author at the Public Communication of Science and Technology (PCST) Conference 2025.

This terminological shift reflects, to some extent, concerns about the exclusions embedded in the notion of citizenship and signals an effort to better acknowledge diverse forms of participation [Kimura & Kinchy, 2016; Cooper et al., 2023; Shirk, 2024].

Other authors retain the term ‘citizen science’ but qualify it as ‘participatory’ and ‘democratic’ [Jaeger et al., 2023; Wehn et al., 2024]. Citizenship is understood here more as social participation than as legal status, thus differentiating it from other, more instrumental approaches to citizen science.

Allan Irwin’s argument about scientific citizenship, in turn, focuses on the idea that science and citizenship are co-constituted, rather than separate domains in which science merely informs pre-existing citizens. Scientific citizenship therefore involves the capacity of citizens to question, interpret, negotiate and sometimes contest scientific claims, particularly where these intersect with public values, environmental risks and policy decisions. At the same time, Irwin emphasises that science itself is reshaped through these interactions, as public concerns, local knowledge and political contexts influence how scientific problems are defined and addressed. Participation, in this sense, is not automatically empowering: it can either deepen democracy or reproduce exclusions, depending on who sets agendas, whose knowledge counts, and how responsibility and authority are distributed between experts, institutions and publics [Irwin, 1995].

From a Global South perspective, on the other hand, these contributions also invite critical reflection. Many such frameworks operate within institutional settings shaped by Northern research agendas and institutional frameworks, which may limit their capacity to confront deeper structures of epistemic asymmetry and extraction, coloniality, and geopolitical inequality. In this context, other agendas have emerged that broaden and assign new meanings to the notion of citizenship – and, consequently, to citizen science – and which go beyond participation in science.

3 - From environmental justice to cognitive justice

Citizen science has attracted increasing attention as a tool for addressing the challenges posed by the intensifying planetary socio-environmental crisis, particularly the climate emergency and accelerating biodiversity loss. The crisis underscores the need to promote sustainable development at multiple levels. However, its causes and consequences are unevenly distributed across countries, regions, and social groups, generating disputes over responsibilities and solutions. Divergent perspectives and projects for the use of territories and resources coexist, and often collide, reflecting a ‘war of worlds’, or competing worldviews [Latour, 2002]. Science is neither neutral nor immune to such controversies; on the contrary, it is a constituent part of them.

This has fuelled debate on socio-environmental and climate (in)justice [Schlosberg & Collins, 2014], which, in turn, connects to issues of cognitive justice, data justice, and data sovereignty, as ontological and cognitive tensions intertwine and ways of being and living correspond to ways of knowing.

Cognitive justice emerges from diverse intellectual, social and political movements and traditions, such as anti-racist thought [Fanon, 1967], subaltern studies [Spivak, 1988], and

the ecology of practices [Stengers, 2005]. Literature from the Global South pushes this critique further by situating these disputes within a geopolitical and geocultural viewpoint.

Latin America has a long history of conceptualisation and experimentation in these topics, from decolonial and anti-colonial perspectives. Notable contributions include those of the pedagogy of the oppressed of the Brazilian educator Paulo Freire [Freire, 1970]; the participatory action research of the Colombian sociologist Orlando Fals Borda [Fals-Borda, 1987]; the decolonial perspective of several authors, such as the coloniality of power of the Peruvian Aníbal Quijano [Quijano, 2000], and the coloniality of knowledge of the Argentine Walter Dignolo [Dignolo, 2000]. It also encompasses the anticolonial thought of Indigenous, Afro-descendant and feminist authors — many of them building from an intersectional approach, — such as Andre Baniwa [Baniwa, 2006], Ailton Krenak [Krenak, 2019], Antonio Bispo dos Santos, known as Nego Bispo [Santos, 2015], and Lélia González [González, 1988], just to mention a few authors in Brazil.

From these perspectives, citizen science has been re-contextualised in and as part of historical and emerging struggles for rights: connecting the struggles for the right to land and territory, to water, to food and nutritional security with the struggles for the right to cognitive justice.

Indian sociologist Shiv Visvanathan, one of the pioneers in using the term, argues that cognitive justice is a fundamental human right — the right of different forms of knowledge to coexist without being delegitimised or rendered invisible — and a necessary condition for democracy [Visvanathan, 1997, 2009].

In a similar vein, Indian anthropologist Arjun Appadurai [2006] proposes the “right to research”, meaning democratising the ways and competences to produce and make use of information and data to expand social influence in public policies.

In this context, citizen science extends beyond improving social collaboration to fill data gaps in pursuit of a pseudo-consensus on sustainable development, which can function as an instrument for depoliticising and rendering conflicts invisible [Kinchy, 2017]. By contrast, citizen science can serve as a valuable tool for making legible different logics of social and territorial inscription, by asking: who is authorised to speak, and who is heard?

Citizen science can thus foster greater porosity and dialogue between science and a broad spectrum of actors, types and spaces of knowledge production [Tengö et al., 2021]. This involves interepistemic and intercultural dialogue, oriented not towards the scientific validation or subordination of community knowledge regimes under established scientific authority and certification criteria (usually Western science), but towards exploring how coexisting knowledge systems and practices can learn from one another. From a cognitive justice perspective, this approach recognises the contributions of diverse knowledge regimes, particularly those of minoritised and racialised communities, including Indigenous, traditional, and spiritual knowledge systems, as well as groups at risk and in conditions of social vulnerability [Povinelli, 2016; Lorenz & Lepenies, 2023]

On the other hand, cognitive justice does not imply that all knowledge systems are interchangeable or equivalent across all contexts. Rather, different systems possess distinct capacities, purposes, and scales. Injustice arises when one system claims universal validity and delegitimises others.

In Latin America, some projects have conducted important experiments using participatory approaches that promote dialogue between science and traditional and ancestral knowledge. One example is the Citizen Science for the Amazon Program (Programa Ciência Cidadã para a Amazônia),² developed by the Amazon Waters Alliance Network in the Pan-Amazon region, which aims to generate information on fish and water systems at an Amazonian scale through the participation of local fishing communities. Another example is Community Sentinels (Centinelas Comunitários),³ a citizen science initiative, developed in Chile, based on participatory community monitoring to generate information about the social and environmental conditions of local territories.

4 - Data justice and data sovereignty

Citizen science increasingly relies on digital infrastructures and tools for data collection, recording, storage, and analysis [Lemmens et al., 2021], ranging from mobile applications to data platforms and repositories.

These infrastructures can connect scientific projects to social and environmental concerns; strengthen collective intelligence; and amplify the visibility and policy impact of citizen and community data [Whitelaw et al., 2003; Fernandez-Gimenez et al., 2008]. But they also bring risks of reinforcing 'platform economy' or 'platform capitalism', that is, a business model based on the control of digital infrastructures by big tech companies, enabling data extraction, the exploitation of unpaid volunteer labour, as well as surveillance by states and markets [Srnicek, 2016]. The scientific ecosystem itself has also been platformised: commercial publishers now function as academic data oligopolies, selling data services to research funding institutions [Chen et al., 2019; Trinca et al., 2022].

Against this backdrop, data justice and data sovereignty gain centrality. The concept of data justice [Taylor, 2017] arises in the context of big data as a strategic resource [Mayer-Schönberger & Cukier, 2013], algorithmic governance [Rouvroy et al., 2013], and digital surveillance [Zuboff, 2019]. It highlights how data-driven systems amplify power imbalances, advocating equity and transparency in data production, governance, and use, while questioning who benefits and who is harmed in the digital economy. In this scenario, artificial intelligence presents both opportunities and risks [Fortson et al., 2024].

Data sovereignty [Baezner & Robin, 2018] extends the concept of national sovereignty to the digital domain, arguing that data is subject to the laws and governance of the nation-state in which it is generated. This debate now expands the concept beyond the sovereignty of nation-state over data to include the autonomy of communities and individuals to make decisions about their personal and territorial data, which are increasingly threatened by corporate and state control [Zuboff, 2019].

Digital sovereignty [Christakis, 2020] refers to control over data localisation, that is the principle that certain data should be stored within the physical borders of the country of origin. Dependence on proprietary infrastructures, dominated by international corporations, particularly impacts countries in the Global South, especially regions and communities that are most affected by the digital divide.

2. <https://pt.aguasamazonicas.org/programas-2/ciencia-cidada-amazonia>.

3. <https://www.centinelascomunitarios.cl/>.

5 - Research and data protocols and safeguards

In this context, the open science and citizen science agendas have become increasingly intertwined [Albagli, 2015; Wehn et al., 2024]. Citizen science has contributed to expanding understandings of open science beyond access to scientific information alone, as reflected in two of the four pillars of UNESCO's recommendations for open science [UNESCO, 2022]: 'open participation of social actors' and 'open dialogue with other knowledge systems'. At the same time, open science principles have reinforced expectations around the sharing of data generated through citizen science, bringing questions of data justice and data sovereignty to the fore.

From a cognitive and data justice perspective, the adoption of research and data protocols and safeguards has been indicated as playing an important role in addressing asymmetrical relationships between participants in citizen and participatory science projects and as ways of addressing risks of academic extraction and corporate exploitation of community knowledge and data [Cooper et al., 2023; Benyei et al., 2023].

The CARE principles — collective benefit, authority to control, responsibility, and ethics — originally developed for Indigenous data governance [Carroll et al., 2020], have been presented as complementary to the FAIR principles (that data be findable, accessible, interoperable, and reusable), proposed to improve the management of scientific data. [Wilkinson et al., 2016].

In this same vein, a number of criteria have been proposed to guide research practices and shape conditions for ethical and fair participation in citizen science projects. These include: the recognition of local knowledge validation systems alongside scientific ones; degrees of community decision-making autonomy, with attention to how consent is obtained and maintained in favour of free and informed consent; the ways in which results are returned to participating communities and the mechanisms for benefit-sharing; and transparent and fair governance practices.

Open data infrastructures have taken on particular importance in this scenario. From the perspective of Science and Technology Studies (STS), infrastructure is understood not merely as a technical substrate but as part of broader socio-technical arrangements [Star, 1999].

Questions of infrastructure governance, including how data circulate within and across systems, also carry significant implications. Discussions on data sovereignty in citizen science have addressed aspects such as: who exercises control over access, storage, and reuse of data; whether communities are able to refuse secondary uses of data; and the extent to which open or community-governed infrastructures are employed.

Taken together, these considerations point to challenges for the institutional and regulatory frameworks that shape research, policymaking, evaluation, and funding in science, technology, and innovation. They highlight the relevance of understanding how existing and emerging regulations, at national and international levels, affect the production, access to, and use of data and knowledge generated through citizen science initiatives.

6 - Final remarks

Cognitive justice, data justice, and data sovereignty are not inherent attributes of citizen science; they may either be advanced or undermined by it.

Citizen science functions as a practical expression of cognitive and data justice when it fosters equitable dialogue between scientific and other knowledge regimes, enabling co-creation and respecting community validation systems rather than treating them as extractable data.

Citizen science also serves as a form of data activism [Milan & Gutiérrez, 2015] when it empowers communities to generate counter-data that challenge dominant narratives. In this sense, it can operate as a ‘sounding board’ [Stengers, 2010] for a heterogeneous range of social and cognitive actors, amplifying societal influence over both public and private policies. In Brazil, one example is the project “[What Mud Is This?](#)”, (Que Lama é essa?) which investigates the condition of water, flood sediments, and soils at sites across the river basins of the Rio das Velhas, Paraopeba, and Doce rivers in Minas Gerais, following the heavy rains of January and February 2022 and the collapse of mining dams in the region.

The absence of equitable governance arrangements, data protocols, and research ethics safeguards creates a risk of practices that fail to align with the values and interests of communities and that exploit their knowledge and data without fair returns. Such protocols and safeguards emerge from deliberate political and ethical choices and depend on processes of negotiation among all parties involved.

From a Global South perspective, however, neither terminological reform nor procedural inclusion is sufficient to address deeper historical and structural injustices rooted in colonialism, extractivism, and epistemic domination. Cognitive justice, from this standpoint, entails not merely recognising diverse knowledge systems, but confronting the unequal global political economy of knowledge production, circulation, and validation through explicitly anti-colonial approaches to knowledge-making. Similarly, data justice is not only a matter of governance models or ethical stewardship, but also a question of sovereignty, ownership, and the geopolitical consequences of data extraction.

These are challenging issues that position citizen science as a terrain of contestation within broader counter-hegemonic and anti-colonial struggles, contributing to the strengthening and expansion of the meaning of citizenship as part of the relationship between power and knowledge.

This entails not merely “respecting differences” but also honouring divergence. It involves understanding communication in its etymological sense of ‘becoming common’, as an encounter between and within difference [Lafuente & Estalella, 2015]. From this perspective, citizen science can be approached as an instrument for promoting a ‘great dialogue’ among different forms of knowledge.

Acknowledgments

Research funded by the National Council for Scientific and Technological Development (CNPq), Brazil.

References

- Albagli, S. (2015). Open science in question. In S. Albagli, M. L. Maciel & A. H. Abdo (Eds.), *Open science, open issues* (pp. 9–25). IBICT; UNIRIO. https://livroaberto.ibict.br/bitstream/123456789/1061/1/Open%20Science%20open%20issues_Digital.pdf

- Appadurai, A. (2006). The right to research. *Globalisation, Societies and Education*, 4(2), 167–177. <https://doi.org/10.1080/14767720600750696>
- Baezner, M., & Robin, P. (2018). *Cyber sovereignty and data sovereignty*. Switzerland, Cyberdefense Trend Analysis, Center for Security Studies (CSS), ETH Zurich. <https://doi.org/10.3929/ETHZ-B-000314613>
- Baniwa, A. (2006). *O índio brasileiro: O que você precisa saber sobre os povos indígenas no Brasil de hoje*. Ministério da Educação; SECAD. <https://www.gov.br/mec/pt-br/media/publicacoes/semesp/vol12indio.pdf>
- Benyei, P., Skarlatidou, A., Argyriou, D., Hall, R., Theilade, I., Turreira-García, N., Latreche, D., Albert, A., Berger, D., Cartró-Sabaté, M., Chang, J., Chiaravalloti, R., Cortesi, A., Danielsen, F., Haklay, M. (, Jacobi, E., Nigussie, A., Reyes-García, V., Rodrigues, E., ... Woods, T. (2023). Challenges, strategies and impacts of doing citizen science with marginalised and indigenous communities: reflections from project coordinators. *Citizen Science: Theory and Practice*, 8(1), 21. <https://doi.org/10.5334/cstp.514>
- Bonney, R., Cooper, C. B., Dickinson, J., Kelling, S., Phillips, T., Rosenberg, K. V., & Shirk, J. (2009). Citizen science: a developing tool for expanding science knowledge and scientific literacy. *BioScience*, 59(11), 977–984. <https://doi.org/10.1525/bio.2009.59.11.9>
- Carroll, S. R., Garba, I., Figueroa-Rodríguez, O. L., Holbrook, J., Lovett, R., Materechera, S., Parsons, M., Raseroka, K., Rodriguez-Lonebear, D., Rowe, R., Sara, R., Walker, J. D., Anderson, J., & Hudson, M. (2020). The CARE principles for indigenous data governance. *Data Science Journal*, 19(43), 1–12. <https://doi.org/10.5334/dsj-2020-043>
- Chen, G., Posada, A., & Chan, L. (2019). Vertical integration in academic publishing: implications for knowledge inequality. In P. Mounier (Ed.), *Connecting the knowledge commons: from projects to sustainable infrastructure* [The 22nd international conference on electronic publishing, revised selected papers]. OpenEdition Press. <https://books.openedition.org/oep/9068>
- Christakis, T. (2020). ‘European digital sovereignty’: successfully navigating between the ‘Brussels effect’ and Europe’s quest for strategic autonomy. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3748098>
- Cooper, C., Rasmussen, L., & Jones, E. (2023). *Data ethics toolkit for the participatory sciences*. Online Ethics Center. <https://doi.org/10.18130/6TG8-7C78>
- Eitzel, M. V., Cappadonna, J. L., Santos-Lang, C., Duerr, R. E., Virapongse, A., West, S. E., Kyba, C. C. M., Bowser, A., Cooper, C. B., Sforzi, A., Metcalfe, A. N., Harris, E. S., Thiel, M., Haklay, M., Ponciano, L., Roche, J., Ceccaroni, L., Shilling, F. M., Dörler, D., ... Jiang, Q. (2017). Citizen science terminology matters: exploring key terms. *Citizen Science: Theory and Practice*, 2(1), 1–20. <https://doi.org/10.5334/cstp.96>
- Fals-Borda, O. (1987). The application of participatory action-research in Latin America. *International Sociology*, 2(4), 329–347. <https://doi.org/10.1177/026858098700200401>
- Fanon, F. (1967). *Black skin, white masks*. Grove Press.
- Fernandez-Gimenez, M. E., Ballard, H. L., & Sturtevant, V. E. (2008). Adaptive management and social learning in collaborative and community-based monitoring: a study of five community-based forestry organizations in the western U.S.A. *Ecology and Society*, 13(2), 4. <https://www.ecologyandsociety.org/vol13/iss2/art4/>
- Fortson, L., Crowston, K., Kloetzer, L., & Ponti, M. (2024). Artificial intelligence and the future of citizen science. *Citizen Science: Theory and Practice*, 9(1), 32. <https://doi.org/10.5334/cstp.812>
- Freire, P. (1970). *Pedagogy of the oppressed*. Continuum.
- González, L. (1988). A categoria político-cultural de amefricanidade. *Tempo Brasileiro*, 92/93, 69–82.
- Irwin, A. (1995). *Citizen science: a study of people, expertise and sustainable development*. Routledge.

- Jaeger, J., Masselot, C., Greshake Tzovaras, B., Senabre Hidalgo, E., Haklay, M., & Santolini, M. (2023). An epistemology for democratic citizen science. *Royal Society Open Science*, 10(11), 231100. <https://doi.org/10.1098/rsos.231100>
- Kimura, A. H., & Kinchy, A. (2016). Citizen science: probing the virtues and contexts of participatory research. *Engaging Science, Technology and Society*, 2, 331–361. <https://doi.org/10.17351/ests2016.99>
- Kinchy, A. (2017). Citizen science and democracy: participatory water monitoring in the Marcellus Shale fracking boom. *Science as Culture*, 26(1), 88–110. <https://doi.org/10.1080/09505431.2016.1223113>
- Krenak, A. (2019). *Ideas to postpone the end of the world*. House of Anansi.
- Lafuente, A., & Estalella, A. (2015). Ways of science: public, open and commons. In S. Albagli, M. L. Maciel & A. H. Abdo (Eds.), *Open science, open issues* (pp. 59–85). IBICT; UNIRIO. https://livroaberto.ibict.br/bitstream/123456789/1061/1/Open%20Science%20open%20issues_Digital.pdf
- Latour, B. (2002). *War of the worlds: what about peace?* Prickly Paradigm Press.
- Lemmens, R., Antoniou, V., Hummer, P., & Potsiou, C. (2021). Citizen science in the digital world of apps. In *The science of citizen science* (pp. 461–474). Springer International Publishing. https://doi.org/10.1007/978-3-030-58278-4_23
- Lorenz, L., & Lepenies, R. (2023). Contributions of citizen science to the sustainable development goals: is transformative “global” citizen science possible? *Citizen Science: Theory and Practice*, 8(1). <https://doi.org/10.5334/cstp.595>
- Mayer-Schönberger, V., & Cukier, K. (2013). *Big data: a revolution that will transform how we live, work and think*. Houghton Mifflin Harcourt.
- Mignolo, W. D. (2000). *Local histories/global designs: coloniality, subaltern knowledges and border thinking*. Princeton University Press.
- Milan, S., & Gutiérrez, M. (2015). Citizens’ media meets big data: the emergence of data activism. *MEDIACIONES*, 11(14), 120–133. <https://doi.org/10.26620/uniminuto.mediaciones.11.14.2015.120-133>
- Povinelli, E. A. (2016). *Geontologies: a requiem to late liberalism*. Duke University Press. <https://doi.org/10.1215/9780822373810>
- Quijano, A. (2000). Coloniality of power and eurocentrism in Latin America. *International Sociology*, 15(2), 215–232. <https://doi.org/10.1177/0268580900015002005>
- Rouvroy, A., Berns, T., & Carey-Libbrecht, L. (2013). Algorithmic governmentality and prospects of emancipation: disparateness as a precondition for individuation through relationships? *Réseaux*, 177(1), 163–196. <https://doi.org/10.3917/res.177.0163>
- Santos, A. B. (2015). *Colonialismo, quilombos: modos e significações*. INCTI.
- Schlosberg, D., & Collins, L. B. (2014). From environmental to climate justice: climate change and the discourse of environmental justice. *WIREs Climate Change*, 5(3), 359–374. <https://doi.org/10.1002/wcc.275>
- Schulz, P. (2018). Cientistas: de amadores a cidadãos. *Jornal da Unicamp*. <https://www.unicamp.br/unicamp/ju/artigos/peter-schulz/cientistas-de-amadores-cidadaos>
- Shirk, J. (2024). Reintroducing this association: Advancing Participatory Sciences. *Association for Advancing Participatory Sciences*. <https://participatorysciences.org/2024/04/02/reintroducing-this-association-advancing-participatory-sciences/>
- Spivak, G. C. (1988). Can the subaltern speak? In C. Nelson & L. Grossberg (Eds.), *Marxism and the interpretation of culture* (pp. 271–313). University of Illinois Press.

- Srnicek, N. (2016). *Platform capitalism*. Polity Press.
- Star, S. L. (1999). The ethnography of infrastructure. *American Behavioral Scientist*, 43(3), 377–391. <https://doi.org/10.1177/00027649921955326>
- Stengers, I. (2010). *Cosmopolitics I*. University of Minnesota Press.
- Stengers, I. (2005). Introductory notes on an ecology of practices. *Cultural Studies Review*, 11(1), 183–196. <https://doi.org/10.5130/csr.v11i1.3459>
- Taylor, L. (2017). What is data justice? The case for connecting digital rights and freedoms globally. *Big Data & Society*, 4(2), 205395171773633. <https://doi.org/10.1177/2053951717736335>
- Tengö, M., Austin, B. J., Danielsen, F., & Fernández-Llamazares, Á. (2021). Creating synergies between citizen science and indigenous and local knowledge. *BioScience*, 71(5), 503–518. <https://doi.org/10.1093/biosci/biab023>
- Trinca, T. P., Papi, M. E. S., & Albagli, S. (2022). Capitalismo de plataforma e plataformização na ciência [Paper presentation]. *XXII Encontro Nacional de Pesquisa e Pós-Graduação em Ciência da Informação (ENANCIB)*. <https://hal.science/hal-04333508v1>
- UNESCO. (2022). *UNESCO recommendation on open science*. <https://doi.org/10.54677/MNMH8546>
- Visvanathan, S. (1997). *A carnival for science: essays on science, technology and development*. Oxford University Press.
- Visvanathan, S. (2009). *The search for cognitive justice* [Seminar (597)]. https://www.india-seminar.com/2009/597/597_shiv_visvanathan.htm
- Wehn, U., Ajates, R., Mandeville, C., Somerwill, L., Kragh, G., & Haklay, M. (2024). Opening science to society: how to progress societal engagement into (open) science policies. *Royal Society Open Science*, 11(5), 231309. <https://doi.org/10.1098/rsos.231309>
- Whitelaw, G., Vaughan, H., Craig, B., & Atkinson, D. (2003). Establishing the Canadian community monitoring network. *Environmental Monitoring and Assessment*, 88, 409–418. <https://doi.org/10.1023/A:1025545813057>
- Wilkinson, M. D., Dumontier, M., Aalbersberg, I. J., Appleton, G., Axton, M., Baak, A., Blomberg, N., Boiten, J.-W., da Silva Santos, L. B., Bourne, P. E., Bouwman, J., Brookes, A. J., Clark, T., Crosas, M., Dillo, I., Dumon, O., Edmunds, S., Evelo, C. T., Finkers, R., ... Mons, B. (2016). The FAIR guiding principles for scientific data management and stewardship. *Scientific Data*, 3(1). <https://doi.org/10.1038/sdata.2016.18>
- Zuboff, S. (2019). *The age of surveillance capitalism: the fight for a human future at the new frontier of power*. PublicAffairs.

About the author

Sarita Albagli is a Senior Researcher at the Brazilian Institute of Information in Science and Technology (Ibict). Professor at the Postgraduate Programme in Information Science, Ibict. Coordinator of the Open Science and Citizen Innovation Laboratory — CindaLab. Scientific Coordinator of Civis — Citizen Science Platform. Coordinator of the National Institute of Citizen Science — INCC, Brazil.

✉ sarita@ibict.br

How to cite

Albagli, S. (2026). 'Citizen science, cognitive justice and data sovereignty: a view from the South'. *JCOM* 25(05), Y01. <https://doi.org/10.22323/355120260309065841>.



© The Author(s).

This article is licensed under the terms of the Creative Commons [Attribution 4.0](https://creativecommons.org/licenses/by/4.0/) license. All rights for Text and Data Mining, AI training, and similar technologies for commercial purposes, are reserved.

ISSN 1824-2049. Published by SISSA Medialab. jcom.sissa.it