

Panel 48. Decolonising Science and Technology Studies for Good?

Convenors:

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Keywords: coloniality, decolonisation, epistemic justice, indigenous knowledge, theory and methods

As in other academic fields of research, the decolonisation of Science and Technology Studies remains an urgent, yet complex challenge. Despite decades of critical reflection since STS established itself as a field of intellectual inquiry in the US and Europe, and despite continuing involvement and efforts from scholars beyond Euro-American contexts, questions around what it truly means to decolonise the field and its research questions, theoretical frameworks, and methods remain unresolved. In the spirit of moving beyond words and towards actions, this workshop invites contributions that critically engage with the ongoing debates and practices of decolonising STS, questioning whether the progress made so far is sufficient or if it remains largely performative and limited by versions of identity politics that fail to seek systemic change

The following are some of the questions that this workshop seeks to interrogate:

- Why are we still grappling with decolonisation after decades of critical scholarship within STS? Are sectors beyond academia, including various epistemic communities from indigenous systems of knowledge, adequately represented in these conversations and efforts?
- To what extent are or can our research designs and methodologies truly be decolonised? Is the term "decolonising STS" simply performative, or is it fostering substantive change? What might be a viable alternative?
- Are STS research teams and institutions multicultural not only in terms of geography but also in the diversity of people working within them? Can diversity be sufficient for achieving decolonisation?
- Beyond academic journals and conferences, what concrete actions have been taken to decolonise the field? How can these efforts be made more substantial?
- What theoretical, analytical, and methodological innovations are needed to push the decolonisation of STS further?
- In which ways can STS contribute to the debate around post-colonialism, decolonisation, and (de-) coloniality? How can STS perspectives on decolonisation contribute to efforts to achieve epistemic justice outside of the Global North?
- In which ways can STS contribute to decolonisation efforts in specific global phenomena such as, for example, climate change adaptation and mitigation or the emergence and implementation of AI systems?
- How can research around decolonising STS co-evolve with discussions around science and technology as a common good?

We welcome papers that explore these questions through empirical research, theoretical reflections, and methodological critiques and interventions. Contributions that include voices and perspectives from underrepresented regions, cultures, and epistemic communities are particularly encouraged, as are those that propose innovative methods and strategies for engaging with decolonisation beyond academia



11 JUNE 2025 09.00 - 11.00

ID 163 - The Not-Quite-West of the Margins, and STS

Alessandro Mongili, Università degli Studi di Padova

Keywords: Postcolonial studies, STS, Marginality and coloniality, Borderlands and topologies, Politics of Innovation

Postcolonial studies, the decolonial hypothesis, and the Asia as a Method approach have highlighted the need to investigate various phenomena analysed by the social sciences from perspectives other than the Western one, which claims universality but is itself localised. Within them, social studies on science and technology (STS) have developed their inquiries on multiple levels. The first is the centrality of the West to technoscience, and of technoscience to the centrality of the West. The second is the epistemological encounter/clash between Western technoscience and other knowledge practices. The third, finally, is that of hybrids, borderlands, and margins between different types of knowledge practices and situations in which colonial-type relations do not saturate all technoscientific and social processes. The last level pertains to this contribution itself.

Taking the viewpoint of technoscience is particularly useful because it touches on the main aspects around which coloniality is defined. My contribution will address the theme starting from the interweaving of knowledge forms, the organisation of technoscience, and innovation policies in countries or territories where coloniality is present but does not saturate all relations, meaning it appears in analogous topological forms. Drawing from studies related to the areas of Mediterranean Europe, Arctic Europe, and various areas of Asia – and thus from postcolonial, neocolonial, or semi-colonial situations – existing paradigmatic models and concepts aiming to highlight hybrid characteristics, such as borderlands, topologies, heterogeneity, and coloniality, will be interrogated. The sources concern research conducted by the author and literature relevant to this theme in various fields.

In particular, this discussion will begin with the situation of Sardinia, which has long been investigated by me. In Sardinia, an aggressive innovation policy coexists with a persistent lack of dynamism in technoscientific processes, conventionally labelled as underdevelopment. Conceptually, it is proposed to employ concepts emerging from critiques of colonialism and the limits of STS in a way not tied to specific territories but to the topological nature of power relations that exist in-between, or are appropriated by technoscientific processes – especially following digital development and the increasing importance of classification, standardisation, and infrastructuring.

Additionally, the aim is to analyse similarities and differences between marginality and coloniality, starting from processes observed in Europe's marginal areas, in relation to certain axes of postcolonial critique. Particular attention will be given to colonial discourse and its inherent excluding dichotomies and essentialisms, to shed light on the construction of STS as a field of research rooted in the academic systems of the Global North.

11 JUNE 2025 09.00 - 11.00

ID 382 - Indigenous-Led Transformations in Technoscience

Maria Sapignoli, Università degli Studi di Milano Statale

Maui Hudson, University of Waikato

Keywords: Indigenous epistemology, AI, decolonisation, technoscience

The entanglement of technoscience and coloniality is increasingly interrogated through Indigenous critiques of science, which challenge its epistemic authority and dominance in policy, governance, and resource management (Durie, 2004; Smith et al., 2013; David-Chavez et al., 2024). The push to integrate Indigenous knowledge into research and decision-making frameworks is often framed as a response to equity and Indigenous rights, but it also speaks to the need for more holistic, relational, and contextually grounded approaches to addressing contemporary socio-environmental challenges (Muhl et al., 2023; UN-



ESCO, 2023; Strand et al., 2024). However, such integration efforts are not neutral interventions; they are sites of negotiation, translation, and contestation, shaped by the enduring legacies of colonial knowledge hierarchies and Indigenous assertions of sovereignty.

Emerging technosciences – including artificial intelligence (AI) and biotechnologies – are reshaping relationships and creating new ways to be in the world, generating both threats and possibilities. Indigenous scholars have critically examined the impacts of AI on Indigenous practices and values, often highlighting its negative effects and the ways it reinforces existing inequities in access and opportunities. AI, in particular, extends colonial trajectories of dispossession through data extraction, algorithmic bias, and the reproduction of settler epistemologies that discriminate and appropriate Indigenous knowledge. However, alongside these critiques, Indigenous researchers, communities and organisations are also engaging with AI in more complex ways, including collaboration and adaptation, shaping technology to align with their own knowledge systems and priorities, engaging with computational methods on their own terms, and enacting alternative futures. This evolving relationship mirrors previous Indigenous engagements with other technosciences (Beaton et al 2017; Shedlock & Hudson, 2022; Lewis, 2023; Lewis et al., 2024; Brown et al., 2024; Reid et al., 2024; Clark et al., 2024). As AI technologies and infrastructures continue to expand, Indigenous communities are actively debating their broader implications for their ways of life, governance, and self-determination.

This paper explores the trajectories of nascent movements to build Indigenous algorithmic futures through three Indigenous led initiatives focused on AI and data science: Tikanga in Technology in Aotearoa/New Zealand, mobilizes Māori epistemologies to reimagine data infrastructures, resisting the extractive tendencies of conventional data science while advancing Indigenous digital sovereignty. The recently launched research project, Abundant Intelligences, based in Canada, convenes Indigenous-led research pods to explore how computational methods can be meaningfully integrated into Indigenous knowledge systems to support communities well-being. Finally, the Indigidata initiative, operating in both New Zealand and the USA, works to cultivate Indigenous students capacity in AI and data science fostering intergenerational knowledge transfer and ensuring Indigenous presence in technological development. Each of these projects is a bridge between Indigenous knowledge, computer science, and AI, building links between the past and present to imagine and shape the possibility of a more diverse and culturally responsive algorithmic future.

11 JUNE 2025 09.00 - 11.00

ID 560 - Decolonizing STS: A Critical Look at Western European Institutional Practices

Maria Lee, Technische Universität München

Keywords: decolonisation, epistemic diversity, institutional practices, European academia

Science, Technology, and Society Studies (STS) is an interdisciplinary that promotes reflexive and critical questions in the relationship between knowledge, power and society. However, despite its commitment to inclusivity and epistemic diversity, the field is often challenged by growing postcolonial scholarship for its Eurocentric perspective that shapes how knowledge is taught, researched and institutionalised.

This paper presents an ethnographic study of an STS department at an elite Western European university, looking at how scholars engage with decolonial knowledge and theories in teaching, curricula and broader institutional practices. Through participant observation, qualitative interviews with faculty members, students and analysis of syllabi and teaching policies, this research asks in what ways can local academic institutions challenge Eurocentric hierarchies in academic knowledge production.

Drawing on critiques of coloniality in STS (Prasad, 2022), institutional whiteness (Ahmed, 2012), and structural barriers to decolonizing knowledge practices (Quijano, 2000; Ashkin & Cengiz, 2023; Sarathchandra, 2018), this study highlights the gap between the call for decolonizing (STS) knowledge and the day to day practices in a local academic environment. Findings show that while there is growing awareness of the



need for epistemic diversity, change is often hindered by institutional inertia, disciplinary norms and the corporatisation of academic institutions.

This presentation contributes to the ongoing debates on the politics of knowledge in STS and offers preliminary thoughts on potential further debates for fostering change.

11 JUNE 2025 09.00 - 11.00

ID 640 - Technoscience for Good in the Global South: Embrace Science and Technology as Global Public Goods

Govindan Parayil, University of South Florida

Keywords: Socio-technical imaginaries, small-scale nuclear power energy systems (on and off grid), renewable energy transition

Much of modern science and technology evolved in now what we call western industrialised countries, their entanglement in the global south as colonial occupiers tainted the discourse on development since the project of decolonisation began after WWII. It was a mistake to equate modern science & technology that evolved in both the west and the colonies as "tools of the empire," and, hence, inappropriate for rebuilding the economies of postcolonial states.

The emergence of epistemological relativism and social constructivism in contextualizing the development of modern S&T did enormous damage to the development and diffusion of critically important new knowledge and tools for rebuilding the economies of the postcolonial states. Instead of selectively deploying new technologies and scientific knowledge for economic development, developing world leaders experimented with various appropriate, intermediate and indigenous technologies as the best tools for economic development. Some of these indigenous knowledge and technologies, are indeed useful, but must be deployed in tandem with modern S&T.

East Asian countries (notably Japan, South Korea, Taiwan, Singapore and lately China) did not follow the epistemic relativism arguments about the evolution of modern S&T unlike most of their peers in the rest of Asia, Africa and Latin America. East Asian countries transferred, innovated and used modern S&T, which brought about widespread economic prosperity that helped liberate hundreds of millions of their people from extreme poverty. These countries looked at modern S&T as global public goods; they innovated and absorbed modern S&T for their contexts. East Asian countries showed that science and technology could be adopted for economic development without losing their national identities. Countries like India, Indonesia, Kenya and others are doing catch up with their east Asian peers.

In this paper, I will argue that STS scholars of decolonising of science and technology should reflect upon the mistakes they have made by uncritically following social constructivists, epistemic relativists and SSK theorists that set the research agenda of STS since the 1980s. Robert Merton's norms of modern science that clearly demonstrated the universality of scientific knowledge got ignored by the storm unleashed by Thomas Kuhn's theory of scientific change. While social constructivists lauded Kuhn, Merton was ignored. STS scholars focused on the social aspects of scientific knowledge production, while ignoring the foundational scientific facts, theories and instrumental innovations that triggered the paradigm shifts in science.

Scholars of decolonisation of S&T uncritically followed the social constructivists and epidemic relativists, which in countries like India found ready followers among right wing groups that claimed that ancient Indians had developed airplanes, cell phones, stem cells and organ transplants. They argued that their ancient and traditional science and technology were as good and better than modern S&T, an obvious fallacy. For technoscience to flourish in the global south, science and technology must be embraced as global public good. Attention should focus on equity and fairness in trade and economic transactions, and fight for a fair stake in political power through economic power that forms the basis of national and global governance.

