

What should decolonization mean for history of science?

Timothy Sim

14 May 2021

Recent calls to decolonize science have inspired debate over what history of science can offer to these movements, and whether the discipline itself needs to be decolonized. While tackling the former question could increase history of science's profile, only the latter might transform it. Hence, this essay focuses narrowly on decolonization within the history of science, although it should be noted that these issues draw from a wider critique of Western academic practice in general.

The discussion is organized into three parts. Firstly, I query why decolonization matters for history of science. I suggest that both the products and practices of the discipline can promote "epistemic violence" by privileging Western perspectives over others. Secondly, I explore what a process of decolonization might entail according to decolonial thinkers concerned with settler colonialism. One influential recommendation – the replacement of Western historiographies with indigenous approaches – has both potentials and pitfalls. Finally, I gesture to what the process of decolonization might produce within a more expansive understanding of colonial relations.

The geopolitics of history of science

When the postcolonial historian Warwick Anderson talks about the "epistemic violence" of "conventional histories", his target is a familiar one: "simple diffusionist narratives" that claim the "absolute sovereignty, possession, or universality" of Western forms of knowledge like science.¹ These narratives espoused a view of science as benevolent truth created at European "centres of calculation" and spread across the world, improving through Westernizing.² Since the spread of science and medicine to European colonies was assumed to be a good thing – the triumph of universal truth over local superstition – any resistance by indigenous peoples was maligned as ignorance. By privileging the experiences and knowledge systems of the West over the rest, these narratives silenced non-European voices, erased colonized subjects of their agency, and legitimized colonial subjugation. Indigenous people were consigned to the role of the primitive "other": "they were not fully human, they were not civilized enough to have systems, they were not literate, their languages and modes of thought were inadequate."³ It was this marginalization of non-Western perspectives that constituted a form of epistemic violence, or violence through knowledge.⁴

If that was all to decolonial worries about epistemic violence, then history of science might seem innocent. Since the 1990s, postcolonial histories of science and medicine have questioned the assumed legitimacy of science, highlighted its inextricable relationship with imperial power, and

¹ Anderson 2020a, 372.

² Latour 1987; Anderson 2018; Basalla 1967.

³ Smith 2012, 29.

⁴ Spivak 1988.

examined its contested nature in practice.⁵ More recently, global historians of science have argued that a focus on circulation can “indigenize” science by identifying mutual influences between “Western” science and other knowledge systems.⁶ Both historiographies therefore attempt to surpass the traditional Eurocentric histories that excluded non-Western perspectives.

Decolonial thinkers, however, argue that it is not just the past products of history of science but also the current practices within the discipline that engender epistemic violence. To these indigenous scholars, who frequently come from the settler colonies of North America, the view of academic research (including history of science) as politically neutral is a dangerous myth. It distracts from how the academy is “focused upon the propagation and promulgation of (settler colonial) knowledge.”⁷ In postcolonial history of science, for instance, a focus on giving voice to the colonized can fetishize pain for academic gain, subjecting the oppressed to a “second order of violence.”⁸ When these studies over-emphasize the agency and hybridity of the colonized over the violence of colonial power structures, they can also become forms of premature reconciliation: a method of reducing settler guilt to their historic responsibilities for violence (“colonialism wasn’t *that* hegemonic”), while blinding oneself to continuing violence today.⁹ Since research is often assumed to be an end in itself, and distinct from activism, the academy “stockpiles examples of injustice, yet will not make explicit a commitment to social justice.”¹⁰ Understood thusly, Western research is a site where neo-colonial knowledge is produced by exploiting, rather than improving, the lives of the “other”.

Within the disciplinary configuration of history of science more specifically, the colonial “geopolitics of knowledge” that privileged Western science in the past continues to operate by privileging Western histories in the present.¹¹ Just as how science was imagined to be universal, so too are Western historiographies often assumed to be applicable everywhere. When these historiographies are uncritically applied to non-Western spaces, they end up remaking other places into pale imitations of the West. The historian Francesca Bray, for instance, recalls that even as the editors of *Cambridge World History* invited her to write about early modern technology in China, their focus on the period 1400-1800 assumed a conventional narrative of European innovation, production, and modernity; one that left little space for appreciating the ritual uses of technologies like housebuilding that dominated in the late-Ming era. The history of Chinese technology is thus invited to be a history of (inferior) European-style development in a different place.¹² Because Europe “remains the sovereign, theoretical subject” of non-European histories, Dipesh Chakrabarty writes, “There is a peculiar way in which all these other histories tend to become variations on a master narrative that could be called the ‘the history of Europe.’”¹³ Non-European knowledge systems thus emerge as mere supplements to European science, given life insofar as they inform and complicate the latter.¹⁴

⁵ For overviews, see Seth 2017; Harrison 2005; Anderson 2002. For examples, see Watson-Verran and Turnbull 1995; Anderson 2006; Arnold 1993; Vaughan 1991.

⁶ Sivasundaram 2010; Fan 2012; Raj 2007.

⁷ Tuck and Yang 2014, 232. See also Smith 2012.

⁸ Hartman 2008, 5; Tuck and Yang 2014, 226-231.

⁹ Tuck and Yang 2012, 19-22

¹⁰ Tuck and Yang 2014, 233.

¹¹ On “geopolitics of knowledge” see Mignolo 2000; Mignolo 2009.

¹² Bray 2012, 233-236. See also Elman 2010, 374-375 and 387-389.

¹³ Chakrabarty 1992, 1.

¹⁴ Anderson 2020a, 373.

This historiographical imbalance leads to an “inequality of ignorance” between practitioners: “Third-world historians feel a need to refer to works in European history; historians of Europe do not feel any need to reciprocate.”¹⁵ Linguistically, this inequality is reified when “local” non-European historians of science must translate their work into English to achieve “global” reach in top journals, whereas European historians may feel no need to engage with – and are not faulted for ignoring – research in non-English communities.¹⁶ The difficulty of this linguistic translation is compounded by epistemic translation across local styles of history of science, which might have varying approaches to engaging with literature or even to what counts as science.¹⁷ Making non-Western scholars play to Western standards hence perpetuates epistemic power relations that we might hesitate to call “violent”, but nonetheless generate unequal burdens along neo-colonial lines.

Decolonizing history of science

Given the range of issues that decolonial authors have noted within the history of science, an equally wide array of solutions has been proposed. I focus here on one influential solution proposed primarily by indigenous scholars: the replacement of Western historiographies with Indigenous “onto-epistemologies” and “refusals”.

Historiographically speaking, many decolonial historians of science advocate replacing Western approaches with indigenous “onto-epistemologies” that foreground the situated nature of knowledge. To an extent, these approaches mirror and are informed by postcolonial critiques of science that examine science as a European indigenous knowledge system. However, decolonial historians tend to argue that it is not enough to make space for indigenous epistemologies alongside Western ones; instead, indigenous perspectives must be privileged.¹⁸ For instance, the historians Anja Kanngieser and Zoe Todd propose a move away from environmental case studies to “kin studies” that foreground the ethical, spiritual, and inter-relational nature of ecosystems as “societies”.¹⁹ These approaches, which are extolled for their “incommensurability” with settler colonial approaches, are seen as the first step to remaking history into a field that is truly decoupled from, rather than sublimated into, colonial epistemic structures.²⁰

The underlying goal of creating these indigenous histories is to use history as activism – to reorient research agendas and methodologies towards advancing indigenous goals, thereby divorcing research of its neo-coloniality.²¹ Part of this project involves refusing to engage with academic practices that do not align with said goals. Hence Kim TallBear’s study of genetic science and Native Americans “refuses ethnography on Native Americans and instead gazes upon those who are understudied yet influential”: the scientists and companies that promote a neo-colonial understanding of Native American tribal belonging.²² By decentering the object of study from indigenous peoples to the scientists themselves, refusal “shifts the gaze from the violated body to the violating structure” to allow for its deconstruction.²³ At the same time, it

¹⁵ Chakrabarty 1992, 2; Mignolo 2009, 166-174.

¹⁶ Nappi 2013; Grecco and Schuster 2020, 431; Mignolo 2009, 166.

¹⁷ Nappi 2013, 107-108.

¹⁸ Anderson 2020a, 372-374.

¹⁹ Kanngieser and Todd 2020.

²⁰ Tuck and Yang 2012; Murphy 2020; Mignolo 2009.

²¹ Murphy 2020; Smith 2012.

²² TallBear 2013, 9.

²³ Tuck and Yang 2014, 241.

shields marginalized indigenous knowledge systems from academia by presenting a “strategically essentialist” front that is outwardly united even when internally contested.²⁴ To many indigenous scholars, decolonizing history of science implies that histories must work towards dismantling settler colonial regimes in favour of indigenous ones.

While this process of decolonizing history is politically powerful, it has notable weaknesses. One obvious problem is that strategic essentialism can quickly devolve into simple essentialism. In the Latin American context, the decolonial global historians Gabriela De Lima Grecco and Sven Schuster concede that attempts to recover a pristine and autochthonous indigenous episteme frequently engender “political militancy, anachronism, lack of empirical study, and a certain neo-*indigenista* nativism that tends to idealize and essentialize the ‘other’ and ‘ancestral’ knowledge.”²⁵ Similarly, Rohan Deb Roy suggests that recent attempts to identify the origins of genetic science in ancient Hindu civilisation feed dangerously into jingoism.²⁶ By sharply demarcating between scientific and indigenous knowledges, decolonial approaches can “blind us to the many accommodations and transfers, the forced mixings and unequal exchanges” that resulted from colonialism, thereby promoting nativist nostalgia.²⁷

Another issue emerges when we consider the politics of this version of decolonization itself. If indigenous scholars stringently promote incommensurable narratives that “necessarily sabotage and supersede settler colonial linguistic, narrative, and temporal protocols,” then it is not clear how non-indigenous scholars might communicate with them.²⁸ One might worry that decolonization would become the province – and burden – of indigenous scholars, just as how feminism and racial equality sometimes remain the burden of women and minorities. An equally pressing concern is that the indigenous/settler dichotomy translates poorly outside of its predominantly American birthplace.²⁹ In places like East and Southeast Asia where white settler colonies no longer exist, this dichotomy glosses over long histories of migration and ethnic conflict that complicate our understanding of indigeneity.³⁰ It is also rarely acknowledged that China and Japan were influential empires and knowledge producers in their own right. As the historian of China Leigh Jenco notes, “there is a *lot* of Chinese thought...that just won’t get looked at very closely if we are mainly trying to deconstruct the effects of European colonial domination on modern knowledge production.” By centring European colonialism over other kinds of experiences in reforming the entire discipline, stringent decolonization “ironically enforces its own kinds of exclusion.”³¹ It is, according to the historian of Malaysia Juno Salazar Parreñas, just another form of cultural imperialism.³²

Broadening decolonization

The above section shows that decolonization can make us think about history as activism, and as an expression of epistemic power – lessons that are certainly worth considering (or

²⁴ Spivak 1996; Simpson 2007, 77-78.

²⁵ Grecco and Schuster 2020, 429.

²⁶ Deb Roy 2018.

²⁷ Anderson 2020b, 438.

²⁸ Anderson 2020b, 433; Neale and Kowal 2020, 407-412.

²⁹ Indeed, Tuck and Yang 2012 explicitly define decolonization in opposition to settler colonization, rather than “Third World decolonizations”.

³⁰ Parreñas 2020, 413-420.

³¹ Jenco 2019. See also Nappi 2013; Elman 2010.

³² Parreñas 2020.

remembering).³³ However, given the problems with using the indigenous/settler binary especially outside of America, I believe that a broader process of decolonization must reject some of its tenets while preserving its spirit. In my reading, the core insight that decolonization offers, more so than its recommendations of specific historiographies, is in stimulating a reflexive interrogation of the politics of our disciplinary practices. By this I mean how the mundane acts of reading, citing, writing, and speaking can recapitulate inequalities along colonial lines.

One way to start this reflection is by problematizing the continuing asymmetry of ignorance between Western and non-Western scholars. As noted earlier, there is still a sense in which Western and Anglophone histories and theories are equated with “global” reach, whereas non-Western and non-English research is seen as a kind of “local” study. Historians can challenge these assumptions by thinking reflexively about the difficulty of assessing works that come from very different historiographical traditions, scholarly cultures, and language groups. The aim here is not to come up with the “right” standard for judging different historiographies against each other, but to be aware of and charitable to variations that we might not have previously encountered.³⁴ In practical terms, this might mean consciously reading and citing non-Western historiographies like “Asia as method”, which aims to understand Asia with theoretical tools of its own making.³⁵ This is obviously necessary if one is working on Asia, but we should also try to – with the limited time we have – keep abreast of a few different historiographic (or anthropological, literary, or sociological) developments that might challenge our conventional disciplinary assumptions.³⁶

Linguistically, this might entail the learning (and use) of a second language like Spanish or Mandarin, especially when alternate historiographies are not easily found in Anglophone journals like *East Asian Science, Technology and Society*. It is telling that even as historians of science embrace the global turn, there remains no foreign language requirement in UK doctoral programs, while the United States requirement can be denounced as a “hideous nuisance” by a history professor.³⁷ If we want our global histories to avoid reconstituting the other in “dubbed voice”, then more attention needs to be paid to the problem of monolingual parochialism.³⁸ At the same time, there could be more sympathy and institutional support for international scholars writing in their non-native languages, whether through courses supporting English learning and writing, or simply through an awareness that people’s writing styles differ.³⁹

These proposals may seem almost banal compared to those suggested by indigenous scholars, but I believe that they keep in the spirit of thinking about the exclusions and inequalities that arise from the geopolitics of our discipline. Underlying each suggestion is the question: who does history of science, and for whom? When framed in this way, even if calls to replace Western analytical categories with indigenous ones ultimately prove limited, the decolonial process of reflecting on our discipline may be transformative.

³³ For instance, one might reflect on the roles of history of science during the intensely politicized Science Wars.

³⁴ Nappi 2013.

³⁵ Anderson 2012.

³⁶ A recent example might be Saidiya Hartman’s method of *critical fabulation*, which proposes a new approach to historical narration. See Hartman 2008; Hartman 2019.

³⁷ McMillian 2014.

³⁸ Grecco and Schuster 2020, 431.

³⁹ Readers of Spivak, Foucault, and Derrida should know this well.

References

- Anderson, Warwick. 2002. "Introduction: Postcolonial Technoscience." *Social Studies of Science* 32(5/6): 643-658.
- Anderson, Warwick. 2006. *Colonial Pathologies: American Tropical Medicine, Race, and Hygiene in the Philippines*. Duke University Press.
- Anderson, Warwick. 2012. "Asia as Method in Science and Technology Studies." *East Asian Science, Technology and Society: An International Journal* 6: 445-451.
- Anderson, Warwick. 2018. "Remembering the Spread of Western Science". *Historical Records of Australian Science* 29(2): 73-81.
- Anderson, Warwick. 2020a. "Decolonizing Histories in Theory and Practice: An Introduction." *History and Theory* 59(3): 369-375.
- Anderson, Warwick. 2020b. "Finding Decolonial Metaphors in Postcolonial Histories." *History and Theory* 59(3): 430-438.
- Arnold, David. 1993. *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India*. University of California Press.
- Basalla, George. 1967. "The Spread of Western Science." *Science* 156(3775): 611-622.
- Bray, Francesca. 2012. "Only Connect: Comparative, National, and Global History as Frameworks for the History of Science and Technology in Asia." *East Asian Science, Technology and Society: An International Journal* 6: 233-241.
- Chakrabarty, Dipesh. 1992. "Postcoloniality and the Artifice of History: Who Speaks for "Indian" Pasts?" *Representations* 37: 1-26.
- Deb Roy, Rohan. 5 April 2018. "Decolonise science – time to end another imperial era." *The Conversation*. Accessed from <https://theconversation.com/decolonise-science-time-to-end-another-imperial-era-89189>.
- Elman, Benjamin A. 2010. "The Failures of Contemporary Chinese Intellectual History." *Eighteenth-Century Studies* 43(3): 371-391.
- Fan, Fa-ti. 2012. "The Global Turn in the History of Science." *East Asian Science, Technology and Society: An International Journal* 6: 249-258.
- Grecco, Gabriela De Lima and Sven Schuster. 2020. "Decolonizing Global History? A Latin American Perspective." *Journal of World History* 31(2): 425-446.
- Harrison, Mark. 2005. "Science and the British Empire." *Isis* 96(1): 56-63.
- Hartman, Saidiya. 2008. "Venus in Two Acts." *Small Axe* 12(2): 1-14.
- Hartman, Saidiya. 2019. *Wayward Lives, Beautiful Experiments: Intimate Histories of Social Upheaval*. Serpent's Tail.
- Jenco, Leigh. 1 May 2019. "Teaching Chinese political thought is hard – is decolonising the curriculum the solution?" *LSE Higher Education Blog: Shifting Frames*. Accessed from <https://blogs.lse.ac.uk/highereducation/2019/05/01/teaching-chinese-political-thought-is-hard-is-decolonizing-the-curriculum-the-solution/>.

- Kanngieser, Anja and Zoe Todd. 2020. "From Environmental Case Study to Environmental Kin Study." *History and Theory* 59(3): 385-393.
- Latour, Bruno. 1987. *Science in Action: How to follow scientists and engineers through society*. Harvard University Press.
- McMillian, John. August 2014. "Against Foreign Language Requirements." *The American Historian*. Accessed from <https://www.oah.org/tah/issues/2014/august/against-language-requirements/>.
- Mignolo, Walter D. 2000. *Local Histories/Global Designs: Coloniality, Subaltern Knowledges, and Border Thinking*. Princeton University Press.
- Mignolo, Walter D. 2009. "Epistemic Disobedience, Independent Thought and Decolonial Freedom." *Theory, Culture and Society* 26(7-8): 159-181.
- Murphy, Michelle. 2020. "Some Keywords Towards Decolonial Methods: Studying Settler Colonial Histories and Environmental Violence from Tkaronto." *History and Theory* 59(3): 376-84.
- Nappi, Carla. 2013. "The Global and Beyond: Adventures in the Local Historiographies of Science." *Isis* 104: 102-110.
- Neale, Timothy and Emma Kowal. 2020. "'Related' Histories: On Epistemic and Reparative Decolonization." *History and Theory* 59(3): 403-412.
- Parreñas, Juno Salazar. 2020. "From Decolonial Indigenous Knowledges to Vernacular Ideas in Southeast Asia." *History and Theory* 59(3): 413-420.
- Raj, Kapil. 2007. *Relocating Modern Science: Circulation and the Construction of Knowledge in South Asia and Europe, 1650-1900*. Palgrave Macmillan.
- Seth, Suman. 2017. "Colonial History and Postcolonial Science Studies." *Radical History Review* 127: 63-85.
- Simpson, Audra. 2007. "On Ethnographic Refusal: Indigeneity, 'Voice' and Colonial Citizenship." *Junctures* 9: 67-80.
- Sivasundaram, Sujit. 2010. "Sciences and the Global: On Methods, Questions, and Theory." *Isis* 101: 146-158.
- Smith, Linda Tuhiwai. 2012. *Decolonizing Methodologies: Research and Indigenous Peoples*. 2nd ed. Zed Books.
- Spivak, Gayatri Chakravorty. 1988. "Can the Subaltern Speak?" In *Marxism and the Interpretation of Culture*, edited by Cary Nelson and Lawrence Grossberg, 271-316. University of Illinois Press.
- Spivak, Gayatri Chakravorty. 1996. "Subaltern Studies: Deconstructing Historiography". In *The Spivak Reader: Selected Works of Gayatri Chakravorty Spivak*, edited by Donna Landry and Gerald MacLean, 203-236. Routledge.
- TallBear, Kim. 2013. *Native American DNA: Tribal Belonging and the False Promise of Genetic Science*. University of Minnesota Press.

- Tuck, Eve and K. Wayne Yang. 2012. "Decolonization is not a metaphor." *Decolonization: Indigeneity, Education and Society* 1(1): 1-40.
- Tuck, Eve and K. Wayne Yang. 2014. "R-Words: Refusing Research". In *Humanizing Research: Decolonizing Qualitative Inquiry with Youth and Communities*, edited by Django Paris and Maisha T. Winn, 223-248. SAGE Publications.
- Vaughan, Megan. 1991. *Curing Their Ills: Colonial Power and African Illness*. Stanford University Press.
- Watson-Verran, Helen and David Turnbull. 1995. "Science and other indigenous knowledge systems." In *Handbook of Science and Technology Studies*, edited by Sheila Jasanoff, Gerald E. Markle, James C. Peterson, and Trevor Pinch, 115-139. SAGE Publications.