Decolonising Science Reading List

It's The End of Science As You Know It

Chanda Prescod-Weinstein
Apr 25, 2015 · 10 min read
Thank me for my free labor maintaining this list by making a donation to funds for the Kānaka Maoli Protectors of Maunakea, and if you are using it for academic work cite and/or acknowledge it.

A note on Making Meaning of “Decolonising” — and in relation to that I want to be clear that the original motivation behind the creation of this list was to address a land claim issue: the use of Maunakea by non-Kanaka Maoli. Do not use the term “decolonising” if you’re not going to tie it into the physicality that colonialism necessarily requires. Intellectual colonialism only works when there is a physical threat associated with it.

A Twitter thread by Melissa Daniels (Athabasca Chipewyan First Nation) on engaging in colonialist activity under the guise of “decolonising education”

October 2016 Introduction

In April, 2015, one of the most visible topics of discussion in the Astronomy community was the planned Thirty Meter Telescope and protests against it from Native Hawaiians who didn’t want it built on Mauna Kea. I wrote a lot about this on social media, spending some significant time trying to contextualize the debate. This reading list was originally created in response to requests for where I was getting some of the information from. A lot of people asked me about what I’d been reading as reference points for my commentary on the relationship between colonialism and what we usually call “modern science.”

In August 2016 I updated to announce: I’m happy to report that Sarah Tuttle and I will be contributing to this list with our own publications in future thanks to this FQXi grant that we are co-I/PI on: Epistemological Schemata of Astro|Physics: A Reconstruction of Observers. The grant proposal was based on a written adaptation of a speech I gave at the Inclusive Astronomy conference, Intersectionality as a Blueprint for Postcolonial Scientific Community Building.

As part of this work, I’ve continued to expand the reading list, which seems to have become a global resource for people interested in science and colonialism. As I originally said, I make no claims about completeness, about updating it regularly, or even ever coming up with a system for organizing it that I find to be satisfactory. You’ll find texts that range from personal testimony to Indigenous cosmology to anthropology, to history.
to sociology to education research. All are key to the process of decolonising science, which is a pedagogical, cultural, and intellectual set of interlocking structures, ideas, and practices. This reading list functions on the premise that there is value in considering the ways in which science and society co-construct. It is stuff that I have read all or part of and saw some value in sharing with others.

I am especially indebted to the #WeAreMaunaKea movement for educating me and spurring me to educate myself.

**Original April 2015 Commentary**

There are two different angles at play in the discussion about colonialism and science. First is what constitutes scientific epistemology and what its origins are. As a physicist, I was taught that physics began with the Greeks and later Europeans inherited their ideas and expanded on them. In this narrative, people of African descent and others are now relative newcomers to science, and questions of inclusion and diversity in science are related back to “bringing science to underrepresented minority and people of color communities.” **The problem with this narrative is that it isn’t true.** For example, many of those “Greeks” were actually Egyptians and Mesopotamians under Greek rule. So, even though for the last 500 years or so science has largely been developed by Europeans, the roots of its methodology and epistemology are not European. Science, as scientists understand it, is not fundamentally European in origin. This complicates both racist narratives about people of color and innovation as well as discourse around whether science is fundamentally wedded to Euro-American operating principles of colonialism, imperialism and domination for the purpose of resource extraction.

This leads me to the second angle at play: Europeans have engaged what is called “internalist” science very seriously over the last 500 years and often in service and tandem with colonialism and white supremacy. For example, Huygens and Cassini facilitated and directed astronomical observation missions in order to help the French better determine the location of St. Domingue, the island that houses the modern nations of Haiti and the Dominican Republic. Why? Because this would help make the delivery of slaves and export of the products of their labor more efficient. That is just one example, which stuck out to me because I am a descendant of the Caribbean part of the Atlantic Slave Trade, and I also have two degrees in astronomy (and two in physics).
There is a lot that has been hidden from mainstream narratives about the history of astronomy, including 20th century history. Where has the colonial legacy of astronomy taken us? From Europe to Haiti to now Hawai'i. The conversation now, even though the story goes beyond Hawai'i, we must understand that Hawai'i is not the first or only place where astronomers used and benefited from colonialism. And in connection, we have to understand Hawai'ian history. Thus, my reading list also includes important materials about Hawai'i's history.

**tl;dr:** science has roots outside of the Eurasian peninsula known as Europe, it likely has its limitations as one of multiple ontologies of the world, it has been used in really grotesque ways, and we must understand all of these threads to truly contextualize the discourse in Hawai'i around science, Hawaiian epistemologies and who gets to determine what constitutes “truth” and “fact” when it comes to Mauna a Wakea.

Finally, I believe science need not be inextricably tied to commodification and colonialism. The discourse around “diversity, equity and inclusion” in science, technology, engineering and mathematics must be viewed as a reclamation project for people of color. Euro-American imperialism and colonialism has had its (often unfortunate) moment with science, and it’s time for the rest of us to reclaim our heritage for the sake of ourselves and the next seven generations.

Note: this reading list is woefully low on materials about science in the pre-European contact Americas, Southeast Asia and parts of Australasia. I’m probably missing some stuff, but I think it signals a problem with research in the history of science too. Also I make no claims about completeness or a commitment to regularly updating it with my newest finds. Also see A U.S./Canadian Race & Racism Reading List.

May 2017 edit: I also just learned that there is a Reading List on Modern and Colonial Science in the Middle East.

October 2017 edit: I gratefully acknowledge Duane Hamacher of the Indigenous Astronomy twitter account for suggesting texts on Australian Indigenous astronomy and for introducing me to research on subarctic Indigenous astronomy.

Martin Kusch’s Sociology of scientific knowledge bibliography may be of interest.
As of May 2017 Beatrice Martini has posted Decolonizing technology: a reading list.

Works by me that may help you contextualize the list with problems I've been thinking about. These are partly here to toot my own horn but because I found that without them, people were assuming I hadn't contributed to the dialogue myself beyond this reading list:

Making Meaning of Decolonising (in dialogue with Tucker and Yang)

Black Women Physicists in the Wake

Intersectionality as a Blueprint for Postcolonial Scientific Community Building

Women in Astronomy: Ain’t I a woman? Living at the intersection of gender, race, and sexuality

The Self-Construction of Black Women Physicists

**The List**

*We Live In the Future. Come Join Us.* by Bryan Kamaoli Kuwada

*Protecting Mauna A Wakea: The Space Between Science and Spirituality* by Keolu Fox

*Maunakea: Redirecting the lens onto the culture of mainstream science* by Aurora Kagawa-Viviani

The fight for Mauna Kea and the future of science by Sara Segura Kahanamoku

*Science, Time, and Mauna a Wākea: The Thirty-Meter Telescope’s Capitalist-Colonialist Violence* (Part I, Part II), Uahikea Maile

*Multicultural settler colonialism and indigenous struggle in Hawai‘i*: The politics of astronomy on Mauna a Wakea a dissertation by Joseph Salazar

*Aloha Betrayed: Native Hawaiian Resistance to American Colonialism* by Noenoe K. Silva

*A Nation Rising: Hawaiian Movements for Life, Land and Sovereignty*, Noelani Goodyear-Ka’opua, Ikaika Hussey, and Erin Kahunawaika’ala Wright, editors

https://medium.com/@chanda/decolonising-science-reading-list-339fb773d51f#om5w2lvfq
voices of fire: reweaving the literary lei of pele and hi’iaka by ku’ualohoa ho’omanawanui

Transient Workspaces: Technologies of Everyday Innovation in Zimbabwe by Clapperton Chakanetsa Mavhunga

Taking Back Our Spirits: Indigenous Literature, Public Policy, and Healing by Jo-Ann Episkenew


Alaska Athabascan Stellar Astronomy by Christopher M. Cannon

Night Skies of Aboriginal Australia: A Noctuary by Dianne Johnson

Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants by Robin Wall Kimmerer

Race After Technology: Abolitionist Tools for the New Jim Code by Ruha Benjamin

Captivating Technology: Race, Carceral Technoscience, and Liberatory Imagination in Everyday Life ed. Ruha Benjamin

The History of White People by Nell Irvin Painter

The Handbook of Science and Technology Studies eds. Ulrike Felt, Rayvon Fouché, Clark A. Miller, and Laurel Smith-Doerr

Pursuing Intersectionality, Unsettling Dominant Imaginaries by Vivian May

Decolonizing Methodologies: Research and Indigenous Peoples by Linda Tuhiwai Smith

Medicalizing Blackness: Making Racial Difference in the Atlantic World, 1780–1840 by Rana A. Hogarth

In the Wake: On Blackness and Being by Christina Sharpe

Against Purity: Living Ethically in Compromised Times by Alexis Shotwell
Many thanks to Archishman Raju for sending me the following significant caveat about this book: I just wanted to bring to your attention that there is a strong charge on G. Joseph for appropriating information amounting to plagiarism (I think). (See http://ckraju.net/Joseph/Complaint-about-Joseph-to-Manchester.pdf, and attachments http://ckraju.net/Joseph/Annexures-Manchester.pdf). It is particularly ironic in this context that someone from University of Manchester would take credit for ideas developed in India. Addendum from Chanda: the link in the letter to the advertised PhD position is available on the Wayback Machine.

*Science, Colonialism and Indigenous Peoples: The Cultural Politics of Law and Knowledge* by Laurelyn Whitt

*Gender and Scientific Authority*, eds. Barbara Laslett, Sally Gregory Kohlstedt, Helen Longino, and Evelyn Hammonds

*Beyond Banneker: Black Mathematicians and the Paths to Excellence* by Erica N. Walker

*Einstein on Race and Racism* by Fred Jerome and Rodger Taylor

*Epistemic Injustice* by Miranda Fricker

*Science as It Could Have Been: Discussing the Contingency/Inevitability Problem* eds. Lena Soler, Emiliano Trizio, and Andrew Pickering

*Black, White, and in Color: Essays on American Literature and Culture* by Hortense J. Spillers

Has Feminism Changed Physics? by Amy Grave (née Bug)

(Baby Steps) Toward a Feminist Physics by Barbara Whitten

*Has Feminism Changed Science?* by Londa Schiebinger

*Knowing Otherwise: Race, Gender, and Implicit Understanding* by Alexis Shotwell

Cognitive Repression in Contemporary Physics by Evelyn Fox Keller
Academic Articles on race and genetics by A.A. M’charek

Language, Identity, and Ideology: High-Achieving Scholarship Women (South African context) by Y. Dominguez-Whitehead, S. Liccardo, and H. Botsis

Conceptualising transformation and interrogating elitism: The Bale scholarship programme (South African context) by H. Botsis, Y. Dominguez-Whitehead, and S. Liccardo

Beyond South Africa’s ‘indigenous knowledge — science’ wars by Lesley J.F. Green

Decolonizing Science and Science Education in a Postcolonial Space (Trinidad, a Developing Caribbean Nation, Illustrates) by Laila Boisselle caveat from Chanda: I *hate* the use of “developing nation” here. It’s a colonialist term.

Women, Science, and Technology: A Reader in Feminist Science Studies eds. Mary Wyer, Mary Barbercheck, Donna Cookmeyer, Hatice Ozturk, and Marta Wayne

Ghost Stories for Darwin: The Science of Variation and the Politics of Diversity by Banu Subramaniam

The Eastern Origins of Western Civilisation by John M. Hobson

Interrogating Whiteness and Relinquishing Power: White Faculty’s Commitment to Racial Consciousness in STEM Classrooms eds. Nicole Joseph, Chayla Haynes, Floyd Cobb

On the possibility of a feminist philosophy of physics by Maralee Harrell

Challenging epistemologies: Exploring knowledge practices in Palikur astronomy by Lesley J.F. Green

‘Indigenous Knowledge’ and ‘Science’: Reframing the Debate on Knowledge Diversity by Lesley J.F. Green

The Rain Stars, the World’s River, the Horizon and the Sun ‘s Path: Astronomy along the Rio Urucauá, Amapá, Brazil by Lesley Green and David Green

Colonialism & Science: Saint Domingue in the Old Regime by James E. McClellan III
Is Science Multicultural? Postcolonialisms, Feminisms, and Epistemologies by Sandra Harding

Whose Science? Whose Knowledge?: Thinking from Women's Lives by Sandra Harding

The ‘Racial’ Economy of Science: Toward a Democratic Future ed. by Sandra Harding with Robert Figueroa

Science and Social Inequality: Feminist and Postcolonial Issues by Sandra Harding

Sciences From Below: Feminisms, Postcolonialities, and Modernities by Sandra Harding

The Postcolonial Science and Technology Studies Reader ed. by Sandra Harding

Hating Empire Properly: The Two Indies and the Limits of Enlightenment Anticolonialism by Sunil M. Agnani

Simians, Cyborgs and Women: The Reinvention of Nature by Donna J. Haraway

Beamtimes and Lifetimes: The World of High Energy Physics by Sharon Traweek

The Structure of Scientific Revolutions by Thomas S. Kuhn

A People’s History of Science: Miners, Midwives, and Low Mechanicks by Clifford D. Connor

Why I Am Not A Scientist: Anthropology and Modern Science by Jonathan M. Marks

Notes on Dialectics by C.L.R. James (available scanned here.)

Science and Technology in Korea: Traditional Instruments and Techniques by Sang-woon Jeon

The Ursula Franklin Reader: Pacifism as a Map

Daughters of Alchemy: Women and Scientific Culture in Italy by Meredith K. Ray

People’s Science: Bodies and Rights on the Stem Cell Frontier by Ruha Benjamin
The World and Africa: An inquiry into the part which Africa has played in world history by W.E. Burghardt Du Bois

The Social Life of DNA: Race, Reparations, and Reconciliation After the Genome by Alondra Nelson

Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present by Harriet A. Washington

Wikipedia entry on Alhazen

Wikipedia entry on History of Scientific Method

Wikipedia entry on Physics in the medieval Islamic World

Tribal peoples have crucial role to play in global conservation Guardian Op-Ed

Collection of documents about TMT situation specifically: aoletmt.com [As of October 2016 this link seems not to work anymore]