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## Beyond Grand Narratives

Contribution to GTI Forum [Big History and Great Transition](#)

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I am a physicist, a transdisciplinary scholar of climate change science and pedagogy, and a writer of speculative fiction, including science fiction. I am from India, although I live and teach near Boston in the US. The comments below are simply an interested non-expert's reaction to the subject of Big History.

1. I have had many conversations with Frank White, the space philosopher who came up with the overview effect and the transformative experience that a view of Earth from space had on astronauts. Initially, it seemed reasonable to me that such a view would fundamentally change the perspective of *any* human who had the privilege of experiencing it. However, a sociologist friend pointed out that universalizing this experience beyond astronauts was likely problematic, since people who command power generally like high vantage points from which to view their domains (hence "lord of all I survey"). Therefore, to assume that any human, including, for example, techno-billionaires and others addicted to power, would have the same humbling, soul-expanding, life-changing reaction is probably unrealistic. I am also not aware whether any astronauts who have seen Earth from space have *permanently* changed their lives and lifestyles as a result of the Overview experience.

2. I see in some of the discussion of Big History a problematic tendency to universalize the experiences of the privileged in the West. Let me clarify. As a physicist, I am thrilled by the knowledge that, in a literal sense, we come from the stars. Whenever I teach about the origins of the elements other than hydrogen in our bodies, and how our solar system came to be, my students and I share a moment of awe and wonder. But I cannot assume that this story would have much meaning for, say, a marginalized community in India. Maybe it would, and maybe it wouldn't, but it is not right for me to assume this to be the case. For example, I am familiar with

a community located in Jharkhand, one of the poorest and most climate-vulnerable states in India. The women of that village have, after much struggle and privation, managed to restore their degraded forest. From my brief conversations with them, I have a sense of a worldview that is very different from that of modern industrial civilization: it is ontologically relational and reciprocal within and beyond humans. From what little I know about it, I can't see anything from the Big History perspective that could teach them to live sustainably on this planet—they already do. Perhaps it would offer them other things? For that, one would have to go there and ask them what they think.

3. It seems to me to be a mistake to focus *only* on the large-scale grand narrative, if indeed that is what Big Historians are implying. Such Grand Narratives that wash out the local, lived experiences of diverse cultures have been used as excuses for imposing material, cultural, and epistemological systems on peoples. They therefore tend to be Grand Narratives of the powerful. If Big History wants to be taken seriously, it had better pay attention to power. Historians, of all people, should know that dominant narratives tend to be written by the powerful. I don't see much acknowledgment of colonialism and power hierarchies in my limited exposure to discussions by Big Historians. In the one Big History conference I attended, I was appalled to see that two physicists had proposed a numerical scale on which to judge successful civilizations, with—naturally—Eurocentric modern civilization at the apex. They seemed not to be aware that this civilization is about to destroy itself and the biosphere. (To do the conference justice, there was also good representation of diverse perspectives from around the world, but I have no idea if this is unusual for a Big History conference or not). An admission that we live in a *colonial* modern world might be a good starting point for a re-examination of Big History.<sup>1</sup>

4. Our current social-environmental crises are global in extent, but they manifest differently, and are received differently, in different locales and climes. Unfortunately, much of mainstream discourse (on climate change, for example) tends to be top-down, bureaucratic, and technocentric, and assumes that various neoliberal illogics are by default true and universal. It has, therefore, become increasingly important to foreground the local, and the lived experiences of communities in different places around the world, which is (I hope) leading to an epistemological broadening in climate science.<sup>2</sup> In the Big History conversations I have witnessed, I see a tendency (among some at least) to disregard the small-scale and local for

the grand vistas. I am puzzled. Why one or the other? Here is an insight from my own field of particle physics: we know about our cosmological origins partly as a result of understanding what happens inside the cores of stars at the unimaginably small scale of protons and neutrons. Nature demonstrates cross-scale connectivity. If we only focus on the local and particular, we are in danger of living in ghettos that are mutually unintelligible and don't talk to each other, which we cannot afford in an age of climate change and global catastrophe. If our sole focus is on the universal, we are in danger of colonialist erasure of alternative ways of knowing and being. Plus, if part of the purpose of Big History is to help us feel responsibility for the planet, how can that possibly happen without a sense of direct experience of the rest of Nature, in place and locale? Some of the most deeply environmentally conscious people on Earth have become so through bodily immersion in Nature in a *particular* context. I am therefore puzzled as to why we must privilege the large-scale.

5. I would love to see a history develop that tells stories of the human and the nonhuman together, including stories of other species and “inanimate” matter. As a physicist, I know that matter is active in the universe, and we co-construct our diverse realities with matter in different ways.<sup>3</sup> But the way I see it, such a history should develop from a place of humility and an acknowledgment of the coloniality of power and knowledge. I suspect this means that we have to start from place, from the local scale, and then reach out. Perhaps people who wish to develop such a history might consider visiting Indigenous and other marginalized peoples in the world, and listening to what they have to say about things. (We could learn, for example, from Navajo cosmology about what it means to belong to the universe). For the world to become a biodiverse and culturally diverse tapestry that also is networked at a planetary scale—that is, a pluriverse—the weaving of the threads that connect across scale should surely be done with the active participation and permission of those who have been at the receiving end of Eurocentric domination. Why can't the story of our cosmological origins be one of the many stories to tell, important in some contexts, but not necessarily in others?

6. Practically speaking, if part of the purpose of Big History is to help us become better inhabitants of Planet Earth—in other words, if the intent is for it to inform educational policy for change—I wonder if immersive, transdisciplinary, experiential Nature education might be a more effective alternative, at least for this purpose.

7. As a side note, I just want to mention that good science fiction exists on the subject of the climate crisis—in fact, a vast literature is developing in this area. Speculative fiction at its most transgressive can help decenter us from dominant paradigms of our present and future—but that is a subject for another day.

## Endnotes

1. See Gurminder Bhambra and Peter Newell, “More than a Metaphor: Climate Colonialism in Perspective,” *Global Social Challenges Journal* 20 (2022): 1–9, <https://bristoluniversitypressdigital.com/gsc/view/journals/gscj/aop/article-10.1332-EIEM6688/article-10.1332-EIEM6688.xml>.

2. See, for example, Regina Rodrigues and Theodore Shepherd, “Small is Beautiful: Climate Change Science as if People Mattered,” *PNAS Nexus* 1, no. 1 (2022): 1–9, <https://academic.oup.com/pnasnexus/article/1/1/pgac009/6540642>.

3. See Karen Barad, *Meeting the Universe Halfway* (Durham, NC: Duke University Press, 2006).

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## About the Author



Vandana Singh is Professor at Framingham State University, a fellow of the Center for Science and the Imagination at Arizona State University, and an acclaimed writer of speculative fiction. For more than a decade, she has been working on a transdisciplinary, justice-centered conceptualization of the climate crisis, at the intersection of science, social sciences, and futures studies. She has developed interdisciplinary case studies on climate change for undergraduate education and is currently engaged in researching collaborative and equitable frameworks to work with communities at the forefront of climatic and related crises in India. She holds a PhD in theoretical physics from Louisiana State University.

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