



May 2023

New Ways of Seeing the World: Big History and Great Transition

Opening Essay for a [GTI Forum](#)

David Christian

As the first astronauts peered down on Earth from space, they saw the planet anew. They all had the same epiphany, as the sight of one small, fragile world, embedded in a huge universe briefly replaced the multiple, ever-changing impressions of everyday life. To build a better future, we will all need a new and more capacious perspective on our world, because the cracked and myopic perspectives of so much modern thought and debate have stymied action by hiding the colossal scale of change and discouraging global collaboration.

Fortunately, wider and more integrated ways of perceiving today's world are working their way into modern scholarly thinking, such as the "Big History" framework, with which I am associated.¹ Our challenge today is to normalize more expansive ways of seeing and thinking that can offer the guidance, motivation, and hope needed to unite humans behind the colossal project of the Great Transition.

The global gestalt shift in thinking, education, and public discourse is already under way, and that augurs well for the future. Indeed, changing how people see the world may prove easier than changing our material technologies or the social and economic structures within which we live. But new ways of seeing and thinking will be just as important, because without the guidance and inspiration they can provide, our species will keep repeating old mistakes as it drifts aimlessly towards catastrophe.

Why We Need New Thinking

Though it is hard to see from close up, a new world has emerged from the chrysalis of the old, a world in which one species, *Homo sapiens*, now dominates change on an entire planet. Crucial thresholds were crossed during my lifetime, as human impacts on the biosphere multiplied so

fast that we began to ruin the habitats of millions of our fellow species and destabilize planetary systems such as the oceans and climate. At stake now is not just the fate of particular communities or nations, but the fate of humanity as a whole, and of the many other life forms with which we share biological kinship and a common home. What we humans do in coming decades will shape the future for thousands, perhaps millions, of years. That is why many scholars argue that we have entered a new geological epoch: the Anthropocene.

The close-up lenses that dominate modern scholarship, education, and debate are far too narrow to let us see such vast changes, and a blinkered vision has constrained effective action. We are like ants on a charging elephant, confused by the jolts and tremors shaking our world, because the limited views of discrete disciplines and competing loyalties let us see only what is right in front of us. Take any conventional high school or university history course. It will be dominated by recent centuries, and by the stories of particular regions or cultures or nation-states. It can teach much about particular communities and identities, but the lens is far too small to let us see the larger historical trajectories that led to the Anthropocene. And to *fully* understand our impact on the biosphere, we need an even wider lens, one that can embrace the history of Planet Earth and of life on Earth over several billion years. Yet few of us acquire more than a fragmented, lop-sided, and compartmentalized understanding of planetary history.

A splintered understanding of our world mattered less a century ago, when the main challenges people faced were still regional and local. But today, such thinking can no longer provide the vision, the guidance, or the motivation needed to cope with challenges that cannot be tackled nation by nation or understood discipline by discipline. To understand the global challenges of the Great Transition, we need perspectives as wide as those of the first astronauts.

New Perspectives on Today's World

Fortunately, we already know what those perspectives will show us because a century of extraordinary global research and scholarship has transformed our understanding of human, planetary, and even cosmological history. New disciplines such as planetary astronomy, plate tectonics, evolutionary biology, and environmental science have revolutionized our understanding of the histories of Earth and the biosphere. And new ways of dating events in the distant past have let us reconstruct those histories with unprecedented chronological precision.

We have also learned how closely linked are the histories of Planet Earth and its fragile cargo of life. For example, we now know that today's oxygen-rich atmosphere—which helped Earth avoid the sort of catastrophic global warming that made Venus uninhabitable—was generated by the activities of photosynthesizing organisms including cyanobacteria and plants. And we know that in the last billion years, the global climate system has been shaped not just by astronomical and geological processes, but also by a delicate balance between organisms that generate oxygen, and those, such as animals, that excrete carbon dioxide and other greenhouse gases.²

Seeing these interconnections has helped us appreciate the astonishing and disruptive role our own species now plays. But understanding how we came to this role and what it will demand of us means studying not just the histories of particular human communities, but the history of all humans. Today, we can also tell that story with a new richness and precision. And the history of our species turns out to be as complex and compelling as the more localized histories that dominate modern historical research and teaching. Human history has as many unexpected twists and turns as any national or local history, as well as an overarching narrative that can explain our path to the Anthropocene and hint at likely futures.

Human history begins a few hundred thousand years ago, probably in Africa, with the evolution of a new primate species. Recent research has revealed so much about the earliest human communities that, even without written documents, we can tell a compelling, evidence-based story about their lifeways. We can show how, thanks to our ancestors' unprecedented technological and scientific creativity, novel behaviors and social arrangements began to emerge. Instead of just filling the ecological niche in which they had evolved, like most other species, humans began to accumulate more and more knowledge, and that increased their control over local environments and helped them expand into new niches.

Each community had its own local triumphs and disasters, but the species as a whole began to spread well beyond Africa. By the end of the last ice age, almost twelve thousand years ago, humans could be found from the Arctic to the tropics, along the world's shorelines, and in its savannas, river lands, and deserts. In the post-ice-age era of agricultural technologies, human numbers and impacts on the biosphere increased faster and faster, building to the explosive changes of modern times, as new technologies and social arrangements gave us more and

more power to manipulate our fellow creatures and transform the earth's surface, oceans, and atmosphere.

Human history is a story of dazzling cultural and technological diversity, and of both conflicts and connections. But it also reveals how we became the most powerful species on Earth in just a few hundred thousand years—the blink of an eye on the scales of planetary history.

The history of humanity is not yet a standard part of school or university curricula. But more and more people know this story, and it is being taught. “Big History” courses adopt the radical strategy of setting human and planetary history within the much larger history of the whole Universe, to construct a modern origin story based on the best recent research and scholarship.³ That story could not have been told even a century ago. There is already considerable support material for Big History courses, in print and online, and they can be extremely engaging. Indeed, the sheer hubris of trying to understand *all* of the past makes for exhilarating teaching and learning, while encouraging the breadth of vision needed to really understand what is going on today. Big History courses also help students integrate information and insights from multiple disciplines: from cosmology and physics, to chemistry, geology, biology, and human history. That is the sort of dynamic, interconnected knowledge that a younger generation will need as it faces the daunting challenge of maintaining a livable planet.

Reasons for Grounded Optimism

Whatever form it takes, a more expansive and interdisciplinary perspective on today's world can galvanize the Great Transition by reorienting the thinking, attitudes, and motivations of billions of people.

As the astronauts learned, seeing Earth from space can shock us into a new appreciation of the home we all share, and make local conflicts seem both petty and dangerous. Teaching the history of humanity can be equally transformative by helping us see ourselves as citizens of humanity, just as the teaching of national histories once helped build loyalties to nation-states. And a sense of global citizenship can help motivate and mobilize most people on Earth behind the challenges of the Great Transition. It can inspire action by clarifying shared goals, driving research on pathways to a better future, and encouraging hope.

This is not to discount the long legacies and persistent presence of many divisions by class, language, gender, race, and culture. But it is to argue that forms of global solidarity and loyalty can coexist with many forms of difference, just as they do within modern nation-states.

The history of humanity offers other reasons for optimism, too. For example, it shows that our exceptional creativity and capacity for learning are defining features of our species. They have persisted throughout human history and, in recent centuries, have helped improve the lives of billions of people. Their source lies in collective learning: the ability that human language gives us to share and accumulate ideas and insights about our world with a virtuosity and on a scale that no other species can match. Our unmatched creativity holds the promise that we will find many novel solutions to the technological, social, moral, and intellectual challenges of the Great Transition.

Human history also highlights our exceptional capacity for collaboration, despite the many things that divide us. Even in the earliest historical eras, gifts and ideas were exchanged through networks that sometimes spanned entire continents; in the last ten thousand years, those networks became larger, denser, and more ramified; and in the last five hundred years, they have become planet-wide. In 1800, it still took many months or even years to travel around the world, and the fastest messages traveled by horse or carrier pigeon. Today, passenger planes can cross continents in a day, and the internet lets us chat across oceans and continents as intimately as we once chatted on village streets. Eight billion humans are now connected through global flows of information, goods, money, people, and ideas.

There is a powerful analogy here with the evolution of multicellular organisms. Until a billion years ago, most life on Earth consisted of single cells. Then super-organisms evolved whose survival depended on the ability of trillions of cells to collaborate in managing and caring for the huge organism of which each was a part. Collaboration on such a scale was possible because each cell in a multicellular organism had many ways of listening to, communicating with, and partnering with other cells, as well as a shared interest in the project's success. That is why, excepting rogue cells such as melanomas, most cells collaborate enthusiastically in the larger task of group survival. By analogy, our task today is to build the tendons, muscles, and neural interconnections that will allow all humans to collaborate on building a better future.

Of course, optimism must be tempered by realism. Most of the existential threats we face today, including the danger of catastrophic global warming, arise from our exceptional creativity. And

there is a dark side even to our capacity for collaboration because it has been mobilized so often for warfare. Conflicts of interest will not vanish, but only now, in the era of nuclear weapons, do they threaten global catastrophe. The many signs we see today of renewed competition and nativistic deglobalization make it all the more important to support ways of thinking that encourage neighborly collaboration at the planetary scale.

Towards a New Normal

Fifty years ago, when scientists issued the first dire warnings about human activity overshooting planetary limits, few shared their global perspective. In the last twenty years, that perspective has spread within governments, corporations, international agencies, and, to some degree, public debate. It drives much of the work of the United Nations, framing the Sustainable Development Goals formally adopted by all members in 2015; it lies behind the work of charities such as *Médecins sans Frontières*; and it shapes global events such as the annual broadcasting of New Year's Day fireworks displays, or the Olympic Games, in which nations compete in friendly ways within a larger world community.

The spread of more global perspectives is moving us towards positive tipping points as sustainable technologies flourish and more governments commit to serious action on climate change. In 2014, the IPCC predicted that without action on climate change, global temperatures could reach a terrifying 4 or 5 degrees Celsius above pre-industrial levels by 2100. Almost ten years later, the UN Environmental Program (UNEP) claimed that recent shifts in attitudes and policy commitments make warming of more than 3 degrees very unlikely. While even that would be bad, continuing shifts in thinking, attitudes, and policies could lead to much better outcomes.

Attitudes can remain stubbornly locked in the past. But they can also switch fast. So encouraging more global ways of seeing and thinking could prove to be one of the easier challenges of the Great Transition. But it will be immensely important, because transforming how we see the world can help build the global consensus needed to tackle the more complex tasks of transforming global technologies and socioeconomic structures.

Endnotes

1. See, for example, David Christian, *Maps of Time: An Introduction to Big History* (Oakland, CA: University of California Press, 2005); *Origin Story: A Big History of Everything* (New York: Little, Brown and Company, 2018); David Christian, Cynthia Stokes Brown, and Craig Benjamin, *Big History: Between Nothing and Everything*, 1st ed. (New York: McGraw-Hill Education, 2014). For more on the field, see the website of the International Big History Association: <https://bighistory.org/>.
2. These interconnections between biology and geology were first recognized in the twentieth century by scholars such as Vladimir Vernadsky, James Lovelock, and Lynn Margulis.
3. For an example of such a curriculum, see <https://bhp-public.oerproject.com/>.

About the Author



David Christian is Professor of History and Director of the Big History Institute at Macquarie University in Sydney. By training a historian of Russia and the Soviet Union, he has become interested in world history on very large scales, or “Big History,” since the 1980s. He taught at Macquarie University from 1975 to 2000, then at San Diego State University, before returning to Macquarie in 2009. He was founding president of the International Big History Association and co-founder, with Bill Gates, of the Big History Project. He is the author of *Maps of Time: An Introduction to Big History*, among many other books and articles. He holds a PhD from Oxford University.

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Cite as David Christian, “New Ways of Seeing the World: Big History and Great Transition,” opening essay for a GTI Forum, *Great Transition Initiative* (May 2023), <https://greattransition.org/gti-forum/big-history-christian>.

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