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## How Humans Ravaged the Earth—And Themselves Too

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*Sunil Amrith's "The Burning Earth" is 'history as literature and history as social science, and occasionally, history as natural history as well. It blends and brings together four great traditions of historical writing.'*

The first substantive chapter of Sunil Amrith's magnificent new book starts in the China of the 13th century, 'the largest, most populous, and wealthiest agrarian state the world had ever known'. China's rise had been fostered over the past two centuries by more productive means of rice cultivation. Soon, by relying on better techniques of growing wheat instead, Europe also witnessed a surge in human prosperity and human numbers. This apparent freeing of our species from the constraints of Nature was, however, rudely interrupted in the 14th century by climate change and disease—the first in the form of a perceptible cooling that radically diminished crop yields, the latter in the shape of a plague carried by rats that led to millions of deaths.

Though Amrith is too subtle a historian to make this explicit, in his choice of where to begin his history surely lies a parable for the present. A millennium ago, as settled agriculture began to decisively expand at the expense of hunting, gathering, and pastoralism, a spectacular rise in human fortunes was brought to a halt by ecological collapse, following which societies and civilizations had to laboriously rebuild their foundations. Likewise, the emergence in the 19th century of what the Scottish ecologist Patrick Geddes memorably called 'carboniferous capitalism' fuelled a massive expansion of wealth and of human opportunities in Europe and North America, and in Japan, China and Australia, that continued well into the 20th century. Industrial and urban society was set to conquer Nature and reshape the world in its image, but then came global warming and the coronavirus.

Amrith's subtlety of approach is revealing in other ways too. The book has a truly global sweep, featuring focussed case studies of environmental and social change from across the world. He draws on a staggering range of references, from specialist literature across many disciplines. Nonetheless, it intrigued me that there is no mention at all in his book of those iconic figures of American environmentalism—Henry David Thoreau, John Muir, and Aldo Leopold. Further, his treatment of European colonialism in the New World pays relatively greater attention to its depredations in Latin America. In this manner, the author, himself a professor at a celebrated Ivy League university, moves decisively away from the North America bias of the field of environmental history.

### Cost of mining

In *The Burning Earth*, Amrith covers a wide array of environmental problems—deforestation, air and water pollution, and, of course, the warming of the atmosphere. In case study after case study, we read of how ecological devastation and social injustice have gone hand in hand. Some of the book's most telling examples have to do with the ravages of mining. 'Gold was never very far from the minds of the Spanish conquerors', writes Amrith: 'Columbus mentions it no fewer than sixty-five times in his account of his first voyage alone'. Another metal much coveted by Europeans was silver; and we read here of how the Andes were devastated in the 16th century by colonists whose 'quest for silver harmed every form of life, human and more than human'. Amrith ends this particular set piece with the words: 'These would not be the last lands ruined by the human search for wealth in rock'.

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Later in the book, Amrith narrates the harm to humans and nature caused by the gold boom in late 19th and early 20th century South Africa. White mine-owners made supernormal profits while

'the hardest work, the work most dangerous and least compensated, was done by Africans. ... African workers on the Rand labored deeper underground than anybody else on Earth. Their daily reality resembled the subterranean dystopia of early science fiction. Each shift began by clearing the previous day's debris, generated by the sheer force of blasting work. ... At the end of the shifts, the miners waited. They waited sometimes for hours for the cage lift to bring them back to the open air. They waited until all the ore—more precious to the mine owners than the miners' lives—had been removed.'

Amrith's account continues:

‘The social and atmospheric circumstances of deep mining eviscerated the bodies of workers. ... While they worked, tiny bits of silica lodged in the miners’ lungs. Fibrous tissue would form to repair the scars left by shards of blasted rock, and it became difficult for miners to breathe. ... The ruins of the miners’ lungs mirrored the ruins of the veld.’

Reading these lines, I wondered how a future historian might write about the expansion of mining in central India over the past few decades. Like the white Randlords of colonial South Africa, Indian capitalists today have ruling party politicians in their pocket. The state gifts our mining barons vast ores of iron, bauxite and coal, from which colossal profits are made. While the working conditions in the mines of Odisha or Chhattisgarh may not be as awful as they were in the mines around Johannesburg, they are yet far from ideal. More crucially, mining in modern India has led to the dispossession of local, mostly tribal, communities, who lose their lands, their forests, their homes and their shrines in exchange for a niggardly compensation. Those who seek to speak for the rights of those displaced are incarcerated using colonial-era laws and provisions.

In his own narratives of environmental abuse and social suffering, Amrith acknowledges the presence of resistance, whether overt or covert, individual or collective, to the abuse of power by capitalists, landlords, and the state. We thus learn of the fugitives from slavery in Latin America who established themselves on the forest fringe, in what were known as ‘maroon’ communities, and of English peasants who protested against the enclosure of their common lands. Closer to our own time, Amrith writes of the Chipko activists in the Himalaya, as well as of still mourned environmental martyrs such as the Brazilian Chico Mendes and the Nigerian Ken Saro-Wiwa.

### Impact of technological innovations

One of the strengths of Amrith’s book is his careful descriptions of technological innovations that transformed Nature and human life. The sections on how silver was mined with the use of mercury, and how railways and cars reshaped forms of transport, are superbly rendered. He quotes some gushing, lyrical, descriptions of the arrival of steam—a power ‘to which no limits can be assigned’, a force ‘made to animate millions of complex organs, infusing into forms of wood, iron, and brass, an intelligent agency’—which anticipate contemporary celebrations of the apparently unlimited power of AI.

Amrith himself is no technological utopian, for he knows that the inventions of man have the capacity to destroy as well as create. He writes, for example, of how the disappearance of the bison herds of North America was facilitated by the railroad and enabled by the modern rifle: ‘The beasts were helpless before the more lethal products of the foundries of New Haven, Connecticut, and Springfield, Massachusetts. Hunters wielded Springfield .50-caliber rifles from the backs of rail carriages. Hunters shot for sport. Hunters shot for meat. They shot for status and for profit. ... The plains were littered with animal carcasses....’

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Amrith has an eye for arresting quotations from authorities who are well recognized for matters other than their understanding of ecological processes. Thus, from Alexis de Tocqueville’s great work *Democracy in America*, he picks out a passage where the visiting Frenchman remarks on the colonists’ indifference to the beauty of the American landscape, since they were preoccupied with ‘draining swamps, turning the course of rivers, peopling solitudes, and subduing nature’. One hundred and twenty pages later, I was likewise impressively surprised to read of how, in Ho Chi Minh’s declaration of independence in 1945, he indicted the French colonizers not just for the political subjugation of his fellow Vietnamese, but also for having ‘devastated our lands... robbed us of our rice fields, our mines, our forests, and our raw materials’.

### Brilliant prose

Throughout the book, vivid empirical descriptions are interspersed with crisp, astute, judgements. There is a judicious use of statistics to buttress an argument, and artful invocations of novels, poems, films, and works of art to illustrate the book’s themes. The prose is often brilliant, as these examples show:

*On the consequences of the Atlantic slave trade:*

‘Millions of Africans suffered a violent removal from all the richness of life that sustained their human communities. They were taken from soils and plants and animals, revered hills, and precious water bodies—and from whom they loved’.

*On sugarcane cultivation in colonial Brazil:*

‘Plantations simplified nature. Planters cut or burned through delicate forest ecosystems so that a single crop could thrive. Sugar’s war on the land demanded a colossal amount of work [by slaves]. ... Violence was the engine of the plantation. Violence underpinned every act and order’.

*On what European industrialism and European imperialism meant for the planet and its inhabitants:*

‘The most privileged people in the world began to think that the human battle against nature could be won. They believed that natural limits no longer hindered their quest for wealth and power. They believed that instant access to the prehistoric solar energy embedded in fossil fuels made them invulnerable. Their steam engines and lethal weapons conquered the world. In pursuit of freedom, they poisoned rivers, razed hills, made forests disappear, terrorized surviving animals and drove them to the brink of extinction. In pursuit of freedom, they took away the freedom of others. The most powerful people in the world believed, and some still believe, that human beings and other forms of life on Earth are but resources to be exploited, to be moved around at will’.

I read the book over three intensely fulfilling days, underlining passages and making comments in the margins as I went along. The experience was always educative and often enthralling. There were just a few false notes; as when C. R. James is characterized as ‘a poet of cricket’—he was in fact more a memoirist and ethnographer of the sport; and when the tiger of the Indian subcontinent is referred to as ‘the Bengal tiger’, a colonial-era anachronism that one rarely hears nowadays.

In the prologue to *The Burning Earth*, Amrith speaks of his upbringing in Singapore, ‘an Asian metropolis that grew vertically’, that imported all its food and most of its water, and whose economic success was in part founded on the invention of air-conditioning. He then talks of his research trips to three other Asian port cities, Yangon, Bangkok and Mumbai, noting how all had faced devastating floods in recent years. In each of these cities, he writes, ‘extreme weather cascaded into political disaster because of misrule’—this largely in the form of unregulated construction facilitated by corruption. Curiously he doesn’t tell us about any comparable disaster faced by his hometown, also a port city—is this because Singapore is better run, or has it just been lucky? The question is left hanging.

I also felt that a chapter apiece on the two World Wars was perhaps one too many. Given the scale of the devastation they caused, these conflicts had to be discussed, but perhaps not at this length, going over details relatively well known even to the interested non-specialist.

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However, once the World Wars are done with, the book springs back to life in its account of the globe after 1945. Amrith writes perceptively of how, in countries such as China and India, and indeed ‘throughout the postcolonial world, the struggle for material freedom took its toll. Idealistic political leaders came to believe, even if they did not believe initially, that some people, some landscapes, and some species were disposable. The language of sacrifice seeped into every demand that states made of their citizens’.

Amrith also highlights the striking parallels, from an environmental point of view, in the economic choices made by the two great Cold War superpowers, ostensibly promoting rival, and opposed, philosophies of ‘capitalism’ and ‘socialism’. As he points out, ‘whether it came ultimately from petroleum or from nuclear power stations, American and Soviet visions of the good life both demanded substantial energy’. He quotes the Soviet leader, Nikita Khrushchev, as saying, in 1956, that his government aimed to create ‘a complete abundance in our country of every type of consumers’ goods’. This is of course what every candidate in every American Presidential election has promised to those whom he hopes will vote for him.

### ‘Total History’

*The Burning Earth* approximates, better than any work of scholarship that I have read in recent years, what the French Annalists term ‘total history’. The thematic range of the book is as impressive as its geographical and temporal range. It is at once a history of trade and technology, of migration and displacement, of production and consumption, of imperialism and warfare, of power and protest, of fields, forests, rivers, coasts, soils, rocks, mountains, and the atmosphere.

*The Burning Earth* is history as literature and history as social science, and occasionally, history as natural history as well. It blends and brings together four great traditions of historical writing: the narrative drive of British historians; the emphasis on structural factors of Continental historians; the ability to range across scholarly disciplines of American historians; and the empathy for victims of imperialism and racism of Asian and African historians. And all of it is so beautifully rendered too.

Amrith's book was published on 24 September 2024. Six weeks later, Donald Trump was elected President of the United States (US). Now, more than ever before, America holds the future of the world in its hands. Its past and its present are however not altogether happy auguries. In 1954, just as the postwar consumer boom was beginning, the Yale scholar David Potter published a book on his country's history carrying the revealing title *People of Plenty*. Material prosperity was seen to be the defining motif of America, of its economy and its culture, of the aspirations and ambitions of its citizens.

The spectacular economic success of the US was owed to a combination of luck, ruthlessness, and enterprise. European settlers came in possession of a large and abundantly endowed continent. The native populations were driven to the brink of extermination, while millions of people were shipped from distant Africa to work the land under conditions of slavery. The white colonists themselves displayed great entrepreneurial drive as well as a capacity for technological and social innovation.

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How, proportionately, to assign credit to these three factors was, and shall remain, a matter of dispute among scholars as well as ideologues. Suffice it to say that by the 1950s the idea that they would forever be a people of plenty took firm shape in the minds and hearts of Americans. Indeed, what is known as the 'American Dream' is best understood as the belief—or dogma—that if one is lucky enough to be born or raised in the US, then it was a near-certainty that, over the course of one's life, one, would have more material possessions than one's parents: a bigger house, more expensive holidays, two cars when they had one or even a yacht when they had none. The worship of economic prosperity at home has been accompanied by the exaltation of military power abroad, propelled by the belief that the US must always be the richest, the strongest, and the most influential nation on earth.

The American dream of an ever-expanding consumer society was, as already noted, shared by the leaders of the Soviet Union, and, in time, by vast numbers of Chinese and Indians too. The enactment of this dream in practice has, on the one hand, led to deep and growing inequalities within human societies, and, on the other, to pervasive and perhaps irreversible environmental degradation across the globe.

### Power of 'Technosphere'

In his last chapter, Amrith draws our attention to the power of the 'technosphere', the network of buildings, bridges, roads, cables, and the like, that consume a disproportionate share of the earth's resources while serving to 'keep people out as well as to protect those within'. He suggests here that China's growing challenge to American hegemony could contain dangerous hazards for those of us who are neither Chinese nor American. The Belt and Road Initiative, promoted by Xi Jinping, now touches more than 140 countries, and accounts for more than 40% of the world's trade in commodities. And it 'has also given China effective control over the materials required for the technosphere's further expansion, including 80 percent of the world's graphite and half of the world's capacity to process lithium, nickel, and cobalt—along with colossal amounts of fossil energy'. Donald Trump's second term as president will surely see an intensification of American attempts to reassert its own global footprint, as his remarks about taking over Greenland, Denmark and the Gaza Strip demonstrate. We may be in for a period of superpower rivalry even more deadly in its effects than the older one between the US and the Soviet Union.

Early in his book, Sunil Amrith writes that 'the dream of human freedom from nature's constraints is under assault by viruses, burned by wildfires, drowned by floods, scorched by extremes of heat'. As I was drafting this review, news came in that the first month of 2025 was the hottest January the earth had witnessed since regular records were kept. Meanwhile, human livelihoods are also under threat from challenges unconnected with climate change, such as air, water, and soil pollution, and the loss of biodiversity, as well as by wars large and small, waged between and within nation-states. These multiple crises are largely unacknowledged by ruling politicians around the world. In this age of Trump and Xi and Modi and Putin, and of Adani and Ambani and Zuckerberg and Musk too, the message and materials of *The Burning Earth* need to be read, and heeded, by those who care as much for their fellow humans—and for Earth itself—as for their own personal wealth or power or success.

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