

The long and the short
Climate change, governance, and inequality
since the 1970s

Long-term thinking about the past and the future proliferates outside the discipline of history, notably around questions of climate change, international governance, and inequality. In all of these domains, the past is already being used as a tool with which to contemplate the future.

In discussions of climate, scientists have used the past to formulate warnings about how environmental destruction will affect our planetary future. In the decades after Rachel Carson's early warnings about the ecological consequences of pollution, the first terrifying pronouncements were published to the world forecasting planetary holocausts if changes were not made. In 1968, the American ecologist Garrett Hardin published his seminal article on the 'tragedy of the commons', comparing an over-populated planet to a wilderness preserve grazed excessively by wildlife. In announcing the limited carrying-capacity of the planet, and forecasting starvation and death for the many, Hardin's narrative paralleled the story of the expulsion from the Garden of Eden.¹ As biologists like Paul Ehrlich confirmed that extensive species extinction was a reality, they too articulated their fears about the future through the Malthusian vocabulary of testing, judgement, and despair.²

Through the 1970s, these claims about an imminent future were sharpened and refined in the course of data-driven analysis, political debate, and mounting impatience. In 1972, a newly founded global think-tank, the Club of Rome, issued a rousing report on environmental futures, funded by the Volkswagen Foundation, *Limits to Growth*, which publicised the new computer models of a systems analyst at the Massachusetts Institute of Technology, Jay Forrester, who warned against overshoot and collapse driven by over-population,

pollution, and resource depletion. The book sold 12 million copies. At the same time, a report to the United Nations World Conference on the Human Environment endorsed the *Limits to Growth* report's conclusions of imminent doom, warning against both the reckless pursuit of economic success science and the nation-state itself.³ At a variety of scales, scientific, governmental, and private organisations endorsed the view of impending ecological peril requiring immediate action.

Since the 1970s, pressure to rethink our relationship to the ecosystem has borne the mark of a quasi-apocalyptic form of long-term thinking, which moves from our sins in the industrial past directly to imminent destruction in the long-term future. Around the time of Rachel Carson's exposé, stories prognosticating doom arrived at almost exactly the moment of the last great recapitulation of popular apocalyptic religion in the United States, conceptualised in Hal Lindsay's best-selling story of the Rapture, *The Late Great Planet Earth* (1970), which became the largest-selling American non-fiction book of the 1970s.⁴ Scientific predictions helped to kick off a new wave of apocalyptic speculation in American popular religion.

The apocalyptic diagnosis of our relationship to past and future continues to exert a pull on scientific discussions of climate change, shaping analysis even as the understanding of the climate is broadened and refined. In the early 2000s, a new narrative of collapse appeared which, following the work of entomologist E. O. Wilson on colony collapse, compared the history of civilisations to over-driven ecosystems, the most prominent of which compared industrial capitalism to the vanished civilisation of Easter Island and forecast the extinction of the human race. Piles of scientific evidence have been amassed since the 1970s, but our long-term thinking has shifted little if at all from the terrors of that moment. We still reason largely in terms of apocalypse, as if we are afraid that without final judgement on our future we will be unable to summon the collective courage to shift from an unsustainable future to a sustainable one as we live in what is alleged to be our 'final century', even 'our final hour'.⁵

It is not our purpose here to question the accumulation of evidence about the past that scientists have amassed since the 1970s, but rather to call attention to certain patterns in the historical

interpretation of those results. Since the 1950s, climate science has expanded and refined into a new profession, which has established certainty about global climate shocks and proved that beyond mere pollution and resource exhaustion, the planet is now facing both global warming and rising sea-levels.⁶ The problem is not that the climate science community does not have data about these events: it has immense amounts of it, regarding many historical events and trends. What is important here is that the overarching narrative wrapped around those events has largely remained one of apocalypse. In scientific discourse, more data should result in new conclusions. In historical accounts, likewise: more data should result in refined and expanded metanarratives.⁷

Indeed, critiques of scientists' sense of time have been voiced from the discipline of economics. In the wake of the 2006 British government-sponsored Stern Review on the Economics of Climate Change, apocalyptic warnings and cries for immediate action led to a denunciation by economists who clamoured against 'the assumption of a near-zero time discount rate' in scientists' modelling of possible futures. In other words, the narrative of certain doom had left too little room for future contingencies in which entrepreneurs suddenly came up with more energy-intensive technologies that produced far fewer emissions than the ones in use today.⁸ Even left-leaning economists calculated that at least fifty more years of unimpeded growth lay ahead (some said far more), and that it would be immoral to deprive the developing nations of their possible economic future on the basis of a theory. Economists' models of future temporality were in conflict with climatologists'.

To counter the claims of climate scientists about rising CO₂ and a changing climate that merited immediate action, some economists proposed their own version of past and future, one that emphasised continuous technological innovation and economic growth since 1700. Others proposed that no matter what dangers had recently been revealed by climate science, the invisible hand of the market would take care of them all.⁹ Neither side really substantiated their claims by taking into account the others. Instead, both sides had mutually irreconcilable models of the past based on limited data of their own.

The problem with these stories is not that they are wrong *per se*, but rather that they are reductionist; mere cartoon-versions of

long-term thinking about the past without the scale and nuance that might yet be possible. Wherever we see the persistence of reductionist stories about time – whether apocalyptic stories propounded by environmental scientists like Jared Diamond or cornucopian stories composed by economists like Nobel laureate Douglass North – we read evidence that scientists have not consulted their own data when narrating their history. Nor is it really their job to forge this kind of interpretation – of actors, events, responsibilities, and solutions. We need long-term data on the climate and economy to tell us when someone notices that the earth is changing. The second level of analysis – assigning responsibility, finding concomitant recommendations about how the earth should be reformed to prevent greater catastrophe still – requires skills of working back and forth between past and future, discerning multiple sources of causality and ranking them, examining them from different perspectives and experiences to offer the fullest possible account of how the catastrophe came to be and therefore what is owed to whom. That kind of thinking about the past, compiling cases for possible vectors of reform, has always been the purview of neither science nor economics but of history.

LONG-TERM THINKING ABOUT THE CLIMATE

But no one can blame those worried about the environment for trying. What climate science has grasped since 1970, in its insistence on reasoning about past and future, is the absolute necessity of making claims about causality if we are indeed to change our behaviour from forms of economic behaviour known to jeopardise both humans and other living organisms. Thinking with history has always been a tool for reshaping the future, whether that intervention takes the form of time on the therapist's couch remembering one's childhood, the collective examination of national or planetary sins in the past, re-running scenarios of historical decision-making, or forming policy through the carefully contextual handling of evidence.¹⁰

For all of those reasons, when scientists have sought to establish human culpability in climate change and call for future action, they have found themselves in the realm of historical reasoning. In the midst of policy wars between economists and climate scientists, history has become a trump card played by both sides in order to

secure their argument about the nature of our world and the necessary conditions of a sustainable future. Indeed, one might say that a great deal of climate science now concerns less the extension of new models of ecosystem or biology, and more the reckoning of historical problems. Scientists now spend a great deal of their energy establishing agreed-upon timelines for the human cause of climate change, a conversation never far away from calls for a change in national and international policy towards the environment. The 'Anthropocene' was first proposed as a concept in 2000 by Nobel laureate Paul Crutzen, an atmospheric chemist, who identified the era as a new epoch in terms of planetary geology, comparable to the Holocene or Paleocene in its difference from previous epochs.¹¹ As Australian historian Libby Robin records, Crutzen's intervention 'was a bold statement on many levels', not least because it was the first geological epoch ever proposed that included the future – the accumulated effects of anthropogenic activity – as well as the past.¹² The label immediately resulted in a historical debate over whether the effects of climate change began 250 years ago with the steam engine, eleven thousand years ago with the rise of human hunter civilisations and the extinction of animals, or five to eight thousand years ago with the agricultural revolution.¹³ At issue were not so much the numbers, as how scientists assigned causality to past events. Was the domestication of the cow and rice to blame for later patterns of cutting down rainforests that would not appear for millennia to come? In a sudden turn of events, the major public battle engaged in by climate scientists was in essence a controversy about history.

Thinking with the past still offers most of the solutions that have been proposed in debates about climate change. A number of scientists today stress the need for 'earth systems governance', or 'carbon trading', looking to the evidence of human history to provide models of government or market capable of remedying disasters like this one.¹⁴ In so doing, they typically seek to replicate other state infrastructure projects, where nations have assumed responsibility for preserving life into the future, from the government-built dykes of the early-modern Netherlands to the American Manhattan Project in the Second World War and on to the World Bank-organised credit programmes from a decade ago inspired by the writings of Hernando de Soto.¹⁵ Nor must all the possible historical precedents for coherent

environmental change necessarily take the shape of centralised authority. Indeed, climate scientists have begun to construct models of climate change that focus on the specific ways in which tribes of humans have shaped the biosphere, foregrounding sustainable and unsustainable patterns of land use as models for the future.¹⁶ Questions about which options to choose and how have driven a new generation of scientists trained as biologists, chemists, and geologists to become, effectively, historians of institutions.

That same impetus has begun to transform the discipline of economics as well. Economists like Anil Markandya have used historical thinking to cut the Gordian knot of growth vs ecology. Markandya revisited questions of environmental regulation with new data gathered over a century and a half from the experience of regulation in Britain. His conclusion was that Britain had started regulating sulphur dioxide and other contaminants as early as 1821, all 'without any serious impact on GDP per capita'.¹⁷ Historical data like Markandya's prove that it is possible to refute doctrine about the trade-offs between innovation and ecology.¹⁸ In this way, history proves capable of expanding our sense of options for the future, and discerning which theories of the future are appropriate given the historical and present data that we have on hand. The successes of enormous collective investment strategies in the past provide the justification for a radical rethinking of climate governance for the future.

Historically minded scientists and economists have been joined by ecologically minded historians. Under pressure of stories about the Anthropocene, long-term histories of land and water use have become increasingly precise in their accounts of where ecological stress has happened before, why, and how it has been overcome. Some of that work confirms that the West has been on a long path to environmental exhaustion, moving from one energy source to another, generation by generation, a process that helped to give rise to the modern nation-state, at the time a form of 'international government' of unprecedented size and strength. That was the answer that historian Paul Warde has now provided to a starting question of striking relevance – how was it that early-modern Europe had survived an ecological crisis of unprecedented scale? – that required him to invent a new way of doing history, essentially one

that required modelling big data over three centuries of information in obscure archives. Over the course of years, travelling from small town to small town, Warde began adding up all of the illegal infractions that happen over centuries, relating them to climate events, and judging how our ancestors found a way out. In this account, new forms of governance become important in reaction to environmental exhaustion, at times when fighting over a collapsing ecosystem results in anarchy that only a new form of government can resolve.¹⁹

A similar pattern of looking to the long past for alternative solutions for the future has been pursued in the domain of water by the prolific Norwegian historian and geographer Terje Tvedt, past president of the International History of Water Association, who has presided over a six-volume history of water from the administration of irrigation in ancient China to water-wars in contemporary Africa.²⁰ For Tvedt, questions of survival meant developing an almost encyclopaedic knowledge of water as resource and scourge in the history of civilisation, learning how it had shaped governments, military strategy, farming, governance, and engineering projects over not centuries but millennia. Surveying examples of solutions and crises from melting glaciers and rising sea-levels to desertification and water-wars, Tvedt stresses the immense vulnerability of our present-day economies to rising sea-levels. A world history of the past becomes for him a reservoir of possible contingencies and alternative futures, each of which will be pitted against the other, overturning the old geography of immovable centres of finance and manufacturing in coastal cities like Shenzhen, London, and New York in favour of water-rich regions like Greenland and Tibet.²¹

Other historians, bent by similar questions of survival and crisis over the long term, have been driven to big data that shows how historical cities may offer new models for sustainable economies to come, proving that not all western history confirms the rule of resource exhaustion. French historians Sabine Barles and Gilles Billen have measured nineteenth-century Paris in terms of its human waste, river pollution, and nitrogen impact, collecting data from government sanitary authorities and the city toll-gates. Why toll-gates? Because for much of the medieval era into the nineteenth century, city officials stopped and taxed wagons from the countryside on their way to city markets. They left behind a complete list of how

much food the city of Paris consumed. Together with government records from the 1860s, when Paris began to invest in modern sewerage treatment, we have a complete record of Paris' 'nitrogen footprint', stretching back over hundreds of years.²² It allows us to tell a richer story of the way in which our near ancestors lived in relationship with their land.

Data mined over generations in the past can give us insight into the future of sustainability. Barles conjectures that nineteenth-century Paris can offer more in terms of a capitalist city that nonetheless was more sustainable, in terms of local agriculture and waste recycling, than the twenty-first-century cities of today. Barles has published some of her historical research with an audience of policy-makers in development in mind. Indeed, Barles is only one of the historians who delved back into urban records to find the story of how nineteenth-century managers invented sustainable practices for waste reuse in large cities.²³ Could the nineteenth century offer a paradigm of a city worth returning to, a city still brimming with entertainment and consumption and global trade, but which nonetheless depended on nearby farms for its produce? History can open up new possibilities, expanding the array of policy and market futures available past carbon trading and earth systems governance into a wider array of possible sustainabilities.

Examples of events from the deep or recent past alike can point to alternative traditions in governance, collecting and describing the fringe movements of the past that are bearing useful fruit today. Joan Thirsk ploughed five centuries of the past for examples of moments similar to the present, when shifting dynamics around land and water caused a search for a more sustainable agriculture. Paul B. Thompson has given a remarkable overview of the historical sources for conservation, organic farming, and sustainable building. Martin Mulligan and Stuart Hill have written a history of permaculture.²⁴ Histories such as these perform an important role: they are energising of new movements; they give scientists and policy-makers on the ground a sense of where to look for possible futures.

That opening up of possibilities and alternative models has revolutionary potential in a world where most models of the future cluster around climate change-induced doom or invisible hand-managed versions of the status quo. Suddenly, it looks like historical

civilisations and recent environmental activists can offer models of sustainability that can feed the poor and house the refugees of rising sea-levels, if only there is political will. Such a message of hope, and such a recipe for focused action, can act as a salve for minds troubled by spectacles of apocalypse or mantras of rational choice. It is medicine for reasoned action in our time, using knowledge of the past, rather than fantasy or dogma, as a tool with which to shape the future. As Libby Robin writes:

The future is no longer destined. Rather, it is something we ‘create’ . . . If so, we need to engage all possible creativity in making that future: science, economics, history and the human imagination. No one can predict the future, but imagination can illuminate its relationship to history and the present condition of the world.²⁵

Written at the nexus of past and future, history can draw a map that includes not only pictures of the fantasy world of capitalistic success and the world burning in climate change apocalypse, but also realistic alternative pathways to a world that we actually *want* to inhabit. These stories can open up new ways of thinking and escape old nightmares: ‘The Anthropocene . . . is not a parable of human hubris, but rather a call to realize our fullest potential as managers of the earth and our future on it.’²⁶

In order to repair the work of broken models of the long term, the work of thinking with time will have to take on not only these positive future potentialities, but also the reality of the obstacles that have historically stood in our way to accomplishing a more just, sustainable, or ecologically attuned civilisation. Here, too, historians have already been at work. History can also point the finger, directing blame towards those responsible for harm or who have slowed down more revolutionary processes with less revolutionary means. Joshua Yates has offered a preliminary decades-long history of ideas of sustainability, sketching for us how the terms of the debate have been constructed at institutions such as the Columbia Business School, which churns out an array of ‘chief sustainability officers’ who promise to protect people, the planet, and prosperity, but only through altering patterns of consumption among the world’s elite.²⁷ The marshalling of scarce resources to stymie the worst effects of climate change on behalf of an elite, no matter the consequences for

the rest of the population, has a history. There are institutions, individuals, and educational programmes that shaped greenwashing, and reviewing their past can help us to choose other institutions for the future – for instance the state agriculture extension programme in Australia, which has converted its materials for small farmers from ones that focus on petro-chemical fertilisers and pesticides to ones that emphasise the emerging science of permaculture.²⁸

With longer perspectives, the directives that history gives can be much clearer still. Swedish historians Andreas Malm and Alf Hornborg have observed that the key event in Paul Crutzen's account of climate change is the invention and proliferation of the steam engine. Looked at in terms of the history of empires and capitalism, the trajectory towards intensifying pollution, agriculture, and consumption from the steam engine forward is not shared equally by all members of the species. Reviewing decades of micro-historical work on the nature of capitalism and empire, Malm and Hornborg are able to point the finger at a particular, small subset of western elite families and corporations, who they believe share the blame for the climate disruption. As Malm and Hornborg write, 'The rationale for investing in steam technology at this time was geared to the opportunities provided by the constellation of a largely depopulated New World, Afro-American slavery, the exploitation of British labour in factories and mines, and the global demand for inexpensive cotton cloth'. The species as a whole can hardly be equally to blame for climate change, or equally responsible for cleaning it up. They explain, 'A significant chunk of humanity is not party to the fossil economy at all: hundreds of millions rely on charcoal, firewood or organic waste such as dung for all domestic purposes'.²⁹

Histories of how ruling powers in the West employed expert civil engineers, foresters, and agronomists to discount unilaterally the wisdom of local peoples managing their land have stressed the way that capitalism, the nation-state, and rule by landlords are directly related to the environmental destruction that characterises the last two hundred years of the Anthropocene. Evidence of the rise of the doctrine of 'improvement' in Enlightenment Europe gives us a hint of the way new ideas about class and racial superiority, not merely economic strategising, tipped the sudden accumulation of power into the hands of a few landlords at the dawn of the

industrial age, leading to a new ideology that wedded power to the exploitation of the environment.³⁰

Given this accumulation of historical evidence, it is no longer tenable to hold the view that links our current environmental predicament with so remote a cause as the evolutionary inheritance of humankind as an inherently greedy and destructive species. As Malm and Hornborg write:

Capitalists in a small corner of the Western world invested in steam, laying the foundation stone for the fossil economy: at no moment did the species vote for it either with feet or ballots, or march in mechanical unison. To invoke ultra-remote causes of this kind 'is like explaining the success of the Japanese fighter pilots in terms of the fact that prehumans evolved binocular vision and opposable thumbs. We expect the causes we cite to connect rather more directly to consequences', or else we disregard them ... Attempts to attribute climate change to the nature of the human species appear doomed to this sort of vacuity. Put differently, transhistorical – particularly species-wide – drivers cannot be invoked to explain a qualitatively novel order in history, such as mechanized, steam-power production of commodities for export to the world-market.³¹

If Malm and Hornborg are correct, the human history of climate change points us in a different direction – towards the responsibility of the developed world and the corporations that have contributed the most to and benefited the most from climate change.

In cases such as these, history offers us instruction about the arrangement of political economy itself, controverting the accepted wisdom that the regulation of industries and taxation of vested interests hampers economic growth. It upsets the policy stalemate of the 1990s, one that could be characterised as environmentalists preaching more regulation and international cooperation, with economists preaching self-interest, technological innovation, and deregulation and promising that environmental solutions would only come further down the road. Largely because of the evidence about long-term processes amassed by historians, that stalemate is no longer tenable. Historical evidence in economics has already substantiated the fact that economic growth is still possible in such a regulatory climate. Historical reasoning here also lays a path towards governance systems that penalise the interests that have benefited the most from climate destruction.

As we begin probing historical data for issues of causality, agency, and alternatives, we learn that the ‘tragedy of the commons’ is not a necessary rule, but rather a historically constructed set of conditions about destroying the commons set up by western elites for their own ends.³² We learn that the terms ‘carrying capacity’ and even ‘over-population’ or ‘population’ carry with them the imprint of colonial ideas about wildlife management and management of natives and indigenous people, or even of religious ideas about God’s punishment intended for the lazy, and that they have been less substantiated as an actual law of nature than was once supposed.³³ In reviewing outmoded ideas and demonstrating the burden of ancient prejudice over fact, history can offer a critical rethinking of the terms we use to talk about the future, demonstrating how certain kinds are stamped with prejudice or outmoded thinking.

The genre of history illustrated by Robin, Yates, and Thompson is history at its most critical. They identify the players who are constructing the game; they show where the terms came from, and they point out contradictions in the system. Critical history is one of the forms of story-telling that most historians today are trained to perform. Critical history can help us to tell which logics to keep for the future and which to throw away. Stamped with the ‘hermeneutics of suspicion’, critical history is the child of the 1970s just as much as micro-history is, although it has a rich legacy going back at least to Karl Marx. It is fruitfully applied to the purpose of unmasking institutional corruption – finding toxic discourses with laden or implicit meanings; unveiling supposed saviours as frauds; disrobing would-be emperors. We have a lot of good critical history. Nathan Sayre tells us how the term ‘carrying capacity’ was first applied to boats, which would literally sink if their capacity were over-reached; it was then transferred to animal populations in the case of British colonial monitoring of hunting reserves, and later passed from the colonial government of animals to the governance of native populations.³⁴ Implicit in the term are the logics of top-down government control of population. Similar findings have been suggested by Alison Bashford’s and Matthew Connelly’s histories of international government, population control, and neo-Malthusianism.³⁵ Of all of the kinds of control we can put into place, history suggests, the control of population is one of the most likely to go awry.

The implications for international policy of all of this sorting into fact and fiction are immense. Indeed, this form of historical reasoning directly controverts the international policy embraced by most nations since the Brundtland Commission in 1987, which reasoned that developed nations could not shoulder the burden of ameliorating climate change, because of their relationship to ongoing industrialisation projects in the Global South.³⁶ In this example, species thinking – insisting that we as a species must cooperate together – has served as a convenient excuse for western elites to deny that they are in a position to respond to a changing climate. Historical reasoning, including the postcolonial history embraced by elites in India and China, gives western powers no such veil of economic theory as an excuse for doing nothing.

THINKING ABOUT INTERNATIONAL GOVERNANCE

The power of historical thinking to destabilise conclusions about the best shape of institutions extends beyond questions of the environment. In matters of international governance, thinking about the past also marks almost all conversations. If we look backwards over the last fifty years, to many historians it appears that socialism is dead in the water, killed by what historian Angus Burgin has called ‘the great persuasion’, the organised assertion of free-market principles by European and American think-tanks founded by libertarian economists but shaped and promoted, often against the better judgements of those economists themselves, into an advocacy lobby for the interests of large-scale American corporations.³⁷ In the battles between institutions that followed in the 1970s and 1980s, a new era of ‘globalisation’ or ‘neo-liberalism’ emerged, characterised by the vanishing of socialism and trade unions, the collapse of communism as an alternative, the rise of international institutions like the International Monetary Fund (IMF), WTO, World Bank, G-7, G-8, and other supranational gatherings intended to extend credit, trade, and entrepreneurship worldwide.³⁸ In this model, the global corporation, technology, and national government go hand in hand; they form a natural bulwark that stands beyond question as the only conceivable cure for any society’s ills. In this vein, the CEO of Google and the director of its think-tank, Google Ideas, for instance, argued for high technology as the ally of democratic national policy, ending

poverty and opening up the media and elections.³⁹ The leaders who propose solutions for the future are not reformers or activists but entrepreneurs and CEOs.

Until recently, it was rare for a journalist or policy-maker to handle these institutions as products of history about which it was possible to raise questions. These transitions have to be understood as historical watersheds, and what they mean and whether they have worked is matter for critical thinking about long-term change. Much of the conversation about these institutions has instead come from individuals who were major players in policy themselves. Their testimony unequivocally celebrates the emergence of new institutions by declaring a new historical era, rather than asking what that era has done. From the United States, at least, it looks like 'socialism is dead'. For Samuel Huntington, the long-term struggles of Europe against the rest of the world signalled the perpetuation of these conflicts into the future. For Francis Fukuyama, the downfall of the Soviet Union marked 'the end of history', or a moment when no other utopian projects than capitalism were for the moment imaginable.⁴⁰ Are any of those claims about the past really true? How would we know?

Such claims as these have lately been subjected to big-data testing in the hands of political scientists assembling new datasets on world cultures and institutions over the *longue durée*, who hope to use these datasets to test theories about whether cultural conflict is inevitable. Since Huntington predicted a 'clash of civilisations' in the 1990s, scholars in political science and International Relations have been formulating statistical databases to measure the regularity and nature of inter-state disputes. These analyses have shown little consensus about the nature of conflict or the trajectory of history, even when they agree that economic aid and growth overall tend to have a positive correlation with democracy.⁴¹ Indeed, many have questioned the viability of Huntington's category of 'civilisations', itself a concept borrowed from the essentialising, hierarchical worldview of Victorian anthropology, and questionably applicable to a globalised world characterised by cross-national education, trade, and migration.⁴² Even with immense data-gathering, then, the formulae for understanding our past and future that were most influential in the 1990s and 2000s turn out to be less than persuasive. Where else then can we look for guidance?

An alternative is to look to the power of history to name alternative systems of governance. One instance is the *longue-durée* story offered by David Graeber in his *Debt: The First 5,000 Years* (2010). While scholars of international studies in the wake of Margaret Thatcher have maintained that indeed there is no alternative to capitalism, Graeber shows how capitalist concepts of debt are only the most recent instance of a recurring form of culture that holds debt against individuals, and that cumulatively the historical record of debt-systems is a generations-long, cross-continental chain of slavery by which strangers are bound to strangers before the time of their birth. With this history, Graeber is able to hold up the real historical alternatives with which Buddhist monasteries and prophetic Christian sects answered debt chains when they found them, alternatives based upon the abolition of debt at regular intervals. Graeber recommends such remission both for the international debts that bind developing nations to the World Bank and to the internal debts that increasingly shackle college graduates and working-class consumers in the United States. Graeber's story depends upon interweaving thousands of analyses of different economics systems ranging from aboriginal Madagascar to the Kwakiutl Indians to the African experience of the transatlantic slave trade in the era just before the American Civil War. None of these episodes is a static system; instead, all of them are coming up against each other, running into trans-oceanic trade networks, and being challenged or challenging back as a result. With this picture, Graeber is able to show that various forms of money relationships, from the gift to the debt, have been around for a long time, and that they do not sit easily with each other, and that the indebted and enslaved have recourses at their disposal, including prophecy and revolution. A series of micro-episodes leads up to a macro-vision of the world which is critically larger than the one we had before.⁴³

Stories like Graeber's stand to destabilise our faith in structures like debt itself as most conducive to a kind of democracy characterised by participation and opportunity. While Huntington and Fukuyama were engaged in shaping history into a simple allegory about the triumph of the West, the long-term perspective opens up doors and windows, allowing us to look around at other ways of organising our society. A longer history of international government

can even demonstrate that alternatives exist to our own political system, alternatives that might in turn offer a fuller expression of the concept of democracy itself. New data-driven surveys raise questions about inevitability of the 'Westphalian' state, the only form of governance that has been truly universalised since the late eighteenth century. In this model, every human must be – or aspires to be – a member of such a state; almost every inch of the earth's surface is claimed and controlled by these states.⁴⁴ But is this model truly the one that has staying power and utopian potential in the twenty-first century?

Before the present moment, a series of emerging attempts at world governments have taken noticeably different tacks. The League of Nations sought to create a lasting peace by unifying the voices of democratic government. As Mark Mazower has shown, in the 1940s leaders combined a faith in the virtue of national planning with a commitment to participation in collective international decision-making bodies. The United Nations expanded this vision, wedding to it a vision of expertise deployed to the advantage of the developing world, with cooperative experts sent by the International Labor Organization (ILO) and soil experts sent by the Food and Agriculture Organization (FAO), with housing and educational specialists extending knowledge around the globe. The World Bank was originally organised to support these visions of world government in lifting up the economic power of the developing world but by the 1970s, it had taken a new line of experimentation – the extension of gigantic national debts – ostensibly intended to help the nations of Latin America, Africa, and South Asia to build their infrastructure. In fact, the rise of the World Bank signalled a transition to a new form of international government, one where international finance, not a growing tax base, were supposed to supply needed revenue for large-scale projects.⁴⁵ Around 1970, the record suggests, the promise of international government in support of democracy was broken. The forms of international government we have had ever since have favoured large corporations and entrenched interests rather than development or democracy.

Does international government have any sort of a future today? Increasingly, Brazil, Russia, India, and China (the BRICs), the emerging countries, are getting cut out of deals. We have seen global

movements and mass protests – the Arab Spring, the Occupy Movement, but also the Indignados in Spain; civil unrest in Istanbul, Kiev, and London; and looking back even further, the Millennium Development Goals (MDGs), the Human Rights movement, the growth of NGOs, Altermondialism, or peasant movements like the Via Campesina. Could these movements point to a new direction in global governance? This question, too, is being addressed through serious work with historical fact. Historians have documented the rise of an international indigenous peoples' movement since the 1970s, drawing attention to the reality of institutions often ignored by media or political science. They have demonstrated the success of the Movimiento Sin Terra (the Landless People's Movement or MST), the landless people's movement of Brazil, and its programme of democratically administered peoples' agricultural movements.⁴⁶

As to enterprise and technology, there are longer stories there, too, which can help us to imagine what a free market or economic growth might look like in a context in which democracy mattered. In the eighteenth century, nations started treating new technologies like road and rail as common resources, subsidising their development through eminent domain (also known as 'forced purchase', the doctrine of the state seizure of land for the public good) and forcing them to serve the poor through decreased tariffs and mandates to reach the poorer hinterlands. Since then, major powers have gone through many phases of government building and libertarian retrenchment.⁴⁷ Longer stories have begun to open up questions about the relationship between technology, the free market, and economic growth.

The technologies of global democracy, from the census to the Internet, suggest other ways in which technologies can be harnessed by the state. In our own time, there are other technologies that offer to extend the promise of political and market participation. These include participatory mapping of ecological disasters as pursued by 'citizen science' groups, dialogue, and democratic processes, the extension of cheap and free broadband to countrysides and ghettos, the enforcement of net neutrality to encourage entrepreneurship at all levels of capitalisation, and the democratisation of the Internet domain system out of the hands of the privately run Internet Corporation for Assigned Names and Numbers (ICANN). Initial histories

of these movements suggest the way that innovation, even the invention of the Internet itself, can be tied to a history of state investment and broad-based political participation, often by those who have no links to power already.⁴⁸ But historians have started to understand that this search for a technology suited to participatory democracy has a much longer story, stretching back to the first decades of the twentieth century, when organisations like Mass Observation attempted to crowd-source data on unemployment and citizen-social scientists launched an intelligence campaign to protect Great Britain from fascism.⁴⁹

As more stories have been gathered about these ‘paths not taken’, so too have historians gathered information about the pattern of expert rule that excludes democratic participation from the avenues of power. For example, in studies of the British administration of irrigation in India, the British administration of the *Anopheles* mosquito in Egypt, and the history of public health, historians have found ample evidence that many nation-states suppressed democracy from within, using expertise as a way to exclude citizen lobbies on the basis of race and class.⁵⁰ They have also shown that the growth of NGOs corresponds with the increasing side-lining of trade unions, neighbourhood groups, and even political parties from political process – with the result that the real financial power for new projects, whether poverty relief or education or environmental reform – is rarely held by voters.⁵¹ Historical evidence even suggests that the proliferation of economists in high-profile policy positions has been linked to the promotion of GDP and the concomitant discounting of employment, health, education, and political participation.⁵²

As with the debate on climate change, historical data can provide not only models worthy of emulation but also warnings, in this case about the dangerous effects of technology monopolies on national markets. Historical studies of American railroads show how government backing of unregulated private companies led to over-extension of resources in a world where no capital large enough to follow those interests existed. As a result, railway tycoons benefited, while millions of individual families lost the fortunes that they had invested in boomtowns that were economically speaking doomed from the start.⁵³ Other stories of state monopoly power have recently

drawn the connection between corporate power and America's bloody history of extending a police state through Latin America, the Philippines, and Vietnam.⁵⁴

INEQUALITY

Nowhere are determinations about blame and alternatives so heated as in conversations like these, which stress the distance between the haves and have-nots. Unsubstantiated myths about the *longue durée* persist, affirming that the institutions we have now are the only ones that we ever can have. The most powerful of these myths in our time are those about inequality. They have two major varieties: one, based in economic anthropology, which looks backwards to the existence of alpha male behaviour among primates, and insists that inequality is a known facet of our species behaviour, and therefore will never go away.⁵⁵ The other grand story about inequality and time is that associated with Cold War economist Simon Kuznets, a Harvard professor and former employee of the US War Department, whose data on the rise of living standards of most Americans between the Great Depression and the 1960s suggested that in a capitalist democracy inequality will naturally go away.⁵⁶ Over the thirty years after 1970, a time when history and the humanities were on the retreat from the public realm, stories like these circulated unchallenged in many fields of policy and academia. But today the return of long-term thinking is forcing scholars to question both myths with the power of factual data gathered over time.

The power of this data to transform argument has been graphically illustrated by the debates about long-term economic inequality under capitalism awakened by the publication of economist Thomas Piketty's *Capital in the Twenty-First Century* (2014).⁵⁷ Piketty explains in his introduction that his prompt for gathering *longue-durée* data about inequality was when he was told a statement that most economists accept as law: Kuznets' assertion that capitalism would, over time, tend to reduce inequality.⁵⁸ Kuznets based his principle on a few decades of data, not centuries, as Piketty would later, and this data came from an exceptional period in economic history – the period of post-depression and postwar recovery in which Kuznets himself was living, an era which was actually one of

the most impressive periods of rising growth and falling inequality in the last two centuries.⁵⁹ But as Piketty examined the fortunes of inequality in France, America, Britain, and elsewhere over two hundred years, his evidence showed that falling inequality was actually quite unusual under capitalism. His *longue-durée* analysis shook the prejudices and supposed laws of economists, unveiling with the power of data what was supposedly conclusive truth as contingent speculation.

Piketty's intervention depended upon measuring many kinds of data against each other. The data on inequality were gathered from five different nations – France, Britain, America, Germany, and Sweden. It often forcibly approximated years for which no data were collected, and adjusted them to take into account the different national practices of doing accounts, or extrapolated them back across decades when census practices changed. As became clear when the *Financial Times* questioned Piketty's analyses, this juggling of data required asking critical questions about the nature of government numbers in the first place. Why, the *Financial Times* wanted to know, did Piketty claim that 70 per cent of Britain's contemporary wealth was in the hands of the 1 per cent, when government figures themselves said that only 35 per cent was held by the elite? As Piketty's public rebuttals and explanations made clear, he had already thought about these questions in great depth, and explained them in a series of articles. Government figures on wealth in Britain were self-reported, and they did not therefore encompass wealth hidden offshore.⁶⁰

This kind of critical analysis of data has a long tradition in History departments, going back to Theodore Porter's and Ian Hacking's work in the 1970s, which showed how common government statistical definitions, from 'unemployment' to the 'average man', were calculated with a view of establishing political peace by minimising the case of the working class for reparations, welfare, or even government reform.⁶¹ But a critical long-term analysis of data can call those averages and tabulations into question, helping to overturn old prejudices about the necessary state of politics or diffusion of wealth in a society. This is exactly the kind of intervention into world debates that Braudel hoped his *longue-durée* studies would lend themselves to.

Part of the power of Piketty's book was that his critique of Kuznets rested on data-driven methods for debunking historical myths propounded in economics on the basis of short-run data. Since the 1970s, economics has been stuck in an enduring debate over the results of more technology and productivity in society: does more innovation lead to greater wealth or leisure for all? Or does more technological innovation trap modern humans in a spiralling quest for consumable goods that take ever more time and effort, even as expanding cities require the working class to own an automobile to get to work in the first place?⁶² Piketty's own interventions are also only a small part of a many-collaborator coalition to measure accurately the promises and reality of income inequality under advanced capitalism. Under the leadership of Piketty and Emmanuel Saez, the Paris School of Economics has made public a *longue-durée* database of top individual incomes around the world, aggregating data from public tax rolls, nation by nation, since 1900.⁶³

Piketty's book – by his own admission, 'as much a work of history as of economics' – exemplifies the power of relevant historical studies, driven by data, to speak to policy and publics well beyond professional history.⁶⁴ History has this power to create major theoretical debates, revealing that what was previously accepted as a natural truth is actually no more than unexamined bias. As a result, *Capital in the Twenty-first Century* has disrupted the core beliefs of many of those who govern our society – especially those responsible for the Wall Street bailouts of 2010. At the core of the new controversy his history has inspired are claims about the nature and promise of capitalism itself, seen in the *longue durée* and conducted as a battle in which long-run analysis triumphs over short-run data.

THE PROLIFERATION OF MYTHOLOGY

The abundance of false stories in our time is one of the major reasons that we are in a crisis of short-term thinking. In an era of simplistic solutions to problems with rising sea-levels, governance, or inequality, few people can talk authoritatively about the big picture. The proliferation of reductionist stories about the past has a history, like anything else. Nightmare scenarios and fundamentalist mythologies about climate, governance, and inequality began to

proliferate around the same time that historians began to retreat to shorter and shorter time scales.

As the Short Past came to dictate conversations about history, *longue-durée* understanding began to look, by contrast, like an antique mode of story-telling, something performed only by patriarchs or amateurs, unsuited to a modern student adept at using evidence or argument. This led to the charge that social history had abandoned all interest in politics, power, and ideology, leading its practitioners instead to 'sit somewhere in the stratosphere, unrooted in reality'.⁶⁵ Increasingly, the Short Past was defined as not only one way to look at history, but the *only* way to look at history.

By the end of the 1970s, the tendency to go long began to look tarnished, something grubby that no self-respecting historian would do. Furthermore, those historians still left in the *longue-durée* game were subject to pressures to report to readers divided by the impossibly conflicting opinions typical of the international scene during the Cold War. Consider the experience of Caroline Ware, editor of the *History of Mankind*, a multi-volume project commissioned by UNESCO and developed between 1954 and 1966. Ware's volume, submitted to civil servant reviewers of the nations represented by UNESCO, was subjected to an ideological tug-of-war between Russian and French readers, Protestant and Catholic reviewers, all of whom lobbied UNESCO for revisions that would reflect their own national and ideological understandings of world history. For someone working on behalf of an organ of international governance such as Ware, the success of the project depended upon making a synthesis that both communists and capitalists could agree with, and that task proved simply insurmountable. The lobbying for content was such that the project's staff were driven to near desperation about ever writing a synthetic history capable of working within the frame. Ware herself wrote in a letter that 'it is not possible to write a history of the 20th century'.⁶⁶ Such dispiriting experiences of writing for the organs of international government tarnished the genre of *longue-durée* history still further. Ware's frustration with rhetorical appeasement was something their micro-historian colleagues in the archives could avoid entirely. These experiences, and many others like them, provided a major rationale for a generation of historians to retreat from long-range history in general.

By and large, after this episode, historians as a cohort declined to engage with futurists, leaving 'dirty' *longue-durée* history in contradistinction to micro-history as the tool of journalists and pundits, hardly a science at all, rarely assigned in the classroom, and almost never debated or emulated. Works of micro-history have expanded our understanding of peasant lives, the variety of psychological impulses, public and private, and the constructedness of human experience. But they have also largely abandoned the rhetorical practice, in their writing of history, of a larger moral critique available to non-historians as a source for alternative social formations over the *longue durée*.

In an era of ideological divisiveness, social scientists became increasingly sceptical that the institutions of international development could be ideologically neutral or effective as the promises of modernisation theory withered and died across the globe from Latin America and Southeast Asia, especially after the Vietnam War.⁶⁷ Their bibliographies, in contrast with those of the previous generation, would accordingly be increasingly filled with publications in peer-reviewed journals not with contributions to the ballooning grey literature of international organs. Their retreat was wholesale: they did not consult for the World Bank, and they did not write *longue-durée* history designed to be consumed by the leaders of governmental institutions. As historians, anthropologists, and sociologists stopped writing and working for the institutions of world government, economists took their place. Beyond history departments, the consequences of losing this audience of influential organisations has expressed itself in many other ways. A creeping science-envy within the social sciences more generally, leading to modelling; a focus on game-theory and rational actors – in short, a retreat to the individual and the abstract, not the collective and the concrete. A policy-driven focus on case-method migrated from law schools (where it had been established in the nineteenth century) to business schools and political science departments via the use of case-studies in medicine.⁶⁸ The baby-boom generation did much for the ability of historians to understand the world, but it did so at the cost of the ability of historians to speak back to the institutions of governance.

Seen in this light, a broad trend within anglophone historiography from the 1970s to the mid 2000s can be cast as evidence of a moral

crisis, an inward-looking retreat from commenting on contemporary global issues and alternative futures. While historians refined their tools and their understandings of social justice, they simultaneously inflicted upon their discipline habits of microscopic attention that culminated in a sense of practical irrelevance, of the historian as astronomer in a high tower, distanced from a political and economic landscape. Part of this crisis was an increasing reluctance on the part of historians to enter the fray of international relations and public policy in the role of professional advisor. Instead, the role of advising citizens and policy-makers on the utopian possibilities of long-term change was largely ceded to colleagues in Economics departments, with the resulting dominance of newspaper headlines and policy circles by theories that idealise the free market, taking little to nothing from the moral lessons that postcolonial and social historians have drawn from the histories of empire and industrialisation, public health and the environment.⁶⁹

By the 1990s, academic commentators in the United States complained about the increasing irrelevance of history and other humanities disciplines and looked nostalgically back to the New York intelligentsia of the 1950s and the active role played by historians and literary critics in the public sphere.⁷⁰ It looked to many colleagues as if the humanities had simply abandoned the public altogether. By the end of that decade, a younger generation of historians, just under the cusp of the baby-boom, began to reopen the question of the *longue durée*. Many of them were ancient and medieval historians by training, for whom silence on the topic of long time spans was perhaps particularly painful. For example, medievalist Daniel Lord Smail has led the charge into a dialogue with evolutionary biology, opening up questions about the periodisation of human identity and consumerism, among other topics.⁷¹

The moral stakes of *longue-durée* subjects – including the reorientation of our economy to cope with global warming and the integration of subaltern experience into policy – mandates that historians choose as large an audience as possible for all of the human experiences about which historians write – including (but not limited to) problems of environment, governance, capitalism, and exploitation. *Longue-durée* history is rightly deployed to allude to the Anthropocene when it becomes necessary to persuade an audience of the fact

of a long-term relationship between humanity and the planet, and in particular to the atmosphere, delicate ecosystems, and constrained natural resources. But it may equally persuade us of the long struggles about the legacy of capitalism towards injustice, as did Tawney and Mumford, or over the governance of the environment.⁷²

The return of the *longue durée* is intimately connected to changing questions of scale. In a moment of ever-growing inequality, amid crises of global governance, and under the impact of anthropogenic climate change, even a minimal understanding of the conditions shaping our lives demands a scaling-up of our inquiries. As the *longue durée* returns, in a new guise with new goals, it still demands a response to the most basic issues of historical methodology – of what problems we select, how we choose the boundaries of our topic, and what tools we put to solving the question. The power of memory can return us directly to the forgotten powers of history as a discipline to persuade, to reimagine, and to inspire. Renaissance historian Constantin Fasolt has argued that thinking about early modern civic institutions was largely premised on what he calls an attitude of ‘historical revolt’.⁷³ In light of this, the new historians of the *longue durée* should be inspired to use history to criticise the institutions around us and to return history to its mission as a critical social science. History can provide the basis for a rejection of anachronisms founded on deference to longevity alone. Thinking with history – but only with long stretches of that history – may help us to choose which institutions to bury as dead and which we might want to keep alive.

In the last decade, evidence for the return of the *longue durée* can be found across the intellectual landscape. A Latin Americanist notes of his field that ‘it became unfashionable to posit theories about . . . historical trajectories over the very long-run’, but change is now in the air: ‘Now the *longue durée* is back.’ A European cultural historian tells his colleagues at a conference, ‘all of us are . . . invested, more or less explicitly, in a *longue durée* of sexuality’. And a professor of American Studies remarks of her discipline, ‘Anyone in literary studies who has looked recently at titles of books, conferences, research clusters, and even syllabi across the field cannot have missed two key words . . . that are doing substantial periodizing duty for

literary and cultural criticism': one is geographical (the Atlantic world), the other 'a chronological unit, the *longue durée*'.⁷⁴ Recent works have placed the Cold War and migration, the Black Sea and the Arab Spring, women's spirituality and the history of Austria, German orientalism and concepts of empire, into the perspective of the *longue durée*.⁷⁵ And even a cursory scan of recent arrivals on the history bookshelves turns up a host of long-range histories, of around-the-world travel over 500 years; of the first 3,000 years of Christianity and of anti-Judaism from ancient Egypt to today; of strategy from chimpanzees to game theory, of genocide 'from Sparta to Darfur' and guerrilla warfare 'from ancient times to the present'; of the very 'shape' of human history over the last 15,000 years; and of a host of similar grand topics directed to wide reading publics.⁷⁶

Indeed, big is back across a spectrum of new and revived modes of historical writing. Grandest of all is 'Big History', an account of the past stretching back to the origins of the universe itself.⁷⁷ More modest in scope, because it includes only the human past, is the still remarkably expansive 'Deep History' which spans some 40,000 years and deliberately breaks through the entrenched boundary between 'history' and 'pre-history'.⁷⁸ And more focused still, yet with perhaps the most immediate resonance for present concerns, is the history of the Anthropocene, the period in which human beings have comprised a collective actor powerful enough to affect the environment on a planetary scale.⁷⁹ The time-scales of these movements are, respectively, cosmological, archaeological, and climatological: each represents a novel expansion of historical perspectives, and each operates on horizons longer – usually much longer – than a generation, a human lifetime, or the other roughly biological time-spans that have defined most recent historical writing.

In this new work, contemporary historians are restoring the tight-woven cloak of stories that helps to shelter a culture with a sophisticated understanding of its past. A contemporary historian has recently urged 'that by returning to the macro-questions that shaped our discipline we can recapture its explanatory ambitions from the navel gazing of microhistories and in the process reestablish an understanding of the public utility of our work'.⁸⁰ History, with its rich, material understanding of human experience and institutions

and its apprehension of multiple causality, is reentering the arena of long-term discussions of time where evolutionary biologists, archaeologists, climate scientists, and economists have long been the only protagonists. Today, we desperately need an arbiter for these mythological histories, capable of casting out prejudice, reestablishing consensus about the actual boundaries of the possible, and in so doing opening up a wider future and destiny for modern civilisations. History as a discipline can be that referee.