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## THE ANTHROPOCENE AND IMPERIAL ECOCIDE: PROSPECTS FOR JUST TRANSITIONS

Vishwas Satgar

With about 200 000 years of modern human existence we are now a geological force shaping, determining and disrupting the Earth's bio-physical system. The scientific Anthropocene discourse and research agenda confirms this. This is a fundamental and profound scientific insight, which cannot be ignored. It is most stark and dangerous in relation to the Earth's carbon cycle and human-generated carbon emissions. We are now heating the planet at levels that take us beyond the limited variability and stability we have experienced over the past 11 000 years in the geological period known as the Holocene.

At the same time, an official discourse around the Anthropocene has evolved, with both scientific and popular elements, within and around United Nations (UN)-led climate negotiations. Within the multilateral negotiations on the climate crisis, not only is the ideological discourse on the crisis grounded in green neoliberalism and techno-fixes, such as geo-engineering but, as importantly, it is also conjoined to the popular rendering of the notion of the Anthropocene as the 'Human Age'. As a result, the Intergovernmental Panel on Climate Change (IPCC) in its fourth and more recent fifth report affirmed the notion of 'human-induced climate change'. This has become part of global

common sense and mainstream understandings of how we should think about the worsening climate crisis. This chapter seeks to show that this politically constructed discourse is not just part of a scientific and technocratic approach to managing a deeply flawed green neoliberal consensus within the UN-led Conference of the Parties (COP) negotiation process, but is actually an ideological discourse with serious consequences for how we understand the contemporary climate crisis. Simply put, the official Anthropocene-centred approach to the climate crisis suggests that it has to be explained as a human problem for which we are all equally responsible. This chapter engages critically with the ideological discourse and theory of the Anthropocene from a Marxist ecology perspective. Through this engagement, the chapter seeks to show the limits and ideological pitfalls of the official Anthropocene-centred understanding of the climate crisis. This is not, however, about rejecting the science of climate change or the scientific discourse on the Anthropocene as it relates to Earth's systems in general.

The chapter first sets out the origins and construction of the Anthropocene-centred approach to the climate crisis, showing how it has been constructed as a scientific and popular mainstream explanation for the crisis. Second, the chapter briefly locates current Marxist approaches and engagements with the Anthropocene ideological discourse. Two broad approaches are identified. This provides for a transition into the critique offered by this chapter from a Marxist ecology perspective. Third, the chapter scrutinises the official Anthropocene ideological discourse in its assumptions and understandings of the relationship between the climate crisis and the way historical capitalism has worked. In particular, the chapter demonstrates how the Anthropocene-centred discourse lets capitalism off the hook by lacking a historical materialist understanding of the political economy of the climate crisis. An Anthropocene-centred discourse is blind to the power wielded by capitalism as a historical imperial system that has devastated and destroyed planetary ecosystems, involving human and non-human life forms, since its origins. Moreover, it does not appreciate the extent to which the structural and political power of capital has made it the main geological force on planet Earth. As a result, by failing to realise that the climate crisis is a product of, and induced by, capitalism, this discourse provides a warrant to affirm solutions that reproduce the same capitalist system and imperial logic that destroys life on the planet. Moreover, besides being functional to capitalist interests, an Anthropocene-centred approach affirms a neo-Malthusian racism in relation to the climate crisis. It blames the most

populous countries and the darker nations for the climate crisis, including Africa, while failing to appreciate the disproportionate impacts on particularly black working-class and peasant women in Africa. In this sense it also reinforces white male domination.

Finally, the chapter concludes with a reflection on the imperative for a counterhegemonic politics that sustains life. It argues for ‘just transitions’, championed from below in different societies, based on an appreciation of necessary historical conditions to enable class and popular struggle to ensure we survive the climate crisis and, ultimately, end imperial ecocide.

## THE OFFICIAL ANTHROPOCENE DISCOURSE AND THE CLIMATE CRISIS

The idea of the Anthropocene has its origins in a short essay written by Paul Crutzen, a Nobel Prize-winning chemist for his joint work on the ozone depletion challenge. In 2002, in the prestigious journal *Nature*, he published an article entitled ‘Geology of Mankind’. In this article Crutzen (2002: 23) argues:

For the past three centuries, the effects of humans on the global environment have escalated. Because of these anthropogenic emissions of carbon dioxide, global climate may depart significantly from natural behaviour for many millennia to come. It seems appropriate to assign the term ‘Anthropocene’ to the present, in many ways human-dominated, geological epoch, supplementing the Holocene – the warm period of the past 10–12 millennia. The Anthropocene could be said to have started in the latter part of the eighteenth century, when analyses of air trapped in polar ice showed the beginning of growing global concentrations of carbon dioxide and methane.

Moreover, in the article Crutzen also draws attention to some of the following major consequences of human activity:

- Human population explosion has contributed to increases in per capita exploitation of the Earth’s resources;
- Between thirty and fifty per cent of the land surface area is exploited by humans;

- Tropical rain forests are being destroyed at a fast pace, increasing carbon emissions and species extinction;
- Fisheries are depleting the oceans' fish stocks;
- More nitrogen fertiliser is used in agriculture than in most terrestrial ecosystems;
- Fossil fuel burning and agriculture have caused substantial increases in the concentrations of greenhouse gases (carbon dioxide by thirty per cent and methane by more than a hundred per cent), reaching their highest levels over the past 400 millennia, with more to follow.

However, the twist is twofold in Crutzen's article. First, he argues that all of this is the result of only twenty-five per cent of the world's population. So the problem is population growth, not the capitalist system. Second, the solution to all this lies in geo-engineering. Thus, scientists and engineers are bestowed with the task of saving humanity from itself and the people have no role in all of this. For Crutzen, the enlightened elite has to rescue humanity.

Crutzen's theorising of the Anthropocene as a geological concept, and ultimately scientific explanation of the climate crisis, suggests that all humans are responsible for the destruction inflicted on nature, but more specifically on planetary ecosystems and the conditions that sustain life. We are all equally culpable. At the same time, there is a neo-Malthusian emphasis on population growth as the underlying driver. Since 2002, his idea of the Anthropocene and human-centred causality has made its way into various studies and scientific disciplines attempting to explain climate change and its impacts. For example, in a leading study on ocean acidification, the authors conclude:

It is the rate of CO<sub>2</sub> [carbon dioxide] release that makes the current great experiment so geologically unusual and quite probably unprecedented in Earth history. Indeed, much of industrialisation and economic activity revolves around energy generated from fossil fuels. In other words much of humanity is, in effect, engaged in a collective and deliberate effort to transfer carbon from geological reservoirs to the atmosphere as CO<sub>2</sub>. (Kump, Bralower & Ridgwell 2009: 105)<sup>1</sup>

According to this perspective, all of humanity is not part of the intensive fossil fuel use of developed economies and does not share equally in the wealth accumulated under capitalism; nonetheless, all human beings are responsible for its

climate effects. Taking forward a generic human-based causality for the tragedy of the commons and the climate crisis has also spurred on a rethink in geology itself. In this regard, a leading geologist, Jan Zalasiewicz, has opened a debate in geology and has gone further to take forward the case for the Anthropocene to the International Commission on Stratigraphy, the group responsible for maintaining the Earth's history (Kolbert 2014).<sup>2</sup> In South Africa, on 29 August 2016, the Commission officially adopted the Anthropocene as a new geological epoch within the Earth's history, subject to scientific markers of this period being verified.

Whether the Anthropocene is officially recognised in geology or not is unimportant, as it has already gained traction within the scientific research agenda on climate change and its impacts, but also within various disciplines. This has ensured that an Anthropocene-centred discourse has found its way into the official IPCC rhetoric and technical language. In 2007, the fourth IPCC report unequivocally affirmed that 'human induced climate change' is a scientific fact; hence humans are responsible for climate change. Moreover, in the fifth report the idea of Anthropogenic effects runs throughout its framing discourse and there is an invented terminology at work that refers to 'human influence on the climate system', 'Anthropogenic greenhouse gas emissions', 'Anthropogenic forcings', 'total human induced warming' 'population growth' and so on (IPCC 2014). In effect, the main causal factor in both scientific and technocratic terms is all of humanity, including population growth.

Allied to this Anthropocene-centred ideological thrust within the IPCC is the rapid growth of a popular literature by award-winning natural science writers, naturalists and journalists. The diffusion of the official ideology of the Anthropocene and human-centred causal explanations for the climate crisis has crossed over from scientific publications into popular culture and is now an organising theme in various books and literatures. This chapter concentrates on the assumptions and perspectives emerging from three of these books in the global mainstream: the Pulitzer Prize-winning book and *New York Times* best-seller *The Sixth Extinction* (2014) by Elizabeth Kolbert; *The God Species: How the Planet Can Survive the Age of Humans* (2011) by Mark Lynas, winner of the Royal Society Prize for Science Books; and *The Human Age: The World Shaped by Us* (2014) by Diane Ackerman, one of America's acclaimed natural history writers. What follows is a critique of the Anthropocene-centred approach to the climate crisis of the IPCC and this popular literature from a Marxist ecology perspective. This critique is about unsettling official Anthropocene discourses

within UN processes and their diffusion by various authoritative intellectual voices within global discourse. This does not mean the Anthropocene as discourse is rejected, but rather that it is contested and reframed as part of this encounter.

## ANTHROPOCENE DISCOURSE AND MARXIST CRITIQUE

There are two dominant Marxist approaches to the Anthropocene discourse. Jason Moore's (2015, 2016) work advances a critique of the Anthropocene and supplants it with the notion of the Capitalocene. There are four parts to his engagement with the notion of the Anthropocene. First, he critiques the popular Anthropocene discourse and avoids the biophysical scientific discourse. In doing this, he places capital, power and nature at the centre of his analysis and his understanding of world ecology. From this perspective, he argues that capital has organised nature, including human beings. We are at the point where capitalism *in nature* is also about the coeval or co-creation of nature. Second, he takes periodisation of history seriously. Rather than embracing the Industrial Revolution as the critical turning point in the human–nature relationship, he argues instead for a rethink of the mercantile origins of capitalism. He maintains that the Columbian project (1492) involving the conquest of the Americas, together with European rationalist thought and a disposition to conquer nature, laid the basis for the Capitalocene. This was given further impetus with the slave trade and the development of legal and cultural conditions. His historical narrative is far from being trapped in economic reductionism. Third, he argues that historical capitalism has been about appropriating multiple natures at a low cost. This has implications for the oppression of women and races, through colonialism. He argues that women, indigenous people and Africans were expelled from humanity in this process. Ultimately, while value is created in the cash nexus of capitalism, it uses extra economic means and strategies to extract from cheap nature. This is central to the history of capitalism. There are four cheap natures: labour, food, energy and raw materials. In this process, work and energy are transformed into value and the preconditions for the Industrial Revolution are put in place. In short, the endless accumulation of capital and the commodification of the Earth's resources go together since the beginnings of mercantile capitalism. Finally, Moore argues that cheap nature has come to an end. Costs are increasing for labour, food, fossil fuels and

raw materials. Neoliberalism's ecological surplus is threatened and all of this feeds into the crises of the Capitalocene rather than the Anthropocene.

The other prominent Marxist view on the Anthropocene is that of Ian Angus.<sup>3</sup> He draws licence for his position from Marx's and Engels's preoccupation with scientific thought in the nineteenth century. His intervention is about ensuring socialists understand the Anthropocene and Earth scientists understand ecological Marxism. There are three crucial parts to his engagement with Anthropocene discourse. First, he locates historical antecedents for the concept but affirms its emergence in contemporary scientific discourse in the early 2000s. He dismisses popular usages of the concept, particularly misappropriations, as either a marker for a particular version of 'modern times' or a modest change by humans to an ecosystem, or anthropocentric meanings which suggest humans control nature.

Second, he recognises that the category of the Anthropocene has evolved out of scientific enquiry to understand the impact of humans on the Earth's biophysical system. It is in essence an object of study today to clarify how humans have and are disrupting the Earth's biophysical system. He follows and draws on the latest Earth system science about this scale and scope of disruption engendered by human activity. Put differently, this is the crux of the concept of the scientific Anthropocene and its usage that he embraces. Third, and deriving from his understanding of the science of the Anthropocene, he argues that human disruption of the Earth system is unprecedented and with largely unpredictable consequences. The geophysical impacts of humans have inaugurated a new geological era (now acknowledged by geologists) which takes us beyond the operating range of the Earth that existed during the Holocene, after the last ice age. The Holocene began around 11 000 years ago, with limited and stable climate variability, which created conditions for human civilisations to emerge, including the neolithic agricultural revolution. Today, human-driven changes and disruptions of the Earth's systems, like the carbon cycle, have placed us in a no-analogue state. The great acceleration of carbon emissions from the mid-twentieth century inaugurated the Anthropocene. It is a global emergency. As a species that has been in existence for about 200 000 years, we have started changing Earth system conditions. This places everything in peril and requires a global emergency response. For Angus, this means building an eco-socialist society based on human solidarity, and through a powerful people's movement championing system change.

While each of these perspectives enriches a Marxist approach to the Anthropocene as a socio-political category, they are not exhaustive perspectives



and neither do they provide a finished critique. What follows contributes to the deepening of the Marxist ecology critique of what is generally a scientific geo-physical category and condition within official Anthropocene discourse. This is not about rejecting the scientific basis for Anthropocene discourse that affirms human disruption of the Earth's systems, but rather about further challenging the socio-political thrust of the concept as it diffuses through official Anthropocene discourse, including popular literature. Put more sharply, this chapter provides another set of challenges to official Anthropocene discourse and its popular valences as it relates to providing social explanations for the climate crisis.

## DEEPENING MARXIST ECOLOGY CRITIQUE: THE ANTHROPOCENE AND THE LOGIC OF IMPERIAL ECOCIDE

### US-led imperial ecocide

The first major assumption and problem shared by the growing official Anthropocene literature and viewpoint is that capitalism, as a social and historical system, is unimportant in understanding the climate crisis. Hence, it fails to bring into view the internal logic of capitalist accumulation and the imperialist tendency towards expansion, conflict and ecological destruction inherent to capitalism. As a result, the Anthropocene view is superficial and selective in its historical underpinnings and in its understanding of how capitalism has been made over time and has worked to conquer nature. The IPCC affirms merely 150 years of Anthropogenic emissions (from about 1850 to 2011), coinciding with the emergence of the Industrial Revolution (IPCC 2014). This, it is argued, is the period over which humans have been increasing carbon concentrations in the atmosphere and inducing climate change. In the ideological frame of the IPCC, this is now merely a technical and scientific fact. In *The Sixth Extinction*, Elizabeth Kolbert compares the climate crisis to five other major extinctions that wiped out various species, habitats and mega fauna within the span of deep geological time (over a period of 500 million years). However, by way of analogy, Kolbert seems to suggest the Anthropocene has to be understood as a period of catastrophism and ultimately another dramatic geological period – but induced by humans. According to Kolbert (2014: 94),

what is sometimes labelled neocatastrophism, but is mostly nowadays just regarded as standard geology, holds that conditions on earth change only

very slowly, except when they don't. In this sense the reigning paradigm is neither Cuvierian nor Darwinian but combines key elements of both – 'long periods of boredom interrupted occasionally by panic.' Though rare, these moments of panic are disproportionately important. They determine the pattern of extinction, which is to say, the pattern of life.

From the standpoint of Marxist ecology, the official Anthropocene viewpoint (scientific and popular) is misleading to say the least, but is also deeply problematic in how it seeks to explain the climate crisis. For starters, not all humans are creating the catastrophe of the climate crisis. Over the past 500 years, capitalism has been through three phases of historical development: mercantile accumulation (1400s to 1800s), monopoly industrial accumulation (1750 until 1980) and transnational techno-financial accumulation (1973 until the present) (Satgar 2015). In each of these phases, it has required and ensured that imperial forms of domination facilitate the process of accumulation. Central to the logic of imperial domination has been the tendency towards ecocide, that is, the destruction of conditions that sustain life such as ecosystems, the commons, as well as the destruction of actual human and non-human life forms, to ensure capitalist expansion. Ecocide is the barbaric dimension of capitalism that has existed since the beginning and is now bringing about the sixth extinction of human and non-human species at an unprecedented rate. The idea of imperial ecocide fits into Marxist ecology in three ways.

First, it has to be located in Marx's understanding of the origins of capitalism, as a process of primitive accumulation. Marx explained and understood primitive accumulation as the necessary condition for the emergence of capitalism and the prior acquisition of capital for accumulation. In Volume 1 of *Capital*, his notion of primitive accumulation and the originary moment of capitalism affirms the existence of three dynamics: (i) the dispossession and separation of the peasantry from the commons and the means of production; (ii) the creation of pauperised pools of 'wage labourer' for factories; and (iii) an international dimension of conquest, pillage, plunder, genocide and destruction that has concentrated capital in the heartlands. In the same volume, Marx (1967: 915) says:

The discovery of gold and silver in America, the extirpation, enslavement and entombment in mines of the indigenous population of that continent, the beginnings of the conquest and plunder of India, and

the conversion of Africa into a preserve for the commercial hunting of blackskins, are all things which characterize the dawn of the era of capitalist production. These idyllic proceedings are the chief moments of primitive accumulation.

However, as David Harvey (2003) points out, this dimension of capitalism has continued beyond the beginnings of capitalism and is even with us in the present through a process of accumulation through dispossession. This has implications for the reproduction of wage labour and the commons. Put differently, imperial ecocide prevails in the process of accumulation through dispossession; it is a historical, relational and contemporary material dimension.

Second, as John Bellamy Foster (2000) reminds us, Marx has been very conscious of the ecological contradictions of capitalism and the metabolic rift induced by capital. This started out with degradation of soils and the further alienation of land in the context of intensive industrial farming, but has also separated humans from themselves and from nature and fostered a schism between town and country. In contemporary terms, globalised food systems and fossil fuel-driven energy systems express this contradiction and logic starkly. This rift has been intensifying with the international expansion of capital. The metabolic rift is directly linked to imperial ecocide and its attempts to secure the expansion of capital at various spatial scales.

Third, imperial ecocide as a dimension of primitive accumulation and the metabolic rift has also taken on different temporal forms. Put differently, the destructive logic of capitalist expansion and imperialism has not only been about economic, military, political and geopolitical domination, but also about ecosystem destruction, the destruction of biodiversity, annihilating various human and non-human species for resources and ultimately conquering nature, during different historical phases of accumulation. Imperial ecocide has expressed itself through different historical forms. In this regard, imperial ecocide has been integral to partitioning the world into enslaved land zones during mercantile capitalism, including genocidal violence against indigenous peoples, dehumanising lives through slavery, the mass destruction of species through the fur trade, mass slaughter of North American bison and commercial whaling (Brosimmer 2002). More recently, imperial ecocide led by the US imperial state has taken on industrial characteristics as it has been tested in modern warfare. This has ranged from developing chemical weapons, like Agent Orange, and testing them in war zones like Vietnam, to the development

of pesticide industries to support large-scale mechanised agriculture (Zierler 2011). Ultimately, the logic of imperial ecocide expressed through US imperial supremacy has its own historical specificity.

While grounded in the practices of imperial ecocide that are part and parcel of the logic and history of capitalism, US imperial ecocide is modern and violent in ways that are unprecedented. In this regard, the failure, for the past twenty years, by the US-led bloc to ensure a climate deal that addresses the systemic roots of the climate crisis is extremely telling, given that the climate crisis is worsening. Instead, the market-centred solutions it supports in the UN process, the Trump administration's climate denialism and growing preparedness of its military-industrial complex for abrupt climate change merely affirm that we are dealing with the destructive logic of US-led ecocide (see Guerrero in this volume). The US will sacrifice most of the human race and probably most life forms to defend an obsolete and ecocidal capitalism. In short, the US and its allies are at the vanguard of bringing about the sixth extinction, by preserving the destructive logic of globalised accumulation and expanded reproduction, centred on transnational capital. Capitalism has been destroying human and non-human life for the past 500 years of its existence, from the time of militarised mercantile accumulation, and not just for the past 150 years in which carbon has been emitted. The only difference is that this time the logic of imperial ecocide endangers every living creature and zone of life, including the imperial heartlands. In short, not all human beings are destroying the biosphere or inducing the climate crisis.

### Capital as a geological force inducing the climate crisis

Despite the limits and weakness of the UN-led multilateral process on the climate crisis, it affirmed through the Kyoto Protocol the need for Annexure A countries, the industrialised countries, to lead the way in cutting carbon emissions as part of affirming the principle of 'common but differentiated responsibilities'. The anthropogenic-centred discourse in the IPCC's (2007, 2014) fourth and fifth reports is a shift away from this. Instead, the primary agential force causing the climate crisis, and responsible for it, is human beings in general. Particularly reading the fifth IPCC report through its anthropogenic discourse suggests that humans in general are also responsible for the systemic causes such as economic growth and population expansion (IPCC 2014). In short, while there is primary scientific causality between greenhouse gases and climate change, there is another level of social causality and that is the human

factor, extricated from social relations. This assertion and assumption – that humans in general are responsible for climate change and are the geological force shaping the biophysical world – is flawed from a class-based perspective.

The ideological discourse that grounds this outside the IPCC is a modernising green environmentalism both concerned about human impacts on the environment but at the same time deeply romantic about the existing capitalist world, which is accepted *a priori* as progressive development, and anthropocentric about our social agency as a species. For Mark Lynas (2011), we are the ‘God Species’: we have conquered the Earth and all life forms on it; we can create and destroy life and so we can also determine our own fate. For Ackerman in her poetic narration of the Human Age, we are best understood when reflecting on our planet from outer space. In her reflections on the ‘Blue Marble’ photograph of the whole Earth floating in space, taken by the crew of Apollo 17 on 7 December 1972, Ackerman (2014: 18) has this to say:

Released during a time of growing environmental concern, it became an emblem of global consciousness, the most widely distributed photo in human history. It gave us an image to float in the lagoon of the mind’s eye. It helped us embrace something too immense to focus on as a single intricately known and intricately unknown organism. Now we could see Earth in one eye-gulp, the way we gazed on a loved one. We paste the image into our *Homo sapiens* family album. Here was a view of every friend, every loved one and acquaintance, every path ever travelled, all together in one place ... As the ultimate group portrait, it helped us understand our global kinship and cosmic address. It proclaimed our shared destiny.

In this one paragraph, Ackerman clarifies a humanism at work which seeks unity and common purpose to save the planet, yet is blind to power relations in a class-divided world. It is this kind of humanism that unintentionally reproduces the power of capital, as it is depoliticising. Kolbert, in *The Sixth Extinction*, evokes humans as a geological force to underline our destructive power. For example, she refers to the causal factor behind the high risk of extinction of Sumatran orangutans in this way:

In this case, the threat is more peace than violence, most of the remaining orangutans live in the province of Aceh, where a recent end to decades of political unrest has led to a surge in logging, both legal and not.

One of the many unintended consequences of the Anthropocene has been the pruning of our family tree. (Kolbert 2014: 254)

Again it is not about the political economy and the specificity of the social forces destroying the habitat of the Sumatran orangutans, but us as humans in general. The human race is to blame for every act of environmental degradation, risk to species and the climate crisis. This is a bit too overgeneralised and exaggerated and not nuanced enough from the standpoint of political economy and class analysis, central to Marxist ecology. In this regard, there are three important historical materialist realities and ecological contradictions of capitalism that the official Anthropocene discourse does not take into account.

First, the assumption of endless accumulation central to the logic of capitalism has been legitimated by conferring on capital a licence of supremacy over nature. This has ensured that since capitalism's inception, nature has been a site of accumulation for capital (Bellamy Foster 1999). This is the metabolic rift as ecological contradiction. Yet resources are limited and non-human nature also has limits. Today all the major biophysical resources, from water and minerals to fossil fuels, are commodified, owned and controlled by capital (Ridgeway 2004). In the phase of transnational techno-financial accumulation, financialisation has intensified the commodification of nature, including its sinks, services and biotic resources. Extractivism, including unconventional hydrocarbons from shale gas and oil, tar sands and deep-water drilling, are all caught in the vice grip of this logic and its ecocidal consequences. At the same time, the Earth's biophysical limits are showing signs of overshoot and stress. This includes biodiversity loss, climate change, the nitrogen cycle, land system change, global fresh water use, ocean acidification and stratospheric ozone depletion (Lynas 2011).

Second, capitalist exploitation extends beyond workers and includes nature. Martin O'Connor (1994: 8) refers to this process generically as 'capital's conditions of production', which is its mechanisms to ensure degradation of human and non-human nature. This means long working hours together with externalising costs of production through pollution, as well as stealing 'the free gifts of nature'.<sup>4</sup> At a more concrete level, with globalised accumulation, exploitation rates have increased and so has unemployment, which also keeps wages low (see Marais in this volume). At the same time, the degradation and destruction of habitats, ecosystems and land has continued apace. The increase of carbon emissions over the past three decades, with carbon concentration sitting at 410 parts per million (ppm) (way past the 350 ppm required to remain within the

safe zone of the climate boundary) and increasing rapidly, places capital at the centre of causing the climate crisis.

Third, while patterns of class formation have shown a complexity as labour markets have been restructured, it is apparent that the power of labour has diminished across the global political economy. The social contract between labour and capital has been undermined as capital has gained a foot-loose mobility and greater structural power across globalised value chains. Moreover, the financialisation of political systems has ensured that states manage risk to capital as a macro-economic priority much more than employment creation. The securitisation of democracy has entrenched a class pattern of power in which transnational and monopoly capital prevail over the state, society and labour.

In short, capital is the real geologic force driving the logic of imperial ecocide and in turn facilitated by it to ensure ongoing accumulation. Today, as Joel Kovel (2003) puts it, capital is the 'enemy of nature' – human and non-human.

### Capitalism will not solve the climate crisis or save planetary life

The UN-led climate negotiations and the IPCC have resigned themselves to solutions within the logic of imperial ecocide. The embrace of carbon trading, carbon offsets, geo-engineering and using forests as carbon sinks while commercialising them, are all part of the agenda to deal with the climate crisis. However, these are not real systemic solutions (see Guerrero in this volume). The most glaring solution of shutting down carbon extraction, particularly oil, gas and coal, as part of a just and zero-carbon energy transition is not on the agenda (Klein 2014). Yet it is common and good sense that if we burn up current oil reserves we will breach the 2°C threshold (which in itself is not sufficient to prevent certain critical tipping points) and incinerate the entire planet. In the Anthropocene literature more broadly, there are three broad approaches to capital-led solutions: first, unabashed support for capitalism to save us from the anthropogenic mob. As Lynas (2011: 66–67) puts it:

I often receive emails telling me that fixing the climate will need a world-wide change in values, a programme of mass education to reduce people's desires to consume, a more equitable distribution of global wealth, 'smashing the power' of transnational corporations or even the abolition of capitalism itself. I am now convinced that these viewpoints – which

are subscribed to by perhaps a majority of environmentalists – are wrong. Instead, we can completely deal with climate change within the prevailing economic system. In fact, any other approach is likely doomed to failure.

Second is a veneration of human science and technology. This is the thrust of Ackerman's (2014) argument in her celebration of the technological genius of human beings, from micro technologies to cyborgs and robots, suggesting that we have the power and the means to chart another evolutionary path. However, this fails to realise that either corporations or powerful states control modern technology and that technology is not neutral in these relations of production – it serves particular interests. Third is a retreat into corporate-sponsored conservation as an expression of practical and ethical hope, in the face of the encroaching sixth anthropocentric extinction (Kolbert 2014).

The assumption that capital and capitalism has the solutions to the climate crisis makes the official Anthropocene perspective not just functional to capitalist interests, but places it squarely within capitalist thought. It rejects the idea that the systemic causes of the climate crisis lie within the historical and current patterns of global capitalist production, consumption, finance and organisation of social life – the logic of imperial ecocide. It is, in the end, an affirmation of the Promethean power of capital, while rejecting the collective agency of working-class, popular and subaltern social forces. Ironically, and in its essence, it has a shallow commitment to humanity and is actually deeply anti-human in its pro-capitalist outlook. Class struggle and a mass politics engendering a counterhegemony to sustain life is the response of Marxist ecology. More precisely, the solutions to the climate crisis lie in a democratic eco-socialist alternative for society, built through transformative just transitions advanced from below and above (see other chapters in this volume).

### The racism and male domination of imperial ecocide

The IPCC's (2014) fifth report is emphatic that anthropogenic population growth is a contributor to climate change. However, the argument is merely made in the aggregate, that the growth of population is a causal factor, but is not sufficiently substantiated or nuanced. It does explore per capita emissions in rich countries versus more populous rich countries, for example. It is an argument that has been made by ecologists before, such as the Club of Rome's *Limits to Growth* by Meadows et al., published in 1972. It is a neo-Malthusian



argument suggesting population growth leads to resource depletion and environmental degradation and, in this case, climate change.

Neither Kolbert nor Ackerman articulates this issue explicitly, while the former is more pessimistic (and almost fatalistic) than the latter about human behaviour in the Anthropocene. Lynas, on the other hand, takes the issue head-on while trying to be cautious. He considers it as a solution, but just about stands back from its eco-fascist implications. He says:

Certainly, fewer people by definition means lower emissions. By getting to 350 ppm by reducing the number of carbon emitters on the planet is impossible as well as undesirable: at a first approximation it would require the number of people in the world to be reduced by four-fifths down to just a billion souls or less. Short of a programme of mass forced sterilisation and/or genocide, there is no way that this would be completed within the few decades necessary. (Lynas 2011: 67)

In its evoking of human population growth as a problem without grounding it in the realities of how capitalist carbon-based overaccumulation and resource control, and the class inequalities engendered, cause the climate crisis, this is nothing short of a racist understanding of human life. This of course is not to argue against abortion and birth control, and the need for women to have control over their bodies, but instead to make the point that neo-Malthusian arguments are blind to the deeper systemic roots of the climate crisis and imperial ecocide. Moreover, in the process of the primitive accumulation marking our times, women are at the frontline of the crisis of social reproduction and bear the consequences of a male-dominated global division of labour. Not only do they earn super-exploitative wages in many parts of the peripheries, but they also struggle to survive in the age of globalised agriculture and climate impacts. African women peasant farmers epitomise this condition (see Terreblanche and Bassey, both in this volume).

This has to be understood in relation to the militarised rationality of US imperial power and the extent to which it is planning to deal with worsening climate crises. It is clear that everything will be done to maintain a globalised capitalist way of life and 'lifeboat' America, even if it means using a masculinised violence to police, pacify and destroy 'zones of instability' in the context of the climate crisis (Parenti 2011). Put differently, the failure by the US to address the systemic roots of the climate crisis both domestically and on a

global scale means that the poor and the marginal, particularly black and indigenous women, will be affected the most. The 2°C goal set at the Copenhagen summit and entrenched in the Paris COP21 summit will be a death sentence for island states but also for many parts of sub-Saharan Africa (Klein 2014). The colonising of the climate commons in Africa through offset mechanisms and other market mechanisms has also not worked over the past few decades in Africa (Bachram 2009). The impacts of extreme weather patterns now are no longer correlations but directly related to climate change. These changes have and will impact disproportionately on working-class and poor families, but in particular on the black working class and the poorer darker nations of the planet. At the same time, the white males controlling the command centres of global capital will continue not taking the climate crisis seriously given their relatively secure class locations and the support, either tacit or explicit, they give to US imperial ecocide to reproduce their civilisation. Naomi Klein (2014: 46) substantiates this point in the following way:

Overwhelmingly, climate change deniers are not only conservative but also white and male, a group with higher than average incomes. And they are more likely than other adults to be highly confident in their views, no matter how demonstrably false.

## PROSPECTS FOR JUST TRANSITIONS

Klein (2014) is absolutely correct that the climate crisis changes everything and it provides an opportunity to transform the world before it is too late. It allows us to say no to financialisation, deep globalisation and neoliberalisation in order to defend and save our societies, nature and future generations. However, this reality can only lead to transformative change and a counterhegemonic strategy to sustain life provided necessary strategic conditions are realised. These conditions are necessary to shift the balance of power in the conjuncture of systemic crises and transformative resistance. This is a conjuncture, post-neoliberal hegemony in which market solutions are failing and ruling classes are facing legitimacy crises. A financialised mode of market democracy is in crisis. In responding, such necessary strategic conditions should include, first, shifting the balance of forces from below, at the level of the national, away from the failed leadership in the UN-led climate negotiations. Today there is

a crisis of leadership in the multilateral system and a lack of collective will to address the systemic roots of the climate crisis and to end imperial ecocide (Gill 2012). The UN has failed humanity and the planet. Thus, the strategic initiative for transformation can only come from below through grassroots leadership committed to climate justice and systemic transformation. Most green parties have been neoliberalised and most institutional political parties are increasingly discredited. The gap between leaders and the led can only be closed through building a politics around systemic alternatives from below. This is the horizon of left politics that exists today and its historical coincidence with the climate crisis has immense potential, which did not exist two or three decades ago. This means advancing movement-based transformative systemic alternatives around food sovereignty, public transport, regulated reductions in carbon emissions, socially owned renewable energy and climate jobs, for instance.

Second is rejecting anthropocentric catastrophism and the 'ends of capitalism' perspective of the vanguardist Left. Instead, a realism about capitalism's systemic contradictions has to prevail. Capitalism is not about to collapse and neither is it about to surrender. However, it is experiencing an unprecedented set of multifaceted systemic crises: financialised chaos, climate crisis, peak oil, food system crisis and the securitisation of democracy (Satgar 2015). This is more than overproduction or financialisation crises and each of these systemic contradictions provides exit points for systemic alternatives. Capitalism today is also experiencing an unprecedented existential crisis: the crises of capitalist civilisation which gridlock, limit and even bring down parts of its accumulation processes, but not the whole system. This also places capitalism in an extremely dangerous place, with its only way out being 'business as usual' imperial ecocide. However, in this context a theory and practice of just transitions is crucial.

Third, a theory of just transitions has to emerge out of transformative practice, which also gives substance to a deep just transition. Hence, at a minimum it should work with the following elements: (i) a conception of the multiple systemic crises of capitalist civilisation, which by implication means a break with productivist understandings of development and industrialisation, including catch-ups by countries of the global South; (ii) instead, all policy needs to be guided by the principle and systemic logic of sustaining life, from below and above, in the present and for future generations. The growth principle has to be replaced by the life principle and underpinned by struggle-driven systemic reforms to sustain life; (iii) just transitions cannot be unilinear but have to be

multilinear, nationally and internationally. Such transitions have to operate at different scales, locales and tempos. This means it has to be deeply democratic, allowing for all forms of democracy to shape its content and practice. This would include participatory, direct, associational, rights-based and cyber democracy having a place in constituting a just transition. This means that multiple democratic, post-capitalist logics from workplaces, communities, civil society, the internet, the public sphere and the state will shape the just transition and ensure its multilinearity. In short, wielding democracy against imperial ecocide is the best, and only, weapon we have.

Fourth, as anti-systemic movements rise and resist there are immense potentials for a new democratic eco-socialist vision to emerge (Angus 2016). Such a democratic eco-socialist vision will have to imagine and build a society in the present that can exist through ending the exploitation of nature (human and non-human) at all levels, through confronting all the oppressions of capitalism. It will have to uphold a bioethic at the level of mass consciousness so as to exist within the biophysical limits of the planet, and embrace socially owned renewable energy, democratic planning and socialisation of the commons: biophysical, knowledge and cyber. In short, a new democratic eco-socialist vision must affirm the web of life as central to an anti-ecocidal politics. This can only emerge from a radically democratic and transformative politics.

## NOTES

- 1 Also see Caldeira and Wickett (2003) and Kolbert (2014). The latter details how this concept diffuses into soil studies and Earth system studies.
- 2 In this regard, see Zalasiewicz et al. (2008).
- 3 His work spans several articles on his blog *Climate and Capitalism* (<http://climateandcapitalism.com/category/anthropocene/>) dealing with the Anthropocene. However, his position is more clearly argued in his recent book (Angus 2016).
- 4 As mentioned, Moore (2015) develops this in his framing of cheap nature in his framework of the Capitalocene.

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