

INTRODUCTION

Plan B: global ethics on climate change

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This introduction to the special issue on climate puts individual contributions in context. Climate change is the result of the current civilization paradigm and its modes of cognition. This suggests a failure of conventional ways of thinking, including mainstream philosophy. The articles in this issue illustrate alternative philosophical approaches, which point to civil evolution.

If we are not careful, climate change may trigger the greatest catastrophe in the history of civilization. Climate change is not a future danger anymore. The processes are well underway, and a destabilization of the Earth system has begun. This lends vital urgency to the question that is at the heart of ethics: what should we do?

Philosophy is the rational investigation of existence in the world, but the world is different now from the one our ancestors inhabited. The difference concerns not so much the obvious phenomena one associates with modernity, such as urbanization, industry, and technology, because all of them, in various ways, have shaped the world already for centuries. The real and radical difference, between our generation and all the ones in the past, is the collective arrival at the limit of existing in the world. The world is our *oikos* or house; we have filled this ecological house over time, and now the house is full. Reaching such limits is an experience bygone cultures knew as well, but only in localized form. This is the first time in all of history that global civilization without exception – the sum-total of humankind – arrives at this juncture.

Hence, being-in-the-world is qualitatively different now, and this affects its rational investigation. The climate crisis is the systematic expression of the arrival at the limit. This emerging reality is so sweeping that it creates a new frame of reference for the other core questions of philosophy as well. Each of them has to be asked anew. Thus: what can we know? What may we hope? And what, really, does it mean to be human? Or, as Heidegger reformulates these queries: where do we stand? Where are we heading?¹

1. Where are we heading?

Engaging with all of these questions illuminates the human and global dimensions of the climate crisis. The last query, of *where we are heading*, asks us to survey the path we are on. If ‘we’ is taken to mean humankind now, and ‘heading’ is understood as the probability-cone of likely futures as charted by the UN IPCC Assessment Reports and supplementary studies at present,

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then the peer-reviewed consensus is that we are heading straight into a bottleneck of our own making. This looming chokepoint is created by two processes on a collision course. Demand for everything we need is rising. That is the one process. Supply of everything we need is falling. This is the other process. Their collision is the bottleneck.

Demand for everything that makes physical existence possible – water, food, energy, and land – is only going to go up. The world population is expected to level off after a mid-century peak of nine billion. Because of near exponential population growth until quite recently, a large share of our species has not yet reached reproductive age. The result is a massively built-up demographic momentum; even if we wanted to stop multiplying now, we could not. A high speed train, with brakes fully set, slides a while before coming to a stop. Similarly, we are incapable of curbing the increase of our numbers in civil and consensual ways *before* adding two more billion to the seven billion we are already. But the planetary surface is not going to expand with us, and neither will the biospherical services our collective existence depends on. Hence, competition for available water, food, energy, and land is fated to become stiffer.

The situation is made worse by economic structures. The collapse of communism had the effect that essentially our entire species bet its house on the market economy. It is essential for the market to grow; that is, economic stability is tied to economic expansion. And indeed, the world economy grew 19-fold between 1900 and 2000 and is only set to grow more.² This characteristic of the market economy is so essential, so consequential, and at the same time so bizarre that it is hard to overstate its importance: *normal* business means to do *more* business, while doing the *same* business means to do *less* business. Whenever growth slows, stops, and reverses, business is hurting and the market has difficulties sustaining social services. Thus, our well-being has come to depend on a system whose integrity requires growth.

Since no one knows how to ensure social security in a shrinking market, governments are committed to stimulate further growth. Growth means more demands on the commons. Thus, strains on the biosphere will inexorably increase. Akin to a malignancy metastasizing in an organism, the market is appropriating ever more of nature. For reasons of economic design alone, demand for everything we use must accordingly go up as well.

But since nature does *not* expand, supply must go down. It not only goes down relative to demand, but it also goes down in absolute terms. The systemic reason was best summed up by Lester Brown in 1998:

As the economy grows, pressures on the Earth's natural systems and resources intensify . . . evidence of mounting stresses can be seen on every land as more and more sustainable yield thresholds are crossed and as waste absorptive capacities are overwhelmed. (Brown 1998, 2–3)

In fact, sustainable yield thresholds of all resources we need have been crossed in the past decade. Biological diversity is declining. World fish stocks are being used up. Rainforests are shrinking. Soil erosion is spreading. Deserts are expanding. Water tables are falling. The capacity of the Earth system to nourish us and to absorb our waste is steadily diminishing. Unsurprisingly, in an updated summary of the state of the Earth system, L. Brown in 2011 comes to the conclusion that *the world is on the edge*.³

Overpopulation and overconsumption overwhelm biospherical capacities. If it were not for climate change, this looming chokepoint would still be ways ahead. But enter climate change into the equation, and everything gets worse – the chokepoint is now just around the corner. Looming constraints slide toward us, from the far future to the immediate tomorrow. Before climate change, the bottleneck was a risk for future generations. Through climate change, it imposes a burden on everyone alive now.

Climate change magnifies every single empirical component of the mounting stress on the Earth system – it speeds up biodiversity loss, destabilizes the ocean food-chain, converts

jungle to savannah, worsens soil erosion, boosts desertification, and dries out the land. It does so through two intertwined developments, *global warming* and what for want of a better term might be called a *power surge*.

Global warming adversely affects water cycles and top soil. Warmer air holds more moisture and speeds up evaporation, which dries out the soil. Soil rich in clay solidifies when dry, making it hard for water to penetrate when it rains again, which leads to runoff, floods, and mudslides. Soil rich in humus becomes loose when dry, making it easy for wind to pick up the fines and carry them off in dust storms. Either way, whether by runoff, mudslides, or dust storms, topsoil is lost and agricultural productivity declines.

The power surge, the other side of the climate coin, manifests itself in extreme weather. Weather, over time, is an oscillation of rain and shine, heat and cold, insolation and precipitation. As greenhouse gases trap heat, they also capture energy from the Sun. Climate systems become more dynamic, which means that the amplitude widens and the oscillation magnifies. Wider amplitudes mean that peaks and troughs move farther apart vertically. Peaks crest taller and troughs bottom out deeper: when it rains it pours, and when it shines it burns. Magnified oscillations mean that the cycles stretch farther horizontally or in time: when it rains it keeps raining until it floods; when it shines it keeps shining until there is a drought.

Weather swings harder and hits farming with a double-whammy. In Siberia in 2010, the combination of global warming and power surge caused a heat wave joined by a drought. Fires broke out, and a third of the harvest was burnt. Russia stopped grain exports, which sent world food prices soaring. In winter 2010, poor nations experienced food riots. In spring 2011, arid countries dependent on imports suffered uprisings. Climate change turns our blue-green planet into a harsh world, with little water and less food.

The worst impact for life will likely be felt in the seas. Warmer waters are poorer in life. Cold waters are rich in plankton that sustains a high density of fish (which is why many fishing fleets operate in the high latitudes). Tropical seas have coral reefs teeming with fish, but such concentrations of life are the exception; farther out in the open and in the pelagic depth, low biotic density is the rule in warmer seas. Warm waters contain little plankton, and as temperatures rise, nutritive capacity falls further. The fish we harvest is the worst affected. Jelly fish is the least affected and has begun to displace commercial fish.

Oceans are carbon sinks. Since atmospheric CO₂ increases each year, more CO₂ now dissolves in the seas. This lowers the pH of water, making it acidic. Sour water attacks shells of calcifying organisms such as mussels and shrimp, the base of the marine food chain. As warming promises to turn oceans into the marine equivalent of a steppe, acidification may be an even greater risk, turning them into dead zones.

The short and the long of it is that the planet will stop feeding us. The humanitarian catastrophe in Darfur is a harbinger of things to come. Darfur's lands used to support farmers and herders as long as the monsoon kept fields and pastures green. Rising temperatures over the Indian Ocean destabilized this rhythm and make the monsoon erratic. Consequently, the land dried out; the age-old cooperation of sedentary and nomadic tribes exploded in genocide, and as early as 2007, UN Secretary-General Ban Ki-moon blamed climate change as one of the culprits of Darfur's collapse.⁴ More failed states are to come.

2. Where do we stand?

Heading into the bottleneck and onto a new planet puts the question of *where do we stand* in perspective. The simple answer is: at a fork in the road. Either civilization keeps working with the dominant paradigm and enter failure mode, or humankind learns how to change – in a rapid, dramatic, and rational fashion.

Reaching the fork is a new reality of existence. And as current generations are the first humans in history who are faced with the fork, being-in-the-world has shifted. This relocation of existence relative to world is visible in the altered status of environmentalism, anthropocentrism, and climate. A closer look at these transformations sheds light on where we stand.

Consider environmentalism first. When environmental ethics joined the canon of disciplines 40 years ago, in 1971, with an inaugural conference at the University of Georgia, environmental protection appeared to the mainstream as an ideal, whose pursuit would be nice but costly. Now environmental protection is survival gear; it is the only way to keep doing business at all. As humankind moved ever closer to the fork, this protection morphed from an aesthetic luxury to an economic necessity and from a moral desideratum to a pragmatic strategy. Being at the fork means that stabilizing the Earth system, mitigating climate change, and adapting to the barren new world is the only way for us to avoid dieback.

At the same time, when environmental ethics was in its infancy, the question of who has moral standing was of prime importance. Environmental ethics was first and foremost about rights, especially about the rights of the nonhuman others. Specialists concerned themselves with the moral status of animals (and plants such as trees), and with the related task of adjudicating interspecies conflicts of interests. In those days, it seemed that environmentalism was an issue of the human 'us' versus the animal 'them'; that what is in our interest tends to undermine theirs, and what is good for our well-being tends to be bad for them. Now the 'us-versus-them' issue is moot. As our species is overwhelming, the capacities of the biosphere, and as environmentalism becomes survival gear, humans find themselves sitting in one and the same boat with nonhuman life. If the boat capsizes, we all go down. When they sink, we sink, and vice versa. Before the shift, anthropocentrism divided the concerns of classical ethics from those of environmental ethics. After the shift, at the fork, anthropocentric and nonanthropocentric concerns are converging.

Finally, the shift reverses the relation of climate change and environmental issues. Initially, climate change appeared as just another environmental problem. The earliest items on the list of environmental issues had been pollution, waste, and endangered species. Since 1971, the list has lengthened. More recent entries, in rough order of appearance, were nuclear power, acid rain, ozone layer, biodiversity loss, and resource depletion. At first, with papers such as Landsberg (1970) and Hansen et al. (1981), it seemed as if climate change would be yet another addition to the list, as an intangible and abstractly worrisome new thing. In retrospect, after the shift, we know it was not such an addition, not the least because climate change is not a 'thing'. The other list-items all fit in this ontological category. They are concrete and well-circumscribed phenomena (such as acid rain), technological risks (such as those associated with nuclear power), or linear dimensions of environmental decline, such as loss in biological diversity.

Climate change is categorically distinct from all of this because it is holistic, multifaceted, and integrative. This becomes evident as soon as we examine the concept. 'Climate' is nothing specific or concrete. It is not like weather. Instead, it is something indefinite and abstract; it is *the average of local weathers over time and across a region*. In terms of causation, it is the classical example of an ontological whole. Wholes are more than sums of parts because they are *the way* parts work together within a sum. A whole is to a sum what a dynamic outcome is to a static aggregate. The aggregate, here, is the Earth system, and its parts are five planetary domains, the regions of air, life, water, earth, and ice. The dynamic outcome of these parts set to work is climate: it is how atmosphere, biosphere, hydrosphere, lithosphere, and cryosphere interact. In this sense, it is a whole.

Accordingly, *climate change* cannot properly be called a phenomenon because its sweeping nature defies such a label. It is more appropriate to call it an emerging reality. This new reality, furthermore, has multiple facets in space and in time. Its spatial facets are, for example, changes of the arctic, the oceans, and the equatorial rain forest belt. Its temporal facets concern runaway

cascades such as thawing permafrost soils, methane outgassing, seabed clathrate destabilization, and Antarctic ice sheet rupture.

Through its multifaceted character, the new reality constitutes a *risk spectrum*. For biomes, climatic perils involve ecosystems collapse and geophysical transformation. For species, such consequent dangers are attrition, displacement, migration, and extinction. For culture or civilization, risks arise in public health, ranging from intensifying allergies to the spread of tropical diseases; they arise in politics, ranging from food riots to uprisings to resource wars; they arise in economics, ranging from lost harvests to climate refuges to failed states; and overall, civilization risks range from social hardship to collapse.

The new reality of climate change informs virtually all phenomena on the list of environmental problems, plus spawning entire new orders of hitherto unknown troubles of its own. From the traditional vantage point of environmental ethics, it also affects whoever has moral standing in some form, whether these are people, future generations, apes, animals, plants, biotic systems, or Aldo Leopold's integrity of the land. Climate change, through its diverse facets, manifold risks, and multiple dimensions, is an integrative reality. It puts all the traditional problems in a new place. It arises as the salient context for all of them. Thus, it is not an entry on the list; it is the new paper the old items are written on. To put it baldly, *it is the list*.

Because being-in-the-world has arrived at the fork, everything is now different. As an academic aside, it is perhaps worth noting that environmental ethics is now obsolete. The sum-total of its subject-matter currently integrates in the existential context of climate change. Thus, *climate ethics* is its rightful heir.

From a philosophical look at the fork, all empirical trends point to the same conceptual conclusion: taking the right path – the path of sustainability, mitigation, and resilience – requires civilization to put as much distance as possible between itself and the paradigm whose implementation unleashed the climate crisis. The question of where we stand at the fork is also a question about location relative to the paradigm.

This paradigm is a bundle of cognitive modes that inform a view of nature in utilitarian and neoliberal ways. These modes originate in the cultural geographies of the Middle East and the Far West. Middle Eastern roots of the paradigm are the Abrahamic or Judeo-Christian-Islamic belief-systems. Far Western roots are Scottish, English, and French variants of the Enlightenment. The Abrahamic religions divorced divinity from nature, which drained nature of sanctity, and elevated humans above the rest of the creation, making them feel entitled to use the world as if it was their larder.

The Far Western Enlightenment, the Age of Reason, appropriated secular versions of this anthropocentric perception of nature. New strands added to the cognitive bundle, during this age, were a turn toward skepticism and an emphasis on individualism, which spawned liberalism. For fairness's sake, East European variants of the Enlightenment, such as the German *Aufklärung*, are mostly exempt from this blame, since their views of nature were more informed by holism and pantheism, often enhanced by a communitarian outlook and a turn to metaphysics. Thus, the modes of cognition that paved the way to the climate crisis, and which are in retrospect responsible for it, are prefigured by the likes of Moses and Plato, by Descartes and Voltaire, and by Smith, Locke, and Hume. The cultural set of their paradigmatic perspectives is the invidious triad of dualism, skepticism, and liberalism. Standing at the fork means civilization must make a decision about these figures and the perspectives they represent.

3. What does it mean to be human?

Knowing where we are heading and where we stand sheds light on *what does it mean to be human*. The current position of humankind is untenable. Doing business as usual is a recipe

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for failure. At the same time, we cannot turn back the clock. Hence, the only option left is *to evolve*. The primary evolutionary goal is obvious: we wish to ensure collective well-being. Subordinate to this end are three strategic goals that are equally evident, at least in principle: one, we must *adapt* to the consequences of climate change while trying to make them more bearable; two, we must *soften* or mitigate the unfolding of climate change while trying to head off causal cascades; and three, we must *rein in* and eliminate the causes of climate change while trying to sustain social and economic stability. The way to get there is through an emancipation of civilization from fossil fuels, economic growth, and unregulated markets. Evolution is accordingly a post-carbon, post-consumerist, and post-capitalistic transformation. Hence, to be human means to *mature*.

The carbon-based consumer culture of predatory capitalism, which is now becoming unsustainable, is a culture of immature development. The invisible hand of Adam Smith, the lazy skepticism of David Hume, and the unbelievable hubris of a Moses who told his people to be fruitful and multiply, and to fill the Earth and subdue it – these are the cultural equivalents of a raging teenager with attention-deficit disorder. Trust in the self-regulation of market forces discloses an Ayn Rand-like arrogance that we can rock it out and get away with it, and that acting as a selfish brat is the best thing that ever happened to the family. Denial of biospherical limits and of the etiology of climate change reveals a Humean cynicism that there are no universal links between cause and effect; that we do not need to worry about a thing as long as we cannot see it; and that warnings are for wimps. Such cynicism fuels epic fails and is typical of teenagers hell-bent on earning Darwin awards. The faith, finally, that the world is our oyster, and that we are following a manifest destiny, and that we are okay, because in God we trust, is the teenage attitude best illustrated by the most radically Christian country on the planet, USA.

Not that long ago, the American way of life was considered to be the high point of human development, and of such perfect maturation, for some particularly inebriated souls, that it spelled the ‘end of history’. But now it turns out that this lifestyle is what unleashed the climate crisis in the first place. USA has the fattest *per capita* carbon footprint of any country on the planet (with the exception of tiny sovereign urban islands and a few oil-refining Middle Eastern sheikdoms). There is no other society worldwide with such excessive consumption, waste, and greed for energy. Although the US American population constitutes less than five percent of the world population, it has produced more than a third of the cumulative greenhouse gas emissions of our species. Anthropogenic climate change is really *Amerigenic* climate change. And despite the fact that USA perpetrated the global climate crisis nearly single-handedly, US policy has wallowed in denial. From Rio to Kyoto, from Bonn to Johannesburg, and from Bali to Copenhagen, the USA has acted like a crazed teenager strung out on oil, blocking or deflecting all efforts to adopt sensible and internationally binding emission caps.

Climate change asks civilization to grow up. The deeper answer to what it is to be human points to an obligation, in enlightened collective self-interest, of civil evolution. This illuminates the three questions stated in the beginning. Attending to this obligation means that we may *hope* to prevail as a civilization. It means we can *know* what is at stake. And it means we should *do* what it takes to get us there.

Schönfeld, Martin, 2013. “Introduction,” *Global Ethics on Climate Change: The Planetary Crisis and Philosophical Alternatives*. Edited by Martin Schönfeld. New York, NY: Routledge.