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Noah's Dove: The Anthropocene, the Earth System and Genesis 8:8–12

This essay reads the Flood narrative of Genesis 6–8 as a myth for the geological present. Discussions of the Anthropocene have turned in part on questions about the relationship between life and the nonliving world. Here, I assess Dipesh Chakrabarty's interventions in those discussions, especially his celebrated essay on 'The Climate of History,' in the light of recent Earth system science. I counterpose Chakrabarty's account of the life/world relationship to the version of the Flood story recounted in the Yahwistic source of Genesis. The Yahwist envisages a primordial complicity between the organic and the telluric. I examine the Yahwist's narrative in detail, focusing in particular on the motif of the dove whose disappearance shows that the deluge has abated. The Flood myth might provide a starting point for an environmental politics that goes beyond a 'green' concern for the biosphere to a concern with the Earth system itself.

Keywords
biogeochemistry; Dipesh Chakrabarty; *Epic of Gilgamesh*; Noachian flood; Yahwist

The story of Eden has had an unmatched significance for Western environmental thought. Not least, it has coloured debates about the Anthropocene. Johan Rockström (2015), one of the most influential writers on the proposed new epoch, makes explicit what is often left implicit when he imagines the departed Holocene epoch as 'Eden's garden for human evolution' (see also Scranton 2015, 38). The dawn of the Anthropocene is felt to be a kind of Fall, in which humankind accedes guiltily and self-destructively to unprecedented knowledge and power. The leading lights of the 'ecomodernist' Anthropocene have deplored this sensibility according to which the new epoch is the 'degradation of a pristine Eden' (Marris et al., 2011). But even those techno-capitalist proponents of a 'good Anthropocene' have themselves been drawn to Edenic imaginings. In the two most memorable figures of ecomodernist rhetoric the Earth is a garden, to be nurtured by human hands, and humans have taken on the likeness of gods, having been elevated to a position of authority over the whole living creation.[1]

In this essay I look elsewhere in the Hebrew primeval history for materials towards an alternative myth for the geological present. Specifically, I turn to the Yahwistic story of the Flood, as it survives in chapters 6 to 8 of Genesis. There are simple reasons why the story of the Flood might be better suited than the story of Eden to yielding a mythic vocabulary for the Anthropocene. The Flood story is about a world that is not pristine but scarred. It describes a situation in which human actions, taken in aggregate, have issued in a transforming calamity. The various species faced with that calamity are pressed together in an uneasy new intimacy. The world proves vulnerable to devastation: the climate, or at least the weather, changes; the sea rises; habitats are destroyed. Even so, certain kinds of endurance and recomposition are possible in the face of the disaster. In all those respects, the story of the deluge seems apposite to the present moment (see also Cohen 2017; Fair 2018; Handley 2018). In what follows I examine some other ways, in addition to those straightforward ones, in which the Flood might be good to think with in the present crisis.

To see just what is at stake in the Flood narrative for contemporary debates about the Anthropocene, I begin with Dipesh Chakrabarty's landmark 2009 essay 'The Climate of History.' That essay has been a constant reference point for the last decade's scholarship on the politics of the environment. Chakrabarty described the Anthropocene as a time of historiographic crisis. Anthropogenic climate change, he said, meant the collapse of the distinction—which he characterised as a 'fundamental assumption of Western (and now universal) political thought'—between human history and natural history (2009, 207). Because of that collapse, political history must be newly qualified or supplemented by 'species history.' That is, the Anthropocene is the time when inquiries into the history of global capitalism, concerned as they are with intrahuman inequality, exploitation, and the pursuit of freedom and justice, become inadequate unless combined with attention to a 'new universal history of humans' (221).

As Chakrabarty described it, the latter kind of history is in many ways antithetical to the former. It treats the human species as a single unit, setting aside those social differences that are the main concern of ordinary humanist history. It thus risks—as Chakrabarty himself bleakly acknowledged—a dangerous essentialism and determinism, and a false universalism that erases the differential responsibility for and vulnerability to climate change between rich and poor. Nevertheless, he insisted, the Anthropocene makes the conjunction of the twin histories of 'globalization and global warming' (2009, 200) as necessary as it is troubling. 'A critique that is only a critique of capital is not sufficient for addressing questions relating to

human history once the crisis of climate change has been acknowledged,' because 'whatever our socioeconomic and technological choices, […] we cannot afford to destabilize conditions (such as the temperature zone in which the planet exists) that work like boundary parameters of human existence' (212, 218). Hence the need to 'mix together the immiscible chronologies of capital and species history' (220). A subsequent essay put it even more starkly: in addition to a mode of existence oriented to freedom and justice, 'we [humans] now also have a mode of existence in which we—collectively and as a geophysical force and in ways we cannot experience ourselves—are "indifferent" or "neutral" (I do not mean these as mental or experienced states) to questions of intrahuman justice' (Chakrabarty 2012, 14).

Many readers have found those arguments compelling. Others have engaged Chakrabarty in productive debates as to whether his universal or species-level history is really a necessary or useful category (see Žižek 2010, 330–36 and Chakrabarty 2014; Malm and Hornborg 2014 and Chakrabarty 2017). But the ongoing discussion sparked by 'The Climate of History' has strikingly underplayed a central feature of its argument. Chakrabarty's much-discussed opposition between the history of capitalism and species history was explicitly derived from a prior opposition between biological and geological modes of existence. 'Climate scientists,' he wrote, 'posit that the human being has become something much larger than the simple biological agent that he or she always has been. Humans now wield a geological force' (2009, 206). The historiography of capitalism and globalization is supposed to be adequate to humans insofar as they are biological agents. Species history enters the equation only when humankind is transformed into a climate-altering geological force. Chakrabarty emphasised that point repeatedly. It explains the obsolescence of the old categories of political thought: 'Humans have become geological agents very recently in human history. In that sense, we can say that it is only very recently that the distinction between human and natural histories […] has begun to collapse' (207). It explains the turn to species universalism, because 'we can become geological agents only historically and collectively' (206). It explains his claims about the ostensibly shared vulnerability of all human beings to climate change, in that 'we have now ourselves become a geological agent disturbing the […] parametric conditions needed for our own existence' (218). It likewise underpins his diagnosis of a mode of existence indifferent to questions of justice: 'if we, collectively, have also become a geophysical force, then we also have a collective mode of existence that is justice-blind. Call that mode of being a "species" or something else, but it has no ontology, it is beyond biology' (Chakrabarty 2012, 14).

The seminal status of 'The Climate of History'—Google Scholar records over 1900 citations to date—justifies this lengthy reconstruction of its argument. But how robust is that argument? It stands or falls on Chakrabarty's sharp distinction between biological agents and geological agents, and his claim that the Anthropocene may be defined by twentieth-century humankind's unprecedented ascent to the status of a geological force.[2] If that distinction proved untenable then the antagonism between political and species history would fall with it, and the history of the Anthropocene would seem after all to be both political *and* geological through and through.

Ideas drawn from Earth system science have become increasingly prominent in the most recent discussions of the Anthropocene (Davies 2016; Angus 2016; Hamilton 2017; Lewis and Maslin 2018). And the contemporary science of the Earth system holds that the distinction proposed by Chakrabarty cannot properly be made. Its central precept is that 'the Earth itself is a single system within which the biosphere is an active, essential component' (Steffen et al. 2005, 1). The planet behaves as a well-integrated system susceptible to general shifts between relatively discrete operating states, via non-linear responses to external and internal forcings. On this systemic level, biotic and abiotic factors cannot finally be separated. Life has a leading role in the skeins of interactions, synergies and feedback loops through which the Earth system works. Hence the recognition of 'biogeochemical cycles'—such as the carbon cycle, in which carbon is ceaselessly exchanged between the atmosphere, hydrosphere, lithosphere, and organic bodies—as the system's primary functioning parts. Whereas an older paradigm had it that 'the variability of the abiotic environment drives the processes and patterns of the biosphere in a largely one-way fashion,' modern researchers see perpetual relays between biotic and abiotic processes, such that 'biology plays a much stronger role than previously thought in the functioning of the Earth System' (Steffen et al. 2005, 35, 256).

Land and marine biota have been key players in the climate system and other planet-scale fluxes of matter and energy—that is, they have been geological agents—not only since the so-called Great Acceleration of the twentieth century, but since early in the history of the Earth. And in the decade since 'The Climate of History' appeared, Chakrabarty's view that humans in particular were only 'simple biological agents[s]' until their 'very recent' transformation into 'geological agents' has also been increasingly undermined. There is growing evidence that both the anthropogenic extinction of Pleistocene megafauna and early

agricultural greenhouse gas emissions had significant impacts on global biogeochemical cycling, global climate, or both (Malhi et al. 2016; Ruddiman et al. 2016).

In short, the relationship between the biological and the geological is a vexed and crucial issue for thinking about the Anthropocene and the modern crisis of the global environment. It is in that context that I read Genesis 6–8. The debate about the Anthropocene can help to illuminate the Biblical text, and in turn that text can help to orientate thinking about the current crisis. The world that Chakrabarty describes in 'The Climate of History,' one characterised by a sharp division between life on the one hand and nonliving, geological phenomena on the other, is not—at least in the perspective of Earth system science—the one that exists around us. It has a seemingly exact parallel, however, in the scenario of the ark lodged on Ararat.

The received text of the Hebrew primeval history in Genesis 1–11 combines material from two distinct sources. The earlier is the Yahwistic source, or 'J,' dating perhaps from the ninth or eighth century BCE. J is almost certainly better regarded as 'an anthology of traditions,' in Ronald Hendel's phrase (2013, 18), than as Harold Bloom's urbane and ironic genius composing in the Solomonic royal court (Bloom and Rosenberg 1991). Nonetheless, J's story of the Flood unfolds with coherent force. The final redactor of Genesis composed his Flood narrative by intercutting that story with the significantly different version found in the so-called Priestly source ('P'). Behind both narratives, although preserved more transparently in J, is a still older mythic and literary tradition with roots that stretch across Southwest Asia (Finkel 2014). Except perhaps for P itself, the closest and most completely recorded parallel to the Yahwistic story of the deluge is found in the *Epic of Gilgamesh*.

The J flood story meditates on the same problem that has concerned Chakrabarty and the Earth system scientists: the problem of the relationship between biological and geological existence. Where Earth scientists trace the course of biogeochemical cycles, the Yahwist offers a mythic rendering of the primordial intimacy between life and the world. He contemplates what it would mean for one to be separated from the other. But in his telling, that separation proves inconceivable and self-undoing. As a myth for the Anthropocene, the Flood story offers an alternative to Chakrabarty's tragic deadlock between political history and species history. For the Yahwist, life is always already reaching out into the intractable depths of materiality. The activity of life is complicit with the nonliving. His narrative speaks

of how the perpetual enfolding of the vital and the geophysical can come to the fore as a figure of hope in a time of crisis.

The Priestly writer imagines the Flood as the reversal of creation, a return to the unordered condition that preceded the existence of the world. On the second day of creation, in P's account, 'God made the vault and it divided the water beneath the vault from the water above the vault' (Gen. 1:7).[3] Then, when the Flood begins, 'the wellsprings of the great deep burst / and the casements of the heavens were opened' (7:11). Everything returns to primordial chaos. With J, things are different. The deluge is something more quotidian than a collapse of the props of the universe: it is a fatal downpour of rain. J specifies that life, and not the structure of creation as a whole, is Yahweh's target. 'I will wipe out the human race I created from the face of the earth, from human to cattle to crawling thing to the fowl of the heavens.' 'I will make it rain on the earth forty days and forty nights and I will wipe out from the face of the earth all existing things that I have made' (6:7, 7:4). The surface of the earth will remain, but sterilised. The ground will be washed clean; life, and life alone, will be cancelled.

Not completely, however. Noah's God-given task is 'to keep seed alive over all the earth' (7:3). The Hebrew term can mean 'semen.' What Noah is charged with preserving is the sheer potential for life: not this creature and that creature for their own sake, but the capacity of each one for reproduction. Noah builds and equips a stockpile of sheer heredity, a sort of floating database or cryogenic repository. The ark is a biological archive (the two words have the same root) where individuals are condensed into specimens. Existence on board is subsumed in the promise of existence to come.

A comparison can illuminate the distinctiveness of J's version of the story. In *Gilgamesh*, what Utanapishtim takes on board his ark is first and foremost his own property. The animals are almost incidental, paired with the craftsmen who will keep the arts of civilization ready to hand:

> What silver I had I loaded upon her,
> What gold I had I loaded upon her,
> I sent up on board all my family and kin,
> Beasts of the steppe, wild animals of the steppe, all types of skilled craftsmen I sent up on board. (Foster 2019, XI.99–102)

Utanapishtim retains both less and more than Noah. Less, in that he looks primarily to his own wealth; more, in that a compact toolkit of civilization travels with him. J's Noah, in

contrast, is an encyclopaedist of life. Abandoning his own home, he offers hospitality to life in all its variety (Rigby 2008). The contents of his ark are identical to the genetic stock of the earth.

Within the ark, time is frozen. The Priestly source makes some concessions to those literalistic readers who have tried to reconstruct the practical business of inhabiting the ark (see Cohn 1996, 33–41). In particular, verse 6:21 specifies the provision of food for all on board. At least in the surviving parts of J, there is nothing similar. The ark is absolutely still: God permits through Noah a miraculous detachment of life from liveliness. The form or principle of life, the fact of incipient reproducibility that we might now imagine as genetic code, survives under conditions that are impossible for life as vital activity, as actual motion or happening: there is no feeding, hunting, fleeing, emitting or desiring. The seeds of life, made manifest in seven pairs of every species of clean animal and one pair of every species of unclean animal, simply exist in intimate proximity within the confines of the vessel. The ark is life-potential without outward attachment, gleaming in the swell that has deactivated all the rest of organic existence. Nothing remains except this tranced vessel of ancestrality, its sheer embryonic drive.

Genesis omits J's description of the construction of the ark. Even so, its essential characteristic can be discerned. In P the ark is referred to as a 'box' or 'cask' (*tebah*, 6:14) rather than as a ship: a suggestive word in relation to the J story. P's 'cask' does, however, have a window just below the roof (6:16). In contrast, it seems to be the case that once it is launched, J's ark has no opening at all other than a hatch in its roof. As Bruce Vawter (1977) puts it, J's Noah is 'completely boxed in': he is 'allowed […] no outlook on the horizon' (125, 128). A single Yahwistic phrase, surviving at the end of a passage taken from P, captures with visceral immediacy both this claustrophobic predicament and Yahweh's devoted concern for his voyager. Noah entered the ark, 'and the LORD shut him in' (7:16). The divine hand reaches out with caring but insistent force. Noah is sealed into the ark, protected and enclosed. Yahweh's haptic presence is felt—in a way characteristic of the J source—in intensely personal and anthropomorphic terms. The doors are fastened tight. Then the rain comes.

J's deluge lasts (if the numbers are meant literally) for forty days and forty nights. Yahweh 'wiped out all existing things from the face of the earth, from humans to cattle to crawling things to the fowl of the heavens.' Only the ark 'rose above the earth […] and Noah alone

remained, and those with him in the ark' (7:17, 23). Finally, the rain stops and the waters begin to recede. There will never be another such storm; the world that will be exposed by the ebb is the one that will be occupied by J and his readers. For now, its essential elements are the earth, sterilised as if in an autoclave and still underneath the retreating waters, but potentially fertile once again; the ark, a sealed box or blind coracle, locked shut and impermeable; and the ark's contents, a mass of preserved seed, the immobile nucleus of life.

If the ark had been constructed less rigorously, then once the flood was over there could be nothing more straightforward than to step outside. The potential for life that was bottled up during the storm would naturally be re-joined to the means of life emerging from the waters. But in the Yahwist's story—and in the mythological tradition out of which his narrative emerges— the process of disembarkation is anything but simple. There seems, somehow, to be a problem in need of resolution. Life as capability for inheritance, the genetic code preserved within the ark, must be coupled with the new-made world. But that coupling will prove to be a slow and delicate affair. It is this scene that invites us to think about life's place within the Earth system, and about the more challenging visions, beyond the myth of Eden, with which the Hebrew primeval history can confront us amid the birth of the Anthropocene.

The Yahwist works slowly through the same problem that Chakrabarty dealt with too hastily: the problem of the relationship between biological and geological existence, or, in the terms that he has now established, the problem of the relationship between the interior of the ark and its exterior. In J's fable, life cannot look at the conditions of life from a distance. There is no window or porthole through which Noah can observe his new environment. Given such an aperture, the ark's inhabitants would be able to scrutinize the earth without committing any part of themselves, from safely within the invincible structure that holds them tight. They would look at the world from the viewing deck of a vessel built, like a spaceship, for traversing the void. They would be granted the transcendent vision of extra-terrestrials, inspecting the world from the outside, as if free of the encumbrance of earthly perspective. If the ark did not limit their sight, then life—that which is inside the ark—and nonlife—that which is outside the ark—would be treated in J's fable (just as in 'The Climate of History') as if they were essentially separate, and because they were separate, capable of being connected together. Life would be at liberty to plan a route down to the surface of the earth. But that is precisely what the form of the ark forbids.

How can the blindfolded survivors within the ark make their way outdoors? How can there be an opening such that there will once again be animation on the earth, and not just quarantined genetic transmissibility? Through the flight of a dove.

> [Noah] let out the dove to see whether the waters had abated from the surface of the ground. But the dove found no resting place for its foot and it returned to him in the ark, for the waters were over all the earth. And he reached out and took it and brought it back to him in the ark. Then he waited another seven days and again let the dove out of the ark. And the dove came back to him at eventide and, look, a plucked olive leaf was in its bill, and Noah knew that the waters had abated from the earth. Then he waited still another seven days and let out the dove, and it did not return to him again. (Gen. 8:8–12)

When Yahweh seals the ark shut, it seems as if the company on board are being set definitively apart from a world on the brink of ruin. As the story ends, however, the opacity of the ark proves to be precisely the reason why the voyagers' relation to the world must be one of elemental complicity, not mere conjunction. There must be intimacy first of all. With a cautious view through a porthole rendered impossible, the first experience of dry land outside the ark comes about in instinctive jubilation. There is an ecstatic soaring, then an irretrievable descent.

The presence of the earth must be discerned through the loss of the dove. Life must send out a part of itself, like a spark from a fire, to be swallowed up. This is the heart of the Yahwist's story about life's commingling with the earth. Life-activity is activity in and with the geophysical earth, for J as it is for those modern researchers who interpret the Earth as a system of enlaced biogeochemical cycles. Life is necessarily imbricated with nonlife, immersed gratuitously in the physicality of the world. The dove is the force of life that is always already amid the earth.

The little gesture described in the ninth verse still stands out brightly through the millennia of textual transmission. It has seemed to many readers to be a consummate image of tenderness towards a nonhuman creature (Wenham 1987, 186). The dove swoops down with the flutter of landing that is never far from panic. Noah reaches up to the dove, as Yahweh reached down to the newly embarked Noah, to offer security. He gathers and settles it; he accepts its sharp grip on his fingers so that it can be drawn back into the safety of the ark, back to him to preen and rest. That the Yahwist thought it important to record this act of dextrous care

suggests that we should not see the dove as an abjected member of the ship's company, as a disposable subaltern despatched on a risky frontline mission. On the contrary, some integral part of the ark takes its departure in these verses. The dove is a fragment chipped from the dense kernel of life. It is a gift given to the earth in the hope of its existence. To belong in the world, the ark must yield up part of itself.

The potentiality within the ark does not begin by selecting the earth as a basis for life, but by finding itself in attunement with the world. Each flight of the dove has the force of a Sabbath ritual. It sets out every seventh day after its first flight, in a systolic act of release. That adoption of a rhythm coordinated with the diurnal cycle is itself a tentative conciliation of the inorganic vibrancy beyond the ark's walls. The dove emerges in accordance with a temporal patterning that is proportioned to the rate at which the earth spins. Again, this is precisely the opposite of the atemporal, always-on perspective that would have been afforded by an aperture framing a view of the scene outside. Hence, too, the significance of the dove's second flight, which brings home the teasing, promising olive leaf. Vegetable life re-emerges autochthonously, outside the special providence of the ark, even before the fatal waters have cleared from the earth. The ark's inhabitants do not learn that plants have grown back by gazing out over a green expanse. Instead the olive leaf comes to them as a sign, a mobile talisman, as the quivering trace of a world to come.

A venerable exegetical tradition treats the dove as an archetype of faithfulness. It twice returns to Noah and its mate, in the same way that, as Matthew Henry put it, 'a Gracious Soul […] returns to Christ as to its *Ark*' (1707, s. v. Gen. 8:6–12). And yet on its third flight the dove departs, never to look back. That third flight bears witness to a fidelity deeper than faithfulness: to an affect that penetrates the dove's being even more deeply, like the fidelity of water to the pull of gravity. The dove is the first creature to fall in love with the postdiluvian world. When it had returned to Noah's hands it had been folded back into the stock of heredity. But the third flight, no less than the first two, likewise ends in a return and an enfolding. Whichever way the dove moves, it is moving towards home. That is not to say that the dove's connecting flight stitches together two essentially different homes, the ancestral ark on one side and the providing earth on the other. Rather, it is to say that the two homes prove to have been caught up in one another all along. In its joyous descent the dove calls into being an embracing homeliness that is as much life as world, and as much world as life.

This culmination of the Flood story was ancient when the Yahwist knew it. Thus Utanapishtim in *Gilgamesh*:

> When the seventh day arrived,
> I brought out a dove and set it free,
> The dove soared off in search of food,
> No landing place appeared to it, so it came back.
> I brought out a swallow and set it free,
> The swallow soared off in search of food,
> No landing place appeared to it, so it came back.
> I brought out a raven and set it free,
> The raven soared off and saw the ebbing of the waters.
> It ate, scratched, and bobbed (its head), so it did not come back. (Foster 2019, XI.171–80)

Analogies have been traced in many other cultures. What we find in Genesis 8:8–12 is a mythic archetype with exceedingly deep roots. 'It is almost incredible,' Claus Westermann writes, 'how widespread this motif is and how similar the most widely separated texts are' (1984, 403). And just as the Southwest Asian flood legends in general may have something to do with the susceptibility of the southern Mesopotamian flatlands to snowmelt floods or inundations from the Persian Gulf, so behind the archaic motif of the birds lies a real nautical practice. Early sailors on the high seas would release birds in order to learn the direction of land from their flight (Gunkel 1997, 64 cites numerous sources).

The story thus turns a question about navigation ('is land nearby?') into a question about ontology ('is there a world, or only chaos?'). Philosophy's second beginning is as a practice of orientation, learned from the craft of the mariner. The early sailors took their bearings from animal desire. The birds that they released, dark against a clear sky, were like stars pregnant with longing for a place to dwell. The story of the departure from the ark—in the Yahwist and in his many predecessors and successors—uses this seafaring technique as a way to describe what it is like to live amid the world. When all particular properties of the face of the earth are bracketed off, as if hidden over the horizon, there is still life's yearning commitment to its geophysical belonging, the elementary co-origination of organic and telluric existence.

Once the dove has dissolved back into the earth a more quotidian disembarkation can follow: 'Noah took off the covering of the ark and he saw and, look, the surface of the ground was dry' (8:13). In order to understand the final import of J's Flood narrative, however, it is worth following chapter 8 of Genesis all the way to its end. As we have seen, Chakrabarty's dualistic understanding of life and nonlife underwrites a political argument as well as a historiographic method. 'The Climate of History' envisages a politics of geological agency, concerned with the survival of the human species in general, that encircles and limits the domain of the politics of biological agency. Only the latter kind of politics is free to offer a critique of intrahuman injustice and inequality. As far as the former kind is concerned, we are all in it together: 'there are no lifeboats […] for the rich and the privileged' in the face of catastrophic climate change (2009, 221). Chakrabarty insists that this is no justification for abandoning the politics of social justice and biological agency. He argues instead that the two kinds of politics are both indispensable, even though they are profoundly incompatible. I suggest, however, that the tragic dilemma that Chakrabarty proposes is ultimately illusory. It mistakes where the real challenge lies for political thought amid the coming of the Anthropocene. Both biota and climate are ultimately operators within the Earth system. The only politics that could be adequate to the present crisis is one that begins by acknowledging those systemic forces. This is a reason for looking to the ending of Genesis 8. The Yahwist offers a widening vision that grows to take in the planetary system as a whole, in a spirit that remains continuous with the one detectable in the story of the dove.

Environmentalists have often perceived in Genesis 1:28 the nub of Judaeo-Christian attitudes to the nonhuman: 'Be fruitful and multiply and fill the earth and conquer it, and hold sway over the fish of the sea and the fowl of the heavens and every beast that crawls upon the earth.' However, both this command and God's condemnation after the Fall—'Cursed be the soil for your sake, / with pangs shall you eat from it all the days of your life' (3:17)—define human beings' relationship with the antediluvian world. (Verse 1:28 is sourced from P; 3:17, from J.) That relationship is not supposed to be the one that obtains among the actual readers of Genesis; amongst other things, the antediluvian order involves universal veganism or at least vegetarianism. Immediately after the Flood P's God announces a new set of rules. Those rules place human interactions with nonhuman animals on an altogether bleaker footing:

> Be fruitful and multiply and fill the earth. And the dread and fear of you shall be upon all the beasts of the field and all the fowl of the heavens. […] All stirring things that are alive, yours shall be for food, like the green plants. (9:1–3)

In the Priestly source it is that new dispensation, predicated more on fearful affect than on regnal authority, that sets the terms for living in the postdiluvian world.

At this point, however, J diverges radically from P. The Yahwist's Noah walks out into the immense quietness of a world inhabited, far off, by a single dove, and offers a sacrifice. This sacrifice prompts another of J's characteristic divine anthropomorphisms:

> The LORD smelled the fragrant odour and the LORD said in His heart, 'I will not again damn the soil on humankind's score. For the devisings of the human heart are evil from youth. And I will not again strike down all living things as I did. As long as all the days of the earth—
>
> seedtime and harvest
> and cold and heat
> and summer and winter
> and day and night
> shall not cease.' (8:21–22)

Yahweh does not revoke the curse of the soil's recalcitrance, the need to purchase food with the sweat of one's brow. Nor does he promise that the earth will last for ever, or that it will be impervious to human despoliation. He does, however, assert a rhythmic vitality that will endure for as long as the earth itself. He seems to imply that something of value inheres in the 'soil' independently of humankind. Notwithstanding that the evil that provoked the deluge remains deep in the human heart, he will never again make everything else pay the price for human crimes.

This vow to sustain the nonhuman world emphasises a particular quality of that world: what Yahweh guarantees is the persistence of cyclical temporality. He does not endorse any single state of things but instead the world's power to keep changing its state, its processual flow. After the patternless flux of the deluge, the propulsive energy of the earth's rotations will be restored. Yahweh's words interweave the diurnal cycle and the seasonal cycle, and the life-activity of planting and reaping with the telluric alternation of summer and winter. Seedtime, summer, harvest and winter: as in the flight of the dove, but now on a universal scale, the organic and the planetary are folded together. Yahweh concerns himself with the world as a cohering system, with the circuits of its operations. It is a cliché that Jewish and Christian philosophy privileges linear temporality, whereas pagan cosmology is fundamentally

cyclical. But in the Yahwist's imagination, the world is re-started by a divine affirmation of the rhythmic pulsing of cyclical time (see also Stone 2019).

It is not the sublunary order but Yahweh himself who has been altered fundamentally by the experience of the flood. The most striking thing of all about his affirmation is that it does not take the form of a promise or a covenant. Yahweh does not say anything to Noah. He is inscrutable, outside of relation or communication. He makes his vow only 'in His heart.' This is a musing, ruminative divinity, who lets go of his vengeful anger as a child might. Even as he dedicates himself to sustaining the world, Yahweh withdraws into his own meditations. He is seen at once in the most personal terms—he is susceptible both to fury and to mollification—and as fundamentally impersonal. In this moment, he is less a lawgiver or patriarch than he is the universe's heartbeat. Just like the dove, he fulfils his purpose through a certain absence. The world that he affirms is the world of the dove: the world of systemic interconnection, experienced first of all through a sense of belonging that precedes any determination of where or how life belongs on the earth.

Chakrabarty's diagnosis of an impasse between political history and species history responds to a real and urgent fact about the contemporary world: the familiar but dismaying contradiction between impoverished populations' legitimate claims on economic betterment and the disaster that would ensue if rich-world lifestyles and their attendant environmental impacts became universal (see especially Chakrabarty 2018). Nonetheless, his invocation of a universal species-being that transcends questions of intrahuman justice is finally not sufficient to the crisis. It rests on an ontological division between biological and geological existence that cannot be sustained. We should not understand the Anthropocene as the time when one living species first transgresses the hitherto firm dividing line between the biological and the geological. If we believe that life ought not to get tangled up with nonlife, ecological praxis will find itself misdirected in innumerable ways. The Yahwist, and the myths through which he worked, can help us to see things differently. We can see the birth of the Anthropocene as a moment in which the perpetual complicity between the biological and the geological must become newly the object of political concern. Genesis 8:8–12 warns us that all supposed divisions between life and nonlife are bound to undo themselves. We might take a timely lesson from it: that what is needed at the present moment is something still more than a 'green' politics of the biosphere. What is needed is a politics of the Earth system itself.

Notes

[1] The two tropes provide the titles of defining contributions to the ecomodernist tradition, Emma Marris's *Rambunctious Garden* (2011) and Mark Lynas's *The God Species* (2012).

[2] Chakrabarty has since changed tack. In his most recent work, the fundamental division is not between biological and geological agents, but instead a much more conventional one between the 'moral' and the 'animal' dimensions of human existence, where the latter occupies approximately the same role previously allocated to humans' 'geological' identity. This distinction between moral and animal being has a lengthy philosophical pedigree, but compared to the division proposed in 'The Climate of History' it has a much less specific relevance to the present moment of environmental crisis. See Chakrabarty 2016, 2017.

[3] All citations of Genesis are from Robert Alter's (1996) translation.

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