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RECEIVED 22 August 2024 ACCEPTED 31 October 2024 PUBLISHED 18 September 2025

CITATION

Best S (2024) Climate justice, speciesism, and total liberation in age of the anthropocene. *Front. Commun.* 9:1484643. doi: 10.3389/fcomm.2024.1484643

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Climate justice, speciesism, and total liberation in age of the anthropocene

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This essay provides a critical overview of climate justice discourse, while examining a key deficit that stems from humanist/speciesist biases and a failure to incorporate nonhuman animals (hereafter "animals") into social analyses, ethics, politics, and visions of a just transition to an ecological society. This deficit, I argue, has serious consequence for understanding the roots and driving forces of social hierarchies, mass extinction, and the climate crisis. Climate mitigation strategies, I claim, will fail without engaging animal rights and vegan perspectives. I argue that earth, animal, and human liberation movements are inseparably interlinked in a comprehensive project of "total liberation." A guiding thread throughout is the focus on *increasingly expansive concepts of rights and justice* that break through the parochial boundaries of humanist views, to include "animal justice," "multispecies justice" and "planetary justice." These emerging moral paradigms and cognitive mappings are vital to overcome the global social and ecological crises that define the Anthropocene Epoch.

KEYWORDS

climate justice, just transition, anthropocentrism, speciesism, hierarchy, Holocene, anthropocene, animal justice

From environmental justice to climate justice

The recent emergence of the global climate justice movement builds on the achievements of the last half decade of social justice struggles. As the social movements of the 1960s and 1970s evolved—including women's liberation, black liberation, gay liberation, anti-war and peace, free speech, and radical democracy—the concepts of rights and justice expanded to ever more marginalized human groups and even to encompass animals and the natural world. As I will show below, however, rarely were human, animal, and earth interests theorized in their inseparable unity, and social justice movements generally ignored, excluded, or marginalized the plight of animal in relation to human priorities, while failing to grasp the systemic consequences of animal exploitation on the natural world and all people. This debilitating lacuna is evident in the environmental justice movements over the last half century and in the more recent global climate justice movement that emerged in the first decade of the 21st century.

In the U.S. during the 1970s and 1980s, a disaffected offshoot of the white, middle-class environmental movement launched a grass-roots struggle by low-income communities and people of color under attack by corporations and environmental racism. In response to corporations building landfills, incinerators, and producing or dumping toxic chemicals and wastes in their neighborhoods, rather than in white suburbs, a new "environment justice" movement emerged in various regions of the U.S. and spread internationally. Decades ahead of formalization by the United Nations (1948), environmental justice advocates insisted that all human beings, whatever their ethnicity or class, have a basic right to a clean environment and access to safe air, water, food, and sustainable resources.

Thus, social and environmental issues, human and environmental rights, were knitted together, as were issues of race and class. Dialogues around inclusiveness and the need for alliances led to the "Principles of Environmental Justice" declaration [People of Color Environmental Leadership Summit (First National), 1991a], drafted at the First National People of Color Environmental Leadership Summit in October 1991. Notably, its first principle stated, "Environmental Justice affirms the sacredness of 'Mother Earth,' ecological unity and the interdependence of all species," thereby referencing human interdependence with animals, not just "nature" in the abstract, as later climate justice declarations subsume animal life and agency to the physical world (see below). Moreover, here, as in all Indigenous peoples' writings, the earth and its sundry life forms are viewed as sacred, as creations of Mother Earth. This implies reverence and spiritual connection with the living world, in sharp contrast to Western utilitarian views of animals and nature as mere resources to exploit. It is also significant that a second declaration from the People of Color Environmental Leadership Summit, "Principles of Working Together" [People of Color Leadership Summit (Second National), 1991b], placed great stress on the need for alliance politics and achieving unity within a diverse multicultural context that values difference, dialogue, cultural sensitivity, and mutual learning, while "working together to overcome our common barriers, and resist our common foes."1

But as the environmental justice movement evolved from "first generation" to "second generation," it adopted broader theoretical and political frameworks such as found in Critical Environmental Studies (Pellow, 2017). Whereas first generation outlooks focused mainly on two overlapping forms of oppression—race and class—second generation activists adopted more pluralistic theories and a more diverse and inclusive politics that also incorporated gender, sexuality, animals, and other groups and identities. Second generation approaches also rejected earlier reformist politics seeking legislative changes, not whole system changes, and affirmed the Marxist assumption that the state is a tool of capitalist domination. 21st century climate activists, however, seek change from the grass roots level and widely support the goal of radical social transformation.

But, with the dawn of a new century, as climate change began to seriously affect people and ecosystems throughout the world, the framing of environmental justice issues shifted from local or regional emphases to global and *planetary* perspectives requisite to theorize a *new geological epoch* brought about by the ever-greater impact of human activity on earth processes.² It became obvious that the main environmental issues affecting people were not just toxic chemicals, waste, and pollutants from local industries, but rather the prodigious release of greenhouse gases into the atmosphere, the onset of global warming, and the disruption of all earth systems.

One might say that whereas the politics of environmental justice emerged at the *dusk of the Holocene*, those of climate justice appeared with the *dawn of the Anthropocene*—the epoch in which humans have clearly emerged as the dominant force behind rapid change in earth

systems.³ Because the causes and effects of climate change are global, the solutions must be as well, and the planetary crisis threatening all life demands alliance politics that links interconnected forms of oppression, unprecedented cooperation of world governments, new conceptual paradigms, and immediate and decisive action.

Climate justice and human rights

Rejecting limited nationalist perspectives and state-based notions of justice, climate justice addresses global colonialism and the growing inequities between "developed" nations of the North and "undeveloped" nations of the global South. The climate justice movement emphasizes the colossal global inequalities in economic wealth, political power, and carbon pollution. It highlights the intolerable injustice that those *least responsible* for causing the climate crisis, especially poor and disadvantaged populations in the global south, are *most vulnerable* to its effects—including extreme weather events, floods and rising sea tides, heat waves and wildfires, drought, crop loss, famine, food insecurity, dwindling water supplies, loss of livelihoods, property destruction, disease, and displacement.⁴ The

¹ For an application of this approach, see the conclusion of this paper

² On the origins and development of the global climate justice movement, see Hadden (2015).

³ There are indeed common main themes throughout "the" global climate justice movement, but it is not a monolithic movement. The climate justice movement is extremely diverse and inclusive. It includes indigenous peoples, peasants, and farm workers; Asian and Pacific Islanders; youth movements such as Fridays for Future and Youth for Climate; Green New Deal proponents; direct action movements such as Extinction Rebellion, Animal Rising, Just Stop Oil, and the Keep it in the Ground; fossil fuel divestment groups; ecoanarchists, ecosocialists, and degrowth proponents; and sundry grassroots groups worldwide who fight on the frontlines of climate-related disasters. Significantly, the climate justice movement also includes thousands of scientists the world who are frustrated with government inaction on the climate emergency and their numerous "warnings to humanity" (see Union of Concerned Scientists, 1992 and Ripple et al., 2020, 2022). This global movement contains mainstream, reformist, and even pro-development approaches (e.g., Mary Robinson and Earth4All), as well as radical anti-capitalists (e.g., ecosocialist and Indigenous groups); it holds liberal-humanist proponents as well as ecocentrists and antispeciesists, and older and younger generations such as Greta Thunberg and the Youth Climate Movement

⁴ Clearly, corporations, the global North, and the consuming classes emit more greenhouse gases than poor nations, communities, and peoples in the global South. Counter to popular prejudice, the primary force driving climate apocalypse change is not the overpopulating masses in the developing world, but rather transnational fossil fuel corporations, the Global Meat and Dairy Complex, neoliberal capitalism, the World Bank, and the privileged lifestyles of the super-rich and middle classes. Affluent Western societies—above all the US, EU, China, and India—and their consuming classes have a far greater ecological impact than "undeveloped" nations and their poor, although Global South countries like Brazil and Middle East nations are becoming major carbon polluters. Economic inequality is inseparable from carbon inequality. In the years between 1990 to 2015, for instance, when annual heat-trapping emissions grew 60% and cumulative emissions doubled, "Ithe wealthiest 1% of the world's population were responsible for releasing more than twice as much carbon dioxide as the poorer half of the world from 1990 to 2015" (Gore, 2020). The top 1% of the world emitters produce over 1.000 times more CO2 than the

climate justice movement views this disparity and victimization as a colossal injustice and emphasizes the obligations corporations and governments have towards the world's most marginalized and vulnerable peoples; the need to address severe global inequities; and the rights of all to clean, safe, and healthy environments. And while climate change perpetuates injustice and violates human rights, this does not happen in any random way; rather, "Climate justice feeds on existing violence and discrimination, on a history of human rights abuses" (Cripps, 2022). In more exact terms, transnational coal, oil, and natural gas companies, along with their accomplices in nation states, have willfully chosen to unleash a "slow-motion nuclear holocaust" (Engelhardt, 2021) on ecosystems, biodiversity, millions, and billions of people, both present and future generations, all for the purpose of sustaining the power, privileges, and profits of world elites.

In addition to incorporating standard concepts of procedural, distributive, retributive, and intergenerational justice, the climate justice movement has pioneered new concepts of justice. 5 Recognition justice demands inclusion of excluded and marginalized communities in decision-making processes (see Whyte, 2011), and epistemic justice rejects Western mechanistic views of nature as mere matter or resources to in favor of valuing nature as sacred, expressing kinship with the living world, and validating traditional and indigenous knowledges, (see Fricker, 2007).6 Ultimately, climate justice requires transformative justice, which emphasizes that interconnected forms of oppression—classism, racism, patriarchy, colonial exploitation, and so on-are inherent in capitalist systems, and thus climate change demands system change. Integral to transformative justice is the notion of just transition. The end of a just society cannot be achieved without means that are just, inclusive, participatory, and democratic and decentralized. Moreover, a just transition to democratic and

bottom 1% (Cozzi et al., 2023). Given the inequities of income, power, and responsibility for causing the climate crisis, abstract references to "humans," "humanity," or "anthropogenic climate change," such as often used in Anthropocene discourse, need to be qualified or replaced by phrases such as "advanced industrial nations," "affluent consuming classes," "transnational corporations," or "the growth-addicted nature of global capitalism." It is crucial not to obscure the vastly unbalanced scale of those most responsible for and vulnerable to climate change and not to conflate biological/species appeals to "human nature" with social/institutional causes in ways that naturalize and exonerate predatory capitalism.

5 Procedural justice involves fair, transparent, and inclusive decision-making processes, along with access to information, voting, civic space and the courts, and legal rights such as due process. Distributive justice addresses inequalities in the distribution of wealth and resources across society between regions such as the global North and South). Retributive justice concerns payment for losses and damages caused by corporate-state powers as well as elimination of crippling debt burdens. The more recent concept of intergenerational justice is based on the premise that present generations have strong duties to future generations to preserve for them livable world). On this argument, just as there is no substantive moral significance between our duties to citizens in one's own country and people living across the world, our obligations to future-living generations are profound (see MacAskill, 2022). The fear of living in a dangerous, depleted, and uninhabitable world, and the anger over being robbed of vital life goods and securities by older generations of elites, is the driving force of the global youth climate movement.

6 On these concepts and broader concepts of justice, see Gupta et al. (2023).

ecological societies must ensure that climate mitigation and adaptation measures do not reinforce existing injustices or cause further harm to peoples, such as happened with forms of "green colonialism" (see Earth.org, 2021).

A key part of Inseparably linked to the fight for climate justice has been the push to define climate change as a human *rights* issue, the official recognition of which only came about through pressure by activists and oppressed communities who finally budged institutions such as the UN and the Intergovernmental Panel on Climate Change (IPCC).⁷ Given the fact that human beings live in and depend upon natural environments and that corporate induced global heating has destabilized ecosystems on a planetary level, the concept of universal human rights, first formally enshrined by the UN in 1948, is empty if not tied to environmental rights.

Universal human rights, global climate justice, and the disproportionate impacts of climate change on undeveloped nations and marginalized peoples were fundamental to the Paris Agreement (United Nations, 2015), a United Nations Educational, Scientific and Cultural Organization (2017) document, and enshrined only recently in a key 2022 UN statement. This latter declaration, for the first time, explicitly endorsed the human right to a "clean, healthy, and sustainable environment" as necessary for "the full enjoyment of all human rights, for present and future generations" (United Nations, 2022). If people have environment rights, then, the document insisted, corporations and states have a moral and legal obligation to promote sustainable management of natural resources, to help developing countries mitigate and adapt to climate change, and to protect peoples' right to protest without retaliation.⁸

The climate justice movement is a vital alternative to mainstream, pro-business, government-led, and NGO approaches to the climate crisis. These struggles have shaped global policies and formed grassroots alliances that supplant the fragmented identify politics which prevailed in earlier decades in favor of a broad alliance with

⁷ As climate activist Mary Robinson noted, "since 2010 climate justice has gone from being effectively a taboo topic to being an approach to climate decision-making and action that is people-centered, rights-informed and fair. Climate justice is supported as a concept by a growing academic literature and in practice by new funding streams from governments and philanthropy. It is now a concept and language that different actors in the world of development, climate change and human rights coalesce around to find commonalities rather than differences" (Robinson, 2019b).

⁸ Clearly, corporations and world governments have not heeded these calls; instead, they have continued their aggressive push for fossil fuel energy resources in complete disregard to the severe and irreversible impacts on present and future generations, animals, ecosystems, and biodiversity. Rather than providing access to information, corporations like ExxonMobil have blanketed the infosphere with greenwashing and disinformation (see Rich, 2019; Ritchie, 2019). Far from facilitating democratic participation in critical decision-making processes that affect all present and future life, nations have repressed, jailed, and murdered environmental activists. Nations like Columbia, Brazil, and Mexico kill environmental activists (see Hines, 2023), while states such as the U.S. and the U.K. have begun criminalizing climate activism, as they did two decades ago with the persecution of animal rights activism as "domestic terrorism" (see Aronoff, 2015; Hover, 2023), a trope widely circulated by mainstream media.

race, gender, and class issues at the forefront. Climate activists comprise the first social movement to fight against a planetary crisis that threatens not one group but all peoples, future generations, and a vital living earth. Like the animal liberation and planetary justice views we consider below, the climate justice movement works with traditional concepts of justice and innovates new ones. These concepts, however, remain confined in most cases to the limits of human-centered values and the human community, however broadly defined. Thus, animals are typically *excluded* from theoretical, moral, and political consideration in climate activist theories, critiques, concepts of justice, and politics. But this biased and uninformed marginalization of animals has tragic consequences and arguably precludes the goal of creating just and sustainable societies.

Speciesism and moral devaluation

Climate change is a global, intergenerational crisis and challenge, but it is not a human problem only and treating it as such is morally bankrupt and counter-productive to human interests. Climate justice proponents prioritize the plight of the most vulnerable victims of climate change, but animals are arguably the most vulnerable, excluded, and oppressed beings on earth, as evident in the barbarities of vivisection and sport hunting or the extirminism of factory farms and slaughterhouses. Animals are property and treated as such. While certainly not lacking agency, they have little representation by enlightened advocates, and virtually no rights or court of appeal. Discrimination against animals is as old as human consciousness itself; it spans from East to West and North to South, informs political views from Left to Right, and is so deeply ingrained in human consciousness as to become "common sense." Any challenge to the dominant ideology-whether we call it humanism, human exceptionalism, human supremacism, speciesism, or dominionisminvites ridicule and hostility.

There is a tremendous irony, hypocrisy, and disabling contradiction at the heart of climate justice movement, for, with regards to oppressed animals, social justice activists are exclusive, not inclusive; homogenous, not pluralistic; and discriminatory, not "progressive" or "enlightened" in any deep or consistent way. The climate justice movement represents only one animal species—Homo sapiens—to the systematic exclusion of millions of others, known and unknown. The overwhelming majority of living species on this planet are gravely affected by capitalist domination, expansionism, climate change, and human exploitation generally-including "radicals" and "progressives" who believe the proper place for many animals is on their dinner plate or a fast-food menu.9 Not surprisingly, moreover, in social justice writings generally one finds little mention of the rapid acceleration of a sixth mass extinction event, this one caused by humans, not natural forces (see Best, 2024), and along with runaway climate change is a fundamental defining aspect of the Anthropocene epoch.10

As discussed above, most mainstream media, government discourse, as well as social and environmental activist writings on climate justice focus exclusively on climate change as a human rights and social issue and not an animal rights/justice issue as well. Such exclusionary and dichotomous appeals, and zero-sum logic that assumes human and animals cannot mutually benefit and prosper together through climate action, are legion in climate justice manifestos (see below).

Underlying the neglect of animal rights philosophy and animals throughout social justice literature is the deeply entrenched worldview of "speciesism," a term coined by Richard Ryder (1970) and developed further by Peter Singer (1975). As I define it, speciesism is a subset of a larger worldview of anthropocentrism, which can be viewed as a general category that applies to the human objectification of the world as a whole, whereas speciesism applies to the alienated, exploitative, and hierarchical outlook and practice to animals in specific.

Both anthropocentrism and speciesism share the same hubristic premise that humans are a radically unique species, privileged and superior by virtue of possessing rationality and language, and rightful owners of a world that exists for their uses and purposes. Both outlooks are debilitating errors that lie at the root of current social and ecological crises. But speciesism has its own independent logic as well, for while environmentalists and humanists might abandon anthropocentrism in one form or another, they do not in most cases renounce speciesism as well, which requires *a qualitative leap* beyond predatory humanism. Human supremacism, in other words, does not die until it renounces not only the most egregious forms of anthropocentrism, but also speciesism as well.

The literal meaning of anthropocentrism is that human beings (Greek: anthropoi) occupy the "center" of the universe; they are the most God-like and advanced species on the planet, the end and aim of evolution, highly unique and entitled, with the physical and living world at their command. Similarly, "speciesism" is an outlook whereby one treats animal individuals according to their species status alone, rather than to their life characteristics—which involve their sentience, preference, interests, subjectivity (emotions and thinking capacities), communication abilities, and other commonalities with the so-called radically "unique" Homo sapiens species. With reason elevated to the sine qua non of moral worth, animals, consequently, are deemed to possess little, if any, moral value and are more akin to things than humans. As Singer (1975) defines the term, "Speciesism' is the idea that being human is a good enough reason for human animals to have greater moral rights than non-human animals ... a prejudice or bias in favour of the interests of members of one's own species and against those of members of other species".

Speciesism rests on two fundamental errors: first, the assumption that animals do not possess human traits to any significant degree, and second, the belief that these traits should define moral value and duties in the first place. In the circular, question-begging, and self-serving illogic of speciesism, only humans have moral status because they possess human traits—because they are humans. This is much like elephants saying giraffes are inferior because they lack tusks. Speciesism is not only a worldview and fundamental aspect of human identity, it also provides the justification for humans to enslave, exploit, and massacre other animals, whether to hunt them for sport; to poison, burn, blind, and mutilate them for "science"; or to confine and butcher them by the billions for "food." Not merely a wispy ideology, speciesism is materially institutionalized in technological systems of segregation, exploitation, and mass slaughter. The *theory* of speciesism informs the *practice* of violence against other animals, in

⁹ For scientific estimates, see Ritchie (2022)

¹⁰ For a detailed argument that such an event is unfolding.

all the nightmarish forms humans can devise. Speciesism is the central plank in the *cult of human supremacy* that prevails over a world in ruins

In addition to excluding animals and the profound moral and environmental consequences of exploiting billions of land and sea animals every year, a *second* main way to devalue animals is to grant them only indirect or partial moral status through a welfare approach that focuses on the "proper," "responsible," or "humane" treatment of other animals without questioning the alleged human right to use, exploit, capture, or confine them in the first place. Animal welfare views decry overt human cruelty of other animals, but not their exploitation per se in systems such as medical research or agriculture that are inherently cruel and oppressive.

Thus, welfarist notions such as "humane" or "sustainable" "farming" are cynical euphemisms that reinforce speciesist hierarchies and the status of animals as property, slaves, and commodities. In bold contrast, the animal rights/liberation perspective treats fellow animals as moral equals, challenges the logic of speciesism, and rejects *in toto* human hierarchies over other animals. It is not a matter of treating the nonhuman animal slaves more "kindly," but rather of abolishing all exploitative systems, dismantling the conceptual and material hierarchies of human over animals, and liberating animals from the predatory grip of human despots.

One typically finds a *third* form of devaluation of animals in environmental literature and sustainability discourse. From speciesist premises, animals are viewed in terms of *species* rather than as *suffering individuals*. Consequently, the only "moral" considerations are instrumentalist and anthropocentric objective to ensure that animals can be "harvested" as "resources" in "sustainable" ways for human purposes, while maintaining the integrity of ecosystems—a holism that Tom Regan denounced as "environmental fascism" (Regan, 1983, pp. 361–362, 396). Applying this logic to humans of course would be an appalling fascist view, but it should be no less so abhorrent applied to other animals and ecological holists shrink back from the logical consequences of their view.

Similarly, animals are often framed in terms of the "services" they provide human beings, as calculations are made in terms of what their loss would cost economies. As vital as insects, pollinators, and other animals are to the integrity of ecosystems and the human food supply (see Appendix), it is exploitative and counter-productive to view them only in such crude instrumental terms. Poignantly, Weisberg and Salzini (2023) note that, "When nonhuman animals, such as the ubiquitous panda or polar bear, are invoked in climate justice campaigns, it is typically as symbols of a threat to human survival. ... In its silence on animal oppression, the climate justice movement comes to resemble its mainstream counterparts and undermine its own commitment to justice".

The animal rights/liberation and justice views, in direct contrast, emphasize that animals have intrinsic value and the same basic rights

humans do, and for the same reasons we do. One can pursue this argument from the grounds that animals too are sentient (Singer, 1975), that they are "subjects of a life" (Regan, 1983), "persons" (Wise, 2003), or complex beings with capabilities and desires to exercise their abilities (Nussbaum, 2024). These and other approaches can be combined for a compelling argument for animal rights. In sum, we can say that animals have the *right from* human exploitation and interference, and the *right to* live autonomously in their natural habitat with their families and communities, and to exercise every interest, need, and capacity they have in the pursuit of pleasure and happiness.

From government organization and mainstream media to climate justice and environmental discourse, supporters of environmental values typically *reject anthropocentrism, but not speciesism*. This is because they adhere to so-called "enlightened anthropocentrism" premised on two key ideas: (1) humans and the earth are interdependent, and the earth and its resources must be protected and used in sustainable ways; (2) we should adopt ecological practices for present and future human benefit. Generally, "biocentric" or "ecocentric" views are upheld as the antipodes to anthropocentric views in any form, given their rejection of human-centered outlooks and emphasis on the intrinsic value of the natural and living world. Yet another critical alternative to human supremacism, often overlooked, is the *anti-speciesist outlook* that informs animal rights and ethical vegan philosophies, often in opposition to positions such as deep ecology.

Anti-speciesism absorbs ecological views in a deeper holistic view that assigns full moral value to animals and rejects human supremacy in whatever form, including "enlightened anthropocentrism." While this version of anthropocentrism and the sustainability focus accompanying it is a definite advance beyond crude anthropocentric views that nature is an infinite cornucopia of resources to mindlessly plunder without limits or consequence, anti-speciesist and animal rights views effect a qualitative philosophical leap and paradigm shift beyond the limited boundaries of humanism *in any form*. Social justice humanists and environmental anthropocentrists find this move difficult or impossible to take but is nonetheless essential for a just transition to a viable future society.

A critical reading of climate justice declarations

Speciesist biases and exclusive focus on human rights are prominent across a wide spectrum of writings on climate justice, including state and government documents, academic analyses, and climate justice declarations and manifestos. ¹² In these latter writings, circulated mainly online, one can find scattered references to species

¹¹ On the reification of other animals as mere "meat," see, for instance, the blatant speciesism in the World Wildlife promotion of increased beef production and "sustainable beef," a concept exalted despite their list of the environmental aspects of "beef" production (https://www.worldwildlife.org/industries/beef). For an overview of the environmental and animal liberation debate and an attempt to mediate the opposing positions, see Jamieson (1998).

¹² Climate justice declarations and manifestos, such as discussed in this section, are typically circulated by the Internet, including collaborative sites such as Climate Nexus (https://climatenexus.org/climate-issues/communicating-climate-justice-collaborative/) and effectively exploit social media as a communicative and organizing too (see Andrio and Safrina, 2021). As well, climate justice groups assemble in regional and international meetings including those held simultaneous with and in opposition to annual United Nations Climate Change Conferences.

extinction, interdependence of all life, or the sacredness of Mother Earth. But even these references are vague abstractions that say nothing concrete about the inherent value, agency, and complexity of other animals. Similarly, such rhetoric rarely leads to specific proposals for respecting animal rights or even reducing their suffering in visions of a just transition to a morally advanced, truly humane, and ecological society. Behind whatever noble sentiments about sacred life one might find, lurking underneath are human supremacist views and projects.

The "People's Demands for Climate Justice," for instance, emphasizes the need for "urgent, vital, and ambitious action... [which] must center [on] people's lives and human rights, and be grounded in principles of equity and historical responsibility" (2018). 13 Similarly, the influential "Declaration on Climate Justice," from the Mary Robinson Foundation (2013) for Climate Justice, strives toward "a global climate system that is safe for all of humanity". It emphasizes "the economic and social costs of climate impacts on people, their rights, their homes, their food security and the ecosystems on which they depend" (Ibid.). For Robinson, climate justice "links human rights and development to achieve a human-centred approach" to climate change action (Mary Robinson Foundation, 2022). "Climate change is fundamentally about human rights and securing justice from those suffering from its impact" (Robinson, 2019b, p. x). Robinson (2019a) emphasized that in the concept of climate justice, "climate change and human rights coalesce around to find commonalities rather than differences". Her vision "puts people at the centre and delivers results for the climate, for human rights, and for development" (Ibid.).

Robinson references the most vulnerable countries and communities, while methodically steering clear of even minimal consideration of other species, let alone taking the larger conceptual steps toward animal rights and animal justice. There is no recognition of the need for animal rights/justice, of the impact of climate change on other species, of how factory farming undermines every human need activists champion, and the vital role animals play in the ecosystems upon which humans depend. They fail to conceive that animals have rights including environmental rights, ignore the impact of climate change on animals, and frame nature in instrumental terms (Ibid.). Understandably, she promotes "the right to development" (Robinson, 2019b, p. 3) in poor nations such as Africa and seeks to "marry the standards of human rights with issues of sustainable development" (Ibid.) But just as speciesist assumptions go unquestioned, so too do destructive concepts like development, modernization, and progress, consummate capitalist values that are the driving forces of colonialism, extractivism, and the planetary crisis climate activists seek to resolve.

Just as blatant an exclusionary humanist stance informs the Berlin Declaration on Climate Justice (2018). This proud statement from self-described liberals is emphatically "Human-centred ...Human wellbeing must always be at the heart of liberal policy-making. We must, therefore, primarily consider (and tackle) the implications of climate change on human flourishing." This outlook leaves out the right of animals to enjoy their flourishing and is self-defeating in its piecemeal

understanding and uncritical reproduction of anthropocentric and speciesist mindsets.

A parallel declaration from the "Peoples' Summit on Climate, Rights and Human Survival" (Peoples' Summit: Climate Rights4All, 2018) aims to "place human rights at the core of climate activism to demand immediate, bold, people-powered and human rights-consistent action of unprecedented scale to address the climate crisis." The declaration has verve and eloquence, it is cognizant of the depth and interconnectedness of ecological and social problems, and it grasps the need for "transformative change" of our economic, social and political systems. But it does not address the need to revolutionize agriculture and eliminate the systemic human exploitation of "farmed animals." It demands a broad-based alliance politics, "mobilizing the most powerful, united and diverse Peoples' movement ever assembled," but a movement, alas, not diverse enough to include the global animal rights/liberation movement and the tremendous contributions it can bring to social justice and environmental struggles.

The Climate Justice Alliance, 14 formed in 2013 was built by and for oppressed workers, multiracial groups, and "frontline" organizations and communities. It seeks strategies that "can point a new direction for the grassroots climate movement as a broad, multi-sector, transformative front." They seek "a Just Transition away from extractive systems of production, consumption and political oppression" with a politics that places "race, gender and class at the center of the solutions." Like so many others, this articulation of a diverse alliance politics makes no mention of animals and the need to include animal rights issues and activists under its broad umbrella. The group seeks "to challenge the extractive economy that is harming people and ecosystems," without even a cursory mention of the escalating Animal Holocaust and the impact of an extractive economy on habitats and accelerating rates of species extinction. 15 Similarly, the collective understands that "Nature and humans are interdependent" and insists that "climate crisis solutions honor human rights and the rights of nature." Astonishingly, but by no means atypically, this fails to include other species in the sphere of rights and either ignores animals completely or reductively subsumes them to insensate "nature."

More promisingly, an elite team of economists, scientists, and policy advocates advanced an empirically grounded vision of "Earth4All" for the 21st century. Spelled out in their widely acclaimed book, *Earth for All: A Survival Guide for Humanity* (Dixson-Decleve et al., 2022), they diagnose a deep crisis in earth systems as humanity crosses multiple planetary boundaries while plagued by deep inequalities and unsustainable food and energy systems. Earth4All lists "five extraordinary turnarounds" necessary for change, including making food systems healthy for people and ecosystems—but while calling for "sustainable levels" of meat consumption and without mention of the enslavement of animals in farming systems (Earth4All, 2023). Along with social

¹³ Hereafter in this section, all emphases on "human" discourse in quotes are mine.

¹⁴ https://climatejusticealliance.org

¹⁵ This is certainly a provocative and contested application of the term to the human extirminism of other species, and it is difficult to find another word that can capture the true enormity of animal extirminism. In fact, the term "holocaust" originally stems from the "burnt offerings" of sacrificial animals (see Patterson, 2002).

regeneration, "the invisible, internal world within each of us needs regenerating too." The call for "compassion and solidarity for ourselves and for each other" excludes the same for the billions of animals victimized by capitalist exploitation. Their definition of "we" means, simply, "all people and peoples" (Dixson-Decleve et al., 2022, p. 1). They thereby preclude a wider definition of life and moral concern covering all beings who comprise and sustain the vast biocommunity on which humans depend. In short, the compassion, moral regard, and vision of Earth4all is sadly limited to "human wellbeing within planetary boundaries" (Ibid, p. 8).

The Earth4all analysis focuses on "two deeply intertwined systems - people and planet" (Dixson-Decleve et al., 2022, p. 3). But the call for "interconnected work and thinking" omits a crucial third factor necessary to understand current ecological and social crises—the exploitation and plight of billions of animals ensnared in systems of human oppression. Moreover, this dual outlook of "people and planet" paradigmatically subsume animals to the physical world. Every such reference to humans and nature, or the social and natural worlds, fails to factor nonhuman communities into a dynamic three-fold system interdependencies that involve humans, animals, and the physical world. The closest mention (but not detailed analysis) to a comprehensive holism can be found in Article 3 of the Bolivian Law of Mother Earth, drafted and passed in 2010 as one of the most radical environmental bills in history and not coincidentally an Indigenous people's document. Quite beautifically, it defines the earth as "the dynamic living system formed by the indivisible community of all life systems and living beings, who are interrelated, interdependent, and complementary, which share a common destiny" (see World Future Fund, 2010).

One of the more radical climate activist groups, Extinction Rebellion, is painfully hidebound in its exclusion of animals. The international group believes that "Ending domination over nature goes hand in hand with tackling all forms of domination and hierarchy" (Yamin, 2019), but somehow overlooks the domination of human over animals and its profound social and ecological consequences. "The struggle for climate justice is also the struggle for racial, gender, sexual and economic equality" (*Ibid.*), a group leader states, in the belief that species equality and animal justice is irrelevant to climate justice and the struggle to salvage a viable future for the privileged human species. Extinction Rebellion seeks to build bridges of solidarity between Northern and Southern peoples but cannot imagine compassionate *transspecies solidarity* with other animals who are also exploited by capitalism and suffer severe effects of climate change.

As several more-broad-minded activists pressed Extinction Rebellion to integrate animals and the impact of agribusiness and meat consumption on climate change, group leaders obstinately rejected the proposal, thereby leading to a breakoff group of activists named Animal Rising (formerly Animal Rebellion). This UK-based group employs the same direct action and disruption tactics as Extinction Rebellion, but with the aim to prioritize animal rights issues and to connect them to urgent human concerns. They stress the environmental impact of animal farming and urge governments to defund meat, dairy, and fishing industries in favor of a just and sustainable plant-based future. In a leap beyond parochial humanist "people-first" boundaries, Animal Rising emphasizes that corporations and world leaders cannot meet the Paris climate targets and secure

net-zero emissions without addressing that our food system is destroying the planet. Guided by a comprehensive anti-speciesist vision, they seek to help "repair our broken relationship" with other animals and the natural world. 16

In addition to highlighting the systemic social and ecological consequences of speciesism and human exploitation of animals, we find a second major advance in understanding the roots of the climate crisis with radical social and political theories. Anarchists, socialists, and much of the climate justice movement grasp the fundamental fact that exploitation, violence, colonialism, extractivism, unfettered growth, and ecocide and extirminism are embedded in the DNA of capitalism, and thus the path ahead lies in transcending not reforming this system. Two such visions, well-worked out in theory and philosophy but not in actual practice, are ecoanarchism and ecosocialism. Both approaches are miles ahead of mainstream reformist politics, but, as well-known, the pathology of humanism prevails in stodgy form throughout broad sectors of the radical left. Marxists in particular have drunk deep from the modern wellspring of anthropocentrism and speciesism, but that has been changing in productive ways.17

The platform of the "System Change Not Climate Change" (SCNCC) group, for instance, is premised on the ecosocialist principle that the climate crisis is the inevitable result of capitalist systems rooted in profit and growth imperatives, but it reproduces Left hypocrisies and humanist dogmas. In their statement of goals, they write: "SCNCC envisions a climate justice movement united with the labor movement, First Nations/Indigenous and other struggles for

¹⁶ To call attention to the climate crises and plight of animals these and other groups use controversial direct action tactics such traffic blockages, gluing themselves to buildings or arena floors during sports events, dousing museum pieces with paint, and mass arrests. Such provocations do achieve their goal of capturing public attention and increasing media coverage on climate and animal issues, but while they provoke awareness in some and inspire new recruits and gain celebrity support, often members of the public resent disruption of their lives or grow more alienated from the issues activists try to highlight. For a poll on divided public responses, see YouGov (2019); for an overview of Extinction Rebellion tactics, public and political criticism, and the group's response, see Taylor (2020); for a lucid assessment of radical climate activism, see Yuong (2024).

¹⁷ The standard Left rejection of animal rights and valorization of humanism is changing as scholars such as John Bellamy Foster uncover dimensions of Marx's writing that directly speak to ecology and capitalist-nature relations and, to a lesser extent, capitalist exploitation of animals. These new interpretations also qualify or question the extent to which Marx was a productivist and dualist in his views of the natural world and nonhuman animals. There is momentum among left theorists to grasp linkages between capitalist domination and nonhuman animal oppression, and to merge Marxist theory, ecology, animal liberation, and socialist politics into a vibrant new paradigm and politics (see, for instance, Benton, 1993). There is a parallel shift among animal liberationists to move away a single-issue moral focus to broader holistic understandings of social dynamics and overlapping forms of human and nonhuman animals (see, for instance, Nibert, 2002). Although anti-speciesist views are still marginal among the radical left, hopefully the linkage of antispeciesism and anti-capitalism-from both left and animal liberation communities—continues to flourish in both theory and practice

liberation to create an alternative to the upside-down world shaped by fossil fuels and corporate power." A noble statement indeed, but it leaves out one of the most significant struggles for liberation of the last 50 years—animal liberation—and how it could be integrated into a broad alliance of groups "united against the ecological destruction spawned by capitalism." "Movements for sustainability and against ecological degradation," they write, "must be led, to the fullest extent possible, by those who are most directly affected and who therefore have the highest stake in the outcome of the struggles we engage in." In other words, people, humans, *Homo sapiens*. Humans enter the future through the front while animal-commodities are dragged in chains and cages through the back. But clearly, millions of species and billions of suffering animal individuals are also "directly affected" by capitalist exploitation, and they too have the "highest stakes" in the outcomes of climate justice struggles.

SCNCC proudly proclaims its opposition to "all [sic] forms of oppression including racism, sexism, xenophobia, homophobia and transphobia." This is quite the impressive list of enlightened sensibilities that decries the many prejudices that inform systems of oppression. Unfortunately, it leaves out speciesism and the catastrophic real-world impacts of human supremacy that drive the climate emergency, the animal holocaust, and the sixth mass extinction crisis. Their reference to "the ecological destruction spawned by capitalism," like countless others, makes no mention of factory farming and meat consumption as major contributors to environmental problems and climate change. And their allegiance to "a society that is free, just, and equitable, that fosters human creativity and productivity while healing the rifts generated by capitalism among people and between human society and the earth's ecology," says nothing about the rifts between humans and other animals, the creativity and amazing complexity of animals, as well as their own urgent needs for freedom from human exploitation—white, male, capitalist, postcolonialist, ecosocialist, feminist, or otherwise!

On the origins of anthropocentrism, speciesism, and hierarchy

The biases, discrimination, injustices, and moral inconsistencies of humanism lead to a shallow holism and pseudo-universalism that does not extend beyond provincial and bigoted human boundaries, as if humans were not deeply embedded in a planetary web of life. Consequently, climate justice—this alleged "movement of movements"—seems oblivious to two of the most dramatic intellectual breakthroughs in the last 60 years: the *philosophical-moral revolution* of animal rights/liberation and the *scientific revolution* of cognitive ethology which, building on Darwin's (2009) pathbreaking insights, documents the complexity of animals' cognition, emotions, behavior, and communication. ¹⁸ Climate justice proponents demand "epistemic justice" and extol the plurality of non-Western ways of knowing and being but are blithely unaware of the amazingly complex and diverse forms of animal intelligence and cultures. Humanists are blind to the

salient similarities in the plight of humans and animals and fail to show solidarity with their extreme oppression.¹⁹

Moreover, the call for a pluralistic and "intersectional" alliance politics among climate justice movements is insufficient to the extent it ignores or excludes animal rights/liberation and ethical vegan groups that typically struggle on numerous fronts-humans, and animals, the environment, justice generally, and, with the more radical animal liberationists, anti-capitalist and anti-statist as well. Many animal rights groups are political, diverse, and open to or involved with social justice groups. Animal liberationists and anti-speciesist vegans would greatly enliven the theory and politics of the climate justice movement, by giving more philosophical depth, greater diversity, and stronger numbers. Unfortunately, the speciesism prevalent throughout social justice movements generally leads proponents to ignore the vital historical, social, philosophical, and political perspectives that stem from I call the "animal standpoint" (see Best, 2014 and below). Consequently, they dismiss or marginalize animal advocates, holistic vegan perspectives, and the urgency of animal liberation for human and earth liberation.

Animal/vegan advocates have invaluable contributions to make to the goal of a just transitions to sustainable societies. Animal advocates understand relations such as between animal cruelty and domestic violence; forms of oppression such as speciesism, patriarchy, and racism; the objectification of meat and of women in images and ideology; the enslavement of animals in early agriculture and the enslavement of peoples in the 16th–19th centuries, the destruction of animal habitats and the spread of pandemics; the extermination of animal species and the disruption of ecosystems vital to life (see Appendix); and countless other connections often hidden from humanist purviews.²⁰

Among the broad range of critical contributions of animal and vegan standpoints, I will consider two. First, I emphasize the powerful insights the animal standpoint has on the origins and evolution of hierarchy, dominator societies, anthropocentrism, overlapping and reinforcing systems of oppression including patriarchy, racism, and colonialism. And although animal standpoint theorists analyze human-animal relations in *positive* forms—such as the crucial role animals have played in shaping human lives, from the earliest primal reverence of animals to the ways they stimulated human cognitive development and give love and support (see Mason, 2021; Shepard, 1998), a major focus of their analyses and I focus below on the innumerable *negative* social and psychological consequences of human alienation from and domination over other animals. Second, in the next section, the animal standpoint exposes the catastrophic

¹⁸ For a feminist critique of Darwin and his era's sexist assumptions about how female animals actually behave, see Cooke (2023).

¹⁹ Weisberg and Salzini (2023) articulate these parallels well: "Just as human families, communities, and societies in the global south are being torn apart, destroyed, and wiped out because of climate change, so are animal families, communities, and societies. Just as human beings are subjected to hideous suffering because of climate change, including starvation, disease, forced migration, and homelessness, so are other animals. Just as human beings are ruthlessly exploited and enslaved by big business, so are other animals".

²⁰ For illuminating analyses of how habitat destruction and climate change contributed to the degradation of ecosystems and allowed for new diseases such as Zika, West Nile, Lyme, and the Coronavirus, see Lustgarten (2020) and Vidal (2020).

social and ecological consequences of global industrial farming and worrying spikes in world meat consumption.

Like many theories, the animal standpoint, in grand narrative form, begins with the monumental historical transition from huntergatherer or foraging cultures to agricultural society with farming and pastoral cultures, emphasizing that the changed human-animal relations were fundamental to the origins and development of dominator societies. Some ten thousand years ago, in the transition from the Pleistocene to the Holocene, throughout the eastern Mediterranean and the Near East, humans initiated a shift from hunter-gatherer cultures to agricultural society premised on *the domestication of plants and animals*.

In agricultural societies, for the first time, systems of hierarchical domination emerged, involving human over human and human over nature and other species. Having lived in partnership societies for 95% of their history, humans now interacted in dominator societies rooted in inequality and power systems. In the transition from foraging to farming, the cultivation of crops for immediate consumption yielded surplus production and societies became larger and more complex. A state apparatus emerged, led by kings, priests, warriors, and functionaries, to control production, trade and tax goods, and to advance and protect territories and power. Governed by men and their patriarchal ideologies and male Gods, women were devalued and reduced to breeding and domestic functions. As higher levels of production spawned economic and population growth, agricultural societies expanded aggressively into Europe by 9,000 BCE, as well as to east Africa, India, and other regions and by 5,000 BCE.

Just as the status of women changed radically with patriarchy, so too did that of animals as the animistic and sacred worldview of primal cultures gave way to the anthropocentric and alienated and objectifying worldview of dominator societies. In emergent farming cultures humans began not only to take from nature, but also to transform it, cultivating fields of wheat and barley, raising small animals such as fowl and pigs for food, and herding large animals such as cattle and sheep in once grassy fields. Where hunter-gatherers saw themselves simply as part of an inherently productive environment, farmers regarded their environment as something to manipulate, tame, and control. They confused having a partial autonomy from nature with radical autonomy, and eventually even to fear, loathe, and wage war against it. Unlike the spiritual and unifying cosmos of primal peoples, agricultural society defined culture in rigid opposition to nature, and humans as radically different from animals. Reason and civilization were counterposed to brute beasts and the chaos of nature. Primal kinship relations with animals gave way to anthropocentric worldviews that stressed the singularity of humans and framed nature and animals as mere objects, resources, and commodities to be exploited for human purposes. One cannot exploit other beings if they are kin rather than Others.

The advent of agriculture marked a profound alienation of human beings from other animals and initiated a *pathology of dominating nature*, expressed in anthropocentric worldviews, that persisted in the ancient and medieval eras and reached full fruition in modernity. Arguably, the first conceptual oppositions that inform the logic of domination are the dichotomies between human/animal and culture/nature, where each trace wholly separate ontological realms divided by inert nature and brute beasts on one side and rational human beings on the other.

The human/animal dualism that underpins speciesism enables not only the subjugation of other animals but also human beings themselves. Because the human/animal opposition parallels and informs the dualisms that underpin patriarchy, racism, and colonialism, it arguably predates and informs these other hierarchical systems. ²¹ By constructing human identity in opposition to animals, by elevating reason as the quintessence of "human," and by relegating animals to *the moral basement*, as the nonrational and nonhuman *Other*, speciesism provided key conceptual tools and foundations for dehumanizing women, people of color, and non-Western ethnicities and cultures—all stigmatized as irrational, subhuman, mere "beasts" or "animals" lacking reason and the niceties of "civilization" (see Spiegel, 1997; Patterson, 2002).

The animal standpoint is vital for a historical understanding of how commonalities of oppression—such as link sexism, racism, and colonialism—are rooted in and reinforced by speciesism and the domination of human over animals. The discrimination, prejudice, violence, and pathologies informing "white supremacism" and "male supremacism" are deeply implicated in human supremacism and the exploitation and massacre of animals. Creating the category of the animal other, animalizing and dehumanizing entire peoples, is *the first step* toward treating them like animals in practice, as colonialists did in their encounters with indigenous peoples by denouncing them as "savages," and "barbarians" in need of civilization.²² *Before swordplay, there is always wordplay.*

Thus, a key insight from the animal standpoint is the recognition that the human/animal and culture/nature dualisms underpinned other oppositions in hierarchical societies, and speciesism deeply informed sexism, racism, and colonialism. One key line of critical analysis turns on the distinction between the sedentary cultivation of

²¹ In their classic work, Horkheimer and Adorno (2007) show that the domination of nature and animals led to the domination of human over human and the repression of the internal subjective world within each human. The domestication of nature and animals led to the domestication of humans themselves, once subjected to labor, rule from above, laws, punishments, inculcated social mores, and the repression of instinctual drives. As humans increase their "control" of nature, their psyches and social worlds become one-dimensional, increasingly focused on employing "instrumental reason," scientific and technological manipulation, toward the goal of subjecting the totality of the living world to human control. For Adorno, "The establishment of total rationality as the supreme objective principle of mankind and the "blind domination of nature" has its "most obvious and tangible expression" in "the exploitation and maltreatment of animals" (cited in Maurizi, 2011).

²² As Srinivasan and Kasturirangan (2016) note: "The idea of human wellbeing embedded in developmentality goes along with the zoöpolitical relegation of those peoples and ways of life that do not meet the benchmarks of development as inferior and in need of the 'improving' care of development". Relegating human groups to subhuman/nonhuman animals, in other words, is a key precondition of Eurocentrism and colonialism, given that developmentality stems from the dualistic logic (human/animal) of human exceptionalism, specifically of a white European kind. Development is about amplifying "human" values believed to be lacking in "savage" and "uncivilized" peoples in need of civilized upliftment by extractionism and "development." Thus, they argue, "an effective critique of development will necessarily have to address the zoöpolitical logics that underpin anthropocentrism" (Ibid.).

crops (farming) and the domestication and herding of large animals by nomadic peoples (pastoralism). The analyses of ecological historians and social theorists such as Alfred Crosby, Jim Mason, and Jeremy Rifkin locate key roots of dominator societies in the first hunter-herder cultures of the Kurdish hill country of northern Iraq and the Middle East, centers of large-animal domestication, including cattle, horses, camels, goats, and sheep. Throughout the world, they find, herding peoples share an obsession with their animals, the pastureland needed to feed them, the conquests needed to sustain their parasitic cultures, as well as property and money (the words "cattle" and "money" share the same roots, and as the Arvan word for "warfare" translates into "the desire for more cattle"). Herder cultures are uniquely expansionistic, fierce, and militaristic and their values infect whole cultures. Rifkin traces a direct lineage from early hunters to herders to later warmongers and colonialists. Throughout history, the exploitation of animals was central to social expansion, developing economic systems, and amassing profit, especially with global capitalism (see Nibert, 2013). Although speciesism, like patriarchy, predates capitalism, it is deeply imbricated with it, and with patriarchy and racism as well.

Factory farming, ecocide, mass extinction, and the animal holocaust

A second key contribution of animal rights and vegan proponents involves the critical analysis of the global system of factory farming of animals for meat consumption that emerged after the second World War and spread globally (see Mason and Singer, 1980). With roots in the 19th century slaughterhouses whose disassembly lines of cutting up animal bodies influenced Henry Ford's automobile production lines (see Rifkin, 1993). These systems of "industrial" or "factory" "farming," often referred to as "CAFOs" (concentrated animal feeding operations), view sentient beings as mere things and treat them accordingly, confining them to cramped pens and cages suited to maximal production of profit over consideration of minimizing animal suffering. Also called "agribusiness" to note corporate domination of farming at the expense of small-scale, rural, or family farming, these prisonhouses and hellholes of animal exploitation continue to expand on a global level as power and control is concentrated in just a few corporate giants such as JBS of Brazil, Tyson Foods in the U.S., and the WH Group of China (see Winders and Ransom, 2019).

Animal advocates document how factory farming and global meat production is a principal cause of major social and environmental problems, a key contributor to the climate crisis, and a veritable Holocaust involving the massacre of hundreds of billions of animals each year. Animal rights and vegan advocates establish that animal-based agriculture and global meat consumption is incompatible with climate justice goals such as clean air and water, healthy forests, habitat preservation, flourishing biodiversity, and a planet that remains within safe operating boundaries. As well, these perspectives are vital to social goals to improve health, curb diseases and pandemics, increase equality, reduce poverty and hunger, bolster food security, and build truly just and sustainable societies. Animal rights and vegan perspectives illuminate a key reason for inadequate climate solutions given that speciesism that underlies and perpetuates factory farming and meat consumption (see Almiron and Tafalla, 2019).

To truly appreciate the analytical, moral, and political deficits of humanism and social justice movements generally, consider the fact that 92.2 billion land animals are slaughtered annually for human consumption, and as many as 124 billion farmed fish are killed each year (Mood et al., 2023).²³ Death is the sole blessing to the "farmed animals" raised in cramped cages, pens, and other systems of intensive confinement. There they live in constant discomfort, pain, and the worst forms of hell humans can devise. Those with a shred of empathy and a functioning moral compass should regard this carnage as a profound moral issue and top world priority to end. And yet when "progressive" humanists do engage the horrors of factory farming and slaughterhouses, such as one finds in venues such as The Nation, they focus on the treatment of (mostly undocumented) workers who are hyper-exploited in miserable and dangerous conditions (see, for instance, Olsson, 2002).²⁴ Incredibly, despite this wretched treatment of humans, such journalistic exposés typically say nothing about the far worse exploitation, torture, and mass killing of animals—as if workers were assembling—or rather dissembling—furniture rather than living, sentient, and intelligent beings.25 Similarly, environmentalists, at best, underscore the ecological impacts of factory farming, but ignore the suffering of other animals.

Agribusiness—large multinational systems of meat and dairy production—has staggering social and environmental consequences. After the energy sector, which produces two-thirds of GHG emissions, agriculture is the largest producer, accounting for a third of all global heat-trapping gases (Crippa et al., 2021). Of this total, livestock production, especially cattle generates a third of food sector emissions and a total global GHG emissions that range from 14.5% on a low estimate (Gerber et al., 2013) to 57% on a high estimate (Xu et al., 2021). Incredibly, the livestock sector releases more GHGs than the entire transportation sector combined, including all cars, planes, trains, and boats around the world, and exceeds the emissions

²³ For dramatic representation of this Holocaust, see the Animal Kill clock: https://animalclock.org. On one estimate, 900,000 cows, hundreds of millions of fish, 202 million chickens 11.8 million ducks, 3.8 million pigs, 1.7 million sheep, and 1.4 million goats, are massacred each day, and each minute 140,000 chickens are killed for human food consumption (Roser, 2023). The largest meat company, JBS, has over 400 branches in 15 countries, and alone "slaughters up to 14 million birds, 115,000 pigs, 75,000 cattle, and 16,000 lambs to produce 7,000 tonnes of meat" each day. The second largest meat corporation, Smithfield, slaughters 36,000 pigs daily, and the third, Tyson Foods, kills 7.8 million chickens, 70,000 pigs and 22,000 cattle every day (Meat Atlas, 2021).

²⁴ The left-leaning magazine *The Nation* has gone so far as to publish flippant attacks on vegetarianism; see for instance Lazare (2007). It is representative of the typical humanist/speciesist biases of mainstream media (print, radio, TV) and "alternative" media generally. Among the larger print media companies, *The Guardian* has excelled in reporting on the climate crisis; in particular, George Monbiot is a power voice who also addresses animal issues sympathetically (see his work at https://www.theguardian.com/profile/georgemonbiot and https://www.monbiot.com). Veganism and animal rights issues, nonetheless, are widely represented on social media and the Internet. 25 For a powerful holistic account of how industrialized farming exploits both humans and nonhuman animals, with emphasis on the unspeakable violence inflicted on "farmed animals" and the psychological impacts on slaughterhouse employees, see Eisnitz (2009).

produced by the world's largest national economy, the United States (Bailey et al., 2014). Equally astonishing, the world's top five meat and dairy corporations produce more annual GHG emissions than ExxonMobil, Shell, or BP (Grain, 2018).

The globalization of factory farming is the principle, if not a major contributor to, a host of environmental problems, including deforestation, desertification, habitat destruction, air and water pollution, resource scarcity, and climate change and species extinction. Besides contributing a third or more of total GHG emissions, animal agriculture depends on converting natural ecosystems to croplands and pastures, and is responsible for 70% of biodiversity loss and 80% of global deforestation. Excluding Antarctica, one-quarter of the earth's landmass is used as pastureland for beef production. In addition to CO2, livestock production is a major producer of other GHGs including methane (around 30 times more potent than CO2 and the second largest contributor to global warming after carbon dioxide) and nitrous oxide (about 300 times stronger than carbon dioxide).

In this system, crops are grown principally to feed livestock, rather than to feed humans directly, and thus are an extremely inefficient use of land, water, and food—a problem that will become even more critical to food security as global temperatures rise. Resource and land scarcity, moreover, have emerged as key causes of conflicts, wars, and displacement (see Klare, 2002; Klare, 2012). The insatiable appetite for meat—whether derived from Asian wet markets, African bushmeat, or factory farms—is a principal cause of zoonotic diseases, spillovers, and plagues like Ebola, West Nile virus, bird-flu, and COVID, which in just a few years killed millions of people worldwide (see Vidal, 2020; Lustgarten, 2020, and Msemburi, 2023). Consumption of meat and dairy products is also a key contributor to several human health crises including obesity, heart disease, and cancer, along with the immense social costs of their treatment. Moreover, the overuse of antibiotic overuse by international meat and dairy producers in order to control the diseases of confinement and to maximize growth and productivity of animal captives has weakened the human immune system and caused antibiotic resistance unable to compete with emerging superbugs. A recent comprehensive report found that overuse of antibiotics has led to the deaths of one million people and over \$400 billion dollars in economic losses each year. Without immediate action, the human death toll linked to factory farming superbugs is on course to double to 2 million by 2050 (World Animal Protection, 2023).

With growing human population numbers, rising incomes, and steady increases in government funding of livestock industries, the problems that stem from agribusiness and meat/dairy consumption are only worsening. Worldwide meat consumption has more than doubled in the last two decades, especially in the developing world, and is expected to rise by 14% in 2030 and to nearly 80% by 2050 (Ranganathan et al., 2016). 2050 is also the year the UN projects that food production will need to increase 70% compared to 2009 in order to feed a world population of 9 or 10 billion people (Food and Agriculture Organization, 2019). Given the fact that ruminants, above all beef, are responsible for up to half of GHG emissions from agricultural production, "reducing its consumption will likely be an important element to limiting the rise of global temperatures to 1.5 or 2 degrees Celsius" (Ranganathan et al., 2016). But rather than promoting reductions in meat and dairy consumption government subsidies of the meat/dairy industries continue to climb. The Global Meat and Dairy Complex receives the largest state and private subsidies and these are on track to soar to \$1.8 trillion a year by $2030.^{26}$

Thus, any proposal for a "just transition" to a sustainable society that involves animal-based rather than plant-based foods will fail, resulting in increased land use, more intensive resource consumption, and higher GHG emissions guaranteed to blow past the ominous 2 degrees Celsius benchmark by 2050 within decades, leading runaway global heating (Ritchie et al., 2022). As vegan groups have emphasized for over half a century, dietary choices have a profound impact on the environment, for better or worse. Global emissions from animal-based foods are twice those of plant-based foods (Xu et al., 2021). Compared to an animal-centered diet, a plant-based diet "reduced per person agricultural land use and production-related greenhouse gas emissions by around 50 percent" (Ranganathan et al., 2016; Xu et al., 2021). A major study found that if the world reduced its meat and dairy consumption by half and consumed instead plant-based alternatives, "net reduction of forest and natural land is almost fully halted and agriculture and land use GHG emissions decline by 31% in 2050 compared to 2020" (Kozicka et al., 2023). The science shows unequivocally that "vegan and vegetarian diets [are] associated with the greatest reductions in greenhouse-gas emissions" (Willett et al., 2019); consequently, a global shift from animal-based to plant-based foods "could make a significant contribution to a sustainable food future" (Ranganathan et al., 2016).²⁷

The perpetuation of the global meat and dairy industries and the animal Holocaust is the most vivid example of human madness, irrationality, and injustice in the modern world. Underpinned by both speciesism and capital profit imperatives, it nonetheless clearly demonstrates the *common interests* of small farmers, the poor, people of color, workers, health advocates, environmentalists, and animal rights and vegan activists. As an example of a holistic integrative approach, the Centers for Disease Control and Prevention (CDC)

²⁶ These astronomical could go to benefit small farmers, promote democracy and equality, improve nutrition and health, and restore ecosystems. Instead, a UN report found, nearly 90% of the \$540 billion in annual global subsidies of agribusiness operations is "harmful" to human health, small farmers, the environment, and the climate (Food and Agriculture Organization, 2021). That is to say, such irrational subsidization policies impoverish small farmers, deepen social inequalities, harm human health, create resource scarcity and hunger, destroy soil with chemical fertilizers, spread toxic pesticides, convert forests and grasslands into farms and grazing lands, increase habitat destruction and while decreasing biodiversity—to say nothing of the suffering and death of tens of billions of animals, and all of this is done openly and actually *incentivized* to continue.

²⁷ A plant-based diet results in significantly reduced losses of land, water, and biodiversity (Scarborough et al., 2023). Spared agricultural land could be restored to forests, ecological declines would be more than halved, and impacts on natural resources such as water usage and biodiversity would decline significantly. Reductions in meat and dairy consumption will also reduce methane gas and nitrous oxide emissions, the second and third largest contributors to global warming after carbon dioxide (Humphreys, 2014). Thus, top world priorities must include not only a shift away from fossil fuels in the energy and transportation sectors, but also a break from animal-based foods models in the agriculture sector. For a comprehensive critique rethinking of animal agriculture, see Kassam and Kassam (2020).

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organization, "One Health," is premised on the awareness that "the health of people is closely connected to the health of animals and our shared environment"; it thus "work[s] closely with human, animal (domestic and wildlife), and environmental health partners" from regional to international levels.²⁸ As well, there are forward-thinking food activist groups connecting human, animal, and environmental issues. One such approach (promoting healthy if not vegan food) seeks "A just, equitable and sustainable food system is one that provides physical, economic and community health; regenerates, protects, and respects natural resources and animals; and ensures that all people live with dignity and freedom from oppression and exploitation" (Farm to Table).29

These kind of alliances can lead humanity out of the depth of the planetary crisis. The systemic toll of agribusiness, the emergence of food justice politics, human and animal rights groups and environmentalism can provide a key plank in the foundation for a multifaceted justice struggle and an alliance politics seeking to end industrial farming and astronomical levels of global meat consumption in favor of sustainable farming systems, healthier diets, and restored ecosystems. A just transition to sustainable farming would benefit small farmers and local communities in substantial ways, but there must also be a just transition and "Green New Deal" for our fellow species (Hatfthorsonn, 2019; also see Just Rural Transition, 2023).

Animal justice and multispecies relations

Whether one considers the "Bali Principles of Climate Justice" (2002), the Durban "La Via Campesina Declaration" (2012), the "Declaration on Climate Justice" (2013), the "Peoples' Summit on Climate, Rights and Human Survival," or "Science for the Peoples' New Deal Campaign"; whether the manifestos come from youth, women, people of color, workers, ecosocialists, academics, or what have you, the emphases are invariably human-centered. They thereby exclude substantive mention of the Animal Holocaust, the human and ecological consequences of the animal-industrial complex, and the crucial role animal liberation and vegan groups could play in a just transition to ecological society.

The animal liberation movement is a social justice movement like any other, albeit one led by humans on behalf of other species. Animal injustice involves the wrongdoing of human violence, exploitation, and domination over their lives. Animal justice too is an environmental justice issue given that humans have disrupted, polluted, set to fire, or destroyed the habitats animals require to live and flourish. No different from humans, animals too need a "safe, clean, healthy, and sustainable environment" as necessary for "the full enjoyment of all [animal] rights, for present and future generations" (United Nations, 2022). Because animal species too are gravely impacted by global warming and ecosystem collapse, they are deserving of climate justice as well.

For over two millennia, Western philosophy, religion, political theory, and legal systems have been predicated on the dualistic logics that erected impassible walls between human and animals. In recent

30 Rawls (1999) celebrated work, A Theory of Justice, for instance, is derivative and atavistic in its unquestioned assumption that while cruelty towards other

decades, however, scientists, philosophers, feminists, and others have dismantled the fallacious conceptual dichotomies that break the continuities of life with such devastating consequences. Recognizing minority traditions that espoused vegetarianism, species egalitarianism, and contempt for human arrogance (see Stuart, 2006), the basic premise that animals exist for human purposes was not consistently questioned by mainstream Western thought until the 1970s. Viewed as beings without reason, rights, or moral status, animals have been treated as such; they fall outside the system of justice—which defines fair treatment—because by definition humans cannot by treat "non-rational" beings unjustly.30

Modern notions of animal rights and animal justice have been based variously on appeals to sentience or preferences (Singer), personhood (Wise); subjects of a life (Regan); as well as dignity, agency, capabilities, and life projects (Nussbaum). Despite different philosophical outlooks, they all assign direct moral or intrinsic value to other animals (at times some more than others), stress the complexity of their lives, and emphasize that our similarities with other animals—like having preferences, interests in pleasure over pain and freedom over confinement—have far greater moral and legal significance than our differences.

If the 1970s and 1980s were the hey-day for philosophical discussions of animal rights, the last two decades represent a spate of new engagements with animal justice. Animal justice proponents reject humanism and speciesism; they decenter the place of humans to focus on the "more-than-human world" and urge recognition of our pressing obligations to other beings. For theorists like Nussbaum (2024), grounding arguments for animal rights and justice in sentience is insufficient because, as cognitive ethologists have stressed, animals have far more complex needs, interests, and capacities to satisfy and exercise; like humans, they need not only to live, but to flourish in a good life. Consequently, humans act justly to other animals when they respect and protect their lives, and injustices to animals demand redress.

In his essay "Climate Injustice in a More-Than-Human World," Donoso (2023) argues that because humans have overextended their presence on earth in terms of numbers, resource consumption, habitat destruction, and impacts like climate change, their behaviors directly undermine the needs and interests of other species and constitutes a fundamental injustice of one species toward countless others. Donoso's focus is on distributive justice and the misappropriation of "the benefits that the Earth's life-support systems and its physical resources provide to sentient animals. In other words, they are misappropriations of ecological space. These are wrongs against animals that should be condemned, prohibited and redressed" (Ibid.). Donoso notes that all life forms are directly dependent upon earth resources; they co-exist within a common environment and have equal entitlement to it. Ecological resources and spaces must be shared and taking more than one's share at the expense of others "is not

animals is wrong, they nonetheless are not entitled to rights or justice because they are not "moral persons"—an irrelevant consideration first and foremost, https://farmtotablenm.org/about-us/ and one refuted in many cases nonetheless by cognitive ethology

See their website at: https://www.cdc.gov/onehealth/.

only immoral, but unjust. It is immoral because it wrongs both human and nonhuman animals by imposing direct harms on them without justification nor redress. It is unjust because it disturbs the appropriate allocation of ecological space in the planet, as required by the basic right to ecological space to which all sentient animals are equally entitled" (Ibid.). And "[s]ince no one has made a special or unique contribution to the creation of the constituent parts of ecological space," Donoso argues, "nobody has a special entitlement over these environmental goods in virtue of their contribution to their creation. In other words, all sentient animals have a symmetrical claim over the ecological space necessary for their good life (relative to the specific needs and functions of each of them). And, on pain of violating the basic right to ecological space, stringent negative duties of justice should limit the extent and intensity of human use of ecological space" (Ibid.).

The related notion of multispecies justice places greater emphasis on the diverse ways of knowing, being, acting, and communication in animal communities. In a radical leap beyond the humanist limitations of climate activists' concepts of recognition justice, proponents of multispecies justice emphasize the need to recognize animals' "own radically diverse life projects, capacities, phenomenologies, ways of being, functionings, forms of integrity, and relationalities" (Celermajer et al., 2021). Like earth system scientists, many multispecies proponents define the community of life and justice in the broadest terms: from microbiomes to oceans to forests, "the relations among and across them are all fit subjects of justice. Consequently, multispecies *in*justice comprises all the human interruptions of the functioning of this broad array of relations" (Celermajer et al., 2021).

Multispecies justice theorists inscribe human beings in the larger natural, ecological, and social content to which they belong, resulting in far more sophisticated models of human experience than liberal-humanist models.³¹ Naturally, these models require new legal and political forms "sufficiently capacious to encompass ... the multiplicity of ways of being [and] negotiating justice in ways that honor all and different points of view" (Chao and Celermajer, 2023). The breakthroughs of cognitive ethology and multispecies theory are important advances toward this task.

A world without moral boundaries: earth systems theory and planetary justice

Thus far, with global, environmental, climate, intergenerational, and animal justice concepts, we have seen significant expansions of moral and legal discourse. But the most inclusive and expansive vision of justice yet stem from the scientific world, building on both climate and animal justice concepts while applying them to the earth itself, to the physical and "nonsentient" world comprised of dynamic, interrelating, and sensitive ecological systems.³² From an emerging paradigm shift in the sciences involving earth systems/governance theory and advanced by collectives such as the Earth System Governance Project, the Earth Commission Global Commons Alliance, and Future Earth, comes the new concepts of "planetary justice."

These theories stem from concerns that humans are pushing key ecosystems to tipping points and collapse, as they have already crossed at least six of nine key planetary boundaries, including carbon dioxide levels in the atmosphere, biodiversity loss, chemical pollution, nitrogen, and phosphorus levels in waterways from factory farm runoff, and changes in land use and deforestation (see Bartels, 2023). Earth system theorists address the global social and environmental crises of the Anthropocene and strive to find "political solutions and novel, more effective governance systems to cope with global environmental change" (Future Earth, n.d.). This new discourse is interdisciplinary, combining philosophy, political theory, the social sciences, the natural sciences, and ecology with a fundamental concern with social justice and sustainability. Remarkably, previously positivistic, objectivistic, non-normative, and apolitical scientific disciplines now explicitly engage issues of ethics and justice on various levels, while incorporating normative and political concerns into their theories and policies.

As well, theories of the Anthropocene and their implications for politics are central concerns for Earth system scientists. Many view the dual crises of mass extinction and global heating to be rooted in the growth-oriented social systems and anthropocentric worldviews of the Holocene, creating crises solvable only through new post-Holocene forms of thought and politics (see Dryzek and Pickering, 2018). Within the Anthropocene, "Humans now influence all biological and physical systems of the planet. Almost most no species, no land area, no part of the oceans has remained unaffected by the expansion of the human species ... [there is] evidence today that the entire system now operates 'well outside the normal state exhibited over the past 500,000 years,' and that 'human activity is generating change that extends well beyond natural variability—in some cases, alarmingly so—and at rates that continue to accelerate" (Biermann et al., 2009). Consequently, the "Earth is now well outside of the safe operating space for humanity" and scientists stress "an 'urgent need' to develop 'strategies for Earth System management'" (Ibid.).

³¹ Many theorists, however, reject the very concept of "justice" given that it, like "rights," is a bourgeois liberal construct inseparable from capitalist values of individualism, egoism, and competition. With the risk of capitalist contamination of expansive moral and legal concepts, some multispecies theorists seek broader holistic concepts that assign equal consideration to and protection of sentient and nonsentient worlds—clearly a break from liberal-humanist individualism. Regardless, some find that extending rights and justice to other animals is a progressive advance and pathway toward institutional justice. The notion of rights important for granting animals intrinsic value and inviolable protection that cannot be traded off to competing interests and deploying expansive concepts of rights and justice to other animals is a progressive advance and pathway toward institutional justice.

³² As noted above, multispecies justice theorists extend justice to the natural world, but not as rigorously or from a scientific viewpoint. Undoubtably, both they and earth system theorists are influenced by the environmental ethics turn in philosophy specifically concepts of the "rights of nature" (see Passmore, 1974; Taylor, 1986, and Stone, 2010).

The goal of reaching a sustainable future, based on living within "earth system boundaries," thereby demands "system justice" that can "challenge inequality to ensure a safe and just future for people, other species and the planet" (Gupta et al., 2023, my emphasis). Within this comprehensive approach, "The novel character of earth system transformation and of the new governance solutions that are being developed, puts questions of allocation and access, debated for millennia, in a new light. It might require new answers to old questions" (Biermann et al., 2009). As the Earth System Governance Project states, "the integration of a planetary perspective with a normative critique of widespread injustices is a central part of [their research]" (Ibid.). Transgressing staid academic boundaries, they stress that "earth system governance is, as is any political activity, about the distribution of material and immaterial values ... [and] ... a conflict about the access to goods and about their allocation - it is about justice, fairness, and equity" (Ibid., p. 16).

Thus, the earth systems approach sees a direct connection between fair global redistribution of resources and planetary stability and sustainability. The minimal starting point for planetary justice is to move from Rawlsian state-based theories of distributive justice to broader theories of global justice and transnational interdependencies. From there, they recognize the imbrication of humans and the natural world and embrace environmental justice. Similar to Donoso's concept of interspecies justice discussed above, earth system notions of justice involve "an integrated framework that reduces the risks of global environmental change (safe) while ensuring well-being (just) with an equitable sharing of nature's benefits, risks and related responsibilities among all people in the world, within safe and just Earth system boundaries to provide universal life support" (Biermann et al., 2020).

But earth system concepts of planetary justice move beyond the human realm to formulate still more comprehensive views of justice. In the Anthropocene, where social and ecological systems have become intertwined, "obligations are owed to nonhuman entities as well. Planetary society-nature integration and non-binary system thinking stands behind our idea of a justice framework; and it is hence planetary justice, as a term, that we are using as key concept for this framework" (Biermann and Kalfagianni, 2020, my emphasis). Thus, this approach rejects the traditional dualism between human/animals, criticizes speciesism, incorporates new theories of "interspecies" or "multispecies" justice, and thereby advances far beyond the parochial humanism and anthropocentric biases of the climate justice movement.

As Hockey and Robeyns (2020) note, "It is perhaps no surprise that the human-rights approach, while it can generate significant implications about issues of planetary justice like climate change, is not immediately equipped to deal with *issues of non-human or non-sentient rights*" (my emphasis). Similarly, in their introduction a special issue of the *Earth System Governance* journal, researchers write, "The term planetary justice... encompasses traditional concerns of environmental justice but foregrounds that *the entire human and non-human world is now at stake*, not merely a locality ... [it] is concerned with *justice among humans* as well as *between humans and the natural world*... Planetary justice scholarship goes further than global justice to call for radical or profound changes to justice understandings in the Anthropocene, *critiques anthropocentricism and calls for greater engagement with the non-human world*" (Gupta et al., 2023, my emphasis).

The view that "Justice is also important in the relation between humans and nature" is still too parochial until it recognizes that "The more-than-human world should be included in decision-making" (Gupta et al., 2023). The deeper holistic view of "interspecies justice"

includes "justice that promotes Earth system stability to prevent the collapse of conditions of life for all species" (*Ibid.*); it folds "intercommunity, interstate and interindividual justice into a broad category of intragenerational justice"; and, inspired by the climate justice movement, it incorporates alliance politics,—the "concern for intersectional justice" among diverse social movements fighting interlocking systems oppression, but without neglecting the plight and importance of "the more-than-human world" (*Ibid.*).

Thus, from this perspective, science, ethics, and politics mutually inform one another, and narrow and self-defeating humanist views open to comprehensive holistic policies embracing humans, animals, and environments in one system of governance: "The Earth Commission approach operationalizes interspecies justice and Earth system stability by looking at each biophysical domain to determine how to enable stability, uphold resilience and ensure that ecological functions, and thereby the Earth system state remains conducive *for all life*" (Gupta et al., 2023). Earth system science seeks to "identify a natural ecosystem area measure (maintaining and restoring natural ecosystems on land)" and thereby, like Donoso, it "promotes interspecies justice by making 'space' for other species to survive and thrive, and halts extinction of species and loss of intact biomes" (*Ibid.*). Earth system justice thus seeks to identify key planetary boundaries, to learn how to live within them, and how to share ecological spaces with animals.³³

Total liberation: revolution in the anthropocene epoch

When one considers the evolution of moral discourse over the last two centuries, there is a clear progression in the concepts of rights and justice. The concept and application of human rights has expanded from white elites to workers, women, people of color, the LGBTQ movement, the disabled, and other oppressed or marginalized human groups. Over the past few decades, one also finds extensions of the notion of justice, evolving from within states (national) to among all states and world peoples (global), to all who suffer from environmental and climate impacts (environmental rights and climate justice), and from present to future generations (intergenerational). Moral and legal applications of justice have covered the entire scope of human existence, but recently evolved a quantum leap further to apply to

³³ Surely one could find fault with undertheorized moral concepts; reformist politics that seek insufficient change in a global capitalist system antithetical to climate justice, democracy, and sustainability; or Western biases in the focus on (re)distributive justice to the detriments of procedural, epistemic, and recognition-based concepts of justice more prominent in other cultures. These critiques point to possible deficits in the earth system approach and suggest the need for still deeper philosophical and political thinking, engaging in closer dialogue with animal rights proponents, radicals such as ecosocialists and decolonial activists, and integrating these views more adequately into a still deeper and more holistic theory of justice. Nonetheless, in earth systems writings, we see a profound leap of scientists into the normative, interdisciplinary, and political territories, engaging and integrating concerns with human, global, interspecies, and ecosystem justice into a new paradigm bursting with insights and potential to guide human society through the perils of the Anthropocene. For a critique of earth management as bringing more of the planet under human control, see Mateer et al. (2023).

animals (animal or multispecies justice) and the physical world of earth systems (the rights of nature and planetary justice).

The Holocene epoch is over, but the mentalities and institutions that stemmed from it still prevail. There is a dire need for need new theoretical outlooks, moral compasses, and a truly inclusive politics appropriate for the 21st century. We need comprehensive visions that can guide us through the existential, social, and ecological crises of the Anthropocene. With the environmental, climate, animal, and planetary justice movements, philosophers, scientists, social theorists, anarchists, ecosocialists, and activists have formulated increasingly inclusive and expansive moral and legal concepts in search of their full meaning and scope, as reason, coherence, logic, compassion, and solidarity dictates. The new visions for justice such discussed above are a promising start for a viable post-Holocene worldview, and they all contribute significantly to creating a more equal, just, and sustainable world. Needless to say, the application and practice lags far behind the theories and there are daunting political challenges in building a multifaceted global resistance movement that can ground these visions in material and institutional form.

Despite mountains of evidence, increasingly urgent warnings from world scientists, and three decades of international climate conferences—from Kyoto to Paris to COP29—facts, logic, and evidence *mean nothing* to fossil fuel industries, world nations, and capitalist elites. The climate is changing faster than we are, fossil fuel industries are escalating extraction and production, nations are missing all climate goals, the world has breached most planetary boundaries and pushed major earth systems to their tipping points, while speeding without guardrails toward 3C degrees or more warming by 2,100 and still showing no signs of slowing down (see Carrington and Taylor, 2022; Fischer, 2022, and Kühne et al., 2022).

This is a pivotal moment in earth and human evolution. The actions that humanity now collectively take—or fails to take—will determine whether our future, and that of biodiversity itself, is redeemable or tragically bleak. Catastrophic climate change is already inevitable. Difficult crises are already—quite literally—baked into the future. Extreme weather events of recent years underscore that this dystopian future is already here, *in incubo*. The only question now is just how truly terrible the decades and centuries ahead will be.

As even the UN, IPCC, and ISPBS concede, "transformative change"—a polite word for revolution—is necessary. The crises threatening the future of all life will not be overcome with moderation, tepid reforms, and techno-fixes, but rather demand urgent and radical change at every level-from the rotting neo-liberal economic and political institutions of capitalist society to the ideologies of anthropocentrism and speciesism that underpin our dysfunctional and destructive relations to other species and the natural world. If social and environmental problems are interrelated, so too must be the solutions and political responses. The project of human liberation and environmental sustainability will fail without giving equal importance to anti-speciesism and animal liberation and connecting human, animal, and earth liberation struggles. Only radical system change guided by a surging and more inclusive and expansive climate justice movement has a chance to avert biological meltdown, catastrophic social collapse, and remake Holocene worldviews and social systems along post-anthropocentric, post-speciesist, radically democratic, and ecological lines.

The root causes of global social and ecological crises involve both institutional and psychological-cultural factors. We need new comprehensive and systemic theories that grasp how anthropocentrism, speciesism, as well as racism, patriarchy, class, and

other forms of human-over-human domination, are intertwined in dominator societies evolving over a 10,000-year span from the earliest agricultural societies to contemporary global capitalism. A truly revolutionary social theory and movement will not just emancipate members of one species, but rather all species and the earth itself. A future revolutionary movement worthy of its name will overcome instrumentalism and hierarchical thinking in every pernicious form, including that of humans over animals and the earth. We cannot leave intact the predatory and violent mentalities that inform our exploitative relations with animals, other humans, and a gravely wounded planet. We cannot create sustainable societies so long as they are premised on the industrial slaughter of trillions of animals to feed a burgeoning population of ten billion people. As clear in the arguments of the degrowth movement, systems of human growth must now contract, and abandon once and for all the dreams of infinite economic growth through the oxymorons of "green capitalism" and "sustainable development" (see Saito, 2024).

A viable revolutionary movement for the 21st century and the epoch of the Anthropocene will grasp the incompatibility of capitalism with the most profound values and goals of humanity. Will build on the achievements of democratic, libertarian socialist, and anarchist traditions. It will incorporate radical green, feminist, and indigenous struggles. It will merge animal, earth, and human liberation in a *total liberation* struggle against global capitalism and domination of all kinds (see Best, 2014). It must eliminate every vicious form of prejudice and discrimination—not only racism, sexism, and homophobia, but also the scientifically false and morally repugnant lies of speciesism and humanism. It must reverse the growing power of the state, mass media, and global corporations to promote decentralization and democratization at all levels of society, and only then can society possibly be reconstituted in harmony with the natural world and other species.

We thereby exchange partial struggles for a broader, deeper, more complex, and more inclusive concept and politics. We must replace the critique of any one system of domination with a critique of hierarchy as a systemic phenomenon, as we recognize that capitalism is a metastasizing cancer eating away at the planet. This systemic approach analyzes "entanglements" (Nibert, 2002) between the exploitation of humans and other animals as well as how various logics of domination—racism, patriarchy, classism, speciesism, and so on overlap and reinforce one another. And we must not only see the "entanglement of human/animal oppression," but also those of liberation. Amidst the crises of the 21st century, social justice, animal justice, and environmental/planetary justice groups must come together to form the most diverse, inclusive, comprehensive, and formidable alliances barely yet imagined, let alone created. As increasingly obvious in the Age of the Anthropocene, human, animal, and earth liberation movements are unthinkable apart from one another. A struggle for one is impossible without a struggle for all.

But let us not be naïve. Such alliances will not come easily; typically, there are fractious differences within any one political movement, let alone a broad alliance of groups with different theoretical, ethical, and political perspectives.³⁴ Social justice

³⁴ For a forthright skeptical view of the possibilities on alliance politics uniting complex differences among human, animal, and earth liberation movements, see the Introduction in Benton (1993).

movements are easily divided by issues of race, gender, and class, each with their own priorities, and adding animal liberation and ethical veganism to the mix creates greater challenges and complications. The ideas spelled out in the "Principles of Working Together" (People of Color Leadership Summit (Second National), 1991b) by the People of Color Environmental Leadership Summit provide at least a rough working framework for unity. Differences and conflicts among social justice proponents, environmentalists, and animal liberationists require open dialogue and mutual learning, but will never be fully resolved. Nonetheless, universal consent is not necessary, perhaps not desirable, and certainly not a process or goal for which we can patiently wait. Far more important than consensus on an intellectual level is a pragmatic approach that identifies common interests and overlapping concerns on a political level, such as discussed above regarding the array of problems caused by agribusiness, factory farms, and ever-climbing levels of meat consumption.

Humanity has reached at an evolutionary impasse and now stands at a decisive historical crossroads where we confront *the greatest challenge in human history*: we can dramatically reconstruct our societies along democratic and ecological lines, or succumb to authoritarianism, chaos, and terror. We can also remake ourselves ethically and ecologically, or perpetuate the alienated, arrogant, and predatory mindsets that brought us to this evolutionary impasse in the first place.

The challenge before us is nearly as unimaginable as the consequences of not meeting it. It is sobering to compare the magnitude of the threat posed to life; the little time left to effect decisive change; the feebleness of world response; the pervasive denial of the existential threat climate change poses to humanity; and the power of fossil fuel industries to misinform, block change, and tighten its death grip on the living world. We confront not the death of the planet—which will continue to evolve into new forms—but accelerating mass extinction, ecological collapse, and the end of "civilization" as we know it.

Although the Anthropocene is an epoch of great calamity and upheaval, it also bears tremendous opportunities. With the sharpened consciousness of the doomed walking toward the guillotine, we have a chance to clearly recognize the flawed mentalities and

growth-addicted systems that brought us to this precipice, to rebuild both our alienated psychologies and suicidal societies, and thereby to redefine and remake our place in the vast *biocommunity* to which we all belong.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

SB: Writing - original draft, Writing - review & editing.

Funding

The author(s) declare that no financial support was received for the research, authorship, and/or publication of this article.

Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Appendix: Extinction and the broken webs of life

We must take special note of a tragic irony: while a handful of farmed animal species artificially proliferate annually by the billions, world wildlife populations declined by 70% since 1970 (World Wildlife Fund, 2022). Currently, two million plant and animal species are on the verge of extinction (Hochkirch et al., 2023). Incredibly, humans and cattle now constitute 96% of all mammals on earth (60% are livestock, 36% are humans), and wild mammal numbers have fallen to a mere 4% of total numbers (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2019). Humans—0.01% of all life—have wiped out 83% of species off the face of the earth in their disastrous tenure on this planet (Carrington, 2018).

Anthropogenic climate change—driven principally by fossil fuel and agricultural industries—is fast emerging as a major new threat to global biodiversity with abrupt impacts such as shifting or shrinking habitats, heat extremes, and changes in reproduction and migration patterns for land and sea animals (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2019). Combined pressures of rising heat, acidification, and oxygen loss in the oceans is driving another mass extinction event that could rival the "Great Dying" 252 million years ago in the Permian Period when more than two-thirds of all marine life perished (see Penn and Deutsch, 2022). The accelerating rates of extinction on land and at sea clearly indicate that a sixth mass extinction event is under way, brought about not by volcanoes or meteorites, but rather by human growth, overhunting, habitat destruction, agriculture, and deforestation (see Best, 2024).

It is not just the large charismatic animals such as the African elephant, the rhino, and whales who are threatened with extinction, but also pollinators and insects who are key to the planet's life support systems. Bees, ants, and beetles are vanishing eight times faster than mammals, birds, or reptiles. Bees are dying in droves, due to a human-induced "bee colony collapse disorder" (Klein and Barron, 2017). The plight of bees is part of a greater "insect apocalypse" involving a 75% decline of insect populations over the past 25 years with 40% of insects now threatened with extinction (Sanchez-Bayo and Wyckhuys, 2019). This is enormously consequential as insects provide food sources for other animals such as birds, bats, reptiles, small mammals, and fish; they pollinate three-quarters of the world's food crops; and they recycle wastes and replenish soils.

In countless ways, reduced species diversity leads to more fragile ecosystems that are vulnerable to collapse. In our broken relation to nature, humans are systematically destroying the life support systems upon which they and other life forms depend. Clearly, our fates are intertwined, and what we do the animals, we do to ourselves. Climate justice views address human-nature interdependence and relations, but not the interdependence of both on animals and the vital role that nonhuman animals play in sustaining the intricate ecological flows and webs of life.