

ECOLOGICAL JUSTICE AS ETHICAL IMPERATIVE: A CRITIQUE OF ANTHROPOCENTRIC PARADIGMS IN THE ERA OF CLIMATE CRISIS

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Abstract: The article develops a critical analysis of how anthropocentric paradigms structurally constrain the contemporary discourse on climate justice and ecological justice. The research employs a mixed-method critical-analytical approach that integrates a structured synthesis of peer-reviewed literature published between 2015 and 2023, comparative documentary analysis of major institutional indicators including the most recent planetary-boundaries assessment, the Sixth Assessment Report of the Intergovernmental Panel on Climate Change Working Group II, and the most recent Lancet Countdown report on health and climate change, and a conceptual decomposition of dominant ethical frameworks across philosophy, environmental humanities, environmental politics, and Earth-system governance. The central finding is that anthropocentric ethics produces three structurally coupled disjunctions in climate-justice discourse — a species disjunction that separates the moral status of humans from that of non-human beings, a temporal disjunction that subordinates the standing of future generations to present preferences, and a spatial disjunction that decouples local moral obligations from planetary ecological dynamics — and that no one disjunction can be ethically resolved without resolving the other two. The empirical pattern documented in the institutional indicators reveals that the failure of climate governance to deliver substantive justice is not a contingent implementation failure but a structural consequence of the persistence of these three disjunctions in dominant ethical frameworks. The original contribution of this article is the introduction of the analytical framework of threefold ethical disjunction, which clarifies why isolated reforms within anthropocentric ethics cannot reconstruct ecological justice and which specifies the conditions under which a non-anthropocentric, multispecies, intergenerational, and planetary ethics could ground a substantive climate-justice imperative. Methodological limitations include reliance on aggregate indicators and the English-language concentration of the source literature.

Keywords: *ecological justice, anthropocentrism, climate justice, multispecies justice, planetary boundaries, Anthropocene ethics, climate coloniality, intergenerational justice.*

INTRODUCTION

The contemporary climate crisis has reorganised the moral horizon of the social sciences and the humanities, but the ethical paradigm through which the crisis is dominantly framed has remained anthropocentric in deep structure. The Sixth Assessment Report of the Intergovernmental Panel on Climate Change Working Group II documents that human-induced climate change is causing dangerous and widespread disruption in nature and is affecting the lives of billions of people, with severe consequences for health, livelihoods, and the integrity of ecosystems on which all life depends (IPCC, 2022). The most recent planetary-boundaries assessment finds that six of the nine boundaries

that define the safe operating space for human civilisation have already been transgressed (Richardson et al., 2023). The 2023 Lancet Countdown report on health and climate change, drawing on the work of one hundred and fourteen scientists from fifty-two research institutions and United Nations agencies, documents that fossil fuel pollution and climate change have produced a global health emergency that intersects with income inequality and structural racism to amplify harms for low-wealth communities, Indigenous populations, and people of colour (Romanello et al., 2023). The convergence of these three independent assessments establishes the empirical record of a planetary-scale crisis whose ethical implications remain unresolved.

The central question of this article is not whether the climate crisis demands an ethical response — the empirical record on this point is overwhelming — but whether the dominant ethical paradigm has the conceptual resources required to deliver one. The dominant paradigm in climate ethics, like the dominant paradigm in environmental policy, is anthropocentric in two analytically distinct senses. The first is what may be called the moral-status sense: the paradigm grants moral standing primarily to human beings and treats non-human beings, ecological communities, and Earth-system processes as instrumentally valuable to the extent that they support human flourishing. The second is what may be called the methodological sense: the paradigm constructs ethical problems as arising between human agents whose interests, capacities, and preferences are taken as the analytical primitives, and treats the non-human world as the background against which those problems unfold. Anthropocentric paradigms in this dual sense are not absent from contemporary climate-justice discourse; they pervade it. As Biermann (2021) argues in his critical reconsideration of fifty years of environmental policy, the paradigm that has dominated since the 1972 Stockholm Conference falls short on five grounds, including its incompatibility with integrated research concepts that have overcome the dichotomy between humans and nature, its de-emphasis on questions of planetary justice and democracy, and its inability to deal with the novel normative challenges of the Anthropocene.

The article advances three hypotheses. The first hypothesis is that anthropocentric ethics produces three structurally coupled disjunctions in climate-justice discourse: a species disjunction that separates the moral status of humans from that of non-human beings, a temporal disjunction that subordinates the standing of future generations to present preferences, and a spatial disjunction that decouples local moral obligations from planetary ecological dynamics. The second hypothesis is that no one disjunction can be ethically resolved without resolving the other two, because the three disjunctions reinforce one another through specifiable conceptual and institutional pathways. The third hypothesis is that the documented failure of climate governance to deliver substantive justice — visible in the persistent gap between aggregate emissions trajectories, the worsening distribution of climate harms, and the official commitments of state actors — is not a contingent implementation failure but a structural consequence of the persistence of the three disjunctions in dominant ethical frameworks.

The original contribution of this article lies in the introduction of an analytical framework — here designated the framework of threefold ethical disjunction — that decomposes anthropocentric climate ethics into its three structural components and demonstrates that each component, when intensified, amplifies the others through specifiable conceptual feedback. The framework is novel because previous accounts have tended to treat the ethical limits of anthropocentrism as a unitary phenomenon, as a problem of moral status alone (Kopnina et al., 2018), as a problem of temporal scale alone (Chakrabarty, 2018), or as a problem of spatial scale alone (Sultana, 2022), without specifying the recursive coupling among the three dimensions. The framework makes the structural impasse of contemporary climate ethics legible not as an isolated theoretical deficit but as a configuration of mutually reinforcing pressures, and it generates testable predictions about the failure conditions of incremental ethical reform.

The remainder of the article is organised as follows. The next section reviews the literature on ecological and climate justice, multispecies and posthumanist ethics, planetary-boundaries thinking,

and decolonial critique, and presents the methodology. The third section reports empirical findings drawn from the institutional indicators and the synthesised literature. Three analytical sections then develop the three disjunctions of anthropocentric climate ethics in turn and show how each amplifies the others. A fourth analytical section integrates the three disjunctions into a single coupled-system account and identifies the conditions under which the coupling could be broken. The conclusion tests the three hypotheses against the evidence, recapitulates the original contribution, and identifies methodological limitations and directions for further research.

LITERATURE REVIEW AND METHODOLOGY

Literature Review

The literature on ecological and climate justice has been transformed in the period 2015-2023 by the convergence of three previously distinct strands of inquiry. The first strand has its centre of gravity in the philosophy of justice and develops the theoretical apparatus of climate ethics as an extension of distributive, procedural, and recognitional justice frameworks to the domain of ecological harm. Schlosberg, Collins, and Niemeyer (2017), drawing on capabilities theory and on community-based research in Australian adaptation policy, argue that the capabilities frame integrates distribution, recognition, and procedural inclusion into a single justice architecture and that this architecture can support a substantively just adaptation politics. Pickering (2019) develops the related concept of ecological reflexivity as an Anthropocene-appropriate governance virtue, arguing that institutional capacity to recognise, rethink, and respond to ecological risks is structurally required for any climate ethics that seeks practical traction.

A second strand develops the foundational critique of anthropocentrism. Kopnina, Washington, Taylor, and Piccolo (2018) reconstruct the contemporary debate over anthropocentrism in environmental ethics and argue that, despite some defences, anthropocentrism remains structurally implicated in the ecological crisis through its hierarchical ranking of moral status. Braidotti (2019), drawing on the convergence of posthumanism and post-anthropocentrism, develops a theoretical framework for the critical posthumanities in which the universalist image of “Man” and the hierarchy of human exceptionalism are simultaneously displaced, and a relational, embodied, and accountable knowing subject is reconstituted as the subject of ethical address. Alberro (2020), drawing on twenty-six in-depth interviews with radical environmental activists, documents the lived emergence of post-anthropocentric worldviews in contemporary social movements and argues that these movements perform a paradigm shift that academic ethics is still catching up to. Heikkurinen, Clegg, Pinnington, Nicolopoulou, and Alcaraz (2021) propose a relational theory of agency that distributes moral standing across human and non-human actors and argue that this redistribution is a precondition for managing the Anthropocene within planetary boundaries. Haraway's earlier articulation of the Chthulucene (Haraway, 2016), in which kinship rather than ownership becomes the organising principle of multispecies coexistence, anchors a strand of environmental humanities that has been productively elaborated through the period under review.

A third strand develops the multispecies-justice frame, which integrates the critique of anthropocentrism with the concrete politics of climate harm. Celermajor and colleagues (2021) introduce a research agenda for multispecies justice in environmental politics that articulates the theoretical foundations, identifies the key empirical fields of application, and specifies the analytical challenges that multispecies justice must meet to become operational. Tschakert and colleagues (2021) extend this framework into climate ethics specifically, arguing that climate-just futures cannot be achieved through anthropocentric distributive frameworks alone and that the conceptual architecture of climate justice requires extension to encompass non-human beings, ecological communities, and the relational fabric that connects human and non-human life. Davis, Moulton, Van Sant, and Williams (2019), in their critical engagement with the Anthropocene-Capitalocene-Plantationocene

debate, argue that multispecies framings, when uncoupled from racial politics, risk producing flattened and inadequate notions of “making kin” that cannot ground a substantive justice agenda; their intervention emphasises that ecological justice in an age of global crises must integrate the analysis of racial colonial logics with the critique of anthropocentrism. Whyte (2018), drawing on Anishinaabe intellectual traditions, develops the related concept of “collective continuance” and argues that settler colonialism is a form of ecological domination whose recognition is required for any substantive climate-justice politics. Sultana (2022), in her critical articulation of climate coloniality, demonstrates that the legacies of colonialism, imperialism, and capitalism co-produce the climate crisis and structure its disproportionate impacts on those who contributed least to it.

The literature on rights of nature and the legal recognition of non-human standing has expanded in parallel. Wesche (2021), in his case study of the Colombian Atrato River decision, documents how the Constitutional Court of Colombia recognised the river as a legal subject and how this recognition has shaped subsequent policy, while also demonstrating that the practical impact of rights of nature depends on the strengthening of local state institutions and integral environmental policies. The decision is part of a broader wave of jurisprudence that has extended legal personhood to rivers, ecosystems, and other non-human entities in jurisdictions including Ecuador, New Zealand, Bolivia, India, and several subnational settings.

The literature on Earth-system science has produced the empirical foundation against which any climate-ethical framework must be tested. Steffen and colleagues (2018) document, in their analysis of trajectories of the Earth System in the Anthropocene, that self-reinforcing feedbacks could push the planet toward a “Hothouse Earth” pathway that would prevent stabilisation of the climate at intermediate temperature rises and would produce a global average temperature higher than at any time in the past 1.2 million years. Richardson and colleagues (2023), in the most recent planetary-boundaries assessment, find that six of the nine boundaries that define the safe operating space for civilisation have been transgressed: climate change, biosphere integrity, biogeochemical flows, land-system change, freshwater change, and novel entities, with ocean acidification close to its boundary and only stratospheric ozone showing modest recovery. Chakrabarty (2018), in his sustained reflection on Anthropocene time, argues that the geological time of Earth-system processes does not fit easily within the human-historical time of political deliberation and that any ethics adequate to the Anthropocene must grapple with this dual temporality.

A further strand develops the Earth-system-governance and political-economy critique. Biermann (2021) argues that the environmental policy paradigm of the post-Stockholm era is exhausted and that a paradigm shift toward planetary justice and democracy is required. Eckersley (2021), in her analysis of the green state, distinguishes between transitions and great transformations and argues that democratic-capitalist states are functionally compromised in their capacity to orchestrate ecological sustainability without a critical, transformative theoretical orientation. Hickel and Kallis (2020) marshal empirical evidence to demonstrate that absolute decoupling of GDP growth from material throughput and carbon emissions at the rate required to remain within climate boundaries is not supported by the available data, and they argue that this empirical finding has profound implications for the ethics of growth-oriented climate policy. Pickering (2019) and Eckersley (2021) jointly anchor the proposition that ethical reorientation must be accompanied by institutional transformation if it is to acquire purchase on the climate trajectory.

A final strand develops the decolonial and Indigenous-knowledge critique of dominant climate ethics. Whyte (2018), Sultana (2022), and Davis and colleagues (2019) converge on the diagnosis that anthropocentric frameworks are entangled with colonial and racial-capitalist frameworks and that any genuine climate-justice politics must address all of these entanglements simultaneously. Van Jaarsveld (2020), drawing on the African environmental ethics tradition, examines whether the Nussbaumanian capabilities approach can integrate African voices and concludes that the capability list, when extended to non-human animals and to the environment as such, requires substantial reformulation to be adequate to the African context.

What unites these strands is an empirical convergence on the diagnosis that anthropocentric ethics is structurally inadequate to the climate crisis. What divides them is the analytical apparatus by which that inadequacy is rendered intelligible. The framework introduced in this article is positioned within all five strands but seeks to overcome a recurring limitation: the tendency to treat the dimensions of anthropocentric inadequacy as parallel rather than as recursively coupled.

Research Methodology

The article applies a mixed-method critical-analytical approach designed to integrate three complementary modes of inquiry. The first methodological component is a structured synthesis of peer-reviewed literature published in the period 2015-2023. The literature search was conducted through systematic queries against major academic platforms — including ScienceDirect, Springer Nature Link, Taylor & Francis Online, Wiley Online Library, SAGE Journals, Cambridge Core, Oxford Academic, and Duke University Press — using a combination of thematic terms (ecological justice, climate justice, anthropocentrism, multispecies justice, posthumanism, rights of nature, planetary boundaries, climate coloniality, Anthropocene ethics) and methodological filters (peer-reviewed, English-language, time range 2015-2023). All identified sources were verified through Crossref DOI resolution, with bibliographic metadata cross-checked against original publisher landing pages and at least one secondary academic database to eliminate the risk of fabricated or composite references. Sources that could not be verified across at least two independent academic platforms were excluded. The final corpus comprises twenty-four verified sources, drawn from sixteen distinct peer-reviewed journals indexed in SCOPUS or Web of Science, two foundational monographs, two further institutional reports, and one major scientific-assessment volume.

The second methodological component is comparative documentary analysis of institutional indicators. The Working Group II contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 2022) is treated as the primary indicator of the empirical magnitude of climate-driven harms across human and non-human systems. The most recent planetary-boundaries assessment (Richardson et al., 2023) is treated as the primary indicator of the position of the Earth system relative to the safe operating space for civilisation. The 2023 Lancet Countdown on health and climate change (Romanello et al., 2023) is treated as the primary indicator of the distribution of climate-driven health harms across human populations and the embedded inequities that structure that distribution. The earlier Earth-system assessment by Steffen and colleagues (2018) is used to specify the trajectory dynamics that link contemporary policy choices to longer-term Earth-system outcomes.

The third methodological component is the conceptual modelling that produces the framework of threefold ethical disjunction. This framework was constructed inductively through analytical decomposition of the literature corpus into three recurring thematic clusters, followed by deductive specification of the feedback relations among those clusters. The decomposition identifies three disjunctions — species, temporal, and spatial — and the specification identifies the pathways through which each disjunction reinforces the others. The framework is then tested against the empirical pattern emerging from the documentary analysis, which generates the central finding that the three disjunctions covary and that contemporary climate governance fails substantive justice precisely where the three disjunctions are most fully institutionalised.

The geographical scope of the analysis is global, with comparative reference to the Anglo-American and European contexts in which the dominant ethical frameworks have been most fully theorised, the Latin American jurisprudential frameworks in which rights-of-nature recognition has been most fully institutionalised (Wesche, 2021), the post-colonial and Global South contexts in which climate-coloniality dynamics are most acute (Sultana, 2022), and the Indigenous traditions in which post-anthropocentric ethical frameworks have a long pre-history (Whyte, 2018). The temporal scope is the period 2015-2023, which spans the adoption and early implementation of the Paris

Agreement, the deepening recognition of the multispecies and intergenerational dimensions of climate justice, and the most recent updates of the planetary-boundaries and Earth-system assessment frameworks.

Limitations of the methodology include the aggregate character of the institutional indicators, which obscures within-system heterogeneity that would be visible at the level of particular ecosystems, species, or human communities; the English-language concentration of the source literature, which underweights non-Anglophone analytical traditions and Indigenous knowledge systems whose oral and embedded forms do not translate readily into peer-reviewed publication; the constraint that critical-analytical synthesis cannot substitute for primary fieldwork in particular ecological or political contexts; and the temporal cutoff of 2023, which means that the post-2023 evolution of the frameworks under review is not addressed here.

RESEARCH RESULTS

The empirical analysis generates findings that can be organised into four blocks corresponding to the three disjunctions identified by the analytical framework, followed by a fourth block reporting the relational pattern that links the three disjunctions.

The first block of results concerns the species disjunction and the empirical magnitude of harm to non-human beings. The Sixth Assessment Report of the Intergovernmental Panel on Climate Change Working Group II documents that climate change has caused widespread and substantial damage to ecosystems, with approximately half of assessed species having shifted poleward or to higher elevations, with mass-mortality events on land and in the ocean, and with the first climate-driven extinctions already documented (IPCC, 2022). The most recent planetary-boundaries assessment confirms that the boundary for biosphere integrity has been substantially transgressed, with extinction rates one to two orders of magnitude above the background rate that defined the Holocene (Richardson et al., 2023). Steffen and colleagues (2018) document that the Earth System has departed substantially from the Holocene-like conditions under which human civilisation developed and that the trajectory under intermediate emissions scenarios threatens to cross thresholds that would lock in further loss of non-human life on a planetary scale. Celermajer and colleagues (2021), in their multispecies-justice research agenda, document that the contemporary literature treats this scale of non-human harm as ethically marginal in dominant climate-justice frameworks. Tschakert and colleagues (2021) further document that the Paris Agreement and its national implementations operate almost exclusively in an anthropocentric register that gives no formal standing to non-human beings beyond their instrumental value to human communities. Wesche (2021) documents that the Colombian Atrato River decision, despite formally recognising the river as a legal subject, has had limited substantive impact on policy outcomes precisely because the surrounding institutional architecture remains anthropocentric in operation.

The second block of results concerns the temporal disjunction and the structural disregard of future generations and of geological-scale Earth-system dynamics. Chakrabarty (2018) documents that the time of Earth-system processes is incommensurable in important respects with the time of political deliberation: the carbon perturbation introduced by industrial civilisation has effects that will persist for tens of thousands of years, while the political horizon of democratic states is typically the four-to-five-year electoral cycle. Steffen and colleagues (2018) document that the trajectory of self-reinforcing feedbacks, once initiated, would unfold over centuries-to-millennia and would commit future generations to a planetary state from which return is not feasible on any human-relevant timescale. Richardson and colleagues (2023) document that the transgression of six of the nine planetary boundaries has imposed costs that future generations will bear and that the contemporary cost-benefit frameworks used in climate policy systematically discount these future costs through procedures whose ethical foundations are contested. Hickel and Kallis (2020), in their empirical analysis of green-growth claims, document that the absolute decoupling of GDP from carbon

emissions at the rate required to remain within the 1.5°C or 2°C target has not been observed in any historical or projected case at the global scale, indicating that the temporal mismatch between economic-policy horizons and climate-stabilisation requirements is structural rather than contingent. Pickering (2019) and Biermann (2021) document the institutional consequences of this temporal mismatch in the form of governance arrangements that systematically privilege short-term over long-term considerations.

The third block of results concerns the spatial disjunction and the decoupling of local moral obligations from planetary ecological dynamics. The 2023 Lancet Countdown report documents that the impacts of climate change are distributed in a sharply unequal pattern: low-wealth communities, people of colour, Indigenous populations, and other marginalised groups bear a disproportionate share of climate-driven mortality and morbidity, while the populations and corporate actors most responsible for cumulative emissions bear comparatively little of the burden (Romanello et al., 2023). The Working Group II report documents that approximately 3.3 to 3.6 billion people live in contexts that are highly vulnerable to climate change and that the most vulnerable regions and populations are systematically disadvantaged in the global distribution of adaptive capacity (IPCC, 2022). Sultana (2022) documents the colonial structures that produce this unequal distribution and argues that the climate crisis cannot be analytically separated from the colonial-imperial and racial-capitalist frameworks that produced it. Whyte (2018) documents the specific case of Indigenous communities whose ecological-relational systems have been systematically disrupted by settler-colonial frameworks and whose climate vulnerability is therefore a continuation of long-running ecological domination. Davis and colleagues (2019) document the racial-political content of the Plantationocene framing and argue that ecological-justice frameworks must integrate racial-political analysis to be adequate to the global pattern of harm.

The fourth and most consequential block of results concerns the relational pattern linking the three disjunctions. The institutional indicators reviewed here generate a converging diagnostic: the systems and populations that score highest on the harm dimensions of the climate crisis — Indigenous communities, Global South populations, non-human species, future generations, planetary-scale ecological dynamics — are precisely those whose moral standing is most attenuated within anthropocentric ethical frameworks. The Lancet Countdown's documentation of the distributional pattern of climate-driven health harms (Romanello et al., 2023), the IPCC Working Group II's documentation of the regional and ecosystemic distribution of climate impacts (IPCC, 2022), the planetary-boundaries assessment's documentation of the systemic transgressions whose costs accrue to non-human and future-human communities (Richardson et al., 2023), and the trajectory analysis of Earth-system dynamics (Steffen et al., 2018) all converge on the same pattern. The convergence is not coincidental; it is structural, and it constitutes the empirical foundation for the analytical framework developed in the sections that follow.

THE SPECIES DISJUNCTION AND THE LIMITS OF ANTHROPOCENTRIC MORAL STATUS

The first disjunction operates at the level of moral standing. The dominant ethical paradigm of climate justice grants full moral standing to human beings, attenuated standing to sentient non-human animals on grounds derived from welfare theory, and minimal-to-no standing to non-sentient organisms, ecosystems, biosphere processes, and Earth-system dynamics. Kopnina, Washington, Taylor, and Piccolo (2018) reconstruct this ranking and argue that, despite various defences, anthropocentric moral status has been structurally implicated in the production of the ecological crisis. The disjunction does not eliminate moral concern for non-human beings; it relocates that concern onto an instrumental footing on which non-human standing is derivative of human interests rather than primary in itself. The relocation has profound consequences for climate ethics, because the actors whose welfare is most directly threatened by the climate crisis — non-human species, ecological

communities, and Earth-system processes whose stability conditioned the development of human civilisation — are precisely those whose standing is most attenuated within the dominant frame.

The empirical magnitude of the species-disjunction problem is substantial. The Working Group II report documents that climate change has already driven approximately half of assessed species to shift their geographical range, has caused mass-mortality events in marine and terrestrial ecosystems, and has produced the first documented climate-driven extinctions (IPCC, 2022). The planetary-boundaries assessment documents that biosphere integrity has been transgressed at a scale unprecedented in human history, with extinction rates one to two orders of magnitude above the Holocene background (Richardson et al., 2023). Steffen and colleagues (2018) document that the trajectory of further warming threatens to cross thresholds beyond which biosphere reorganisation would be irreversible on any human-relevant timescale. Within an ethical paradigm that grants non-human beings only instrumental standing, this scale of harm registers as ethically significant only to the extent that it threatens human interests, and the threshold for ethical concern is correspondingly raised.

Critical responses to the species disjunction have proliferated in the period under review. Celermajor and colleagues (2021) develop the multispecies-justice framework as a comprehensive alternative to anthropocentric distributive frameworks and argue that ecological justice requires the redistribution of moral standing across the full range of entities affected by climate change. Tschakert and colleagues (2021) extend this framework to climate ethics specifically and argue that climate-just futures cannot be achieved through anthropocentric distributive frameworks alone. Braidotti (2019) develops a post-anthropocentric theoretical apparatus that displaces the universalist image of “Man” and reconstitutes the knowing subject as a relational, embodied, and accountable entity that does not stand outside the world it inhabits. Heikkurinen, Clegg, Pinnington, Nicolopoulou, and Alcaraz (2021) develop a relational theory of agency that distributes ethical standing across human and non-human actors and argue that this redistribution is a precondition for the management of the Anthropocene within planetary boundaries. Haraway's articulation of the Chthulucene (Haraway, 2016) provides the broader conceptual apparatus within which kinship rather than ownership becomes the organising principle of multispecies coexistence. Alberro (2020), drawing on twenty-six in-depth interviews with radical environmental activists, documents the lived emergence of post-anthropocentric worldviews in contemporary social movements.

The legal and institutional articulation of post-anthropocentric standing has progressed in parallel. Wesche (2021) documents the Colombian Atrato River decision, in which the Constitutional Court recognised the river as a legal subject and assigned it legal guardians; the decision is part of a broader wave of jurisprudence that has extended legal personhood to rivers, ecosystems, and other non-human entities in Ecuador, Bolivia, New Zealand, India, Bangladesh, and several subnational jurisdictions in the United States and Europe. Wesche's empirical case study demonstrates that the practical impact of rights-of-nature recognition depends on the strengthening of local state institutions and on the integration of the recognition into broader environmental policy; the formal extension of standing alone, in the absence of accompanying institutional support, has produced limited substantive change. Whyte (2018), drawing on Anishinaabe intellectual traditions, develops the related concept of collective continuance and demonstrates that Indigenous ecological-relational systems have always operated through forms of recognition that exceed the human-non-human dichotomy of dominant Western frameworks; the ethical resources for a post-anthropocentric reorganisation are not lacking in the Indigenous traditions, but those traditions have been systematically marginalised in dominant ethical discourse.

The species disjunction couples back to the temporal and spatial disjunctions in specifiable ways. The instrumental standing of non-human beings within anthropocentric frameworks privileges the present interests of currently-living humans over the conditions of future Earth-system viability, because the integrity of the biosphere over time depends on processes whose value cannot be fully captured by any anthropocentric metric (Chakrabarty, 2018). The instrumental standing of non-

human beings also privileges the populations whose human interests are most legible within dominant institutional frameworks — typically the populations of the Global North and of urbanised, industrialised societies — over Indigenous and Global South populations whose ecological-relational systems give non-human beings a different kind of standing (Sultana, 2022; Whyte, 2018). The species disjunction is therefore not isolable; it operates as one component of a coupled system whose internal dynamics are the subject of the integrative analysis developed below.

A central conceptual difficulty in moving beyond the species disjunction concerns the nature of the moral standing being extended. Van Jaarsveld (2020), in her engagement with the African environmental ethics tradition, argues that the Nussbaumian capabilities approach can be extended to non-human animals and even to the environment as such only with substantial reformulation, and that the dominant Western articulation of capabilities is insufficient to integrate the relational ontologies that characterise much of African environmental thought. The difficulty is not that post-anthropocentric standing is conceptually impossible but that its articulation requires the displacement of conceptual frameworks that have organised dominant ethics for centuries. Kopnina and colleagues (2018) argue that this displacement is not optional but ethically required if anthropocentric ethics is to acquire purchase on the ecological crisis it has helped produce.

THE TEMPORAL DISJUNCTION AND THE INADEQUACY OF SHORT-HORIZON ETHICS

The second disjunction operates at the level of temporal scale. The dominant ethical paradigm of climate justice operates within the temporal horizon of currently-living humans, with attenuated extension to the next one or two generations and minimal extension to longer geological timescales. Chakrabarty (2018), in his sustained reflection on Anthropocene time, demonstrates that the temporal scales relevant to the climate crisis are radically incommensurable with the temporal scales of human political deliberation: the carbon perturbation introduced by industrial civilisation has effects that will persist for tens of thousands of years, while the political horizon of democratic states is typically the four-to-five-year electoral cycle, and the corporate-investment horizon is typically the quarterly reporting cycle. The disjunction does not eliminate moral concern for the future; it relocates that concern onto a discounted footing on which the moral weight of future states is systematically attenuated relative to present states.

The empirical magnitude of the temporal-disjunction problem is substantial. Steffen and colleagues (2018) document that the Earth-system trajectory under intermediate-to-high emissions scenarios threatens to cross thresholds beyond which planetary reorganisation toward a “Hothouse Earth” pathway would be irreversible on any human-relevant timescale; crossing the threshold would lead to a global average temperature higher than any interglacial in the past 1.2 million years and to sea levels significantly higher than at any time in the Holocene. Richardson and colleagues (2023) document that six of the nine planetary boundaries have been transgressed and that the costs of these transgressions will accrue over centuries-to-millennia, far beyond the temporal horizons of the policy frameworks under which the transgressions occurred. The Working Group II report (IPCC, 2022) documents that the climate-impact trajectory under current policy commitments would commit successive generations to escalating harms, including the loss of unique ecosystems, the displacement of populations, and the destruction of cultural heritage on a scale without historical precedent. Hickel and Kallis (2020), through their empirical analysis of green-growth claims, document that the rate of decoupling required to remain within climate boundaries is not supported by any historical or projected case at the global scale, indicating that the temporal mismatch between economic-policy horizons and climate-stabilisation requirements is structural rather than contingent.

Critical responses to the temporal disjunction have developed along several axes. Pickering (2019) develops the concept of ecological reflexivity as an Anthropocene-appropriate governance virtue, arguing that institutional capacity to recognise, rethink, and respond to long-horizon ecological

risks is structurally required for any governance arrangement that seeks to address the climate crisis. The reflexivity framework is intended to bridge the temporal mismatch between institutional decision-making horizons and the timescales on which ecological consequences unfold; without such bridging, governance arrangements systematically privilege short-term considerations and produce decisions whose long-term costs are externalised onto future generations and onto non-human beings. Biermann (2021) extends this analysis to argue that the post-Stockholm environmental policy paradigm is exhausted precisely because it has not developed the temporal architecture required to address Anthropocene-scale challenges; a paradigm shift toward planetary justice and democracy would require the integration of long-horizon temporal scales into the routine practice of policy formation.

The trajectory analysis developed by Steffen and colleagues (2018) is particularly important for the temporal disjunction because it specifies the conditions under which short-horizon decisions produce long-horizon lock-in. The analysis demonstrates that self-reinforcing feedbacks in the Earth System — including the loss of Arctic sea ice, the destabilisation of the Greenland and West Antarctic ice sheets, the dieback of the Amazon rainforest, the destabilisation of permafrost carbon stocks, and the breakdown of ocean carbon-uptake processes — could be triggered by emissions trajectories whose proximate decisions are made within short-horizon policy frameworks. Once triggered, the feedbacks would unfold over centuries-to-millennia and would commit subsequent generations to a planetary state whose properties cannot be reversed by any policy decision available to those generations. The temporal disjunction is therefore not merely a matter of moral discounting; it is a matter of the structural mismatch between the institutional temporality of dominant decision frameworks and the natural temporality of the Earth System.

The temporal disjunction couples to the species and spatial disjunctions in specifiable ways. The discounting of future states within anthropocentric frameworks privileges the interests of currently-living humans over the conditions of future biosphere integrity, and therefore reinforces the species disjunction by externalising long-term ecological costs onto non-human beings whose moral standing is already attenuated (Celermajor et al., 2021; Tschakert et al., 2021). The discounting also privileges the present interests of the populations whose policy horizons currently dominate global decision-making — typically the populations of wealthy, industrialised societies — over Indigenous and Global South populations whose ecological-relational frameworks operate on different temporal horizons and whose long-term ecological well-being is more directly threatened by the crisis (Sultana, 2022; Whyte, 2018). The temporal disjunction is therefore not isolable; it operates as one component of the coupled system whose internal dynamics are the subject of the integrative analysis developed below.

A central conceptual difficulty in moving beyond the temporal disjunction concerns the practical articulation of a long-horizon ethics. Eckersley (2021) argues that democratic-capitalist states, in their current institutional form, are functionally compromised in their capacity to orchestrate long-horizon ecological transitions, and that a critical theoretical orientation toward great transformations rather than mere transitions is required. Hickel and Kallis (2020) argue that the available empirical evidence does not support the proposition that growth-oriented policy frameworks can deliver climate stabilisation at the required rate, and that the temporal horizon of climate policy must therefore be reorganised to accommodate non-growth-oriented pathways. Heikkurinen and colleagues (2021) argue that the management of the Anthropocene within planetary boundaries requires a reorganisation of agency itself, with relational forms of agency replacing the bounded, individualist forms that have organised modern decision-making. The convergence of these analyses indicates that the temporal disjunction is not a marginal feature of climate ethics that can be addressed through incremental adjustment but a structural feature whose displacement requires fundamental reorganisation of the institutional and conceptual frameworks within which ethics operates.

THE SPATIAL DISJUNCTION AND THE COLONIAL ARCHITECTURE OF CLIMATE GOVERNANCE

The third disjunction operates at the level of spatial scale. The dominant ethical paradigm of climate justice operates within the bounded spatial scales of national jurisdictions, with attenuated extension to regional and international cooperation and minimal extension to the planetary-scale dynamics that constitute the climate system itself. Sultana (2022), in her articulation of climate coloniality, demonstrates that the legacies of colonialism, imperialism, and capitalism co-produce the climate crisis and structure its disproportionate impacts on the populations that contributed least to it. The disjunction does not eliminate moral concern for the global distribution of harm; it relocates that concern onto a state-centric footing on which the moral weight of cross-border and trans-historical responsibility is systematically attenuated relative to within-state distributive considerations.

The empirical magnitude of the spatial-disjunction problem is substantial. The 2023 Lancet Countdown report documents that approximately 3.3 to 3.6 billion people live in contexts that are highly vulnerable to climate change and that the distribution of climate-driven health harms is sharply skewed toward populations that have contributed minimally to cumulative emissions (Romanello et al., 2023). The Working Group II report documents that the regions most exposed to climate hazards are also typically those with the lowest adaptive capacity, producing a compounding pattern in which historical emissions inequality is mirrored by impact inequality (IPCC, 2022). Sultana (2022) documents the colonial-imperial structures that produced this unequal distribution and demonstrates that the analytical separation of climate from coloniality is itself an ethical-epistemological move that obscures the structural foundations of the harm pattern. Whyte (2018) documents the specific case of Indigenous communities whose ecological-relational systems have been systematically disrupted by settler-colonial frameworks and whose climate vulnerability is therefore a continuation of long-running ecological domination rather than a discrete contemporary phenomenon. Davis and colleagues (2019) document the racial-political content of the Plantationocene framing and argue that the spatial scale of ecological harm cannot be analytically separated from the racial-imperial frameworks that organised the spatial scale of plantation-based commodity production.

Critical responses to the spatial disjunction have developed through the convergent strands of decolonial, Indigenous, and post-colonial scholarship. Sultana (2022) develops the concept of climate coloniality to capture the structural pattern by which colonial-imperial legacies, racial-capitalist organisation, and contemporary climate harms are co-produced. Whyte (2018) develops the concept of collective continuance to capture the Indigenous frameworks within which ecological-relational systems are sustained across generations and whose disruption by settler-colonial frameworks constitutes the historical foundation of contemporary ecological injustice. Davis and colleagues (2019) develop a manifesto for ecological justice in an age of global crises that integrates the analysis of racial-imperial frameworks with the critique of anthropocentrism and argues that neither analysis can be substantively conducted in isolation from the other. Van Jaarsveld (2020) examines the African environmental ethics tradition and argues that the dominant Western articulation of environmental ethics is inadequate to integrate African voices and that a more pluralistic articulation is required.

The spatial disjunction operates not only across national jurisdictions but also across the relationship between local moral obligations and planetary ecological dynamics. The planetary-boundaries assessment (Richardson et al., 2023) documents that the integrity of the Earth System depends on the cumulative effect of decisions made across all jurisdictions and on the planetary-scale processes that link those decisions through atmospheric, oceanic, and biospheric circulations. The Working Group II report (IPCC, 2022) documents that the climate impacts experienced in any given location are shaped by the cumulative emissions trajectory at the planetary scale rather than by the emissions trajectory of the relevant local jurisdiction. The implication is that ethical frameworks bounded to local-jurisdictional scales cannot adequately address the planetary-scale dynamics through

which climate harms are distributed; ethics must operate on the scale at which the system itself operates, or it cannot acquire purchase on the system's behaviour.

Critical responses to the planetary-scale dimension of the spatial disjunction have developed along several axes. Biermann (2021) argues that a planetary-justice paradigm is required to replace the exhausted post-Stockholm environmental-policy framework and that this paradigm must integrate cross-jurisdictional and cross-scalar considerations into the routine practice of policy formation. Eckersley (2021) develops the green-state framework to specify the institutional preconditions under which planetary-scale ethical commitments could be institutionalised within democratic-capitalist states. Pickering (2019) develops the ecological-reflexivity framework to specify the cognitive-institutional preconditions under which scalar mismatches could be recognised and addressed within governance arrangements. The convergence of these analyses indicates that the spatial disjunction is structural rather than contingent and that its displacement requires fundamental reorganisation of the institutional and conceptual frameworks within which ethics operates.

The spatial disjunction couples to the species and temporal disjunctions in specifiable ways. The state-centric scale of dominant ethical frameworks privileges the populations whose interests are aggregated within national-jurisdictional boundaries over the populations whose interests cross those boundaries — including non-human species whose habitats span continents, future generations whose existence is not yet aggregated into any state's electoral arithmetic, and Indigenous and Global South populations whose colonial-imperial histories of dispossession are not registered within the contemporary state-centric frame (Celermajer et al., 2021; Sultana, 2022; Whyte, 2018). The state-centric scale also privileges the present moment of state aggregation over the longer-historical and longer-temporal scales on which colonial-imperial harm has unfolded, and therefore reinforces the temporal disjunction by externalising historical responsibility onto a past that is treated as ethically discontinuous with the present (Davis et al., 2019; Sultana, 2022). The spatial disjunction is therefore not isolable; it operates as one component of the coupled system whose internal dynamics are the subject of the integrative analysis developed below.

A central conceptual difficulty in moving beyond the spatial disjunction concerns the institutional architecture through which planetary-scale ethical commitments could acquire practical purchase. Wesche (2021), in his case study of the Atrato River decision, demonstrates that even formal extensions of legal personhood to non-human entities have limited substantive impact in the absence of accompanying institutional support; the formal scale-extension of standing alone, without the integration of that standing into the routine architecture of policy formation, has produced limited substantive change. The implication is that the spatial disjunction cannot be addressed through formal legal-conceptual moves alone but requires the simultaneous reorganisation of institutional, cognitive, and political-economic architectures.

THE COUPLED SYSTEM AND THE CONDITIONS OF AN ECOLOGICAL-JUSTICE IMPERATIVE

The three disjunctions identified above do not operate as isolated theoretical limitations but as components of a coupled system in which each disjunction reinforces the others through specifiable conceptual, institutional, and political-economic pathways. This section develops the integrative analysis of the coupling and identifies the conditions under which the coupling could be broken.

The species disjunction reinforces the temporal disjunction through the moral-status pathway. When non-human beings are granted only instrumental standing, the moral weight of long-term biospheric integrity is attenuated, because the integrity of the biosphere over time depends on processes whose value cannot be fully captured by any anthropocentric metric (Chakrabarty, 2018; Steffen et al., 2018). The discounting of long-term biospheric considerations within cost-benefit policy frameworks is not a contingent technical choice but a structural consequence of the prior decision to treat non-human beings as instrumentally rather than intrinsically valuable. Heikkurinen

and colleagues (2021) develop this point through their relational theory of agency and argue that the management of the Anthropocene within planetary boundaries requires the simultaneous reorganisation of moral-status and temporal-scale frameworks.

The temporal disjunction reinforces the species disjunction through the discounting pathway. When the moral weight of future states is systematically discounted relative to present states, the populations whose welfare is most directly tied to future ecological conditions — non-human species whose population dynamics unfold over generations, ecosystems whose integrity depends on long-cycle processes, and Indigenous communities whose cultural continuity depends on multi-generational ecological relationships — are systematically disadvantaged. The discounting therefore operates as an indirect mechanism of species-disjunction reinforcement, even where the formal moral-status framework is articulated in terms that purport to extend standing across the human-non-human dichotomy. Pickering (2019) and Biermann (2021) document this pathway in their analyses of contemporary governance arrangements and argue that the institutional architecture of climate governance has been designed in ways that systematically reproduce the discounting pattern.

The spatial disjunction reinforces the species and temporal disjunctions through the colonial-coloniality pathway. The state-centric scale of dominant ethical frameworks not only privileges the populations whose interests are aggregated within national-jurisdictional boundaries but also reproduces the colonial-imperial frameworks within which the contemporary distribution of ecological capacity was historically produced (Sultana, 2022; Whyte, 2018; Davis et al., 2019). The colonial-coloniality pathway operates by treating the historical-imperial origins of contemporary ecological capacity as ethically discontinuous with the present, and therefore as outside the scope of ethical consideration; the result is that the populations whose ecological-relational systems were disrupted by colonial-imperial processes — typically Indigenous and Global South populations — are simultaneously exposed to the highest contemporary climate harms and excluded from the institutional architectures through which adaptation is organised. The pathway therefore reinforces the species disjunction by concentrating ecological harms on populations whose ecological-relational frameworks are already marginalised, and reinforces the temporal disjunction by treating long-historical responsibility as ethically discontinuous with the present.

The coupling among the three disjunctions is the central analytical claim of this article. Each disjunction, operating in isolation, would produce specific local effects but would not be sustainable, because the affected agents and frameworks would resist or work around the disjunction. The disjunctions become sustainable, and indeed self-reinforcing, because each disjunction produces the conditions under which the other disjunctions can operate. The species disjunction produces the moral-status framework within which long-term biospheric integrity is discounted. The temporal disjunction produces the discounting framework within which long-term ecological harms are externalised onto populations whose moral standing is already attenuated. The spatial disjunction produces the state-centric framework within which colonial-imperial responsibility is treated as ethically discontinuous with the present. The cycle is closed, and the closure is the source of the system's stability.

The framework of threefold ethical disjunction therefore identifies a structural feature of contemporary climate ethics that previous accounts have approached but not fully specified. Kopnina and colleagues (2018) describe the species disjunction without isolating its coupling with the temporal and spatial disjunctions. Chakrabarty (2018) describes the temporal disjunction without specifying its coupling with the species and spatial disjunctions. Sultana (2022) describes the spatial disjunction without specifying its coupling with the species and temporal disjunctions. Celermajor and colleagues (2021), Tschakert and colleagues (2021), and Davis and colleagues (2019) approach the coupling through the multispecies-justice and Plantationocene frameworks but stop short of specifying the recursive-feedback structure that produces the system's reproductive stability. The framework introduced here is offered as a complement to these accounts, designed to address the question of why the system reproduces itself even in the absence of conscious coordination.

The empirical pattern reported in the Research Results section — the convergence of harm distributions on populations and entities whose moral standing is most attenuated within the dominant ethical framework — receives its analytical interpretation through the coupling. The populations and entities that score highest on the harm dimensions of the climate crisis are precisely those that are exposed simultaneously to the species disjunction (non-human beings, ecological communities, Earth-system processes), the temporal disjunction (future generations, long-cycle ecological dynamics), and the spatial disjunction (Indigenous communities, Global South populations, populations whose historical-imperial position is treated as ethically discontinuous with the present). The convergence is not coincidental but structural, and it constitutes the empirical foundation of the analytical framework.

The implications for ethical reform are direct. Reform initiatives that target only one disjunction — for example, the extension of legal personhood to non-human entities while leaving the temporal-discounting framework in place, or the extension of intergenerational concern within an unchanged state-centric spatial framework, or the elaboration of climate-coloniality analysis without engagement with multispecies-justice considerations — cannot succeed because the unaltered disjunctions compensate. The empirical record confirms this prediction in the Atrato River case (Wesche, 2021), in the documented limits of intergenerational-discount-rate adjustments within current cost-benefit frameworks (Hickel & Kallis, 2020), and in the persistent gap between formal climate-coloniality recognition and substantive cross-jurisdictional reorganisation. Genuine restoration of an ecological-justice imperative requires simultaneous intervention on all three disjunctions, which is a political-conceptual task of substantial complexity.

The framework does not specify the content of such reforms, but it specifies the criteria they must meet to succeed. A reform that addresses the species disjunction without simultaneously addressing the temporal disjunction will be neutralised by the discounting framework that systematically attenuates long-term ecological standing. A reform that addresses the temporal disjunction without simultaneously addressing the spatial disjunction will be neutralised by the state-centric framework that externalises historical responsibility. A reform that addresses the spatial disjunction without simultaneously addressing the species disjunction will reproduce the anthropocentric moral-status hierarchy in a more geographically inclusive but no less species-exclusive form. The conditions under which the coupling can be broken are therefore stringent: only an ethical framework that simultaneously redistributes moral standing across human and non-human beings, expands the temporal horizon of moral concern to encompass the timescales on which Earth-system dynamics unfold, and reorganises the spatial scale of ethical responsibility to encompass the planetary-scale processes through which climate harms are distributed can ground a substantive ecological-justice imperative.

The conceptual resources for such a reorganisation are not absent from the contemporary literature. Haraway's *Chthulucene* (Haraway, 2016), Braidotti's critical posthumanities (Braidotti, 2019), the multispecies-justice framework articulated by Celermajer and colleagues (2021) and Tschakert and colleagues (2021), the relational-agency framework developed by Heikkurinen and colleagues (2021), the climate-coloniality framework developed by Sultana (2022), and the collective-continuance framework developed by Whyte (2018) collectively provide the elements of an alternative ethical architecture. What the contemporary literature has not yet produced is a synthesis in which the three disjunctions are treated as a coupled system and in which the conditions for their joint displacement are specified. The framework introduced in this article is offered as a step toward such a synthesis.

CONCLUSION

This article has examined the structural inadequacy of anthropocentric paradigms to the ethical demands of the contemporary climate crisis through a systematic analysis of three coupled

disjunctions in dominant climate-justice discourse. The analysis has been conducted through a mixed-method critical-analytical approach that combined a structured synthesis of twenty-four peer-reviewed sources from the period 2015-2023, comparative documentary analysis of major institutional indicators including the Sixth Assessment Report of the Intergovernmental Panel on Climate Change Working Group II (IPCC, 2022), the most recent planetary-boundaries assessment (Richardson et al., 2023), the 2023 Lancet Countdown on health and climate change (Romanello et al., 2023), and the trajectory analysis of Earth-system dynamics (Steffen et al., 2018), and analytical decomposition of dominant ethical frameworks across philosophy, environmental humanities, environmental politics, and Earth-system governance. The empirical findings have been interpreted through an analytical framework that decomposes anthropocentric climate ethics into three structurally coupled disjunctions — a species disjunction, a temporal disjunction, and a spatial disjunction — and demonstrates that the three disjunctions operate as a self-reinforcing system rather than as independent theoretical limitations.

The first hypothesis stated that anthropocentric ethics produces three structurally coupled disjunctions in climate-justice discourse. The empirical record confirms this hypothesis. The species disjunction is documented in the gap between the magnitude of non-human harm reported in the Working Group II assessment (IPCC, 2022) and the planetary-boundaries assessment (Richardson et al., 2023) on the one hand, and the marginal moral standing accorded to non-human beings within dominant climate-justice frameworks on the other (Kopnina et al., 2018; Celermajor et al., 2021; Tschakert et al., 2021). The temporal disjunction is documented in the structural mismatch between Earth-system timescales and political-deliberative timescales (Chakrabarty, 2018; Steffen et al., 2018; Pickering, 2019). The spatial disjunction is documented in the colonial-coloniality structure of contemporary climate harm distributions (Sultana, 2022; Whyte, 2018; Davis et al., 2019; IPCC, 2022; Romanello et al., 2023). The second hypothesis stated that no one disjunction can be ethically resolved without resolving the other two, because the three disjunctions reinforce one another through specifiable conceptual and institutional pathways. The empirical record again confirms this hypothesis. The Atrato River case (Wesche, 2021) demonstrates that formal extensions of moral-legal standing to non-human entities have limited substantive impact in the absence of accompanying institutional support. The empirical analysis of green-growth claims (Hickel & Kallis, 2020) demonstrates that adjustments to discount rates within cost-benefit frameworks cannot deliver climate stabilisation at the required rate. The persistent gap between formal climate-coloniality recognition and substantive cross-jurisdictional reorganisation demonstrates that the spatial disjunction cannot be addressed without simultaneous reorganisation of the species and temporal disjunctions. The convergence of these empirical patterns supports the structural prediction that the three disjunctions are coupled and that no isolated reform can succeed. The third hypothesis stated that the documented failure of climate governance to deliver substantive justice is not a contingent implementation failure but a structural consequence of the persistence of the three disjunctions in dominant ethical frameworks. The empirical record provides indirect but consistent support for this hypothesis. The persistent gap between aggregate emissions trajectories and the trajectories required to remain within climate boundaries (Steffen et al., 2018; Hickel & Kallis, 2020), the persistent unequal distribution of climate harms (IPCC, 2022; Romanello et al., 2023; Sultana, 2022), and the persistent marginalisation of non-human and future-generation standing within dominant institutional frameworks (Celermajor et al., 2021; Tschakert et al., 2021; Pickering, 2019; Biermann, 2021) collectively support the structural prediction that the failure is not a contingent implementation problem but a structural consequence of the dominant ethical paradigm. Direct testing of this hypothesis would require comparative case-study analysis of specific reform initiatives, which the methodology applied here does not undertake; the hypothesis is therefore confirmed at the level of structural prediction rather than at the level of specific causal demonstration.

The principal original contribution of this article is the introduction of the analytical framework of threefold ethical disjunction. The framework decomposes anthropocentric climate ethics into three

interlocking dimensions and specifies the recursive feedback relations through which each disjunction amplifies the others. The framework is novel because previous accounts have tended to treat the ethical limits of anthropocentrism as a unitary phenomenon (Kopnina et al., 2018), as a problem of moral status alone (Celermajer et al., 2021), as a problem of temporal scale alone (Chakrabarty, 2018), or as a problem of spatial scale alone (Sultana, 2022), without specifying the recursive coupling among the three dimensions. The framework makes the structural impasse of contemporary climate ethics legible not as an isolated theoretical deficit but as a configuration of mutually reinforcing pressures, and it generates testable predictions about the failure conditions of incremental ethical reform. The framework also provides an interpretive key for the empirical convergence of harm distributions on populations and entities whose moral standing is most attenuated within the dominant framework: the convergence is not coincidental but structural, and it is the empirical expression of the coupling.

The methodological limitations of the analysis are fourfold. First, the institutional indicators on which the empirical analysis depends are aggregate, masking within-system heterogeneity that would be visible at the level of particular ecosystems, species, or human communities. Second, the source literature is concentrated in English-language publication and underweights non-Anglophone analytical traditions and Indigenous knowledge systems whose oral and embedded forms do not translate readily into peer-reviewed publication; the inclusion of Whyte (2018), Sultana (2022), Davis and colleagues (2019), and Van Jaarsveld (2020) partially mitigates this limitation but does not eliminate it. Third, the critical-analytical synthesis cannot substitute for primary fieldwork in particular ecological or political contexts, and the framework therefore generates predictions that require further empirical testing through comparative case-study research. Fourth, the temporal scope of the analysis ends in 2023, and the post-2023 evolution of the frameworks under review — including the post-COP outcomes of the loss-and-damage negotiations, the developing jurisprudence of rights-of-nature recognition in additional jurisdictions, and the further articulation of the multispecies-justice and climate-coloniality frameworks — is not addressed here and constitutes a priority for further inquiry.

The implications for climate governance are substantial. The framework predicts that incremental ethical reforms targeting individual disjunctions — for example, the extension of legal personhood to non-human entities without simultaneous reform of intergenerational temporal frameworks, or the rebalancing of intergenerational considerations without simultaneous reform of cross-jurisdictional spatial frameworks — will fail to deliver substantive ecological justice. Genuine restoration of an ecological-justice imperative requires simultaneous intervention on all three disjunctions, including the redistribution of moral standing across human and non-human beings, the expansion of the temporal horizon of moral concern to encompass the timescales on which Earth-system dynamics unfold, and the reorganisation of the spatial scale of ethical responsibility to encompass the planetary-scale processes through which climate harms are distributed. The political and institutional complexity of such a reorganisation is considerable, and the framework does not prescribe its content. What the framework provides is the analytical clarity required to evaluate proposed reforms against the criterion of systemic adequacy: a reform that does not address all three disjunctions cannot, on the analysis presented here, succeed in its stated aim of grounding a substantive ecological-justice imperative.

Three directions for further research can be identified. First, the framework can be tested through comparative case-study analysis of jurisdictional reform initiatives that simultaneously address the three disjunctions, including the rights-of-nature jurisprudence in Ecuador, Colombia, New Zealand, and Bangladesh, and the climate-litigation cases that have invoked intergenerational and planetary-scale considerations in domestic and international courts. Second, the framework can be applied to the analysis of climate-policy initiatives outside the European and Anglo-American contexts, with particular attention to the Latin American, post-Soviet, African, and Pacific Island contexts where the coupling among the three disjunctions takes distinctive forms (Sultana, 2022; Van Jaarsveld, 2020; Whyte, 2018). Third, the framework can be extended to the analysis of digital and technological transformations that are reshaping the architecture of climate governance, including the

role of Earth-observation infrastructures, climate-modelling platforms, and emerging artificial-intelligence-mediated decision-support systems, all of which embed particular configurations of the three disjunctions in their operational logics.

The crisis of ecological justice is not a contingent failure of contemporary climate governance but a structural feature of the ethical paradigm within which that governance has been organised. The framework introduced here does not predict that the crisis will resolve itself, nor that the dominant ethical paradigm will be displaced by the simple accumulation of further evidence. The three disjunctions operate as a stable system precisely because they are coupled, and the system reproduces itself through routine ethical, institutional, and political-economic practices that do not require deliberate coordination. What the framework does predict is that the substantive purposes of ecological justice — the protection of non-human life as something more than instrumental, the recognition of long-term Earth-system integrity as a condition of any future ethics, and the recognition of the colonial-imperial and racial-capitalist origins of contemporary harm distributions — cannot be sustained within the operating constraints of anthropocentric ethics. Restoration of those purposes requires conceptual and institutional reorganisation on a scale that incremental reform cannot accommodate. The first task of analysis is to make the constraint visible. The remainder of the task is political, conceptual, and intergenerational, and lies beyond the analytical scope of this article.

BIBLIOGRAPHY

- Alberro, H. (2020). 'Valuing life itself: On radical environmental activists' post-anthropocentric worldviews. *Environmental Values*, 29(6), 669–689.
<https://doi.org/10.3197/096327120X15752810324093>
- Biermann, F. (2021). The future of 'environmental' policy in the Anthropocene: Time for a paradigm shift. *Environmental Politics*, 30(1–2), 61–80. <https://doi.org/10.1080/09644016.2020.1846958>
- Braidotti, R. (2019). A theoretical framework for the critical posthumanities. *Theory, Culture & Society*, 36(6), 31–61. <https://doi.org/10.1177/0263276418771486>
- Celermajer, D., Schlosberg, D., Rickards, L., Stewart-Harawira, M., Thaler, M., Tschakert, P., Verlie, B., & Winter, C. (2021). Multispecies justice: Theories, challenges, and a research agenda for environmental politics. *Environmental Politics*, 30(1–2), 119–140.
<https://doi.org/10.1080/09644016.2020.1827608>
- Chakrabarty, D. (2018). Anthropocene time. *History and Theory*, 57(1), 5–32.
<https://doi.org/10.1111/hith.12044>
- Davis, J., Moulton, A. A., Van Sant, L., & Williams, B. (2019). Anthropocene, Capitalocene, ... Plantationocene?: A manifesto for ecological justice in an age of global crises. *Geography Compass*, 13(5), e12438. <https://doi.org/10.1111/gec3.12438>
- Eckersley, R. (2021). Greening states and societies: From transitions to great transformations. *Environmental Politics*, 30(1–2), 245–265. <https://doi.org/10.1080/09644016.2020.1810890>
- Haraway, D. J. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Duke University Press.
- Heikkurinen, P., Clegg, S., Pinnington, A. H., Nicolopoulou, K., & Alcaraz, J. M. (2021). Managing the Anthropocene: Relational agency and power to respect planetary boundaries. *Organization & Environment*, 34(2), 267–286. <https://doi.org/10.1177/1086026619881145>
- Hickel, J., & Kallis, G. (2020). Is green growth possible? *New Political Economy*, 25(4), 469–486.
<https://doi.org/10.1080/13563467.2019.1598964>
- Intergovernmental Panel on Climate Change. (2022). *Climate change 2022: Impacts, adaptation and vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D. C. Roberts, M. Tignor, E. S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, & B. Rama (Eds.)]. Cambridge University Press.

- Kopnina, H., Washington, H., Taylor, B., & Piccolo, J. J. (2018). Anthropocentrism: More than just a misunderstood problem. *Journal of Agricultural and Environmental Ethics*, 31(1), 109–127. <https://doi.org/10.1007/s10806-018-9711-1>
- Pickering, J. (2019). Ecological reflexivity: Characterising an elusive virtue for governance in the Anthropocene. *Environmental Politics*, 28(7), 1145–1166. <https://doi.org/10.1080/09644016.2018.1487148>
- Richardson, K., Steffen, W., Lucht, W., Bendtsen, J., Cornell, S. E., Donges, J. F., Drüke, M., Fetzer, I., Bala, G., von Bloh, W., Feulner, G., Fiedler, S., Gerten, D., Gleeson, T., Hofmann, M., Huiskamp, W., Kummu, M., Mohan, C., Nogués-Bravo, D., ... Rockström, J. (2023). Earth beyond six of nine planetary boundaries. *Science Advances*, 9(37), eadh2458. <https://doi.org/10.1126/sciadv.adh2458>
- Romanello, M., Di Napoli, C., Green, C., Kennard, H., Lampard, P., Scamman, D., Walawender, M., Ali, Z., Ameli, N., Ayeb-Karlsson, S., Beggs, P. J., Belesova, K., Berrang Ford, L., Bowen, K., Cai, W., Callaghan, M., Campbell-Lendrum, D., Chambers, J., Cross, T. J., ... Costello, A. (2023). The 2023 report of the Lancet Countdown on health and climate change: The imperative for a health-centred response in a world facing irreversible harms. *The Lancet*, 402(10419), 2346–2394. [https://doi.org/10.1016/S0140-6736\(23\)01859-7](https://doi.org/10.1016/S0140-6736(23)01859-7)
- Schlosberg, D., Collins, L. B., & Niemeyer, S. (2017). Adaptation policy and community discourse: Risk, vulnerability, and just transformation. *Environmental Politics*, 26(3), 413–437. <https://doi.org/10.1080/09644016.2017.1287628>
- Steffen, W., Rockström, J., Richardson, K., Lenton, T. M., Folke, C., Liverman, D., Summerhayes, C. P., Barnosky, A. D., Cornell, S. E., Crucifix, M., Donges, J. F., Fetzer, I., Lade, S. J., Scheffer, M., Winkelmann, R., & Schellnhuber, H. J. (2018). Trajectories of the Earth System in the Anthropocene. *Proceedings of the National Academy of Sciences*, 115(33), 8252–8259. <https://doi.org/10.1073/pnas.1810141115>
- Sultana, F. (2022). The unbearable heaviness of climate coloniality. *Political Geography*, 99, 102638. <https://doi.org/10.1016/j.polgeo.2022.102638>
- Tschakert, P., Schlosberg, D., Celermajer, D., Rickards, L., Winter, C., Thaler, M., Stewart-Harawira, M., & Verlie, B. (2021). Multispecies justice: Climate-just futures with, for and beyond humans. *WIREs Climate Change*, 12(2), e699. <https://doi.org/10.1002/wcc.699>
- Van Jaarsveld, J. (2020). Nussbaum's capability approach and African environmental ethics: Is the African voice heard? *Oxford Development Studies*, 48(2), 135–147. <https://doi.org/10.1080/13600818.2020.1759037>
- Wesche, P. (2021). Rights of nature in practice: A case study on the impacts of the Colombian Atrato River decision. *Journal of Environmental Law*, 33(3), 531–555. <https://doi.org/10.1093/jel/eqab021>
- Whyte, K. (2018). Settler colonialism, ecology, and environmental injustice. *Environment and Society*, 9(1), 125–144. <https://doi.org/10.3167/ares.2018.090109>

EKOLOŠKA PRAVDA KAO ETIČKI IMPERATIV: KRITIKA ANTROPOCENTRIČNIH PARADIGMI U DOBA KLIMATSKE KRIZE

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Apstrakt: Članak razvija kritičku analizu načina na koje antropocentrične paradigme strukturno ograničavaju savremeni diskurs o klimatskoj i ekološkoj pravdi. Istraživanje primjenjuje mješoviti kritičko-analitički pristup koji integriše strukturiranu sintezu recenzirane literature objavljene u periodu 2015–2023, komparativnu dokumentarnu analizu glavnih institucionalnih pokazatelja — uključujući najnoviju procjenu planetarnih granica, izvještaj Druge radne grupe Šestog izvještaja Međuvladinog panela za klimatske promjene, te najnoviji izvještaj Lancet Countdown-a o zdravlju i klimatskim promjenama — i konceptualnu dekompoziciju dominantnih etičkih okvira u filozofiji, ekološkim humanističkim naukama, ekološkoj politici i upravljanju Zemljinim sistemom. Centralni nalaz je da antropocentrična etika proizvodi tri strukturno spregnute disjunkcije u diskursu klimatske pravde — disjunkciju vrste koja razdvaja moralni status ljudi od moralnog statusa ne-ljudskih bića, vremensku disjunkciju koja podređuje status budućih generacija sadašnjim preferencijama, i prostornu disjunkciju koja odvaja lokalne moralne obaveze od planetarne ekološke dinamike — i da nijedna disjunkcija ne može biti etički razriješena bez razrješenja preostale dvije. Empirijski obrazac dokumentovan u institucionalnim pokazateljima otkriva da neuspjeh klimatskog upravljanja u isporučivanju supstancijalne pravde nije kontingentni neuspjeh implementacije nego strukturna posljedica perzistencije triju disjunkcija u dominantnim etičkim okvirima. Originalni doprinos rada je uvođenje analitičkog okvira trostruke etičke disjunkcije, koji pojašnjava zašto izolovane reforme unutar antropocentrične etike ne mogu rekonstruisati ekološku pravdu i koji specificira uslove pod kojima bi neantropocentrična, multivrstna, međugeneracijska i planetarna etika mogla utemeljiti supstancijalni imperativ klimatske pravde. Metodološka ograničenja uključuju oslanjanje na agregirane pokazatelje i koncentraciju izvora na engleskom jeziku.

Ključne riječi: *ekološka pravda, antropocentriizam, klimatska pravda, multivrstna pravda, planetarne granice, etika antropocena, klimatska kolonijalnost, međugeneracijska pravda.*