Stephen Gardiner and the Ethics of Intergenerational Responsibility: Moral Challenges of Climate Change

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Abstract

Stephen Gardiner argues that climate change is a perfect storm a convergence of global, intergenerational, and theoretical failures. He contends that current generations engage in moral corruption, passing costs to future people and the poor, creating a "tyranny of the contemporary" that hinders ethical action.. Intergenerational ethics has emerged as a critical thought for understanding the moral obligations of present generations toward those yet to exist, particularly in the context of climate change. Stephen Gardiner's philosophical work provides a systematic and compelling analysis of these obligations, emphasizing the distinctive ethical challenges posed by the global, temporal, and theoretical dimensions of climate disruption. Central to his analysis is the concept of the "perfect moral storm," which highlights how structural, intergenerational, and moral complexities converge to make climate change a uniquely daunting ethical problem. Gardiner demonstrates that the diffuse nature of responsibility, the temporal distance between cause and effect, and the collective scale of decision-making create a landscape in which ordinary ethical reasoning is often inadequate, and conventional policy mechanisms risk moral failure. By framing climate change as both an environmental and moral crisis, Gardiner underscores the urgency of protecting the subsistence, security, and well-being of future generations, advocating for proactive, ethically informed action in mitigation, adaptation, and governance. His work bridges moral philosophy and practical policy, providing normative guidance on how societies can recognize and fulfill intergenerational obligations despite

complexity and uncertainty. This article critically engages with Gardiner's contributions, situating them within broader debates in environmental ethics, global justice, and moral responsibility. It argues that intergenerational ethics, as conceptualized by Gardiner, is indispensable for framing climate change not merely as a technical or political problem, but as a profound moral imperative demanding coordinated global and temporal accountability.

Keywords: Intergenerational ethics, climate change, moral responsibility, future generations, perfect moral storm

Introduction

The peculiar features of the climate change problem pose substantial obstacles to our ability to make the hard choices necessary to address it. Climate change involves the convergence of a set of global, intergenerational and theoretical problems. This convergence justifies calling it a perfect moral storm."One consequence of this storm is that, even if the other difficult ethical questions surrounding climate change could be answered, we might still find it difficult to act. For the storm makes us extremely vulnerable to moral corruption. Climate change represents one of the most urgent moral, political, and environmental challenges of the twenty-first century, not merely because of its ecological consequences, but because of its profound intergenerational implications. The actions of the present generation, particularly those associated with fossil fuel consumption, deforestation, and industrial development, have the potential to inflict severe and enduring harms on future populations. These harms are not hypothetical or marginal; they threaten the basic conditions necessary for human survival, including access to food, water,

shelter, and security.[1] What distinguishes climate change as an ethical problem is the temporal asymmetry it creates: present actors enjoy benefits and conveniences derived from carbon-intensive lifestyles, while the most serious costs are deferred, disproportionately impacting individuals who do not yet exist and cannot represent themselves in political or economic decision-making. This creates a situation in which conventional moral intuitions and standard policy mechanisms are often inadequate for capturing the full scope of ethical responsibility.[2] Stephen Gardiner's work offers a philosophically rigorous framework for understanding these intergenerational responsibilities. His concept of the "perfect moral storm" articulates how climate change presents a convergence of three ethically challenging dimensions: global (spatial and collective scale), intergenerational (temporal and moral distance), and theoretical (complexity, uncertainty, and institutional inadequacy).[3] By highlighting the moral dilemmas created by these overlapping challenges, Gardiner underscores that climate change is not merely a technical or political problem it is an ethical crisis that demands attention to justice, responsibility, and the rights of future generations. His work bridges moral philosophy, environmental ethics, and policy-oriented analysis, offering normative guidance for both individual and collective action, and for institutional responses at local, national, and international levels.

1. Gardiner, S. M. 2017. *A perfect moral storm: Climate change, intergenerational ethics, and the problem of moral corruption*, Oxford: Oxford University Press, 2017, p. 13.
2. Jamieson, D., *Reason in a dark time: Why the struggle against climate change failed—and what it means for our future*. Oxford: Oxford University Press, 2017, p. 71.
3. Gardiner, S. M. 2017. *A perfect moral storm: Climate change, intergenerational ethics, and the problem of moral corruption, p. 98.*

The central thesis of this article is that Gardiner's ethical analysis illuminates the unique moral obligations owed to future generations while clarifying the structural and practical challenges of fulfilling these obligations in an interconnected, globalized world. The article proceeds in several stages. First, it situates Gardiner's approach within the broader field of intergenerational ethics, delineating key conceptual foundations and normative principles. Second, it examines the ethical dimensions of responsibility, collective action, and institutional failure in light of climate change's temporal and spatial complexities. Third, it engages Gardiner's theory in dialogue with other contemporary approaches, including Rawlsian justice, the capability approach of Sen and Nussbaum, and care and relational ethics, highlighting points of convergence and distinction. Finally, the article explores the philosophical and practical implications of Gardiner's insights for climate governance, policy-making, and ethical deliberation, emphasizing the normative urgency of adopting an intergenerationally responsible approach. By framing climate change as a profound ethical and intergenerational problem, this analysis aims to provide a robust moral rationale for policies and actions that respect the rights, well-being, and dignity of those yet to come.[4]

Conceptual Foundations of Intergenerational Ethics

Intergenerational ethics is a branch of moral philosophy concerned with the obligations of current generations toward those who will exist in the future. Unlike conventional ethical problems, which typically involve relationships among contemporaneous agents, intergenerational ethics must grapple with temporal asymmetries,

4. Vanderheiden, S. *Atmospheric justice: A political theory of climate change*, Oxford: Oxford University Press, 2020, p.19.

moral distance, and uncertainties about future capacities, preferences, and contexts. The ethical stakes are particularly high in the context of climate change, where decisions made today regarding energy consumption, land use, or greenhouse gas emissions can generate consequences that persist for centuries, affecting the basic conditions necessary for human survival. These include access to food, potable water, habitable land, and protection from environmental hazards.[5]

At the heart of intergenerational ethics is the principle that future persons have moral standing, despite their nonexistence at present. This principle challenges conventional ethical reasoning in three ways. First, it confronts temporal bias, wherein present-day actors often prioritize immediate benefits over long-term harms, a tendency reinforced by political cycles, economic incentives, and human cognitive limitations. Second, it requires addressing the uncertainty of outcomes: the magnitude, timing, and distribution of future harms may be unknown, yet this uncertainty does not diminish the moral relevance of foreseeable rights violations. Third, intergenerational ethics emphasizes collective responsibility, as the scale of climate change means that harms to future generations are rarely attributable to individual actions alone but emerge from the cumulative effects of societal and institutional behaviour.[6]

Stephen Gardiner's conceptual contribution is particularly significant in clarifying these challenges. He articulates the notion

5. Newell, P., et al. "International perspectives on climate justice", *WIREs Climate Change*, 2012

6. Schlosberg, D., & Collins, L. B. "From environmental to climate justice: Climate change and the discourse of environmental justice" *Wiley Interdisciplinary Reviews: Climate Change, 5*(3), 2014, 359–374.

of the "perfect moral storm", a metaphor capturing the ethical complexity of climate change as a global, intergenerational, and theoretical problem. The global storm refers to the spatial dispersion of causes and effects, in which emissions in one region may harm populations elsewhere. The intergenerational storm highlights the temporal distance between actions and their consequences, creating a moral asymmetry where present luxury and convenience can lead to deprivation and insecurity for future generations. The theoretical storm reflects the inadequacy of traditional moral reasoning and institutional frameworks in addressing these intertwined challenges. Together, these storms illuminate why ordinary ethical tools such as immediate harm–benefit calculations or short-term policy compromises are insufficient for capturing the obligations owed to future generations.

Intergenerational ethics also engages with broader debates in environmental and political philosophy. For example, Rawls' just savings principle provides a theoretical framework for securing resources for future generations, emphasizing long-term fairness. Yet, Gardiner critiques this approach for potentially permitting threshold violations of well-being if they serve aggregated or distributive ends.[7] Similarly, the capability approach of Sen and Nussbaum emphasizes ensuring future generations have the substantive freedoms and capabilities to live meaningful lives. Gardiner complements this by highlighting that certain basic thresholds such as survival, security, and the ability to sustain human societies must be protected categorically, regardless of overall societal gains. Relational and care-oriented perspectives

7. Caney, S. Climate justice and historical responsibility. *Critical Review of International Social and Political Philosophy, 23*(7), 2020, pp. 841–861.

further enrich intergenerational ethics by stressing the moral significance of vulnerability, dependence, and structural inequalities, demonstrating that obligations to future generations are embedded not only in temporal sequences but in social and ecological networks.[8]

In sum, the conceptual foundations of intergenerational ethics establish that moral obligations to future persons are both non-negotiable and demanding, requiring attention to foreseeability, preventability, and fairness across temporal, spatial, and structural dimensions. Gardiner's analysis deepens this framework by articulating the unique ethical challenges posed by climate change, showing how ordinary moral intuitions may fail and why ethically informed policy and governance are imperative. Understanding these conceptual foundations is essential for evaluating the duties of present generations, designing effective climate policies, and advancing a normative framework that integrates moral theory, collective responsibility, and practical action in the service of intergenerational justice.

The Perfect Moral Storm: Climate Change as an Ethical Challenge

Stephen Gardiner's concept of the "perfect moral storm" provides a paradigmatic framework for understanding why climate change is not merely an environmental or technical problem, but a uniquely profound ethical and moral challenge.[9] The metaphor captures the convergence of three distinct but interconnected

8. Vanderheiden, S. *Atmospheric justice: A political theory of climate change, p. 27.*
9. Gardiner, S. M. 2017. *A perfect moral storm: Climate change, intergenerational ethics, and the problem of moral corruption, p. 98.*

dimensions the global, the intergenerational, and the theoretical that collectively complicate moral reasoning and ethical responsibility. These dimensions reveal why ordinary ethical intuitions, policy tools, and institutional arrangements are often insufficient to address the obligations owed to present and future generations. The global dimension highlights the spatial and collective scale of climate harms. Greenhouse gas emissions and other anthropogenic impacts are dispersed geographically; emissions in one region affect populations across the globe, frequently in ways that are highly unequal. Vulnerable communities in the Global South, for example, disproportionately suffer from flooding, drought, and agricultural collapse, despite contributing minimally to cumulative emissions. This spatial dispersal produces an ethical problem of collective responsibility, in which individual or national actions alone cannot prevent harm, yet the moral imperative to act persists. Philosophically, this challenges traditional frameworks of ethical responsibility that assume a clear agent–victim relationship, forcing ethicists to consider diffuse, collective, and structurally mediated responsibilities.

The intergenerational dimension captures the temporal asymmetry of climate change. The primary beneficiaries of fossil fuel-driven economic growth are contemporary populations, while the most severe consequences ranging from sea-level rise to biodiversity collapse will primarily affect future generations. This temporal distance creates a moral paradox: actions that are convenient, profitable, or even enjoyable today may constitute severe, foreseeable harms to individuals who cannot yet represent themselves or consent to the risks imposed upon them. Gardiner emphasizes that this asymmetry exacerbates ethical complexity,

particularly when combined with institutional, social, and cognitive limitations that diminish the visibility of long-term consequences. Unlike conventional moral scenarios, where harms are immediate and actors can directly perceive their effects, climate change requires ethical reasoning across time, uncertainty, and moral abstraction, challenging utilitarian, libertarian, and Rawlsian approaches that prioritize short-term welfare or procedural fairness.[10]

The theoretical dimension addresses the epistemic and institutional challenges that hinder moral clarity and ethical action. Climate change is characterized by scientific complexity, uncertainty, and the absence of clear causal chains that link individual or national behaviors to specific harms. Moreover, governance structures often fail to coordinate responses effectively across borders and scales, leading to ethical coordination problems akin to a global tragedy of the commons. These factors together produce what Gardiner describes as a theoretical storm: ordinary moral principles, such as fairness, harm avoidance, and responsibility, can seem abstract or inapplicable when the scale, uncertainty, and diffuse nature of harms are taken into account. This theoretical dimension underscores the need for ethical innovation, including frameworks that explicitly integrate moral thresholds, foreseeability, and collective responsibility into decision-making.

Philosophically, the perfect moral storm framework underscores several critical insights. First, it reveals that climate change cannot be adequately addressed through conventional ethical reasoning

10. Gardiner, S. M. 2017. *A perfect moral storm: Climate change, intergenerational ethics, and the problem of moral corruption, p. 104.*

alone; moral judgments must account for the scale, temporality, and collective complexity of harms. Second, it highlights the importance of intergenerational ethics, emphasizing that present generations have non-derogable duties to protect the subsistence, security, and dignity of those yet to exist. Third, the framework stresses the structural dimensions of moral failure: political institutions, market incentives, and social norms can collectively undermine ethical action even when individuals recognize their moral duties. In this way, Gardiner bridges normative philosophy with real-world policy considerations, offering guidance for ethically informed climate governance.

The ethical implications of the perfect moral storm are profound. It demands that we reconceptualize moral responsibility beyond immediate or local contexts, incorporating collective action, institutional reform, and precautionary principles. It challenges utilitarian cost–benefit calculations that discount future harms, libertarian prioritization of property rights over collective welfare, and narrow conceptions of justice that fail to account for temporal and spatial asymmetries.[11] By foregrounding these dimensions, Gardiner's analysis provides a morally compelling rationale for urgent mitigation, proactive adaptation, and global cooperation, situating climate change firmly within the realm of ethically non-negotiable human obligations. The ethical significance of climate change is most acutely revealed when considering the moral obligations owed to future generations. Unlike present-day ethical concerns, intergenerational obligations must account for the fact that those affected by today's actions do not yet exist and cannot

11. Schlosberg, D. "Climate justice and capabilities: A framework for adaptation and mitigation" *Ethics & International Affairs, 33*(2), 2019, pp. 167–183.

represent themselves. This temporal asymmetry creates both a moral and philosophical challenge: how can present actors meaningfully respect the rights, interests, and well-being of future persons whose identities, preferences, and circumstances are not yet determinate? Stephen Gardiner's analysis of intergenerational ethics provides a rigorous framework for addressing this challenge, emphasizing non-derogable duties, moral thresholds, and the moral relevance of foreseeability and preventability.[12]

At the core of this analysis is the principle that future persons have moral standing. Ethical theories must therefore treat the potential harms imposed on future generations as morally significant, even in the absence of direct consent or immediate reciprocity. This aligns with rights-based approaches to climate justice, which assert that subsistence, security, and ecological stability constitute baseline entitlements that cannot be sacrificed for present convenience or short-term gain.[13] Present generations, therefore, bear forward-looking duties of restraint, ensuring that their economic, technological, and political choices do not compromise these thresholds.

Gardiner further emphasizes the asymmetry of moral obligations between present and future generations. While current actors enjoy considerable freedom, wealth, and consumption opportunities, future generations are often powerless to influence outcomes, making them especially vulnerable to the decisions made today. Philosophically, this asymmetry demands heightened

12. Gardiner, S. M. 2017. *A perfect moral storm: Climate change, intergenerational ethics, and the problem of moral corruption, p. 109*
13. Gardiner, S. M. 2017. *A perfect moral storm: Climate change, intergenerational ethics, and the problem of moral corruption, p. 114.*

moral attentiveness: it is ethically impermissible to prioritize short-term luxury, convenience, or economic efficiency over the fundamental survival and dignity of future persons.[14] From a consequentialist standpoint, one could argue that aggregate utility might justify minor harm to future persons for present gains. However, Gardiner rejects this reasoning, asserting that categorical moral thresholds particularly those safeguarding subsistence and security cannot be overridden, regardless of aggregated benefits. This position parallels certain deontological frameworks, yet Gardiner situates it firmly within a practical, policy-oriented environmental ethics, bridging abstract moral theory with real-world governance concerns.

Intergenerational obligations also raise profound questions about discounting and moral temporality. Economic analyses often discount future costs and harms, reducing their perceived significance relative to present-day benefits. Gardiner critiques this practice as ethically unsound, emphasizing that the passage of time does not diminish moral relevance. Discounting effectively treats future persons as morally secondary, which is incompatible with principles of justice, rights protection, and ethical foresight. Instead, intergenerational ethics demands a normative framework that treats foreseeable harms to future generations as morally significant, even when the practical implications involve complex trade-offs, scientific uncertainty, or collective coordination challenges.

From a relational and care-oriented perspective, these obligations are not merely abstract or procedural but are embedded in

14. Jamieson, D., *Reason in a dark time: Why the struggle against climate change failed—and what it means for our future*, p. 63.

networks of dependence and vulnerability. Future generations are connected to the choices, technologies, and institutions of the present; their flourishing depends on the ethical attentiveness of current societies. Climate change therefore creates a structural moral imperative: obligations are not limited to individual actors but extend to governments, international institutions, corporations, and civil society. Ethical responsibility is both forward-looking and collective, requiring systems of governance and policy that recognize the rights of those who cannot yet advocate for themselves.

The concept of moral thresholds is essential for operationalizing intergenerational obligations. Present actions that push future generations below critical thresholds such as water scarcity, extreme climate events, ecosystem collapse, or loss of habitability constitute morally impermissible harm, regardless of the broader distribution of benefits.[15] Thresholds provide a practical ethical guide: they delineate the minimum conditions necessary for future well-being and dignity, ensuring that moral reasoning remains actionable even in the face of uncertainty and complexity. By anchoring intergenerational ethics in such thresholds, Gardiner provides a framework for integrating moral theory, policy design, and institutional responsibility. Moral obligations to future generations are non-negotiable, collective, and forward-looking. Gardiner's analysis reveals that ethical action requires both restraint in present consumption and proactive measures to protect ecological and social systems. Intergenerational ethics challenges policymakers, corporations, and societies to adopt a long-term perspective grounded in justice, rights, and care for the yet-to-

15. Gardiner, S. M. 2017. *A perfect moral storm: Climate change, intergenerational ethics, and the problem of moral corruption, p. 114.*

exist. Through this lens, climate change is not only a practical problem but a profound ethical crisis, demanding that present actors act with foresight, moral integrity, and global responsibility. Understanding these dimensions is essential for framing policy, governance, and ethical reasoning in ways that recognize and uphold the rights and well-being of both current and future generations. Gardiner's framework therefore serves not only as a diagnostic tool for moral failure but as a normative guidepost for ethically coherent action in the age of climate crisis.

Collective Responsibility and Institutional Challenges

The perfect moral storm framework illuminates why traditional notions of individual liability are insufficient: harms are often the result of thousands of dispersed actions, mediated through institutions and infrastructures that span nations and generations.[16] Collective responsibility, in this context, requires recognition that societies, states, corporations, and international institutions are morally implicated in perpetuating or mitigating harm. Ethically, the responsibility of these entities is not reducible to the sum of individual actions but is shaped by their capacity to coordinate, regulate, and prevent foreseeable harms. For example, high-emitting nations and multinational corporations hold disproportionate influence over emissions trajectories, and thus bear heightened moral obligations to reduce harm, provide support for mitigation and adaptation, and safeguard the rights of vulnerable populations, including future generations.

The collective dimension of responsibility also raises institutional challenges. Even when actors recognize their moral duties,

16. Caney, S., *Ethics and climate change: A new perspective*. UK: Routledge, 2021

existing governance structures often fail to facilitate coordinated action, producing a form of structural moral failure. This includes weaknesses in international climate agreements, inadequate regulatory mechanisms, and the absence of enforcement capacity to ensure compliance with ethical imperatives. Philosophically, Gardiner's analysis suggests that institutional failure is not merely a technical or political deficiency, but a moral problem, as it systematically undermines the capacity to prevent foreseeable harms to current and future generations.

Moreover, the ethical challenges of collective responsibility are amplified by temporal and spatial distance. Present-day policymakers may perceive climate harms as abstract or distant, while future generations have no voice in political decision-making. This creates a scenario in which ethical obligation must be institutionally mediated: the moral claims of those affected cannot rely solely on their capacity for direct advocacy, but must be safeguarded through principles of justice embedded in laws, policies, and global governance frameworks. Institutions thus serve a dual ethical function: they translate individual moral awareness into coordinated action and provide mechanisms to protect the interests of those who cannot advocate for themselves, including future generations and marginalized populations. Philosophically, Gardiner's framework challenges the dominance of narrow utilitarian or market-based approaches to climate governance. Cost–benefit analyses often ignore the ethical weight of threshold harms, particularly for future generations, and may justify actions that violate fundamental rights in the pursuit of aggregate utility.[17] By contrast, a rights-based and ethically

17. Gardiner, S. M. *Debating Climate Ethics*. Oxford: Oxford University Press, 2016, p.16

threshold-oriented perspective central to Gardiner's intergenerational ethics asserts that collective actors have non-derogable duties to prevent harm, maintain ecological sustainability, and uphold basic entitlements to life, security, and well-being. When failures in governance, coordination, or policy allow foreseeable harms to occur, collective responsibility includes both preventive and corrective duties. Preventive duties involve reducing emissions, implementing adaptation strategies, and strengthening international cooperation. Corrective duties involve compensation, technological assistance, and remedial measures for those who suffer from institutional failures, particularly marginalized. Importantly, ethical frameworks must recognize the limits of compensation: some threshold harms, such as irreversible loss of ecosystems or displacement of future populations, cannot be remedied, reinforcing the necessity of preventive moral action.

The ethical challenge of climate change extends far beyond individual responsibility. Gardiner's analysis demonstrates that collective, institutional, and systemic action is morally indispensable, requiring societies to develop structures, policies, and practices that can enforce forward-looking duties. These duties encompass the prevention of harm, the protection of basic thresholds for current and future generations, and the remediation of institutional failures when harms occur. By linking moral theory with institutional responsibility, Gardiner provides a framework for understanding climate change as a multi-dimensional ethical crisis, demanding both individual awareness and coordinated global governance grounded in justice, care, and intergenerational accountability.

Intergenerational Justice in Dialogue with Other Ethical Theories

Stephen Gardiner's work on intergenerational ethics offers a uniquely robust framework for understanding the moral challenges posed by climate change, yet its philosophical significance becomes even clearer when it is examined in dialogue with other contemporary theories of justice. By situating Gardiner's approach alongside Rawlsian justice, the capability approach of Sen and Nussbaum, and care and relational ethics, one can appreciate not only its distinctive normative insights but also its philosophical complementarity, demonstrating how diverse frameworks converge and diverge in addressing the obligations owed to future generations.

a. Rawlsian Justice and the Just Savings Principle

John Rawls' theory of justice, particularly the just savings principle, emphasizes that each generation bears a responsibility to preserve sufficient resources and institutional frameworks to enable future generations to pursue a just life.[18] This approach provides a formalized and forward-looking conception of intergenerational fairness, but Gardiner critically observes that it may insufficiently address threshold-level harms. Rawls' principle emphasizes continuity and aggregate fairness, but it does not guarantee the protection of non-negotiable rights or survival thresholds. In this sense, Gardiner complements Rawls by insisting that certain harms such as climate-induced ecological collapse, extreme weather events, and irreversible biodiversity loss cannot be justified or mitigated solely through procedural or distributive reasoning. Philosophically, this underscores

[18] Rawls, J., *Justice as fairness: A restatement* (E. Kelly, Ed.). Harvard: Harvard University Press, 2016, p.73.

Gardiner's insistence on categorical obligations, situating intergenerational duties as morally binding even when weighed against economic or collective efficiency considerations.

b. Sen and Nussbaum's Capability Approach

The capability approach emphasizes the moral imperative to ensure that individuals, present and future, have the substantive freedoms to live lives they value. This forward-looking, human-centered framework aligns closely with Gardiner's concern for the well-being of future generations. However, Gardiner's analysis strengthens this approach by highlighting systemic risks: climate change may prevent future populations from achieving minimum thresholds for survival, health, and dignity, irrespective of overall aggregate capabilities. Whereas the capability approach emphasizes the expansion of freedoms and functionings, Gardiner foregrounds the ethical priority of baseline thresholds, offering a rights-anchored benchmark to guide moral and policy action.[19] This integration demonstrates that safeguarding basic thresholds is both a moral necessity and a practical condition for enabling capabilities.

c. Care Ethics and Relational Justice

Care ethics foregrounds the ethical significance of vulnerability, relationality, and attentiveness to needs. From this perspective, obligations to future generations are not abstract but arise from the structural and ecological relationships that bind present and future persons. Gardiner's framework resonates with care ethics by emphasizing the asymmetry of agency and power, recognizing that future generations cannot represent themselves and are

19. Caney, S., & Hepburn, C., "Carbon trading and moral hazard". *Climate Policy, 19*(8), 2019, pp. 967–978.

uniquely vulnerable to harm. Yet Gardiner extends this framework by institutionalizing obligations, showing that moral attentiveness alone is insufficient. Collective and enforceable structures ranging from international law to national climate policy are necessary to translate relational responsibilities into concrete action. Philosophically, this synthesis demonstrates that care ethics and rights-based approaches can mutually reinforce intergenerational justice, combining attentiveness with enforceable moral duty.

d. Utilitarian, Libertarian, and Other Critiques

Gardiner also engages critically with utilitarian and libertarian approaches. Traditional utilitarianism may justify short-term benefits for present populations even if they produce catastrophic harms for future generations, while libertarian perspectives often deny moral obligations to those who do not yet exist. By introducing the concept of moral thresholds, Gardiner challenges both frameworks: ethical constraints on present action are required to prevent irreversible harms, regardless of potential aggregate gains. This represents a philosophically robust critique, highlighting that climate ethics demands non-negotiable duties that resist simple cost–benefit or property-based reasoning.

e. Gardiner's Distinctive Contribution

Gardiner's philosophical contribution lies in bridging abstract ethical reasoning with practical governance imperatives. His framework accounts for the complexity, scale, and temporal reach of climate change, specifying not only what duties exist but also how they can be operationalized through policy, institutional design, and collective action. By integrating uncertainty, moral distance, and structural failure into the ethical analysis, Gardiner provides guidance for both individual moral reflection and

coordinated societal action.[20] His emphasis on thresholds, forward-looking duties, and enforceable obligations ensures that intergenerational ethics remains both normative and actionable, offering a coherent strategy for addressing climate change as a uniquely challenging moral problem.

Situating Gardiner's intergenerational ethics in dialogue with Rawlsian justice, the capability approach, and care ethics illuminates both its distinctive normative features and its philosophical complementarity. Gardiner demonstrates that ethical obligations toward future generations are neither abstract ideals nor discretionary claims: they are practically enforceable duties, requiring moral foresight, institutional coordination, and unwavering commitment to protecting fundamental thresholds of well-being and dignity. His framework thus provides a normatively rigorous and philosophically sophisticated lens for understanding and addressing the unprecedented ethical challenges of climate change.

Conclusion

Stephen Gardiner's contributions to intergenerational ethics provide a comprehensive and philosophically rigorous framework for understanding the unique moral challenges posed by climate change. Through his concept of the "perfect moral storm", Gardiner exposes the confluence of global dispersal, temporal asymmetry, and theoretical uncertainty, demonstrating why climate change is not merely a technical or environmental issue, but a profound ethical crisis. By foregrounding the ethical significance of future generations, he insists that present actions

20. Gardiner, S. M. (Ed.), *The Oxford handbook of intergenerational ethics*. Oxford: Oxford University Press, 2021, p. 284.

must be evaluated not only in terms of immediate benefits but also in terms of their long-term consequences on the survival, dignity, and flourishing of those yet to exist.

A cornerstone of Gardiner's framework is the notion of moral thresholds: certain harms such as the loss of habitable land, collapse of ecosystems, and deprivation of basic subsistence are ethically non-negotiable. These thresholds establish minimum conditions for human well-being, which present generations are morally obligated to protect. This principle distinguishes Gardiner's approach from utilitarian or libertarian reasoning, which might justify present convenience at the cost of catastrophic future harm, and complements other ethical frameworks such as Rawlsian justice, the capability approach, and care ethics.[21] Gardiner's insistence on enforceable obligations highlights the necessity of translating normative insights into institutional and policy action, bridging the oft-perceived gap between moral philosophy and practical governance.

The practical implications of Gardiner's work are profound. Climate governance must integrate moral foresight, justice, and institutional accountability into mitigation and adaptation strategies. States, international institutions, and corporations are collectively responsible for preventing foreseeable harms, protecting ecological thresholds, and ensuring that vulnerable populations both current and future are not subjected to irreparable damage. Institutional reforms, legally enforceable obligations, and international cooperation are essential for operationalizing

21. Ainia, D. K., Mahaswa, R. K., Lasiyo, & Arianto, B. Environmental ethics and intergenerational justice: Building sustainable responses to climate change. *Journal Ekologi, Masyarakat dan Sains,* 2025. *6*(2), 241–247

these ethical responsibilities, particularly in the face of structural, economic, and political obstacles that exacerbate collective inaction. Gardiner's framework has profound implications for moral education and civic responsibility. Citizens, scholars, and policymakers alike must cultivate awareness of the temporal, spatial, and relational dimensions of climate harm, recognizing that ethical obligations extend far beyond immediate personal or national interests. Ethical reflection must therefore be coupled with practical action, ensuring that individual and collective behaviors align with the moral imperatives of intergenerational justice.

Finally, the continuing relevance of Gardiner's work lies in its ability to synthesize normative theory with real-world applicability. By integrating moral philosophy, political theory, and environmental ethics, he provides both a diagnostic lens for understanding moral failure and a prescriptive framework for ethical action. In doing so, Gardiner not only clarifies the moral urgency of protecting future generations but also charts a course for ethically coherent climate policy, governance reform, and global cooperation. His work thus remains indispensable for philosophy, law, and global climate policy, offering a normatively robust, ethically principled, and practically actionable guide for addressing the unprecedented intergenerational moral challenges posed by climate change.

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