

Kant, Revolution, and Climate: Individual and Political Responsibility

Zachary Vereb
University of Mississippi

Abstract. There has been a revived interest in the relevance of Kant's philosophy for contemporary global issues. This paper investigates the extent to which Kant's philosophy can provide grounds for addressing the global issue of climate change, despite his seemingly conservative defense of reform over revolution. First, I argue that Kant's account of societal progress as metamorphosis is compatible with the conception of a green revolution understood as restructuring society toward sustainability. Second, I claim that Kant's evolutionary model of political change offers a helpful framework for thinking about how to transition present societies to more sustainable ones. I conclude with reflections on how Kant's views have applied relevance for climate-related problems.

Key words: Kant, revolution, reform, climate, environment

Climate change is among the most pressing of contemporary moral and political challenges. Because there has been a revived interest in the relevance of Kant's philosophy for contemporary global issues, a discussion of its significance for sustainability is desirable.¹ However, since it has been suggested by some that a green revolution is urgently needed to usher in sustainable societies,² Kant's rejection of revolution might be thought to limit the importance of his philosophy for sustainability. This paper investigates the extent to which Kant's moral and political philosophy can provide grounds for addressing climate change despite his seemingly conservative emphasis on reform, not revolution. I aim to show that it can be mobilised as one strategic resource, among many, for thinking about a sustainable and just future.

I argue that Kant's account of societal progress as metamorphosis is compatible with the conception of a green revolution understood as a restructuring of society toward sustainability.³ I claim, additionally, that Kant's evolutionary model of political change offers a helpful framework for thinking about how we might transition present societies to more sustainable ones. Contrary to the worry that Kant's rejection of revolution makes his philosophy too conservative and therefore inadequate for sustainable

1] See Williams 2012, Roff 2013, Baiasu 2014, Reglitz 2016, and Wood 2017 for recent literature on contemporary global problems viewed through a Kantian lens. For accounts touching on climate change, see Rentmeester 2010, Altman 2011, Frierson 2014, and Pinheiro Walla 2020.

2] E.g., Malm 2021. See Hall and Taplin 2007 for a discussion on environmental rhetorical and political strategies on revolution vs reform. For Marxist ecological revolution, see Pepper 1993 and Foster 2014. On revolutionary aspects of ecocentrism and deep ecology, see McLaughlin 1993. The activist Deep Green Resistance (DGR) organisation promotes violent civil disobedience; I discuss DGR later.

3] Sometimes 'green revolution' refers to renewable energy transformation (e.g., Gardiner 2011, 63-71). Though a green revolution will involve these technological innovations, I use the term more broadly to express a restructuring and reorientation of society, including technology, institutions, and values.

transformations (which, I take it, is one reason for a dearth of literature on sustainability in Kant scholarship), his account of progress and political change provides invaluable insights for sustainability.⁴

This paper is divided into four parts. Part I surveys Kant's views on revolution and reform. I consider Kant's explicit arguments against revolution and some of his general concerns about it. Then, I argue that the environmentalist call for a green revolution should not necessarily be understood as revolution in the sense that Kant rejects, but rather as a global project for political reform and human maturation. Part II explores the value of Kant's account of political change for the project of sustainability, especially his model of metamorphosis contrasted with palingenesis. Part III draws from ideas in Kant's works to outline a way for justifying climate-related duties regarding nonrational nature, rights of climate refugees, and obligations of nations. I conclude in Part IV with objections on the temporal shortcomings of reform.

I. KANT ON REFORM, NOT REVOLUTION

Kant famously opposes revolutionary action, even in the face of a despotic leader or regime.⁵ Instead, Kant enjoins piecemeal reform. One difficulty in interpreting Kant's arguments involves the ambiguous meaning of 'revolution'. Some commentators suggest that Kant means violent rebellion, while others interpret revolution as resistance to state laws, which may include civil disobedience.⁶ I stipulate that Kant at the very least has in mind unlawful action, so peaceful, lawful protests do not necessarily count as acts of rebellion.⁷ I leave open the possibility of permissible civil disobedience, since

4] Of course, even if the Kantian approach is plausible, this does not mean that it will necessarily ensure we effect the sustainable shift in time; that remains an open question. See the IPCC's AR6 for concerns for change by mid-century. I address this question at the end of the paper.

5] Kant's excitement over the French Revolution despite his general condemnation of revolution has puzzled many commentators. There are several responses to this tension. Possibly Kant did not view the pre-Terror French Revolution as revolution properly speaking (Nicholson 1992, 256). Others think that Kant was sympathetic to the revolutionary cause, yet dissembled in his publications to evade censorship (Beck 1971 rejects such a view; Yovel 1980 endorses it). In any case, Kant thinks that violent revolution, like war, can be a lucky vehicle of progress from the perspective of human history, though it should never be uncritically endorsed. In many ways, climate change presents a global analogue of the French Revolution; the question, in the end, is whether it too will end in a global terror.

6] Does violence concern harm to persons only, or property also? Malm (2021) affirms the former, following Martin Luther King Jr. For Kant, we probably must assume both, given arguments in the *Metaphysics of Morals*.

7] The sense of the term *Widerstand* for Kant is contentious (see Nicholson 1976 and Schwarz 1977). To ensure that my question is not a mere terminological dispute but a philosophical one, I take 'revolution' and 'resistance' for Kant to refer to actions that violate rational law(s) of the state or lead to unjust violence. Lawful pressure aimed at legislators for reformative policies need not be secretive, violent, or non-universalizable, and appear permissive, unless, of course, the sovereign prohibits the right to free speech; if this happens, hope remains with the moral politician to convince the sovereign that free speech permissions benefit her self-interest (Williams 1992).

Kant does remark (in the *Metaphysics of Morals*)⁸ that the state cannot force citizens to act in contradiction to “inner morality” (MS, AA 06: 371; cf. 06: 321n and Refl 19: 8051).⁹ In any case, Kant presents a number of differing arguments as to why revolution is impermissible. Below, I consider four argumentative strategies – conceptual, political, moral, and pragmatic-historical. I do not evaluate or endorse Kant’s arguments. Instead, I ask: why does Kant see revolution as illegitimate for social change? Is he simply reactionary, or are there lessons to learn here?¹⁰

First, in MS Kant argues that revolution is itself contradictory in character when viewed from a juridical standpoint.¹¹ No legal right to revolution exists, for Kant, since there may only be one sovereign, represented by the legislative authority. The sovereign is legitimated only by the people’s voluntary submission to its authority. In other words, the sovereign has rightful power because citizens, as rational agents, (in principle) submit themselves to its authority in the execution of laws designed to coerce those who hinder unlawful freedom for the purpose of leaving a state of nature and entering into a rightful condition (MS, AA 06: 320). Citizens have “voluntarily replaced arbitrary coercion (in the state of nature each is his own judge) by legitimate and rational coercion (the rule of law) and, yet, they wish to act as judges of their own cause, which is absurd” (Linden 1988, 180). A right to rebel against these laws, Kant thinks, contradicts that commitment (MS, AA 06: 319-21; cf. TP, AA 08: 302). In short, revolutionaries constitute a part of the state, but as a mere part they cannot rightfully claim to represent the whole state (i.e., the entire people) against the only rightful representation (i.e., the sovereign). A right to rebel, in the end, would entail two conflicting sovereigns, which is a contradiction.

Second, in TP Kant argues that a right to revolt (on the basis of actions of the sovereign perceived to disadvantage happiness) “destroys” the rational “foundation”

8] Parenthetical references to Kant’s writings give the volume and page number(s) of the Royal Prussian Academy edition (*Kants gesammelte Schriften*). Translations are from the Cambridge Edition of the Works of Immanuel Kant, with the following abbreviations: MAM = “Conjectural Beginning of Human History” (in Kant 2007); MS = *Metaphysics of Morals* (in Kant 1996); Päd = *Lectures on Pedagogy* (in Kant 2007); TP = “On the Common Saying: That May Be Correct in Theory, but it is of No Use in Practice” (in Kant 1996); ZeF = *Perpetual Peace* (in Kant 1996); WA = “An Answer to the Question: What is Enlightenment?” (in Kant 1996); KU = *Critique of the Power of Judgment*; SF = *Conflict of the Faculties*.

9] By “inner morality” Kant clearly does not have in mind subjective moral beliefs (for that would make little sense in Kant’s system), but rather that the state, as the instantiation of (external) legality, cannot conflict with (inner) morality. I bracket the question as to whether unlawful but peaceful protest is permissible if positive law conflicts with right. At the very least, it is possible based on this passage to defend a view supportive of civil disobedience.

10] Many neo-Kantian socialists have claimed that Kant’s arguments against revolution are poorly formulated. For a discussion of this with emphasis on Hermann Cohen, see Linden 1988. Interestingly, the influential Marxian thinker Ernst Bloch argued that, though Kant could not see it, his categorical imperative only makes sense in a classless society (1986, 874).

11] Exceptions arguably include a “state” in name only, i.e., a “den of thieves” as Byrd and Hruschka put it, following Augustine (2010, 183). In any case, Kant admits that unlawful states (i.e., states that do not represent the general will of the people) “ripen” for revolt.

upon which legitimate civil society is based (TP, AA 08: 299). For Kant, civil society's main purpose is to secure the freedom of people from arbitrary coercive actions that hinder independence; it is not tasked with securing the happiness of citizens, unless that happiness is somehow instrumental to securing a rightful condition (TP, AA 08: 298), as happiness is personal and contingent (*Critique of Practical Reason*, AA 05: 25-26). Sovereign laws that detriment happiness may appear unjust, but, as Kant argues, only the sovereign has the authority to adjudicate their necessity for securing liberty. The sovereign can of course err in judgment, but that is irrelevant, since the social contract that has been, as it were, agreed upon by the people as an idea of reason (TP, AA 08: 297) represents the sovereign as the sole authority for such determinations. Worse, a universalized revolutionary maxim would "annihilate any civil constitution and eradicate the condition in which alone people can be in possession of rights generally" (TP, AA 08: 299). In dissolving the civil constitution, revolutionary actions (at least temporarily) revert us to a state of lawlessness: "There cannot be a law which permits lawlessness, nor an institution of power that provides for its own forcible dissolution" (Beck 1971, 413). Kant is hesitant to accept this, since in addition to the perceived conceptual and political contradictions, he is worried that a new despotism would fill the vacuum.

A third criticism against rebellion can be found in ZeF, where Kant argues that the right to rebel violates the categorical imperative's publicity criterion and is therefore prohibited (ZeF, AA 08: 386; Linden 1988, 184). Now, successful revolutions require careful coordination. If a maxim of rebellion were to become public in order to secure such cooperation, this would undermine the possibility of its effective execution since the sovereign could crack down on its organisers. The planning would then need to be secretive, presumably relying on unethical means such as deception and lying. Thus, "The wrongness of revolt is revealed by the fact that the maxim through which one *publicly declares it* renders one's own intention impossible" (ZeF, AA 08: 382). It is clear that Kant has in mind here secret revolutionary organisation, such as a planned military coup. As we will see later, Kant's narrow view of revolution does not necessarily rule out the possibility of, e.g., demonstrations that do not violate publicity or the categorical imperative.

Lastly, Kant generally opposes the legitimacy of revolution for its potential to destabilize human-historical progress, engender violence, and promote irrational enthusiasm. In "What is Enlightenment?" Kant argues that revolution has an allure as the ideal solution to perceived despotism, yet society will regress if it fails, which Kant thinks is probable. Kant assesses the potential moral and political counterproductivity of *enthusiastic* revolution, whereby "the great unthinking mass" of people will reign, instituting new prejudices and injustices (WA, AA 08: 18). As Howard Williams notes, "the shock of a revolution might awaken this mass but Kant is sceptical that this will have the lasting effect we might hope to see" (2003, 23-24).

Quick fixes to societal ills, Kant worries, are probably unsustainable, and may even regress to an uncivil condition. Because citizens have the right for free speech

in enlightened society (WA, AA 08: 37; TP, AA 08: 304), Kant thinks wiser means for progress should first look to political reform via, e.g., education and critical public expression.¹² Piecemeal reform, Kant thinks, is therefore preferable. Given this, we might wonder whether Kant would disapprove of the environmentalist call for a green revolution, even in the face of governmental mismanagement with climate change.¹³ If Kant's arguments against revolution also apply here, i.e., if climate mismanagement does not undermine the state's legitimacy, we might have reason to abandon the question of Kantian sustainability and instead consider revolutionary alternatives.

The Green Revolution: Revolution or Reform?

Sustainability is touted as a win-win solution for addressing environmental degradation, climate change, global poverty, and injustice. Yet because of the existential urgency of resource scarcity and climate-induced civilization collapse, we require a green revolution, which, it is claimed, implies a deeper social revolution to succeed (Foster 2014). Like 'sustainability', the phrase 'green revolution' is vague. Sometimes the latter refers to radical, illegitimate political change in the sense Kant rejects, and other times it is used to suggest a restructuring or reformation in societal institutions, values, and culture (or generally, human maturation). Is revolution in the so-called radical sense required for the task at hand? If it is, perhaps we occupy an emergency justifying suspension of typical ethical norms. Let us begin by considering perspectives that endorse radical, social revolution vis-à-vis environmental crisis.

On Naomi Klein's view, our current economic system – with its structural requirement for infinite growth – and our political system – which is ill-suited to serve the people – are incompatible with sustainability. Though we must, of course, embrace new values, Klein is pessimistic about the saving power of green virtues cultivated within present institutions. Realistic solutions must involve a radical revolution of our market system, political institutions, and values (2014, 57, 91). For law in its current

12] Indeed, prohibiting the public use of one's reason through free speech would inhibit the progress of enlightenment for present and future generations. And, as Kant very clearly puts it, it would be a "*crime against humanity*" to cut this flower of progress at its root (WA, AA 08: 39).

13] Byrd and Hruschka argue that it is possible to defend revolution as a *duty* for Kant, supposing the state acts unjustly and therefore constitutes nothing more than a state of nature: "[...] Not every association that calls itself a 'state' or a 'civil society' is a juridical state [...] Kant is far from prohibiting revolution in a 'state' which, although it calls itself a 'state' [...] Otherwise remains a den of thieves and thus indistinguishable from the state of nature [...] A prerequisite for the prohibition against revolution is that we have a *lawgiving* head of state, who expresses his *universal lawgiving will*. If we do not, only a despot remains [...] The prohibition against revolution does not apply in a despotic state" (2010, 181-84). In a state of nature, agents have a duty to enter a rightful condition meant to sustain itself in perpetuity (MS, AA 06: 312, 307, 325). If corrupted legislatures can be argued to be unlawful and lacking in legitimate sovereignty (by, e.g., violating the innate right of independence, MS, AA 06: 237), perhaps revolt in such contexts would not necessarily apply to the arguments against revolution glossed in this section.

form privileges the wealthy.¹⁴ For Klein, sustainability requires bottom-up mobilisation: “Only mass social movements can save us now [...] We will need the climate revolution playing on repeat, all day every day, everywhere” (2014, 450-52). Whether this demands violent revolt is unspecified, though she reflects on historical precedents, such as the abolition of slavery, involving much bloodshed (2014, 455-56).

Social theorists John Bellamy Foster (2014) and David Pepper (2013), though much of their views on ecological revolution align with a Kantian view of reform (since they understand the state playing a major role in sustainability), endorse revolutionary activity as the only viable way to sustainability; they do not outright endorse violent or unlawful means, yet their commitment to Marxian and anarchist positions – ones that do not rule out unlawful strategies – place them at odds with the Kantian view of metamorphosis. Indeed, Foster argues that “the only rational answer” for responding to climate change, “lies in an ecological revolution, which would also have to be a social revolution” (2014, 46). Both theorists suggest that reform is a dead-end; a global socialist revolution is thus the only viable pathway to sustainability.

Dave Foreman and Murray Bookchin go further and endorse direct action. As current institutions tend to perpetuate injustice and environmental degradation, these commentators suggest that recourse must be unlawful, presumably involving eco-terroristic resistance (Foreman 1991, 72-73; Bookchin 1991, 78). Their views are echoed today in Andreas Malm’s recent manifesto *How to Blow up a Pipeline*, which details the inefficiencies of civil disobedience and questions the anti-revolutionary, anti-violent methods of the American civil rights movement. Malm suggests that we consider violence (toward property, not persons) as a “tactical asset” to bottom-up, “hands-on” change since we find ourselves in an emergency climate situation where so-called passive options have proven fruitless: “[...] Change will have to be forced upon them. The movement must learn to *disrupt* business-as-usual” (Malm 2021, 51, 84, 20).¹⁵

Not all green revolution proponents endorse this radical sort. Many argue that we do not need a complete overhaul of society. Instead, attempts should first be made to reform society by promoting awareness of structural violence, prioritizing education, and stressing the importance of public debate. For instance, Lester Brown (1981) argues

14] One potential concern for a Kantian approach regards a systemic problem that goes deeper than individual actors. Klein (2014), e.g., argues that the root is neither corrupt politicians nor uncaring citizens, but rather the inherent logic of capitalism with its endless growth. Though I cannot address this here, many twentieth century neo-Kantians indeed flirted with Marxian ideas in trying to think through impediments of global capitalism for social progress. For our purposes, it is sufficient to note that individuals still matter for charting a sustainable future, and Kant is at least suited for addressing *these* sorts of challenges.

15] Though Malm (2021) defends the necessity for force, force is not lacking in Kant’s thought. Ethics alone will certainly not cut it given failures of Glasgow’s COP26. Justified force is needed, so perhaps Kant’s juridical philosophy can help. Still, there may be potential problems with such an approach, seeing that it justifies property-relations which might be thought, like Malm, to be one of the roots of the crisis. Here, then, we come against limits of Kantian thought, though the basis of Kant’s justification – with the idea of our common ownership of the earth – may be a moment used to develop a future Kantian *climate ethic*.

that the path to sustainability is one which can be changed from within if institutions, religions, and values converge on the common goal of building a sustainable society. Martin Schönfeld (2013) suggests that a normative paradigm shift could be the basis for a sustainable restructuring of society. And though he is pessimistic about the possibility of reform given the complex theoretical entanglements of the climate tragedy, Stephen Gardiner (2011) argues that our best shot begins with development of an “ethics of transition” which gives citizens and legislators the intellectual tools to enact just climate policy.¹⁶ Still, the environmentalist call for a green revolution is widespread. Where does Kant’s view of political change sit with regard to the call?

II. METAMORPHOSIS, POLITICAL CHANGE, AND SUSTAINABILITY

How would Kant evaluate the *radical* version of the green revolution? Unlawful, violent revolt, even if done to secure the safety of the environment, threatens a state of irrational anarchy contrary to the categorical imperative and the duty to seek a rightful condition. Additionally, revolutionary enthusiasm makes violent revolt likely. Few things are more dangerous to international unity and peace than civil war, and the failed revolution of a dominant power would be counterproductive to global sustainability.¹⁷ In its most radical formulation green revolution appears off the table, unless conceived as a collective act of self-defense in a state of nature.

Yet it is not obvious that Kant would reject the *reformative* instantiation of the green revolution. First, there is no logical contradiction or violation of publicity in the idea that governments reform themselves from the top down, through lawful pressure from the bottom up (such as organised by Greta Thunberg and the youth protest of March 2019 or the youth climate lawsuits of 2015). Second, effective green reform would ensure that the state does not succumb to societal collapse in failing to address climate change.¹⁸ Finally, sustainable reformation is universalizable. Some commentators, such as Schönfeld, have suggested that the categorical imperative is itself a blueprint for sustainability (2008, 14).

16] So-called ‘evolutionists’ or ‘reformists’ may not use the phrase ‘green revolution’. Part of my purpose is to disambiguate, to show how there are at least two ways to think about what a green revolution entails, one of which is plausibly anti-Kantian and the other, progressively Kantian.

17] This is so for at least two reasons: First, effective climate treaties require commitment from most nations, though some nations emit far more than others. A failed revolution in one of those nations, ending in civil war, could leave the remaining nations with no reasonable emission mitigation solutions other than technological ones, since even if a *failed* nation emits less because of decreased production, war is itself emission-intensive. Relatedly, geoengineering would then remain the only viable mitigation strategy, having its own ethical and political problems (Robock 2008). I address this in Part IV.

18] Besides resource shortages which pose a danger to the health of nations, climate change is, as the IPCC and others have put, a “threat multiplier” (CNA Military Advisory Board, 2007), i.e., it will only exacerbate geopolitical problems and lead to more failed states such as Yemen, Libya, and Syria. Fertile grounds for radicalized terrorist organisations (such as ISIS) then result, along with more refugees. Failure to reform soon makes it far more difficult later. The clock matters.

Rather than burning society down and starting anew, the reformist green revolutionary would promote the restructuring of society in accordance with the progress of humanity. Thus, Kant's rejection of revolution is compatible with the reformist view of a green revolution for sustainability.

Political change, for Kant, is characterized in the biological terms of metamorphosis and palingenesis. Metamorphosis, as used in Kant's time, signifies "a transformation, a restructuring of the form of a thing" (Williams 2003, 164). For society to change in accordance with metamorphosis means that society is refashioned, as in the transformation of caterpillar to butterfly. Though the transformation may be qualitative and nonlinear (SF, AA 07: 55), the organism suffers no rupture; similarly, Kant views successful societal change in terms of the metamorphic continuity of reform rather than the abrupt break of palingenesis (MS, AA 06: 339-40). A contemporary environmental parallel to palingenesis can be seen in the DGR, which even Malm opposes. This revolutionary organisation aims "to 'induce widespread industrial collapse, beyond any economic or political systems' – to reduce organised human life to a *tabula rasa* and hand the planet back to the animal kingdom [...] Murder is no longer abhorred" (cited by Malm 2021, 156). By contrast, Kant's organic and evolutionary model of metamorphosis is a preferable heuristic for thinking about the societal shift to sustainability. It is only useful, however, *while* we remain at a fork in the road (i.e., not long).

Metamorphosis emphasizes the improvement of civil society through epistemic, moral, and political growth. Growth from the standpoint of metamorphosis is inward, not outward, just as education represents qualitative development and expansion, not disruption. The green revolution requires "educational reform on a planetary scale," involving creativity, deep-thinking, and "critical consciousness" (Assadourian 2017, 6-14), just as societal improvement and progress for Kant rest, in great part, on education and public enlightenment (Päd, AA 09: 444; WA, AA 08: 39). Relatedly, metamorphosis underscores the importance of political continuity for the advance of human progress. Rather than succumbing, for Kant, to the irrationality of violent and unlawful means, viewing the transition to sustainability via societal metamorphosis allows for "political improvement with radical goals but which employ non-radical means" (Williams 2003, 162-63). If we understand the green revolution as a fundamental restructuring of society and a reorientation to a new paradigm of thought (Costanza 2013, 128), this is precisely what I take Kant to mean when he understands the qualitative transformation and continual progress of the species.

In addition, metamorphosis represents a healthy, embedded view of humanity-in-society-in-nature conducive to species-maturation. Sustainability, as it turns out, requires we problematize the infinite-growth model and reflect on alternatives, since planetary boundaries have limits. Transitioning from growth-based societies to sustainable ones is best appreciated with the model of the butterfly; the caterpillar represents the immature, growth-based society; if the maladaptive caterpillar continues to eat without anticipating the need for a cocoon state, it destroys itself by exceeding natural boundaries. Only once

the caterpillar has stopped growing can it finally transform into a butterfly. This is the wisdom needed for transitioning from unsustainable societies to sustainable ones, and it is the model Kant prefers for just political change. To invoke the same imagery, the radical revolutionary approach has the caterpillar sacrifice itself with no guarantee for future caterpillars. Deliberate progress toward sustainability reflects a more mature and healthy relation of humanity to nature. It furthermore avoids the risks of civil collapse and the impairment of global climate mitigation.

Destruction, dispersion, discontinuity, immaturity, and enthusiasm all characterize the *palingenetic* model of political change that is antithetical to the metamorphic one. These palingenetic features are also antithetical to sustainability. By contrast, metamorphosis represents a fundamentally forward-looking model of human development. We are to consider not only the *present* legislative state, but the *future* goals for sustainability on a species-wide scale, including concerns for posterity and its potential. Concrete examples of metamorphic strategies in the sustainability literature include the promotion of eco-education (Assadourian 2017), transformative democratic change in politics (Leach 2013), the prioritisation of public institutions and economic metrics that more adequately track human well-being (Costanza 2013), infrastructure innovation (Newman 2010), and finally public policy addressing economic inequality and consumption (Kasser 2009).

All these require, in principle, reform rather than abrupt and violent change. Accordingly, they function as real-life examples of sustainable metamorphosis from a Kantian perspective. Thus, not only is Kant's rejection of revolution compatible with the call for a green revolution, but his model of political change fits nicely with frameworks to green society: what remains is their implementation and enforcement. With this in mind, the next section draws from Kant's works to outline moral and political duties that enjoin these and related metamorphic policies.

III. CLIMATE CHANGE AND RESPONSIBILITY

In his political works, Kant discusses the finitude of the earth, and his arguments have implications relevant to the climate crisis (e.g., MS, AA 06: 352; ZeF, AA 08: 358). In MS, Kant's concept of the original common possession of earth, which is understood not as disjunctive but as *common* possession (and therefore which is distinguished from property), is foundational to his argumentation (MS, AA 06: 262, 352). The right that can be derived from this common possession is a "right to be" somewhere on the surface of the earth (which is to say, empirical possession), rather than a right to be a proprietor of something (which would be intelligible possession, like a share in the earth's surface) (MS, AA 06: 262).¹⁹ Byrd and Hruschka gloss this right "to a place on the earth" as

19] In climate justice, it is commonly argued that justice demands everyone, irrespective of nationality or background, by virtue of their humanity, receive an equal share of the earth's atmosphere (i.e., its ca-

meaning, in essence, “the right not to be propelled off the earth’s surface” (2010, 127). That is, “my right, which I have against everyone else, is a right to an (unspecified) piece of earth that I have even if all the land on this earth has been claimed by others. In other words, I have a right to exist on the face of the earth as I am. No one may throw me against my will into the ocean [...]” (Byrd and Hruschka 2010, 128). The right of hospitality (i.e., the “right to visit”), thinks Kant, is derived from original common possession of the earth’s surface.

Though Kant clearly does not discuss such issues, a Kantian approach that develops these sections may hold promise for rethinking obligations owed to climate refugees threatened by sea-level rise and perpetual drought. Such individuals – especially those in poorer nations that have contributed least to climate change and therefore bear the least responsibility – have the right to hospitable treatment on the part of wealthier (and more culpable) nations, since they cannot return to their old homes. Not allowing them to at the very least temporarily visit would be the functional equivalent to propelling them off the earth. When discussing war, Kant defends as much regarding refugees who are permitted to seek asylum if alternatives would involve destroying them (ZeF, AA 08: 358). The notion of a ‘climate refugee’ is, however, largely alien in traditional international law since refugees are usually recognized as persecuted individuals, not displaced ones. The foregoing discussion (along with Kant’s remarks on the cosmopolitan right to hospitality) readily lends itself to justified defenses on the part of those impacted, who as it were will be thrown (by wealthy nations) against their “will into the ocean.”²⁰

In addition to refugees, it is possible to draw from Kant’s thought to reflect on duties regarding nonrational nature in the context of climate change. In KU, Kant claims that sublimity prepares us for morality by making us receptive to the moral law (Allison 2001, 324; KU, AA 05: 259) while making us aware that we are creatures dependent on nature (Brady 2013, 82-83); and the disinterested appreciation of beauty in nature prepares us to love nature and be moral to others (KU, AA 05: 298-99, 380; MAM, AA 08: 113). Combining these insights with passages in MS where Kant states that we have indirect duties regarding nonrational nature give us good reasons to avoid cruelty toward animals and wanton destruction of the beautiful in nature, all of which are exacerbated by unmitigated climate change and its sublime impacts (MS, AA 06: 443-44; Vereb 2019).

The prevention of biodiversity loss – since it preserves nature’s beauty and ensures the stability of environments (and, consequently, welfare of flora and fauna) – can be thought as a corollary to our duties regarding nonrational nature. Thus, we have wide moral obligations to prevent biodiversity loss. These duties have an amplified significance

capacity for absorbing GHG emissions, which currently wealthy countries overindulge). Although I believe it would be possible to develop a juridical argument of this sort using Kant’s philosophical resources, I do not have the space to do so here.

20] Pinheiro Walla 2020 and Vaha 2019 address related questions on Kant’s practical philosophy vis-à-vis threatened peoples.

when framed in the context of climate change, for two reasons. First, we are creating a sixth mass extinction event with extinction rates currently up to 100-1000 times that of the Holocene.²¹ An extinction event would massively reduce biodiversity. This implicates us in animal cruelty and wanton destruction of beautiful nature on a large scale, failing our duties toward others and ourselves. Second, robust global biodiversity functions as a key bulwark against climatic instability. Biodiversity is, as it were, the planet's immune system, and a reduction in biodiversity means a more erratic climate, leading to increased rates of climate impacts, such as extreme weather, heat waves, and water shortages.²² Just as we have indirect duties to ourselves regarding the preservation of our health (*Groundwork for the Metaphysics of Morals*, AA 04: 397) to ensure we are able to fulfil our direct duties, so also do we have indirect duties regarding biodiversity loss to ensure the planet is hospitable for us to pursue our moral ends. Additionally, when we fail these duties regarding nature, we also create conditions that make the planet less stable, in turn threatening the stability of the state. To better realize these duties, agents can use several means at their disposal to facilitate policy change, including critique and lawful resistance. However, since individual action alone is insufficient to mitigate climate change, the state duties must also be considered.

On Kant's view, the primary function of the state (and the core of the state's obligation to its citizens) is the ensure that individuals have space to pursue their own ends independently and in harmony with one another (TP, AA 08: 289-90; ZeF, AA 08: 350). The aim of the state is thus to prevent a condition antithetical to rationality (Williams 2003, 18). To prevent political chaos, the state is authorized to issue policies of coercion in order to ensure the liberty of agents and the sustainability of the state. With climate change on the scene, numerous societies – especially less developed ones – face political conflict such as civil war.²³ Many countries will likely face destabilization, if not collapse, from an increasingly large stream of climate refugees, resource scarcity, and political instability. Additionally, states have obligations as moral agents (ZeF, AA 08: 354; MS, AA 06: 343) to form a federation that makes sustained peace possible, whose role today must include international agreement on GHG reduction.

A number of political obligations follow from the foregoing outlines. States must be hospitable to refugees who would be destroyed by climate-related impacts, since everyone has a right to be somewhere on our finite globe. Second, states have obligations to ensure that biodiversity is protected in order to safeguard that society does not decline from climate destabilization, creating the space for individuals to practice their duties with regard to nonrational nature. Third, because states have obligations to pursue peace

21] Though there is general agreement that climate change will severely impact biodiversity loss and extinction rates, there is some contention about whether a true sixth mass extinction is already under way. See Ceballos 2015 for critical discussion of this debate.

22] That "biodiversity insures ecosystems against declines" has become known as the 'insurance hypothesis' (Yachi and Loreau 1999).

23] See Hsiang 2011 for a discussion on organised political violence and climate impacts.

and prevent war (ZeF, AA 08: 356), they must work collectively towards preventing climate change and the endless war that will result when civilizations breakdown.²⁴ Civil breakdown not only precludes agent self-determination, but the “duty to realize the condition of public right, even if only in approximation by unending progress [...]” (ZeF, AA 08: 386).

IV. CONCLUDING REMARKS

The worry of Kant’s apparent conservatism in regard to climate change is no intrinsic obstacle for the wide applicability of Kant’s philosophy for climate change. Reformism is prudent insofar as it ensures stability and security against the overly swift and potentially derailing aspects of palingenetic revolutionary change. In this respect, Kant’s account is wise. Still, even if this is granted, one might object that the climate problem is unique not only insofar as it is an international challenge (which, to be sure, Kant’s political philosophy is suitably equipped to address), but more perniciously: it is a race against time. Without swift change in the next few decades, we will be locked into a climate trajectory of no return. The analogy often used is a runaway train. Even if we slam the brakes, the train will slide down the tracks. Likewise, since we see the cliff ahead, we must act now to avoid oblivion. Hence, Malm’s justification for violence vis-à-vis obstacles to climate action. The problem with Kant’s account of change, it might be thought, is that it is too slow, as are present democratic methods. Perhaps the Hobbesian approach is wiser in times of crisis: Should we not install an international sovereign and/or suspend usual moral and juridical protocols in a global emergency situation?

From a Kantian standpoint, the Hobbesian solution is problematic primarily because it would establish a “soulless despotism” (ZeF, AA 08: 367). For Kant there are worse things than death, and the annulment of the power of self-determination is one; it would be better to try first, at least, to promote the reform of education and political institutions (on the domestic level) and push for a federation of nations (on the international level) rather than institute a global hegemon.²⁵ This echoes Gardiner’s call for a “global constitutional convention” (2019).

Second, the procedure of disbarring juridical and moral norms to enact an emergency protocol could also lead to the very thing it is trying to prevent. For the

24] In many ways, the question of peace for Kant is like the question of sustainability. If we do not come together as nations and agree to exit the global state of nature, we may very well meet our demise in war. Similarly, if we do not come together as nations and determine a course of action for addressing climate change, we may very well end up with climate war, with nations competing over scarce resources on an increasingly inhospitable planet. In the worst-case scenario, climate change may very well lead to perpetual peace by spelling the end of humanity, so seeing ourselves as citizens of the world on a finite planet, as Kant suggests, is an important frame.

25] Though education affects individuals (especially youth), reform of education is primarily a policy matter rather than the responsibility of individual teachers and students (SF, AA 07: 93). Likewise, though climate treaties relate to individual nations (and representatives), they need international consent to work.

most obvious solution to climate change from this standpoint would be to deploy geoengineering as a 'lesser evil' solution. If we do not achieve political solidarity and commit to norms of global justice, a rogue state (e.g., China or USA) could deploy, e.g., sulfate injections in the atmosphere, acting under the aegis of 'emergency' without global consent (Gardiner 2011, 347; 395). Since geoengineering on a global scale has never been done and is, in truth, an experiment, it is quite likely for geoengineering to backfire, having catastrophic effects for humans and non-humans alike (Robock 2008), thus ultimately stunting the progress of humanity.

Finally, it is not clear that all reform must be slow. There is no a priori reason why reform cannot happen swiftly. Several empirical examples of successful, rapid reform without revolution, such as the international ban of CFCs/HCFCs of the Montreal Protocol, the Meiji Restoration in Japan and the Chartist Movement in Britain, give us reasonable hope that change is possible.²⁶ The caricature of Kant's view, whereby political change must be slow and linear, is mistaken. Just as the transformation of pupa to butterfly involves a qualitative shift, so also does Kantian political reform operate with non-linear thresholds; all that is needed to supersede a threshold is an evolutionary spark. Thus, though Kant often talks of change as a slow, generational process, we have actual evidence of reform happening on swifter time-scales. Despite this, the stakes remain high, and the odds are not in our favor. We should learn lessons from Kant's insights, but not remain blind to other alternatives, especially ones that are able to temper efficacy with ethical legitimacy.

The question of the climate reform timeline is a crucial but open one. In this paper, I have suggested that Kant's moral and political philosophy offers conceptual resources for this task. The green revolution needed to overcome climate change will require more than individuals performing their duties, yet it must include them if we are to attain a society *worth* sustaining. In addition to such duties, Kant's account of political change as metamorphosis provides us with an alternative framework for approximating a sustainable future. What remains is to implement it.

ztvereb@olemiss.edu

²⁶] The Montreal Protocol, which secured a global ban on ozone-destroying substances, is an example of rapid reform at the international level. The Chartist movement of the mid-nineteenth century and the Meiji Restoration of the late-nineteenth century are examples of rapid domestic reform. The former involved legal pressure on parliament for labour rights and suffrage, and though it involved some insurrectionary activity, was largely successful for influencing reform in roughly 30-60 years without violent resistance as its primary motor. The latter involved the sovereign of Japan reasserting control over the illegitimate shogunate occupation. The Restoration led to better living conditions for its citizens, abolished the feudal class-system, and reformed education, all in the span of about 30 years. Though violent resistance was part of this transition, the force stemmed from the unlawful shogun, who lacked sovereign authority. Other examples of top-down progressive reform include: Frederick the Great and his father Frederick I of Prussia (e.g., open borders, freedom of the speech, press, and school reform), Peter the Great and the House of Romanov prior to Nicholas II (especially regarding education reform), and the Tang Dynasty (or cosmopolitan, 'Golden Age') of China.

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