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The Climate Crisis, Renewable Energy, and the Changing Landscape of Global Energy Politics

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Abstract

Abstract

This essay reviews three recent books on the changing landscape of global energy politics in the era of climate change. Key questions that the authors investigate include: how will the renewable energy transition reshape the global balance of power? How will political-economic interdependencies and geopolitical alignments shift? Will contemporary petro-states adapt or collapse? And what new patterns of peace and conflict may emerge in a decarbonized world order? The authors provide different perspectives on the likely speed of the energy transition and its geopolitical implications. However, they occlude deeper questions about the depth of the transformations needed to prevent climate catastrophe—particularly in the nature of capitalism and military power—and the potential for more radical perspectives on energy futures. In contrast, I will argue that we should advance a critical research agenda on the global energy transition that accounts for the possibility of more far-reaching transformations in the political-economic, military, and ideological bases of world politics and highlights diverse movements fighting for their realization. These possible transformations include (1) transitions to post-growth political economies; (2) a radical shrinkage of emissions-intensive military-industrial complexes; and (3) decolonizing ideologies of “progress.” If struggles for alternative energy futures beyond the hegemony of economic growth and Western-style modernization are at the forefront of radical politics today, then these struggles deserve greater attention from critical IR scholars.

Keywords

climate change, renewable energy, energy transition, geopolitics, climate justice

Introduction

Energy flows are the foundation of life, global capitalism, and world order, yet energy remains a relatively neglected subject in the field of International Relations (IR). Attention to energy flows and infrastructures for the most part remains confined to the subfield of energy geopolitics, which is dominated by realist and liberal approaches that highlight conflict and cooperation over energy

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security and market governance (Colgan, 2013; Klare, 2015). Understandably, this literature focuses overwhelmingly on fossil fuels, particularly oil, since they have been the backbone of economic growth, globalization, and empire since the 19th century (Buzan & Lawson, 2015). However, in the past couple of years, an increasing number of scholars have turned their attention to the Renewable Energy (RE) transition and the question of how it will transform international relations (Van de Graaf & Sovacool, 2020; Hafner & Tagliapietra, 2020; Yergin, 2020). While a rich literature on global climate politics exists, it focuses primarily on issues like multilateral climate governance, the political economy of carbon markets, the climate-conflict nexus, migration politics, and reworking the ontological horizons of IR (Burke et al., 2016; Dalby, 2018; Lakitsch, 2021; Newell & Paterson, 2010; Nicholson & Jinnah, 2016; Proedrou, 2020). Yet the RE transition itself raises a different set of questions about the future of world politics that have only begun to be systematically investigated by scholars in the field of IR and beyond.

The books reviewed in this essay constitute a productive starting point for exploring these questions, yet much more work needs to be done to broaden this literature and deepen our grasp of the scale and scope of the possible transformations ahead. In particular, the authors tend to focus on conventional IR concerns, including questions such as: how will the energy transition reshape the global balance of power? How will political-economic interdependencies and geopolitical alignments shift? Will contemporary petro-states adapt or collapse? And what new patterns of peace and conflict may emerge in a decarbonized world order? Yet deeper questions about the depth of the transformations needed to prevent climate catastrophe—particularly in the nature of capitalism and military power—and the potential for more radical perspectives on energy futures are occluded. In contrast, I will argue that we should advance a critical research agenda on the global energy transition that accounts for the possibility of more far-reaching transformations in the political-economic, military, and ideological bases of world politics and highlights diverse climate justice movements fighting for their realization.

The Emerging Geopolitics of Renewable Energy

Manfred Hafner and Simone Tagliapietra's edited volume *The Geopolitics of the Global Energy Transition* provides a useful introduction to the emerging "geopolitics" of the RE transition, understood in the sense of how the transition will reshape inter-state competition and conflict. In particular, three themes stand out in the volume: (1) competition over new RE technologies and value chains; (2) the trading relationships that may emerge from the transition and their geopolitical consequences; and (3) the future of contemporary petro-states. First, the contributors demonstrate how RE technologies—including solar panels, wind turbines, battery storage systems, and electric vehicles—are fast becoming an arena in which states struggle for control over value chains and raw materials. Just as British hegemony was built on the energetic foundations of coal and steampower and American hegemony on oil, Manfred and Tagliapietra claim that China may become "the 21st century's world renewable energy superpower" (Manfred & Tagliapietra, 2020, pp. xv). Eyl-Mazzega and Mathieu document how China "has already taken, or is seeking to take, dominant positions in the whole value chain of the main technologies involved in the low-carbon energy transition" (Eyl-Mazzega & Mathieu, 2020, pp. 36). Other contributors point to China's near monopoly over rare earth minerals that are critical for the RE transition: in 2017, it accounted for 80% of rare earth production and is home to 36% of world reserves and has also made efforts to gain priority access to cobalt and lithium reserves around the world, which are critical for battery storage systems (Meidan, 2020).

The second key theme is how the RE transition will transform the global energy trade and forge new relationships of interdependence and possibilities for peace and conflict. In order to balance the intermittency of renewables, regional "smart grids" are in development that would transmit energy from areas with a surplus of solar/wind/hydro power to areas where demand exceeds local supply, and

Meidan therefore suggests that interstate electricity cut-offs could become an important foreign policy tool (Meidan, 2020). Hafner & Tagliapietra (2020, pp. 13), on the other hand, claim that the “geopolitical complexity of greater electric interconnections between nations” will intensify global interdependence and vulnerabilities, thereby “reducing the risks of conflict”. Similar debates arise concerning the implications of mineral supply chains: the increasing dependence of most states on China for rare earths (80% of global production), the Democratic Republic of the Congo for cobalt (60% of global production), and the Andean salt flats for lithium (40% of global reserves) may increase vulnerabilities to supply chain disruptions (whether intentional or accidental) (Meidan, 2020), though some suggest that these minerals are more geographically diffuse and therefore harder for one or several states to control, which may facilitate regional autonomy and dampen conflict pressures (Hafner & Tagliapietra, 2020).

The third key theme concerns the future of contemporary petro-states: can they quickly diversify their economies away from fossil fuels in order to sustain economic competitiveness, tax revenues, and domestic stability, or will they suffer stranded assets and economic decline? Some contributors argue that Saudi Arabia and Russia in particular have the most to lose from the transition (Henderson & Mitrova, 2020). Both have made limited efforts to diversify their economies—Saudi Arabia through its “Vision 2030” initiative, Russia through its plan to increase nuclear reactor exports and “green” its steel and aluminum manufacturers—though fossil fuel exports remain the overwhelmingly dominant basis of their economies, and some contributors believe the most likely outcome for these states will be waning geopolitical influence, social instability, and possibly even state collapse (Henderson & Mitrova, 2020). This narrative is contested by others, who claim that the RE transition may actually boost the short- to mid-term oil and gas rents of petro-states by (artificially) increasing the scarcity of fossil fuels (Mills, 2020). But it is certain that contemporary petro-states like Saudi Arabia, Russia, Venezuela, Iraq, Nigeria, and others face profound challenges that could result in transitions to more diversified RE-powered economies on the one hand, or instability and collapse on the other.

The Hafner & Tagliapietra volume provides fascinating insights into the likely tectonic shifts in world order that will emerge as a result of the RE transition. While limited to realist and liberal perspectives, the contributors demonstrate that none of the key elements of world politics of interest to mainstream IR scholars—from the balance of power to dynamics of geoeconomic competition and cooperation—will remain untouched by the transition. Yet they provide merely a small window into a vast terrain of counter-hegemonic struggles over energy futures at different scales. In particular, the forms of “change” that these authors focus on are limited to shifts in the balance of power, trade relationships, geopolitical alignments, and technological substitutions; all important, but they tell us little about the deeper transformations that would likely be necessary to enable a truly just and sustainable RE-based world order (as I will elaborate below).

The Continuing Geopolitics of Oil and Gas Amidst the Energy Transition

In contrast to Hafner & Tagliapietra’s emphasis on the geopolitical upheavals that may emerge from the RE transition, Daniel Yergin’s *The New Map: Energy, Climate, and the Clash of Nations* instead puts more emphasis on the long-term continuity of the fossil fuel economy. As the title of the book indicates, Yergin is also concerned with the implications of climate change and the RE transition, though these remain secondary in the arc of his narrative, which focuses predominantly on the consequences of the American “shale revolution,” the rise of China, and the role of energy in reshaping the geopolitics of the Middle East, EU–Russia, and Russia–China relations. Yergin claims that “shale oil and gas have proven to be the biggest energy innovations so far in the 21st century” (Yergin, 2020, pp. xiv). He explores how the United States, by reducing its oil import-dependence, has given it new flexibility in its foreign policy, for example, by enabling it to place financial and energy sanctions on Iran and Russia without fear of triggering oil price spikes (pp. 60–62). Furthermore,

rather than tensions between OPEC and non-OPEC countries dominating the geopolitics of oil, Yergin recounts how the rise of American shale alongside resurgent Russian production has forged a new oil order based on the “Big Three” of the United States, Russia, and Saudi Arabia, which allows us to understand the novel dynamics of oil price negotiations from the 2014 shale-driven price crash to the 2020 pandemic-induced collapse (pp. 65–66).

When turning to the RE transition, Yergin treads much of the same ground covered by the Hafner & Tagliapietra’s volume. But in contrast to the above authors, Yergin argues that the rise of renewables will remain slow and subordinate to oil and gas for a long time to come. He writes: “oil will maintain a preeminent position as a global commodity, still the primary fuel that makes the world go round. Some will simply not want to hear that. But it is based in the reality of all the investment already made...[and] its central role in transportation” (pp. 428–429). Yergin’s caution here is a valuable counterpoint to more techno-optimistic narratives of rapid market driven “disruption” of the global energy industry and geopolitics. Yet it demonstrates a lack of urgency and limited understanding of the climactic consequences of his projections. Yergin claims that, in contrast to growing calls for “net zero” emissions by 2050, fossil fuels will likely take up at least 50% of (growing) energy consumption by that time (pp. 429). But he does not then consider that according to UNEP analysis, this would set the world on track for a 3°C temperature rise later this century (UNEP, 2019), which would likely have devastating consequences. As Mark Lynas explains, “three degrees will usher in a wholesale mass extinction” along with a “globe-girdling region of drought engulfing a substantial majority of the world’s current population and land area,” which will set the stage “for a new era of escalating food commodity price shocks as we tip from relative global sufficiency into increasing desperate scarcity” (Lynas, 2020, pp. 117, 142).

Instead of reckoning with these consequences, Yergin instead criticizes youth and indigenous climate activists fighting to ban hydraulic fracturing and accelerate the RE transition with a “Green New Deal.” As he writes, regarding their proposals: “how you ban imports and exports of oil and at the same time ban domestic production of oil – and still have a functioning economy and society – [is] left unexplained” (Yergin, 2020, pp. 392–393). This question is an important one that deserves more careful consideration beyond simplistic appeals to RE-based techno-optimism, but Yergin’s tacit support for business-as-usual fossil fuel production plans and scorn for more radical proposals evinces limited understanding of (or concern for) the stakes of the energy transition. We should not disregard his caution regarding the technical and political challenges facing efforts to accelerate the transition; but rather than an excuse to support business-as-usual oil and gas production plans, this calls for more radical responses that foreground diverse local and global struggles for climate justice and a liveable future.

Widening the Scope of 21st Century Global Energy Politics

Benjamin Sovacool & Thijs Van de Graaf’s *Global Energy Politics* broadens the scope of analysis beyond the limits of the other books under discussion. While their book is in part intended as a primer to the field, it also makes two main contributions that take it beyond existing approaches to the changing landscape of global energy politics. First, whereas most scholars of energy geopolitics focus almost exclusively on energy supply infrastructure (e.g., wells, pipelines, minerals, etc.), Sovacool & Van de Graaf adopt a “socio-technical systems perspective” that also includes both “the demand infrastructure and the social context in which these supply and demand infrastructures are embedded” (Van de Graaf & Sovacool, 2020, pp. 8–10). This allows them to probe more deeply into the demand side of energy systems as well as the broader sociology of energy: how it is used, the specific consumption practices and material infrastructures it enables, and how these are shaped by collective habits, norms, and economic growth models (pp. 10). Second, rather than limiting their analysis to realist and liberal frameworks, they explore four different lenses for analyzing the dynamics of global energy politics, including neo-mercantilism (or realism), market liberalism, environmentalism, and

social justice (or Marxism). They show how these different lenses highlight different actors, evaluate and prioritize risks in different ways, and envision different energy futures—from classical patterns of geopolitical competition continuing throughout the renewable energy era (the neo-mercantilist view) to more harmonized global markets and institutions for governing energy flows (the liberal view) and other futures involving accelerated decarbonization timelines and a “just transition” (the environmentalist and social justice views) (pp. 228).

Sovacool and Van de Graaf bring us closer to the broader research agenda we need to map the different pathways of global transformation that may emerge from the transition. Like the other authors discussed above, they investigate the likely geopolitical implications of the energy transition, though they go further by analyzing the RE transition’s impacts on global energy governance (e.g., the changing mandate of the IEA, challenges to the Energy Charter Treaty and WTO, and the creation of the International Renewable Energy Agency (IRENA)) and social movement struggles to shape it in more sustainable and egalitarian directions (pp. 195–205). Their chapter on “energy justice” is particularly welcome, which investigates the detrimental impacts of renewable energy supply chains on communities when social justice concerns are side-lined—seen, for example, in the horrific cobalt mining conditions in the Democratic Republic of the Congo; accumulating toxic waste from solar panels, electric vehicle parts, and smart meters in Ghana; and processes of land enclosure and dispossession of marginalized communities to build solar energy plants in Gujarat, India—and highlights initiatives for “energy democracy” seeking more decentralized RE generation and distribution infrastructures (pp. 119–142).

However, *Global Energy Politics* continues to occlude deeper questions about the nature and scope of the possible transformations ahead. Despite their efforts to provide a broad survey of global energy politics that is inclusive of diverse theoretical perspectives, Sovacool and Van de Graaf’s discussion of more radical environmentalist and social justice perspectives remains fairly superficial. They acknowledge the existence of more radical critiques of capitalism and economic growth as incompatible with climate stabilization and a just energy transition, but these voices scarcely receive a hearing. A “just transition” for them simply entails a more interventionist state to create “green” jobs, internalizing the costs of capitalism’s “negative social externalities” and providing a more adequate welfare safety net (pp. 140). They do not engage with arguments from Marxists and ecological economists demonstrating the likely impossibility of “green growth” (Albert, 2020; Hickel & Kallis, 2020; Jackson, 2018; Keyber & Lenzen, 2021), nor do they consider the limits of “energy democracy” in a capitalist economy (e.g., due to the lobbying power of incumbent utilities, limited access to finance for marginalized communities, and broader systemic pressures to direct capital toward more profitable investments) (Brummer, 2018). Furthermore, while they adopt a socio-technical systems approach that highlights the role of social power relations, norms, and culture in producing and reproducing energy infrastructures and demand patterns, they do not examine how these are shaped by Western norms of “progress” and the “good life,” thereby occluding more radical and decolonial imaginaries like degrowth, buen vivir, post-extractivism, and post-development among others (Escobar, 2020; Kothari et al., 2019). Therefore, while Sovacool and Van de Graaf raise several important issues that deserve greater attention from critical IR scholars, including struggles for a “just transition” and the risks of “renewable energy colonialism,” we need a broader research agenda on the global energy transition that clearly grasps the unsustainability of globally hegemonic modes of political economy and ways of life, while centering more radical perspectives and struggles for climate and energy justice.

Toward a Critical IR Research Agenda on the Global Energy Transition

The books reviewed above share a common blind spot, which Matthew Paterson suggests is common among IR scholars more generally: that they ignore or downplay “the depth of the social transformation

entailed in addressing climate change adequately,” as well as “the catastrophic costs of failing to do so” (Paterson, 2020, pp. 2). Instead, the authors all assume that the RE transition (whether unfolding more rapidly or slowly) will mainly involve shifts in the inter-state balance of power, trade relationships, geopolitical alignments, and energy–mineral security concerns, perhaps also to some extent in the nature of capitalism, but that it will not potentially require or facilitate more radical transformations in world politics. In contrast, to move toward a more critical research agenda on the global energy transition, in the sense of research that illuminates potentials for emancipatory transformation and engages with social movements struggling for their realization (Koddenbrock, 2015), I suggest that critical IR scholars should investigate three possible axes of global transformation in response to the decarbonization imperative: (1) the potential for transitions to post-growth political economies; (2) the potential for radically shrinking emissions-intensive military–industrial complexes; and (3) the potential for decolonizing modern ideologies of “progress” (Buzan & Lawson, 2015).¹ Following Barry Buzan and George Lawson’s work on the 19th century “Global Transformation,” just as this fossil fuel–powered transformation went far beyond shifts in the balance of power to encompass deeper transformations in the political–economic, military, and ideological bases of world politics, I suggest that the RE transition may require comparable shifts in these three axes of world order, which at the very least warrant greater attention from critical IR theorists and scholars of the energy transition.

First, assumptions about the desirability and feasibility of continuous economic growth (measured in terms of gross domestic product) are deeply baked into mainstream IR and policy-making (Barry, 2020), though the imperatives of decarbonization and climate stabilization call this assumption into question in at least two ways. First, mounting evidence suggests that continuous exponential growth is incompatible with climate stabilization, since continuously growing total energy consumption makes it extremely difficult (if not impossible) to decarbonize rapidly enough to meet the Paris Agreement targets (i.e., short of a massive roll-out of Negative Emissions Technologies, which raises numerous concerns about technical feasibility, food security, and land enclosures) (Hickel & Kallis, 2020; Keyber & Lenzen, 2021). Second, as Yergin intimates, it is questionable whether renewables by themselves—due to their intermittency, high land and mineral intensity relative to fossil fuels, and relatively low “Energy Return on Investment”—can power a continuously growing global economy (Capellan-Perez et al., 2019). This will be contingent on the uncertain trajectory of technological advance, but even if possible, it is highly questionable whether RE-powered exponential growth would be desirable, since it would require dramatically increasing land use and rates of mineral extractivism, which would intensify processes of land enclosure, dispossession of marginalized communities, contamination of water resources, RE-technology waste proliferation, and biodiversity decline (Capellan-Perez et al., 2019; Hickel & Kallis, 2020).

In short, continuous exponential growth not only makes full decarbonization more difficult to achieve but also increases the likelihood that the RE transition will exacerbate the forms of energy injustice discussed by Sovacool and Van de Graaf. Therefore, the decarbonization imperative demands at least consideration of the potential for “post-growth” political-economic transitions in which GDP growth would cease to be a “core state imperative”; economies would be reorganized to pursue alternative values (e.g., “well-being”, public health, sustainability, resilience, etc.); and the power of transnational capital would be subordinated to state or community-determined development priorities (Albert, 2020; Barry, 2020; Jackson, 2018; Pettifor, 2019). To clarify, due to the massive disparities in resource use between the global north and south, post-growth transitions are overwhelmingly a priority for states in the global north. However, given the inconsistent (at best) effects of GDP growth on poverty reduction in the global south (especially for states other than China), and its creation of “new poverties” via enclosures, dispossession, and ecological degradation, the global south would also benefit from new “development” (or post-development) models that emphasize “the satisfaction of basic needs for all rather than the pursuit of growth per se” (Gerber & Raina, 2018, pp. 355). Rather

than merely an abstract proposal, post-growth is a concrete movement instantiated to differing degrees in diverse initiatives around the world, from initiatives among policy-makers like “Beyond GDP” and the “Wellbeing Economy Alliance” aiming to supplement GDP with alternative economic indicators (WEALL, 2020), to more radical grassroots movements including struggles for indigenous sovereignty against predatory extractivism; community-based movements for decentralized energy democracy and publicly owned utilities; struggles for a “Green New Deal” in the United States and Europe (which, in their more radical incarnations, align with post-growth principles); and movements like degrowth, ecosocialism, and solidarity economies aiming to build post-capitalist economies based on principles of sufficiency, well-being, and community control of labor and common resources (Albert, 2020; Gudynas, 2016; Kothari et al., 2019; Pettifor, 2019). These movements have for the most part been ignored by IR scholars, though they raise numerous questions that deserve attention from an IR perspective: including the challenges of national post-growth transitions in conditions of international “anarchy”; the dynamics of uneven and combined development in the transition; the composition of hegemonic “GDP-First” coalitions at national, regional, and global scales; and the potential composition of counter-hegemonic “Beyond GDP” and post-growth coalitions at different scales.

A second possible axis of global transformation involves the potential for “demilitarization” in a fully decarbonized world, or a radical reduction in military spending and shrinkage of military-industrial complexes. While some IR scholars have drawn attention to the problem of military emissions (Belcher et al., 2020; Crawford, 2019), very few (if any) have addressed the question of how decarbonization may reshape the nature of war and military power, which is a surprising omission among the books reviewed above (particularly those emphasizing the *geopolitics* of the global energy transition). Fossil fuels made the emergence of industrial war machines possible and continue to be the overwhelming energetic foundations of military power (Buzan & Lawson, 2015), and we should by no means assume that military force structures, strategy, and war itself will remain unchanged by the transition. From a critical IR perspective, the key question is whether and how a trajectory of demilitarization may emerge that not only eliminates the “carbon boot-print” of military force structures (Belcher et al., 2020) but more radically limits their size, abolishes emissions-intensive sectors that cannot easily (if at all) be decarbonized (e.g., air-forces and nuclear weapons supply-chains), and transforms discourses and practices of “security” to focus on climate resilience and disaster response rather than great power war and counter-insurgency (Dalby, 2018). A new research agenda on the global energy transition can in this way intersect with the rich body of literature on environmental and climate security (e.g., Klare, 2019), though the specific aim here is to understand how militaries are already attempting to decarbonize their force structures, the political and technical limits of such efforts, and the prospects of counter-hegemonic coalitions both within and between states to push for a demilitarization agenda. In short, there may be an insufficiently explored contradiction between the decarbonization imperative and similar-to-today levels of militarization, in which case the choice before us may be demilitarization or climate catastrophe.

Third and finally, IR scholars should consider the potential for ideological transformations beyond the narratives of “progress” that permeate liberal IR and policy-making. Buzan and Lawson show how the dominant ideologies in the world today—including liberalism, socialism, and nationalism—share an underlying belief in linear progress through endless economic growth, technological innovation, and increasing “control over nature” (Buzan & Lawson, 2015, pp. 99–100). However, given the problems with exponential growth described above, conceptions of the RE transition that view it as a continuation of this same form of “progress” are a hindrance to the potential for more sustainable and just energy futures. Instead, a new critical research agenda for the global energy transition could intersect with ongoing work on decolonization and post-development, which critiques the “one world” imaginary of mainstream IR and development discourses based on Western-style modernization (Blaney & Tickner, 2017; Escobar, 2020; Gudynas, 2016; Kothari et al., 2019). These scholars

illuminate how racist 19th century discourses (e.g., the “standard of civilization”) persist today in discourses of “developed” and “developing” countries, as well as in continuing forms of violence against indigenous peoples legitimized by “progress” narratives (whether driven by fossil fuel extractivism or RE colonialism) (Escobar, 2020; Kothari et al., 2019). In contrast, many of the movements for post-growth futures discussed above aim to decolonize narratives of progress by valorizing alternative conceptions of the good life (e.g., “buen vivir”, which emphasizes material and spiritual well-being through reciprocal communal and ecological relationships), “low-tech” practices, and indigenous forms of knowledge (Gudynas, 2016). In this way, rather than assuming that the global energy transition will or should perpetuate classical modernist ideologies of progress, IR scholars should engage with scholarship and activism across the global north and south struggling to realize new worlds and ways of life based on alternative values, ontologies, and practices of social reproduction.

Conclusion

This gives us merely a brief sketch of possible ways forward for critical IR scholarship on the global energy transition. The books reviewed in this essay provide a useful starting point to understand the likely shifts and disruptions that will emerge in the coming decades as the RE transition advances. But we should also broaden our horizons to explore the potential for more radical transformations in the political–economic, military, and ideological dimensions of world order and engage with social movements throughout the global north and south struggling to realize alternative energy futures beyond the hegemony of economic growth and Western-style modernization/development. The important challenge here for critical scholars is not to anticipate what *will* happen as the global energy transition advances, but rather to illuminate emancipatory potentials that may emerge while also anticipating possible dangers and pitfalls (e.g., RE colonialism, intensified extractivist conflicts, green capitalist colonization of the futurist imagination and possibility space). If critical IR theory is indeed “shaped by the social struggles of the day” (Koddenbrock, 2015, pp. 258), and if struggles for climate-energy justice are at the forefront of radical politics today, then critical IR scholars must give deeper attention to these struggles, the obstacles they confront, and their potential to drive radical transformations in world politics.

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Note

1. Filippou Proedrou’s work on “Anthropocene Geopolitics” provides a useful complement to this agenda, which explores the potential for more radical foreign policy strategies in the EU and elsewhere that would be compatible with the 1.5°C target (Proedrou, 2020). But it is more a form of “climate political realism” that foregrounds initiatives among powerful actors, rather than a critical emancipatory approach that centers struggles for climate justice from below. While useful and necessary, it downplays the structural constraints that almost certainly make capitalist strategies incompatible with the 1.5°C target (Hickel & Kallis, 2020; Keyber & Lenzen, 2021; Albert, 2020), and also ignores the problem of military emissions (Belcher et al., 2020).

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