Global Climate Policy Beyond the Paris Agreement

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Although a subset of political scientists has been studying climate change for decades, the mainstream of the discipline lags behind. Journals such as *Global Environmental Politics* and even *Nature* and *Science* have long published political science research on climate, yet major disciplinary journals tend to marginalize climate and environmental politics more broadly (Green and Hale 2017). This trend has been changing slowly (as evidenced by this symposium), but mainstream political science still has much catching up to do.

Fortunately, scholars new to the study of climate change need not "reinvent the wheel." This article is a brief history of the changing logics of cooperation in the global climate regime and offers suggestions of avenues for future research.

For decades, climate change has been depicted as a collective action problem, focused largely on mitigation. Without firm commitments on reductions, the logic goes, laggard states will free ride on other states' efforts. As a result, enforcement mechanisms are essential for mitigation (Bernauer 2013; Keohane and Oppenheimer 2016). More recently, scholars have emphasized the domestic distributive conflicts underpinning global climate politics (Aklin and Mildenberger 2020; Bayer and Genovese 2020; Finnegan 2022).

A third stream of research views climate change as a problem of "existential politics" in which asset owners fight to maintain the value of their assets in the face of both a changing climate and a shifting regulatory landscape (Colgan, Green, and Hale 2021). This view is consistent with but expands on distributive accounts of climate politics. In existential politics, actors' interests are determined exogenously largely by the types of assets that they hold. In some cases, these interests may shift over time due to either changes in technology (Kelsey 2018) or normative or ideological shifts (Hale 2020). This article expands on earlier work and discusses the research agenda implied by the existential politics framework.

As a stylized model, existential politics suggests three main interest groups. First, climate-forcing asset (CFA) owners—including oil and gas companies, electric utilities, and heavy industry—seek to maintain the value of their assets as governments expand mitigation efforts. For example, the International Renewable Energy Agency (2017) estimates that upstream oil and gas production will face approximately $7 trillion worth of stranded assets between now and 2050. Although the oil and gas industry is perhaps the most obvious CFA owner, other sectors also will incur losses in the face of increasingly stringent decarbonization policy. To protect the value of their assets, many CFA owners oppose efforts to address climate change, often through hedging or greenwashing (Green et al. 2021; Vormedal, Gulbrandsen, and Skjærseth 2020).

Second, climate-vulnerable asset (CVAs) owners—including homeowners in low-lying areas, parts of the agriculture >industry, and the insurance and reinsurance industries—will face the devaluation or even destruction of their assets as the effects of climate change intensify. CVAs are dispersed geographically with extremely heterogeneous interests. Because of these characteristics, they are politically weaker, creating a power imbalance that skews toward the status quo.

Third, climate-positive asset (CPA) owners—and the workers needed to build and deploy these assets—are the political "linchpin" to decarbonization. Without them, there is unlikely to be much progress on decarbonization, given the huge power asymmetry between CFAs and CVAs. CPAs potentially can serve as the political counterweight to CFA obstructionism. They include producers of renewable energy, zero-emissions vehicles, zero-carbon buildings, and the infrastructure required to produce all of these goods. Infrastructure includes expanded electricity grids, charging stations, and retrofitted factories and buildings. Currently, these CPA owners are relatively few; they must be created purposefully and scaled up through government investment.

These three categories are neither absolute nor static. Actors can hold a mix of assets. In these instances, their interests generally will be determined by the ratio of holdings and the degree of asset specificity (Colgan, Green, and Hale 2021). Technology is also important. In "convertible" industries, asset owners may be able to acquire CPAs or to transform existing CFAs into decarbonized assets (Kelsey 2018). The automobile and electricity sectors are excellent examples: many firms' interests are shifting precisely because they can provide low- or zero- carbon versions of their goods and services. If firms "flip" from being CFA to CPA owners, they can also potentially catalyze larger intra-industry shifts, making the status quo more costly for laggards (Hale 2020).

Politics is about winners and losers, and climate politics is no different. If states move rapidly toward decarbonization, CFA owners will lose and, in some cases, cease to exist. In this model of existential politics, obstructionism is the key obstacle to decarbonization. This is particularly true because CFA

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owners have massive resources to delay and distract (Brulle and Downie 2022; Supran and Oreskes 2017).

Some scholars argue that investors' aversion to climate risks will shift money away from CFAs for fear of economic losses due to increasingly stringent decarbonization policies. However, the evidence to support this claim is mixed. Firms use environmental and social governance metrics, making comparisons difficult; moreover, many of these metrics tend to privilege process over outcome (Delmas, Etzion, and Nairn-Birch 2013). Moreover, the effectiveness of divestment depends on reinvestment choices; without careful consideration, divestment runs the risk of reproducing environmentally harmful and exploitative practices in other ways (Neville 2020).

This article is a brief history of the changing logics of cooperation in the global climate regime and offers suggestions of avenues for future research.

Unfortunately, global climate rules—embodied by the United Nations Framework Convention on Climate Change (UNFCCC)—and its associated agreements are not sufficiently attentive to the reality of obstructionism. For decades, the prevailing wisdom has been that climate change is "the mother of all collective-action problems," which therefore requires multilateral cooperation on emissions reductions. This cooperation has been fragile from the earliest days of the climate regime (as presciently noted by Victor 2001), in part because of the unwillingness to recognize the political implications of existential politics.

A BRIEF HISTORY

Since its signing in 1992, the UNFCCC has had a difficult political path. The constant challenges and precarity of cooperation demonstrate that it is not well equipped to address CFA obstructionism. As Allan (2019) noted, "progress" in the climate regime has focused on diplomatic successes rather than environmental outcomes. The result is "dangerous incrementalism" that legitimates an institution that has consistently fallen short of its goals.

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Markets have been a hallmark of the UNFCCC since the Kyoto Protocol (Newell and Paterson 2010). The creation of a global carbon-offset market, the Clean Development Mechanism (CDM), was the critical "glue" that cemented the precarious political deal that became the Kyoto Protocol (Werksman 1998). This market-based approach was a political win-win in the negotiations. Developed countries gained a cost-containment mechanism and developing countries received much-needed investments to develop in a climate-friendly way.

The problem was that the CDM did not work well in terms of actually reducing emissions. Numerous challenges with measuring "additionality"—or the extent to which projects actually reduced emissions compared to "business as usual"—meant an overestimation of the CDM's contributions to mitigation (Schneider 2009).

The broader use of carbon pricing greatly expanded in the Kyoto Protocol era. Currently, 25% of global emissions is covered by a carbon price, which includes both taxes and cap-and-trade systems (World Bank 2022). The evidence on their effectiveness is mixed. Whereas some individual studies indicate that carbon pricing reduces emissions (Bayer and Aklin 2020; Dechezlêpretre, Nachtigall, and Venmans 2018), other studies point to gaming behavior (Badgley et al. 2022) and limited reductions (Green 2021b).

As the political infeasibility of the Kyoto Protocol became clear, states began negotiating a successor, culminating in the 2015 Paris Agreement. The Paris Agreement has doubled down on markets, creating a new offset market and a still-developing, largely bilateral market for "mitigation outcomes." In addition, the European Union recently created a carbon border adjustment mechanism, which will tax products from a subset of carbon-intensive sectors (e.g., cement, iron, and steel) imported from countries without an equivalent carbon price beginning in late 2023.

The Paris Agreement has also institutionalized voluntary cooperation with nonstate actors, including CFA owners. The Global Climate Action Portal, administered by the UNFCCC, reports 150 voluntary cooperative initiatives on mitigation and adaptation including firms, NGOs, and subnational governments. States have appointed "high-level champions" to convene nonstate actors to report annually on their progress. This "all hands on deck" approach has been heralded as a necessary step to promote rapid decarbonization (Hale 2016). However, there are considerable challenges to quantifying the effects of these efforts (Hsu et al. 2019).

The use of markets and voluntary nonstate efforts are two strategies to paper over conflicts with CFA owners and perpetuate diplomatic progress in the Paris Agreement. Yet, the main

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effect of the Paris Agreement has been to maintain the legitimacy of the UNFCCC process rather than reduce emissions. Virtually all of the major emitters have made pledges that are inconsistent with the 1.5-degree Celsius target set in the Paris Agreement, and they have failed—thus far—to implement policies to meet even these insufficient goals. Current models estimate that the Paris Agreement will result in 2.4 degrees Celsius of warming.[1] The Paris Agreement is failing by its own measures.

CLIMATE POLICY BEYOND THE UNFCCC

These arguments indicate a fundamental mismatch between the political–economic challenges of decarbonization and the policies created by the UNFCCC. This mismatch dictates that global climate policy may produce limited emissions reductions but, thus far, demonstrates few signs of progress toward true decarbonization. This is not because of the Paris Agreement per se but rather because CFA owners are redoubling their efforts to preserve the status quo and the value of their assets for as long as possible, or they are buying time to extract maximum profits before assets are devalued or become worthless.

Climate policy beyond the UNFCCC, therefore, is fertile research territory for scholars of international and comparative political economy (IPE and CPE). In particular, tax and trade institutions can be the locus for accelerating decarbonization. As with all global cooperation, it will be fraught with challenges. However, there are important reasons to broaden the scope of climate policy to trade and taxation.

First, focusing on taxation and trade directly addresses the fundamental challenge for decarbonization—that is, restructuring the global economy—which is causally prior to reducing emissions. Second, it tackles the problem of obstructionism head on instead of assuming that CFA owners will contribute meaningfully to decarbonization in the absence of regulation. The prevalence of hedging among oil and gas firms, the strategic design of net-zero pledges, and the heavy reliance on offsets are all evidence that most CFA owners will not decarbonize without meaningful regulation—either carrots or sticks. Third, climate policy beyond the UNFCCC potentially appeals to a variety of interests, building a broad base of support for aggressive action (Bergquist, Mildenberger, and Stokes 2020; Meckling et al. 2015). Of course, all multilateral cooperation is vulnerable to obstructionism, and this approach is no exception. However, using trade and taxation institutions increases the potential leverage on the global economic restructuring that the climate crisis demands.

Regarding IPE, scholars can investigate the conditions under which states cooperate on international tax policy. Reforms potentially can constrain the material resources available to CFA owners to obstruct progress on climate (Green 2021a). Moreover, in CPE, understanding when and how states can use trade policy to invest in and expand CPA owners as an interest group to counter CFA owners is critical to progress on decarbonization.

International tax policy can significantly impact CFA owners' bottom line. Currently, an estimated US $100 billion to $240 billion is lost each year to "offshoring," in which multinational corporations book their profits in countries with low tax rates. Oil and gas companies are among those firms engaging in offshoring. Offshoring has been linked directly to deforestation in the Brazilian Amazon (Galaz et al. 2018). Furthermore, tax avoidance indirectly provides CFA owners with additional profits that can be used to obstruct progress on climate.

The Organisation for Economic Co-operation and Development (OECD) has been engaged in a multiyear effort to tighten rules on tax avoidance. In 2021, more than 130 countries signed on to an agreement to implement a 15% minimum global corporate tax. However, as United Nations Conference on Trade and Development (2022, 107) noted, "The structure of Pillar II [part of the OECD agreement] is more complex than the headline feature of establishing a minimum effective rate of 15 percent may sound." Once applied, "Pillar II" will "top up" taxes not on overall profits but instead on profits in excess of "the carve-out"—that is, a quantity determined by tangible assets and payroll costs in the jurisdiction. In short, the global minimum tax is not an across-the-board increase but rather is limited to a yet-to-be-finalized smaller proportion of firm profits.

Curtailing investment protections for CFA owners is another important avenue through which international institutions can accelerate decarbonization. Currently, international investment treaties are contributing to further carbon lock-in by protecting fossil-fuel infrastructure. Since 1980, states have signed more than 2,600 international investment treaties—including bilateral investment treaties, trade agreements with investment provisions, and the Energy Charter Treaty. Conflicts over the agreements are adjudicated through the Investor-State Dispute Settlement (ISDS) system, in which foreign investors can sue states for compensation if domestic regulations impede their investments.

ISDS has two main negative effects on climate policy. First, it erodes sovereignty because it effectively circumscribes states' ability to regulate within their borders. For example, Canada is seeking $15 billion in compensation for the United States' cancellation of the Keystone Pipeline. In turn, this can create a "regulatory chill," whereby states "fail to regulate in the public interest in a timely and effective manner because of concerns about ISDS" (Tienhaara 2018, 232). However, some scholars have shown that this phenomenon is variable, with

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greater effects on developing countries (Moehlecke 2020) and more complex effects on sovereignty than a simple regulatory chill (Thompson, Broude, and Haftel 2019).

Second, protections afforded by the ISDS have resulted in massive payouts to the fossil-fuel industry. At least 173 ISDS cases (approximately 17%) are related to the fossil-fuel sector (Tienhaara and Cotula 2020, 16). For example, only a few lawsuits brought by major oil and gas companies have resulted in state payouts of more than US $67 *trillion* since 2013 (Tienhaara and Cotula 2020, table 1). These payouts embolden firms faced with asset revaluation, reinforce their power through massive transfers of funds, and disempower states from implementing aggressive climate policy for fear of legal reprisals from firms whose investments are protected by the ISDS.

There is a growing body of work in CPE on the role of trade, industrial policy, and organized labor in decarbonization. CPAs will be the foundation of a decarbonized society. Some of these assets—including renewable-energy components, expanded electricity grids, and electrified transport—must be built from the ground up; others (e.g., buildings) must be retrofitted. Both new and retrofitted assets will require extensive investments by states through various policies such as investment in R&D, production subsidies, procurement, efficiency, and best available technology policies. These can all be considered green industrial policy (GIP).

In addition to accelerating decarbonization, GIP can also help build the political coalitions needed to counter the influence and obstructionism of CFA owners—especially if such policies precede others that may create greater costs (Meckling et al. 2015). This coalition building can happen through CPAs and the labor associated with their creation.

CPA owners are a relatively small group with limited material resources and political influence. A recent study found that trade associations typically opposed to climate policies (i.e., the fossil-fuel industry) are outspending renewable trade associations by a factor of 14 to one (Brulle and Downie 2022). Renewable energy has become much more cost competitive during the past decade, thereby accelerating its uptake. Yet, even the deployment of well-developed technologies such as zero-emissions electricity is not happening quickly enough. Simply stated, governments must supercharge this process with massive investments if they are to meet the Paris Agreement goal of 1.5 degrees Celsius.

Government investments can also win over the support of organized labor—a key interest group in climate politics. Traditionally, labor has been divided over climate policy, with labor from CFA industries generally siding with their employers against more stringent decarbonization measures (Mildenberger 2020). Their opposition stems from legitimate concerns about the effects on climate policy on their livelihood; this problem has given rise to a political discourse on a "just transition" to ensure employment of labor in CFA industries in a decarbonizing world.

Preferential treatment of domestic labor, such as through local content provisions, can help to achieve a just transition. Local content provisions are mandates from governments that a certain proportion of manufactured goods be produced domestically—at the federal, state, or provincial level. For example, in 2009, Ontario passed a law creating feed-in tariffs to support the expansion of renewable energy. The law also required that renewable energy components be sourced from within the province (Stokes 2013). The Ontario law received support from organized labor and boosted production within the province. However, it ran afoul of World Trade Organization provisions, which prohibit preferential treatment of domestic production. The global trade regime thus presents a fundamental challenge for climate politics (Tucker 2019): how to balance the need for building domestic support without slowing the global diffusion of green technologies.

FUTURE RESEARCH

Climate change is a problem of political economy, and political science has much to contribute to broader policy discussions about paths forward. While there is an emerging literature on the comparative domestic politics of climate change, there is comparatively less work on the role of international institutions outside of the UNFCCC. To date, this has been primarily the province of economists and international lawyers.

Yet there is a clear research agenda in both IPE and CPE. First, we need to know much more about the conditions under which reform of international trade and finance institutions has been effective—both diplomatically and in terms of changing real-world outcomes. Second, we need a much better understanding of the domestic conditions that facilitate investments in CPAs—especially in the highest-emitting developed countries. Third, and perhaps most important, we need more research on reining in what Rodrik (2019) calls "economic hyperglobalization," which has sacrificed considerable state sovereignty in favor of free trade and open markets. Political scientists are well positioned to investigate how states can restore some of this sovereignty to empower CPAs while still respecting and maintaining a rules-based order.

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CONFLICTS OF INTEREST

The author declares that there are no ethical issues or conflicts of interest in this research. ■

NOTE

1. See https://climateactiontracker.org/publications/glasgows-2030-credibility-gap-net-zeros-lip-service-to-climate-action.

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