

# Information and Climate (In)action<sup>\*</sup>

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## Abstract

This paper presents a formal model studying how expectations of climate change’s severity and special interests’ messages about climate policy appropriateness shape the trajectory of national and international climate policy implementation. Anti-climate interests learn about the true effects of climate damages but may be tempted to “misreport” their findings, downplaying the true climate threat. I find that the effect of this misreporting on climate action is nonmonotonic: intermediate levels of misreporting inadvertently induce higher rates of policy adoption, while extreme misreporting dampens climate action by degrading the public’s informational environment. Because intermediate distortion is counterproductive for anti-climate groups, their optimal messaging strategy follows a monotonic threshold. Groups disclose truthfully when public expectations of climate risks are low, but shift to extreme informational distortion as public concern grows. Consequently, through cross-border informational spillovers, the probability of international climate coordination is greatest when domestic misreporting is intermediate, but diminishes as informational distortions become extreme. The model departs from canonical theories of international climate cooperation by treating countries’ actions as complementary and by explaining policy suboptimality as the outcome of domestic political actors exploiting uncertainty.

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Uncertainty surrounding climate change’s effects and intensity is fundamental to the political response to it, as formulating policies to combat climate change requires both politicians and citizens to form beliefs about their vulnerability to climate risks, and to evaluate whether and how such risks justify policy intervention ([Balcazar and Kennard 2025](#); [Gazmararian and Tingley 2023](#); [Gazmararian and Milner 2024a;b](#)). This paper explores how information about the severity of climate change affects beliefs about the appropriateness of policy reform and subsequently the likelihood of climate action. In particular, I consider how changes in these expectations—the evolution of knowledge about climate change’s effects ([Hai 2024](#)) as well as personal experiences with a warming world ([Egan and Mullin 2012](#))—alter the messaging strategies of anti-climate special interest groups vis-à-vis the public ([Kollman 1998](#); [Stokes 2020](#); [Williams et al. 2022](#)) about the necessity of climate reforms. In turn, citizens’ beliefs about whether climate policies are appropriate affects assessments of their political leaders and ultimately politicians’ decisions to pursue climate policies ([Stokes 2016](#); [Mildenberger and Tingley 2019](#)).

Through a formal model of domestic and international climate policymaking, I highlight a trilateral relationship between interest groups, politicians, and voters that shapes the prospects for national and internationally coordinated climate action. This relationship disciplines variation in coordinated climate outcomes as a function of prior expectations about vulnerability to climate change, which shape special interests’ optimal messaging strategies. Anti-climate interests, such as fossil fuel companies, have long had access to accurate climate models and forecasting ([Oreskes and Conway 2011](#)). However, they face a strategic choice about whether to honestly report these findings or to downplay the climate threat. I find that the decision to “misreport” shifts sharply as public expectations about climate damages grow. When concern about climate risks is low, special interests do not need to invest heavily in public-facing information campaigns because politicians are already unlikely to pursue climate reforms. However, once perceived risks cross a critical tipping

point, interest groups abruptly shift to a strategy of maximum misreporting, hoping to stall impending demands for climate action.

Given the trajectory of climate messaging, I study the downstream effects of these messages on the prospects for policy implementation via their effects on voter beliefs. Politicians, with an eye toward reelection, want to ensure that their decision to adopt climate reforms is commensurate with perceived environmental harms, and is recognized as such by voters. When an interest group misreports, it deliberately degrades the information environment, altering the standard by which voters evaluate the appropriateness of climate reforms. I find that the relationship between the level of misreporting and policy adoption is non-monotonic: paradoxically, the likelihood of climate action is highest when interest group misreporting is intermediate. In this range, the injected noise creates enough suspicion among voters that politicians are forced to aggressively adopt climate reforms to prove they are not simply capitulating to special interests. However, as misreporting becomes extreme, the group's messaging becomes entirely uninformative. Voters discount the heavily biased signals completely, removing the politician's electoral need to overcompensate and causing the probability of climate action to decline.

The core intuition driving these results is that special interest messaging strategically amplifies the effects of political pandering (see [Canes-Wrone, Herron and Shotts 2001](#)). When the prior probability of climate risk is low, inaction is the *ex ante* likely policy. In this case, the interest group actually benefits from perfect transparency: a perfectly informative truthful signal creates a maximal electoral penalty for any politician who contradicts it, thereby locking the politician into the group's preferred policy of inaction. However, when the prior is high and climate action becomes *ex ante* favored, truthful signals would force the politician to act. To prevent this, the interest group shifts to maximal misreporting. By degrading the signal, the group relies on the equilibrium implications of pandering working in their favor: if voters sour on climate action because it is perceived as pandering, the

special interest succeeds in dampening reform.

These domestic informational frictions have profound international consequences when I build the model out into a game of global climate policymaking. By examining countries' incentives to coordinate their climate policies, I identify a novel phenomenon of *informational spillovers*: the strategic distortion of information in one country actively undermines climate efforts worldwide. Because the true severity of the global climate threat is fundamentally uncertain, a foreign nation's policy choices can be informative for domestic voters. Consequently, when an interest group is likely to misreport in its home country, it does not only alter domestic outcomes. Observing a lack of reform in a peer nation, foreign electorates may infer that the shared environmental threat is less severe than initially anticipated. This downward shift in public concern subsequently reduces the electoral incentives for politicians in other countries to implement costly environmental policies. Qualitatively, these spillover dynamics help explain the broader trajectory of global climate policymaking, illustrating how the proliferation of misreporting in key nations, like the United States, has historically cascaded across borders to stagnate coordinated global action.

This paper contributes to domestic and international theories of climate policymaking. Primarily, it innovates by departing from extant theories of international climate cooperation on several avenues. First, the model endogenizes the effects of domestic politics on international climate policy outcomes (cf. [Battaglini and Harstad 2020](#); [Melnick and Smith 2025](#)), which allows for the exploration of a novel causal mechanism to explain the underprovision of climate policy. Classical theories of global climate cooperation argue the underprovision of climate policy stems from the national costs of supplying global benefits ([Ostrom 1990](#); [Stern 2007](#); [Bernauer 2013](#); [Keohane and Victor 2016](#); [Kennard and Schnakenberg 2023](#)). By contrast, this model locates suboptimality within the domestic political environment, specifically because of the uncertainty that politicians face about the appropriateness of climate reforms given assessments about vulnerability. Increased misreporting exacerbates this defi-

ciency: by skewing voter beliefs against climate action, special interests effectively dissuade politicians from pursuing climate reforms perceived as electorally costly, even if these reforms were *ceteris paribus* necessary. Hence the climate policy observed in equilibrium diverges from the normative optimum.

Additionally, the model contributes by departing from extant models of international climate cooperation (e.g., [Harrison and Lagunoff 2017](#); [McAllister and Schnakenberg 2022](#); [Kennard and Schnakenberg 2023](#)) by assuming countries' actions are international strategic complements. Conventional wisdom claims that global climate cooperation efforts are dominated by free-riding concerns, implying that carbon emissions or abatement efforts are strategic substitutes ([Barrett 2003](#)). On this view, the marginal value of action is decreasing as more nations abate. Instead, this paper presumes that adopting climate policy is more valuable when other nations do the same, as suggested by the empirical patterns below. Consistent with the empirical evidence, the model uses strategic complementarity as a guiding assumption to help rationalize the coordinated evolution of global climate policymaking and, in so doing, argues that the dearth of climate action that the world observed until the mid-2000s and early 2010s emanated from the spillover effects of anti-climate special interest messaging as expectations about climate severity increased. This also helps explain variation in climate policies within countries over time despite the fact that the structure of the collective action problem has remained *ceteris paribus* fixed over time—it continues to be true that policies to curb national emissions are individually costly but contribute to a global benefit.

A common explanation for variation in global climate action posits that the distributional conflicts generated by climate reforms offer political advantages for domestic incumbents. The literature suggests that policy implementation inherently creates domestic winners and losers, meaning environmental reforms need not be scoped by collective action concerns ([Akin and Mildenberger 2020](#)), pointing instead to factors like electoral institutions and elec-

toral incentives (Finnegan 2022; Melnick 2024), special interest influence (Mildenberger 2020; Stokes 2020), and sectoral conflicts (e.g., Aklin and Urpelainen 2013; Cheon and Urpelainen 2013; Hughes and Urpelainen 2015) as shapers of climate policymaking. This paper argues that uncertainty surrounding the climate crisis renders policy responses malleable, as the delineation between winners and losers shifts depending on the policy approach. Uncertainty also makes finding the appropriate policy response to climate change less clear, which can animate distributive conflict—if true climate vulnerabilities were known, more efficient policy bargains could be negotiated by distributing abatement costs more easily or by compensating climate losers (cf. Gazmararian and Tingley 2023; Bolet, Green and González-Eguino 2024)—and may be exacerbated by strategic messaging from special interests. Thus, this theory presents a complementary argument, positioning distributional concerns within the broader context of informational constraints. The emergence of distributional conflict, I argue, can be a consequence of uncertainty surrounding climate change, which requires that we study the effects of information on climate policy.

This paper also sheds light on the role of “outside lobbying” (Kollman 1998) in climate politics. Public messaging—which may promote doubt or denialism to delay climate action (e.g., Oreskes and Conway 2011; Frumhoff, Heede and Oreskes 2015; Supran 2022)—complements special interest lobbying (Kim, Urpelainen and Yang 2016; Brulle 2018; Stokes 2020; Brulle 2021; Cory, Lerner and Osgood 2021; Schnakenberg and Turner 2024) and contributions (Brulle 2014). Carattini, Matter and Roesti (2024) examine patterns of corporate advertisement spending as a measure of public messaging, finding that anti-climate interests spend more during election periods and that this spending is associated with content skeptical of the effects of climate change. This paper isolates how special interests design information targeted at citizens to affect their beliefs about the need for climate action—which in equilibrium affects the implementation of climate policy through politicians’ incentives for reelection. The theory’s contribution to this literature lies in describing the trajectory of

climate-skeptical messaging: I provide a parsimonious explanation for changes in anti-climate groups’ communication strategies over time, documenting their relative truthfulness early on and their subsequent pivot into messages downplaying the threat or promoting individualization of responsibility (Green et al. 2022; Williams et al. 2022; Chater and Loewenstein 2023).

The model also speaks to literatures spanning mass climate attitudes and the electoral effects of climate policy implementation. In the model, individuals receive information about the effects of climate change, and such information is relevant to their voting behavior through their updated *beliefs* about climate-related uncertainties (Gazmararian and Milner 2024a)—not through a wholesale change in policy preferences. Observational empirical evidence on whether voters reward or punish climate policies at the ballot box is mixed (e.g., Stokes 2016; Urpelainen and Zhang 2022; Bolet, Green and González-Eguino 2024; Colantone et al. 2024; Gazmararian 2025; Voeten 2025), so the model helps to unpack why citizens may believe climate change is an important problem but not necessarily hold politicians accountable for their lack of action.

## Trajectories of Special Interest Messaging and Climate Policy

Upward of 60% of historical global carbon dioxide and methane emissions can be traced to 90 oil and gas companies (Heede 2014; Ekwurzel et al. 2017), which possess resource reserves that would yield significant profits but intensify climate change (Green et al. 2022). Many of these groups exploited the uncertainty inherent to climate change (Oreskes and Conway 2011; Williams et al. 2022), orchestrating global informational campaigns aimed at distorting public understanding of climate change and dissuading support for large-scale environmental regulations (Antonio and Brulle 2011; Brulle 2014; Chater and Loewenstein 2023).

A notable example is ExxonMobil: Figure 1 displays a timeline of events pertaining

to Exxon’s disclosure<sup>1</sup> of climate-related information (see Appendix B for further details on sources in the figure). In the late 1970s and early 1980s, Exxon’s scientists truthfully communicated the possibility of a climate crisis based on the combustion of fossil fuels and the release of greenhouse gases. However, this changed in the late 1990s and early 2000s, when Exxon exploited the uncertainty inherent to climate change, orchestrating a public campaign to convince citizens that climate change did not warrant broad policy action. A 1998 American Petroleum Institute memo famously declared that “victory will be achieved when average citizens ‘understand’ (recognize) uncertainties in climate science” (American Petroleum Institute 1998). Exxon’s behavior was not unique; companies like Shell and BP engaged in similar campaigns. In 2004, BP launched its “carbon footprint calculator” that sought to individualize responsibility for climate change and minimize the impact of potential climate regulations on fossil fuel companies. Thus, the historical trajectory of fossil fuel messaging reflects a marked shift: relative truthfulness when climate risks were poorly understood, with misreporting growing as expected damages increased.<sup>2</sup>

As group messaging shifted, so too did the global appetite for climate action. For decades, global climate policymaking largely stagnated, plagued by uncertainty and exacerbated by misreporting. Yet, within the last several years, countries have begun to implement climate laws and environmental policies of increasing ambition. This growth in global climate regulation challenges traditional theoretical frameworks. Standard free-riding models, which rely on strategic substitution effects, predict a negative correlation in countries’ policymaking behavior and struggle to explain this wave of policy adoption (cf. Kennard and Schnakenberg 2023). These patterns beget a need for greater theoretical innovation to explain the

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<sup>1</sup>Exxon’s corporate-branded documents are not the only means through which it communicated with the public. The company also projected its desired message through organizations like the American Enterprise Institute, the Competitive Enterprise Institute, and the Cato Institute that oppose mandatory action on global warming and other environmental standards (Union of Concerned Scientists 2007).

<sup>2</sup>While the rhetoric of these firms has shifted in recent years toward public acknowledgment of climate risks, scholars widely document this as an evolution of delay tactics rather than a genuine return to truthful messaging (Supran and Oreskes 2021; Green et al. 2022; Chater and Loewenstein 2023).



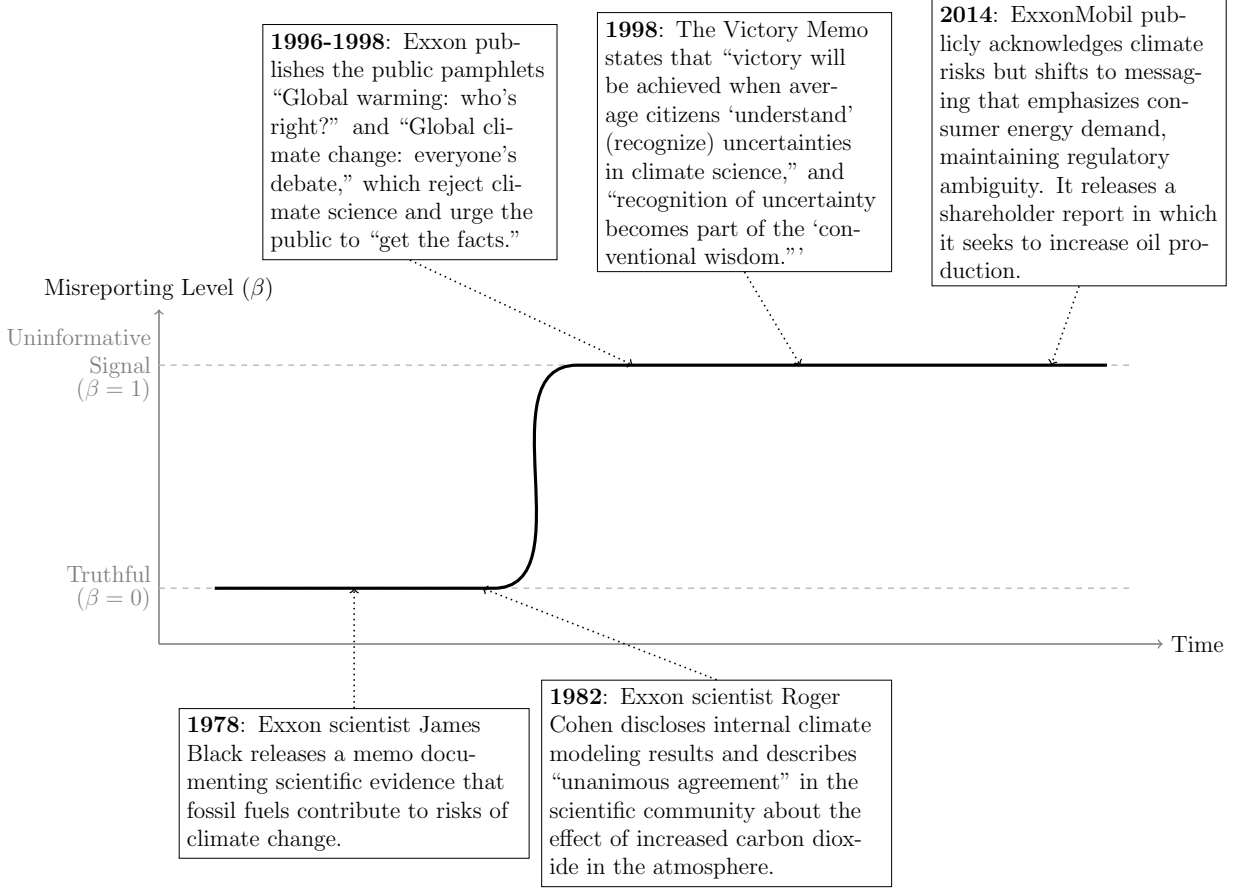


Figure 1: Variation in Exxon’s Climate Messaging

stagnation and then growth of climate policies across the globe: one explanation consistent with this data is a complementarity across countries in their national climate measures, and the theory employs this assumption along with variation in knowledge of climate change’s severity to explain this empirical pattern.

## Pandering, Persuasion, and Coordination

The model elucidates three strategic channels through the agency relationships between politicians, voters, and special interest groups are connected. Politicians may *pander* to voters by, for example, engaging in climate reforms even if they do not believe it to be

*ex ante* appropriate or that the expected damages from climate change are low. Through mass public communications, interest groups seek to *persuade* voters that climate change does not warrant further action and that politicians who engage in climate reforms should be punished electorally. And while balancing these domestic constraints, politicians may *coordinate* their policies abroad in order to develop effective mitigation strategies. Here I outline the three core mechanisms that underlie the theory informally and demonstrate how they help to explain patterns of climate policymaking.

At the heart of the model is a domestic agency problem between a politician and a voter. Building on the tradition of electoral accountability models (e.g., [Canes-Wrone, Herron and Shotts 2001](#)), I assume politicians vary in their “competence,” or their ability to correctly identify the appropriate policy response to an uncertain state of the world, which I conceptualize as the “true” severity of climate change’s effects or the vulnerabilities to climate-related damages. To signal competence and secure reelection, incompetent politicians often pander to the public’s prior beliefs, choosing the policy that the voter expects to be correct rather than following their own noisy private signals. As we shall see, when the public’s expectation is that climate severity is low, incompetent politicians pander toward inaction; when it is high, they pander toward reform.

To this agency problem, I introduce an anti-climate special interest group that seeks to influence this electoral calculus through “outside lobbying” or public messaging. The interest group designs an information structure to minimize the voter’s belief in the severity of climate change and persuade the public that climate reforms are not needed (e.g., [Kamenica and Gentzkow 2011](#)). The interest group’s public communications form a lens through which the voter contextualizes the politician’s pursuit of climate reforms (or lack thereof). As this information affects the voter’s assessment of politician competence, it influences the politician’s reelection chances. Hence the interest group can influence policymaking indirectly through voter beliefs. I find that misreporting increases with expected climate

damages. When the public’s prior expectation of climate severity is low, the interest group remains truthful, as politicians are already naturally inclined to pander toward the status quo of inaction. However, once expected damages cross a critical threshold, the interest group shifts to maximum misreporting, generating noise to degrade the informational environment.

Finally, the model links these domestic politics to a model of global climate policymaking through a mechanism of international strategic complementarity. Departing from canonical theories that treat climate action as a game of strategic substitutes (e.g., [Harrison and Lagonoff 2017](#); [McAllister and Schnakenberg 2022](#); [Kennard and Schnakenberg 2023](#)), I assume that the value of adopting climate policy increases when other nations do the same. International politics magnify domestic electoral considerations. A foreign leader’s policy choice serves as a highly visible, secondary signal to the domestic electorate about the need for climate reforms. If a neighboring country undertakes climate action, it reinforces the domestic voter’s expectation that the global climate threat is severe. This foreign action then shapes the incentives for action at home, providing legitimization for domestic climate action.

Putting these three mechanisms together explains the historical stagnation and recent surge in global climate policymaking. Historically, when the public’s expectation of climate severity was low, politicians naturally pandered toward the status quo of inaction. In this environment, special interests had no need to distort their messaging about climate damages, and countries coordinated around inaction. Over time, as scientific consensus grew and expectations about climate severity shifted, special interests shifted to a strategy of maximum misreporting. This generated a period of informational ambiguity where politicians, facing noisy domestic signals, relied heavily on cross-border informational validation; by pointing to their neighbors’ lack of action, leaders could electorally justify their own lack of policy response.

Ultimately, this paper demonstrates that such a strategy of coordinated suppression is structurally fragile. As the baseline probability of climate severity increases further, politi-

cians engage in a flurry of reforms because the public’s expectations outweigh interest group misreporting. This initial action catalyzes global climate efforts: it chips away at coordinated global inaction, informs foreign voters about the need for reform, and triggers a transnational cascade of policy adoption.

## Model

The model depicts the politics of climate policymaking at home and abroad between two countries,  $i$  and  $j$ , which each contain a politician  $P$  (“she”), a special interest group  $S$  (“it”), and a representative or median voter  $V$  (“he”).<sup>3</sup> There are two policy-relevant states of the world  $\omega \in \{0, 1\}$ . In simplified terms,  $\omega$  represents the severity of climate change’s effects or the vulnerabilities to climate-related damages. Each state of the world carries a “correct” policy response that is commensurate with anticipated environmental harms: state  $\omega = 1$  indicates a scenario in which greater climate policy reforms are appropriate because of greater vulnerability to climate change’s effects, while the case of  $\omega = 0$  represents an instance in which the status quo or more modest climate reforms are sufficient. As will be detailed below, players have policy preferences that depend on this underlying state. The true value of  $\omega$  is unobserved, but players share a common prior  $P(\omega = 1) = \pi \in (0, 1)$ , capturing the expected impacts of climate change.<sup>4</sup>

The game begins with the special interest group in each country committing to the design of information about the state of the world  $\omega$ . This takes the form of a signal distribution, or experiment  $\mathcal{E}_i(s_i, \omega) = P(s_i|\omega)$ . The signal  $s_i$  is akin to a report about climate change’s severity, which takes on two values  $s_i \in \{0, 1\}$ . Since I focus on the case of an anti-climate

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<sup>3</sup>The language of voters and elections is used to ease exposition, but the model need not be scoped to democratic countries. In nondemocratic states, the voter may be an elite or other individual whose political support is pivotal for the leader’s survival in office (Bueno de Mesquita et al. 2003).

<sup>4</sup>While individual knowledge about climate change may vary globally (Lee et al. 2015; Kennard 2025), the prior represents a common baseline from which all actors have expectations about climate change’s effects, which may stem from common informational sources like the IPCC (Hai 2024).

interest group like ExxonMobil,  $S$  seeks to convince their domestic public that  $\omega = 0$ , implying that the correct policy response is to take minimal climate action. Given the preferences of the interest group, as well as the dichotomous nature of the state of the world, the choice of an experiment can be expressed as

$$\begin{aligned}\mathcal{E}_i(s_i = 0, \omega = 0) &= 1. \quad \mathcal{E}_i(s_i = 1, \omega = 0) = 0. \\ \mathcal{E}_i(s_i = 0, \omega = 1) &= \beta_i. \quad \mathcal{E}_i(s_i = 1, \omega = 1) = 1 - \beta_i.\end{aligned}$$

Whenever the true state is  $\omega = 0$ , the group will always send the signal  $s_i = 0$ : it would never be in the group's interest to communicate that climate change poses a threat that demands action when the correct policy aligns with its preferences for inaction. However, if  $\omega = 1$ , there is some probability  $\beta_i \in [0, 1]$  that the special interest in country  $i$  reports signal  $s_i = 0$ . I will therefore refer to  $\beta_i$  as the level or intensity of “misreporting” about the true effects of climate change in country  $i$ . Higher values of  $\beta_i$  mean that the special interest is more likely to send the message that climate change warrants minimal action, even though the true state of the world is that climate change poses severe harms. The signal structure implies that the choice of  $\beta_i$  is isomorphic to the choice of the experiment  $\mathcal{E}_i(s_i, \omega)$ .  $S$  chooses  $\beta_i$  optimally in order to maximize the chances that the politician enacts policy congruent with  $\omega = 0$ ; the group receives a payoff of 1 in this eventuality and zero otherwise.

After the special interest group chooses its experiment, the game proceeds into the *climate policy subgame*, which is a variation on [Canes-Wrone, Herron and Shotts \(2001\)](#). Given each  $\beta_i$ , the politicians in each country must take a policy action on climate change,  $a_i \in \{0, 1\}$ . The action  $a_i = 1$  represents broad climate reform or more intensive policies that might regulate the production of fossil fuels, and  $a_i = 0$  captures the status quo or minimal policy measures.<sup>5</sup> The politician's action as well as the special interest's signal are observable to

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<sup>5</sup>Modeling implementation costs would only bias results toward  $a_i = 0$ .

the voter who decides whether to retain or replace the politician,  $r_i \in \{0, 1\}$  based on her policy and the special interest’s report.

While climate change’s effects remain uncertain, the politician has an informational advantage over the voter because she observes a signal about the state, indicating the relative success of potential climate reforms. The precision of this signal varies across politicians; the politician has a private type  $\theta_i \in \{0, 1\}$  indicating her “competence.” The voter’s prior about the politician’s competence is  $P(\theta_i = 1) = \tau_i \in (0, 1)$ . Politicians’ types are not known internationally, but priors  $\tau_i$  and  $\tau_j$  are known to all. The politician’s signal is formulated as  $x_i^\theta = \omega + \nu_i^\theta$  where  $\nu_i^\theta \sim G(\cdot)$ , has zero mean and admits a log-concave probability density function  $g(\cdot)$  with the monotone likelihood ratio property such that  $\lim_{x \rightarrow -\infty} g(x) = \lim_{x \rightarrow \infty} g(x) = 0$  (one example would be the normal distribution,  $\nu_i^\theta \sim N(0, \frac{1}{\alpha_\theta})$ ). I focus on the limiting case where a competent politician has a more precise signal of the state than the incompetent politician, in particular that  $\text{var}(\nu_i^1) = 0 < \text{var}(\nu_i^0)$ .<sup>6</sup> Let  $G(t; \omega) = P(x_i^0 \leq t | \omega)$ , be the cumulative distribution of the incompetent type’s signal given the value of  $\omega$ .

The politician and the voter share the same intrinsic policy preferences: each want policy to match the state of the world, or  $a_i = \omega$ , meaning that broad climate reforms are adopted only when it is appropriate to do so. However, since domestic climate policies also reverberate internationally, politicians care about the behavior of other nations; politician  $i$  also wants politician  $j$  to choose  $a_j = \omega$ . This assumption is how I parameterize strategic complementarities across nations, as it means that both politicians are pivotal in implementing a joint outcome. We can think of this an international institution trying to coordinate countries’ policies in reduced form, akin to the United Nations’ use of consensus decisionmaking (Barrett 2016). If politicians both match their policy actions to the state of the world, they

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<sup>6</sup>This is without loss of generality, all that is required is that a competent type’s signal of  $\omega$  is more precise than the incompetent type’s signal.

enjoy a policy payoff normalized to 1. Each politician also cares about remaining in office, and receives a payoff normalized to 1 if the voter reelects her.

Upon announcement of global climate policies, the representative voters in each country observe the triple  $(a_i, s_i, a_j)$  and retain or replace their leaders based on their assessments of competence  $\mu_i(a_i, s_i, a_j) = P(\theta_i = 1 | a_i, s_i, a_j)$ .<sup>7</sup> The voter receives a payoff of 1 if he reelects a competent politician and a payoff of zero if he reelects an incompetent politician. If he removes the incumbent, replacing her with a challenger, his payoff is a random draw  $\varepsilon_i \sim F(\cdot)$  where  $F(\cdot)$  is a known distribution function. This payoff could represent the expected competence of an electoral challenger, and thus the possibility that climate policy will be executed competently in the future, or the value of the incumbent politician on all other electorally salient dimensions that are independent of climate policy. The shape and support of the distribution  $F(\cdot)$  modulate how much the voter cares about climate policy relative to other issues, capturing salience as well as structural electoral factors such as partisan asymmetry or incumbency advantages.

For players in country  $i$  (country  $j$ 's are analogous), payoffs are formalized as follows:

$$\begin{aligned} u_S &= 1 - a_i. \\ u_P &= a_i a_j \omega + (1 - a_i)(1 - a_j)(1 - \omega) + r_i. \\ u_V &= r_i \theta_i + (1 - r_i) \varepsilon_i. \end{aligned}$$

The timing of the game is summarized as follows:

0. Nature randomly draws the state  $\omega$ .
1. Interest groups commit to experiments  $\mathcal{E}_i(s_i, \omega)$ , choosing  $(\beta_i, \beta_j) \in [0, 1]^2$ .
2. Politicians observe signals  $x_i^\theta$  and choose climate policies,  $(a_i, a_j) \in \{0, 1\}^2$ .

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<sup>7</sup>Allowing voter  $i$  to also condition his retention rule on interest group  $j$ 's signal makes the model more tedious and does not qualitatively alter results.

3. Interest groups' signals  $(s_i, s_j) \in \{0, 1\}^2$  and the shocks  $(\varepsilon_i, \varepsilon_j) \in \mathbb{R}^2$  are realized. Voters form posterior beliefs  $(\mu_i(a_i, s_i, a_j), \mu_j(a_j, s_j, a_i) \in [0, 1]^2)$  and choose to retain or replace their politicians,  $(r_i, r_j) \in \{0, 1\}^2$ .

I examine weak Perfect Bayesian equilibria. A strategy for the special interest group  $i$  is a choice of  $\beta_i$  given equilibrium behavior in the climate policy subgame. In the subgame, a strategy for politician  $i$  is a mapping from her type  $\theta_i$  and private signal  $x_i^\theta$  into an action, given beliefs about what she expects politician  $j$  to do. The voter's strategy is a reelection rule that is sequentially rational given politician  $i$ 's policy action, politician  $j$ 's policy action, interest group  $i$ 's signal about the state of the world, and the realization of the shock  $\varepsilon_i$ . Voter  $i$ 's beliefs about politician  $i$ 's competence are formed by Bayes's Rule wherever possible.

It is useful to state up front that equilibria of the game having the form:

1. Given equilibrium behavior in the climate policy subgame, the special interests choose optimal misreporting levels  $(\beta_i^*, \beta_j^*) \in [0, 1]^2$ .
2. A unique pair<sup>8</sup> of cutoffs  $(\tilde{x}_i^*, \tilde{x}_j^*)$  exists such that a politician of type  $\theta$  in country  $i$  chooses policy  $a_i = 1$  given signal  $x_i^\theta$  with probability  $\sigma^*(\theta_i, x_i^\theta) \in [0, 1]$ ,

$$\sigma^*(1, x_i^1) = x_i^1 = \omega.$$

$$\sigma^*(0, x_i^0) = 1 - G(\tilde{x}_i^*; \omega).$$

3. Given  $(a_i, a_j, s_i)$ , the voter in country  $i$  forms posterior belief about politician competence  $\mu_i(a_i, s_i, a_j; \tilde{x}_i^*, \tilde{x}_j^*)$  and reelects the politician with probability  $F(\mu_i(a_i, s_i, a_j; \tilde{x}_i^*, \tilde{x}_j^*))$ .

In what follows, I build the model sequentially to examine how each of the three mechanisms—pandering incentives, persuasion incentives, and cooperation incentives—affects climate policymaking.

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<sup>8</sup>It is not appropriate to assume symmetry of cutoffs because countries' domestic politics (i.e.,  $\tau_i, \beta_i$ ) may generate heterogeneity in strategic considerations.



## Comments on and Interpretation of the Model

The model setup makes several simplifying assumptions that warrant further interpretive discussion mapping theoretical components to relevant empirical elements of the politics of climate change.

**The special interest’s information structure.** The special interest’s information structure relies on symmetric uncertainty and an *ex ante* choice of an informational environment, building on the framework of [Kamenica and Gentzkow \(2011\)](#).<sup>9</sup> In this context, the commitment assumption allows for the formal analysis of the impact of the special interest’s message on politician behavior, which is necessary if we think that a special interest has strict preferences over policy outcomes. Crucially, this modeling approach captures the indirect nature of outside lobbying. While the special interest group fundamentally cares about the policy outcome, preventing the politician from implementing climate reforms, it achieves this indirectly by targeting the public’s information environment. By manipulating the public signal  $s_i$ , the group shifts the voter’s posterior beliefs about the state of the world, subsequently shifting voters’ electoral assessments of politicians.

However, rather than interpreting this as a literal “commitment to a disclosure rule,” a usually restrictive assumption ([Little 2023](#)), I frame the group’s choice as an *ex ante* investment in public relations and evidence suppression. Substantively, if the true state requires climate action ( $\omega = 1$ ), internal scientists and researchers will naturally generate evidence unfavorable to the group’s preferences. The parameter  $\beta_i$  represents the special interest group’s structural capacity to suppress this whistleblowing, manufacture doubt, and successfully communicate a “safe” narrative to the public. If the group successfully suppresses

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<sup>9</sup>Unlike standard Bayesian persuasion frameworks where the receiver of the signal directly takes the action, this setup separates the belief-updater (voter) from the ultimate decision-maker (politician). The sender’s (interest group) message operates as an indirect mechanism, persuading voters to electorally discount climate action, which subsequently filters upward to constrain the politician’s policy choice.

the evidence, with probability  $\beta_i$ , the public receives the favorable signal  $s_i = 0$ . If the suppression apparatus fails, with probability  $1 - \beta_i$ , the truth about climate damages leaks, and the public receives  $s_i = 1$ . In this setup, the group does not “promise” to occasionally tell the truth; rather,  $1 - \beta_i$  is the probability that the truth escapes their control. Symmetric uncertainty ensures there is no signaling embedded in the ex-ante choice of  $\beta_i$ .

**Strategic complementarities.** The model explicitly assumes that countries must coordinate their climate reform globally in order to realize a joint policy outcome. This can be interpreted as a reduced-form representation of an international institution that is designed to organize collective action (e.g., a climate club or other treaty, see [Nordhaus 2015](#)). Importantly, this modeling choice serves a specific analytical purpose: it isolates the mechanics of informational spillovers. Modeling climate action as strategic complements demonstrates that free-riding is not strictly necessary to explain the historical stagnation of global climate policy. Rather, the model reveals that robust patterns of global inaction can emerge from domestic political frictions. As will be shown, the strategic distortion of information by special interests in one country can cross borders, shifting *global* expectations of environmental vulnerability and depressing coordinated action.

**Interpretation of the state and actions.** There is a connection between “appropriate” policy responses and the state of the world, which immediately generates distributional conflict between the special interest, which has state-independent preferences, and the politician and voter, who have state-dependent preferences over policy. This conflict arises directly because of the fact that there is uncertainty about what types of policies should be implemented. The state  $\omega$  and actions  $a_i, a_j$  are assumed to be binary, but provide sufficient richness to capture this fundamental tension in climate politics ([Colgan, Green and Hale 2021](#)). By way of interpretation, policy  $a_i = 0$ , which is the preferred choice of the special

interest group regardless of the state of the world, might typify minimal climate reforms or even upholding the status quo, or other consumer-facing policies that still allow for the combustion of fossil fuels. Policies that invoke the “individualization of responsibility” fall under this umbrella. Policy  $a_i = 1$  would encompass more comprehensive climate policy reform or policies that are more likely to affect production of fossil fuels. One could imagine a model with a continuous state of the world and continuous action space, allowing for more fine-grained interpretations of policy outcomes, but this adds mathematical complexity without providing additional substantive insights.

**The “anti-climate” special interest.** I model the strategic dissemination of information by a single interest group that opposes climate action. The appendix includes an extension in which the special interest group has a bias in favor of environmental action (e.g., the Sierra Club), in which all results bias toward climate action rather than inaction. Concentrating on a single group allows for a more concrete understanding of the incentive structure for misreporting, and focusing on an anti-climate group captures the empirical regularity of anti-climate lobbying and its role in stalling climate policy, especially in the United States (Dunlap and McCright 2011; Brulle 2014; Dunlap and McCright 2015), although one could interpret  $s_i$  as the “net messaging” a voter receives from multiple groups.

To isolate and focus on the “outside lobbying” mechanism (Kollman 1998) in which special interests indirectly influence policy through voter beliefs, I assume that the politician does not observe  $s_i$  when implementing climate policy. The appendix considers this model, but results are ultimately uninteresting: if the politician and voter know that the special interest is more likely to misreport and has sent a message that downplays the risks of climate change, then they rationally discount the message.

**Interpretation of politician competence.** The politician and the voter have aligned

incentives on policy as each wants actions to match the state. The voter thus rewards politicians whom are viewed as competent, or were more likely to have done the right thing. The politician’s competence lends itself to several interpretations. We may think that some politicians are more likely to implement successful climate reforms given information that they have at their disposal about the true threat of climate change. This may arise due to variation in bureaucratic capacity or variation in the quality of scientific knowledge. In addition, competence may signify a heightened ability to implement policy congruent with the voter’s willingness to pay for climate policy, given their prior belief about the need for such policy measures.

**Motivated reasoning and partisanship.** The literature documents that individuals can display motivated reasoning when learning about climate change or that their inferences may be colored by partisan affiliation (e.g., [Saunders 2017](#); [Druckman and McGrath 2019](#); [Bayes et al. 2020](#); [Bago, Rand and Pennycook 2023](#)). These cognitive factors are not directly modeled, as is standard. Given an individual’s prior, motivated reasoning may be observationally equivalent to more classical versions of updating ([Little 2025](#)), and partisan affiliation or biases could be accommodated through the distribution  $F(\cdot)$ , the valence shock. All that is required for results to hold is for the politician’s reelection probability to be increasing in the voter’s belief that she is competent.

## Pandering

First consider a very simplified model where I study the climate policy subgame within a single nation with no special interest group. This setting is nearly identical to [Canes-Wrone, Herron and Shotts \(2001\)](#), so I will not dwell on this case, but it serves as a useful baseline to establish how politicians’ incentives to pander operate. In this context, as will be shown

below, pandering refers to the incompetent politician's tendency to choose the action that is *ex ante* more likely to be correct (i.e., depending on the value of the prior  $\pi = P(\omega = 1)$ ) with the intent of winning reelection.

**Proposition 1** *In the unique equilibrium of the model without the interest group:*

- *There exists a  $\pi^\dagger$  such that the incompetent politician panders to  $a = 0$  when  $\pi < \pi^\dagger$  and panders to  $a = 1$  when  $\pi > \pi^\dagger$ .*

In this stylized setting, the voter assesses the politician's competence following the realization of either  $a = 1$  or  $a = 0$  and reelects when his perception of competence is greater than the replacement value of the challenger. Let  $\mu(a) = P(\theta = 1|a)$  be the voter's posterior belief about the politician's competence given the politician's policy choice such that the probability the politician is reelected is simply  $F(\mu(a))$ .

Now considering the behavior of the politician, it is clear that the competent politician always prefers to choose  $a = \omega$ : policywise she wants to match her action to the state and has perfect information about the need for climate policy. By contrast, the incompetent type does not precisely know the state of the world, so she must form beliefs about the true severity of climate change. Given the value of her private signal  $x^0 = x$ , the incompetent politician's posterior belief about the state is  $\eta(x) = P(\omega = 1|x) = \frac{\pi g(x;1)}{\pi g(x;1) + (1-\pi)g(x;0)}$  where  $g(\cdot; \omega)$  is the density of the incompetent politician's signal in state  $\omega$ . Then it is optimal for the incompetent politician to choose  $a = 1$  iff

$$\eta(x) + F(\mu(1)) \geq 1 - \eta(x) + F(\mu(0)).$$

Write  $\Delta = F(\mu(1)) - F(\mu(0))$  as the difference in reelection probabilities. The cutoff  $\tilde{x}^*$  solves

$$\underbrace{2\eta(\tilde{x}^*) - 1}_{\text{net belief } a=1 \text{ correct}} + \underbrace{\Delta(\tilde{x}^*)}_{\text{net electoral return}} = 0.$$

The incompetent politician weighs her posterior belief that  $\omega = 1$  with the difference in reelection odds that each policy choice induces. If she is sufficiently confident that broad climate reform is the correct policy, then she chooses  $a = 1$ . Otherwise, she selects policy  $a = 0$ . Since the incompetent type’s information is imperfect, she can sometimes make the “wrong” policy choice. The signal that makes the incompetent politician indifferent between choosing  $a = 1$  and  $a = 0$  is  $\tilde{x}^*$ , thereby identifying the equilibrium cutoff. Increasing  $\tilde{x}^*$  would require the incompetent type to be more certain that  $\omega = 1$  in order to take action, thereby decreasing the range of signals that would result in climate reform; decreasing  $\tilde{x}^*$  would galvanize the incompetent politician toward climate action, meaning she needs lower quality information to choose  $a = 1$ .

An important feature of the equilibrium is that it features *pandering*, which occurs when the incompetent politician chooses the action that is *ex ante* more likely to be correct than the competent politician does, with the hopes of ingratiating herself with the voter. In equilibrium, since the competent politician will always select the correct policy—she pursues climate reforms if  $\omega = 1$ , when vulnerability is high, and abstains otherwise—the probability she takes climate action is simply the prior  $\pi$ , the nation’s expected vulnerability. However, the probability that the incompetent politician takes climate action is  $\pi(1 - G(\tilde{x}^*; 1)) + (1 - \pi)(1 - G(\tilde{x}^*; 0))$ , which can be more or less than  $\pi$ . If it is larger than  $\pi$ , which occurs when  $\pi > \pi^\dagger$ , then the incompetent politician panders to the voter by enacting climate reforms more often than necessary. By contrast, if  $\pi < \pi^\dagger$ , the incompetent politician is lax relative to the competent politician, and does not pursue enough climate action.

Interestingly, in expectation of pandering, the voter rationally updates his beliefs about who is more likely to pursue climate action. For example, as  $\pi$  increases, meaning that the expected vulnerability is high and climate reforms are appropriate, the voter knows that the incompetent politician becomes more likely to enact climate reforms—even more likely than the competent politician if  $\pi > \pi^\dagger$ . Observing climate action becomes a less

informative signal about the politician's competence, and, in fact, becomes more emblematic of *incompetence*. This means that when  $\pi > \pi^\dagger$ , the voter punishes climate action and electorally rewards inaction.

**Corollary 1** *Voters are more likely to reelect a politician who pursues climate action relative to inaction when  $\pi < \pi^\dagger$  and less likely to reelect a politician who pursues climate action relative to inaction when  $\pi > \pi^\dagger$ .*

To see these equilibrium consequences of pandering on electoral fortunes, consider how the voter's posterior belief following  $a = 1$  changes as the expected vulnerability to climate change increases:

$$\frac{d\mu(1; \tilde{x}^*)}{d\pi} = \underbrace{\frac{\partial\mu(1; \tilde{x}^*)}{\partial\pi}}_{\text{likelier correct policy}} + \underbrace{\frac{\partial\mu(1; \tilde{x}^*)}{\partial\tilde{x}^*} \frac{d\tilde{x}^*}{d\pi}}_{\text{pandering penalty}}.$$

The first term is a positive direct effect holding fixed the incompetent politician's threshold  $\tilde{x}^*$ : as the expected severity of climate change grows, climate action is more likely to be the appropriate policy, and so the voter rewards a politician who enacts reforms. This would lead the voter to update favorably on the politician's competence and thus increases the politician's reelection chances. However, at the same time, there is a negative strategic effect on the voter's posterior belief that comes from the fact that the incompetent politician over-reforms. This pandering effect leads the voter to sour on climate action and decreases the chances that the incumbent wins reelection. Interestingly, this negative strategic effect often offsets the positive direct effect, making the voter less likely to reward climate reforms even as they are increasingly seen as appropriate.

The pandering incentive provides a rationalization as to why voters might punish incumbents who engage in vast climate reforms, even if they are perceived to be *ex ante* necessary. Incompetent politicians, seeking to simply emulate the expected behavior of competent politicians, overcompensate by engaging in reform too often. In the equilibrium, the voter responds with electoral punishment.

# Persuasion

Building off of this discussion, I now introduce the interest group that can design the reporting scheme  $\mathcal{E}_i(s_i, \omega)$ . The special interest group's incentive in choosing  $\beta$  is to minimize the probability that the politician enacts climate reforms, which is done indirectly by “persuading” voters to punish reforming politicians. Indeed, when the voter chooses to retain or replace the politician, he now has two pieces of information at his disposal: the politician's action  $a$  and the special interest group's message  $s$ . The message  $s$  forms a lens through which the voter perceives the appropriateness of the politician's reform decision  $a$ .

**Proposition 2** *In the unique equilibrium of the model with the interest group:*

- *As  $\beta \rightarrow 1$ , the game collapses to the model without the interest group.*
- *The probability of climate action is inverse U-shaped in  $\beta$ .*
- *There exists a  $\pi^*$  such that the special interest's optimal misreporting strategy is*

$$\beta^*(\pi) = \begin{cases} 0 & \pi < \pi^* \\ 1 & \pi \geq \pi^*. \end{cases}$$

The equilibrium considerations in this model with pandering and persuasion take a similar shape to those above. First consider the policymaking process holding  $\beta$  fixed. Now when the voter determines whether to reelect the politician, he forms a posterior belief about the politician's competence using both the interest group's signal  $s$  and the politician's action  $a$ : he holds belief  $\mu(a, s) = P(\theta = 1|a, s)$ . The probability that the politician is reelected is then  $F(\mu(a, s))$ .

The competent politician, as before, always selects the correct policy: she has no incentive to deviate as doing so would make her worse off policywise. Turning to the incompetent



politician, there are two important uncertainties to consider. As in the model without the special interest group, the incompetent politician does not know the true state of the world herself, and thus does not know for sure whether climate reforms are appropriate. Additionally, the incompetent politician does not know the value of  $s$ , meaning she does not know how the voter will interpret her decision to pursue climate action in light of the special interest's message about the need for reform. The politician does know  $\beta$ , and so she can ascertain the probability that each signal is realized given her own posterior belief about the need for climate action  $\eta(x)$ . These beliefs affect her personal assessment about potential environmental damages, as well as which messages she believes the voter could observe from the special interest. The incompetent politician chooses  $a = 1$  if and only if

$$\eta(x) + (1-\beta)\eta(x)F(\mu(1,1)) + (1-\eta(x) + \beta\eta(x))F(\mu(1,0)) \geq (1-\eta(x)) + (1-\beta)\eta(x)F(\mu(0,1)) + (1-\eta(x) + \beta\eta(x))F(\mu(0,0)).$$

Write  $\Delta(s) = F(\mu(1,s)) - F(\mu(0,s))$  as the difference in the politician's reelection odds between taking climate action and not, holding the interest group's signal fixed. The cutoff  $\tilde{x}^*$  solves

$$\underbrace{2\eta(\tilde{x}^*) - 1}_{\text{net belief } a=1 \text{ correct}} + \underbrace{(1-\beta)\eta(\tilde{x}^*)\Delta(1;\tilde{x}^*)}_{\text{net electoral return if } s=1} + \underbrace{(1-\eta(\tilde{x}^*) + \beta\eta(\tilde{x}^*))\Delta(0;\tilde{x}^*)}_{\text{net electoral return if } s=0} = 0.$$

The special interest's signal  $s$  plays a crucial role in shaping the equilibrium dynamics of the policymaking process. Since the special interest communicates the appropriateness of climate policy, its message functions as a lens through which the voter interprets the politician's behavior. Consequently, it affects the voter's assessment of the politician's competence. To see why, consider the history following  $(a, s) = (0, 1)$ . Since the interest group is biased toward maintaining the status quo—new climate regulations like those targeting fossil fuels are detrimental to its interests—any signal  $s = 1$  must be fully informative about  $\omega$ , so the voter learns  $\omega = 1$  for sure following  $s = 1$ . Thus, if the politician failed to take action in this eventuality, she must be incompetent. To avoid this severe electoral sanction,

the incompetent politician must internalize the informational weight the voter places on the signal and adjust their policy to avoid contradicting a definitive public revelation of the state. This implies that in equilibrium,  $\mu(1, 1; \tilde{x}^*) \geq \mu(1, 0; \tilde{x}^*)$  and  $\mu(0, 0; \tilde{x}^*) \geq \mu(0, 1; \tilde{x}^*)$ .

The lever through which the interest group affects voter beliefs is  $\beta$ , which represents the possibility of misreporting that climate change does not require any action when the true state requires it. The politician and the voter both know  $\beta$  when policy is enacted and competence is assessed. Importantly, the level of misreporting can affect the voter's assessment of the incumbent politician's competence because it affects the voter's assessment of the need for climate reforms. If the voter perceives that the politician pursued the incorrect policy based on his view of the appropriateness of climate reform—shaped by  $\beta$ —then he punishes the incumbent.

Depending on the value of  $\beta$ , and thus the informativeness of the interest group's message about climate vulnerability, the voter weighs the signal  $s$  and the action  $a$  differentially in assessing the politician's competence. If  $\beta = 1$ , the special interest group is completely uninformative, then the voter discounts  $s$  entirely; this is equivalent to the model above in which there is no special interest group. But if  $\beta = 0$ , then the special interest is a truthful arbiter about the expected damages from climate change, and the voter relies heavily on the signal  $s$  when determining his posterior belief about the politician's competence. In such a case,  $\mu(1, 0; \tilde{x}^*) = \mu(0, 1; \tilde{x}^*) = 0$ , showing that any action inconsistent with a perfect signal of the state reveals the politician to be incompetent. Such a fact delivers two important insights. First, the special interest can design information through its choice of  $\beta$  that can maximally punish the incumbent politician. Second, the persuasion mechanism—and thus the value of misreporting—can look qualitatively different depending on how it interacts with the equilibrium dynamics between the voter and the politician.

## Misreporting and Equilibrium Climate Action

Misreporting affects the voter’s beliefs about the appropriateness of climate reforms and subsequently the incompetent politician’s estimation of how her policy choices will be viewed by the public. How does the level of misreporting affect the likelihood that climate action is pursued in equilibrium? Since both the politician’s competence  $\theta$  and her signal about the state of the world  $x$  are unobserved, it is useful to work with the *ex ante* probability of climate action, or the total probability that a politician chooses  $a = 1$ , written as

$$A(\tilde{x}^*) = \underbrace{\tau\pi}_{\substack{\text{competent type} \\ \text{takes action if } \omega=1}} + \underbrace{(1-\tau)\pi(1-G(\tilde{x}^*;1))}_{\substack{\text{incompetent type takes action if } \omega=1}} + \underbrace{(1-\tau)(1-\pi)(1-G(\tilde{x}^*;0))}_{\substack{\text{incompetent type takes action if } \omega=0}}.$$

As the special interest group can only influence the choice of the incompetent politician—the competent politician always follows her signal and pursues the correct policy—the answer boils down to how misreporting affects the incompetent politician’s willingness to engage in action, capture by the threshold  $\tilde{x}^*$ . Interestingly, this threshold is U-shaped in  $\beta$ , leading to an inverse-U shaped probability of climate action. This is shown in Figure 2 for low (left panel) and high (right panel) values of  $\pi$ , the expected vulnerability to climate change. Of course, the competent politician’s probability of action (blue dashed line) is constant in  $\beta$ , while the incompetent politician is most likely to take action when  $\beta$  is intermediate (red dotted line). The total probability of action (black solid line) is the weighted average of these two curves.

To understand the non-monotonicity of the incompetent politician’s threshold, it is useful to view the special interest group’s public message as a lens through which the voter assesses the politician’s competence. Because her reelection odds are tied to the voter’s posterior beliefs, the incompetent politician will strategically shade her climate policy depending on how she anticipates that lens will distort the voter’s view. Together, these electoral incentives

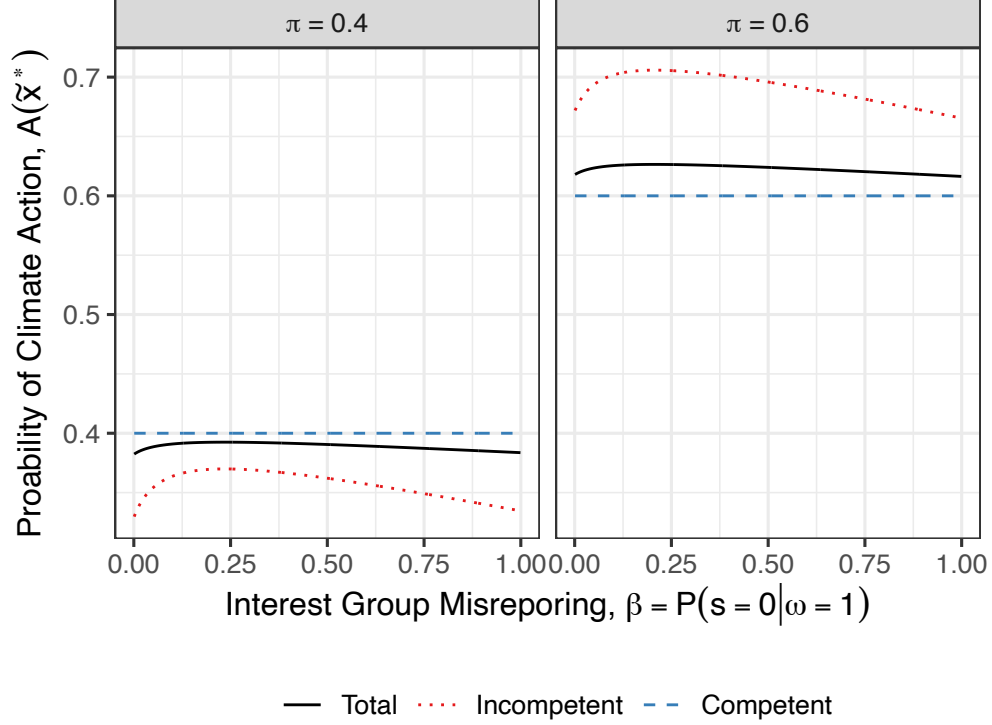


Figure 2: Probability of Climate Action is Inverse U-Shaped in Misreporting  
 $\tau = \frac{3}{4}$ ,  $\varepsilon \sim N(0, 1)$ ,  $\nu^0 \sim N(0, 1)$

create a U-shaped threshold with respect to the level of misreporting  $\beta$ .

At  $\beta = 0$ , the interest group's signal is perfectly informative. If the politician enacts climate reforms but the interest group communicates that expected damages are low, the voter knows with certainty that the politician selected the wrong policy, revealing herself to be incompetent, as  $\mu(1, 0; \tilde{x}^*) = 0$  in this case. Facing maximum punishment at the ballot box for this contradiction, the incompetent politician adopts a highly cautious approach, leading to a high evidentiary cutoff for taking action. However, as  $\beta$  increases, this severe penalty softens. Increased misreporting implies that the voter rationally discounts the message  $s = 0$ . Relieved of the extreme electoral risk of being contradicted by the signal, the incompetent politician becomes significantly more willing to enact reforms, driving her threshold downward. The probability of climate action is thus greatest when  $\beta$  is

intermediate.

As  $\beta$  rises further toward 1, the special interest's communications become uninformative. Knowing that the signal will almost always downplay the need for climate action regardless of the true state, the voter discounts the message entirely and relies primarily on the politician's action to assess competence. In this instance, the incompetent politician knows that  $s = 1$  will almost never be sent, implying that any climate reforms would contradict the voter's general expectations. She thus halts climate reforms to avoid appearing unilaterally out of step with the interest group's message. Consequently, her threshold increases again. As can be seen, the degree to which the incompetent politician pursues suboptimal climate policy changes, leading to differing degrees of inaction by either perfectly precise or heavily biased messaging.

## Misreporting and Pandering

Recall that in the model with pandering, the incompetent politician engages in climate reform more than the competent politician when  $\pi > \pi^\dagger$  in attempt to ingratiate herself with the voter. These pandering incentives are directionally still present when introducing the interest group, and can be seen in Figure 2. In the left panel, expectations about climate damages are low, and so the incompetent politician is always less likely to pursue climate action than the competent politician is. Indeed, as  $a = 0$  is *ex ante* more likely to be the correct policy, the incompetent politician panders toward inaction. By contrast, when expected damages are high, as in the right panel of the figure, the incompetent politician engages in climate action at a rate that is much larger than that of the competent politician. Here, the incompetent politician panders to the voter by pursuing broad climate reforms.

However, introducing the special interest group leads the intensity of pandering to change based on the level of misreporting. When  $\pi$  is low and the incompetent type has an incentive to engage in inaction, pandering incentives are reinforced when misreporting is either very

high or very low. In the former case, the interest group’s signal is uninformative, and so the incompetent politician panders as in the model without the interest group: because  $a = 0$  is *ex ante* more likely to be correct, she is biased toward inaction. But in addition to this, the incompetent politician may pander toward inaction when misreporting is low and expected damages are low because of the way that the special interest’s message affects voter beliefs. This novel channel arises because the incompetent politician wants to avoid action in the event that  $s = 0$  from a perfectly truthful special interest group.

By contrast, if expected damages are high, the temptation to pander toward climate action is most heavily reinforced when  $\beta$  is intermediate, as this is when the incompetent politician’s threshold is lowest. Interestingly, however, the special interest group can mute this over-provision of climate policy by pushing misreporting to either extreme. As established, highly truthful reporting,  $\beta \rightarrow 0$ , induces maximum electoral punishment for inconsistency. This disciplines the politician and tempers the pandering incentive. Yet, completely uninformative reporting,  $\beta \rightarrow 1$ , also skews the politician’s behavior toward inaction, but for an entirely different reason. When the interest group’s message becomes uninformative, the voter relies solely on the politician’s action to assess her competence, effectively returning the strategic environment to the baseline model without an interest group. Recall that in this baseline, the voter actually sours on climate action when the prior is sufficiently high, when  $\pi > \pi^\dagger$ . Anticipating this baseline electoral sanctioning, the incompetent type retreats from taking action in order to preserve her veneer of competence. Thus, extreme levels of misreporting successfully suppress the incompetent politician’s urge to pander under a high prior.

## Optimal Misreporting

Zooming out, I now consider how the special interest determines the optimal level of misreporting  $\beta$ . Recall that the special interest group seeks to optimally deter climate action, and

does so by designing an information environment that induces the voter to punish climate action. The interest group has an objective function

$$\max_{\beta \in [0,1]} 1 - A(\tilde{x}^*) = \max_{\beta \in [0,1]} \pi G(\tilde{x}^*; 1) + (1 - \pi)G(\tilde{x}^*; 0).$$

It is clear that the special interest group can only influence the behavior of the incompetent politician, and does so by strategically manipulating the informational environment to induce a threshold  $\tilde{x}^*$  that would minimize climate action. Since we know that  $\tilde{x}^*$  is U-shaped in  $\beta$ , the optimal level of misreporting must be at one of two extremes, either  $\beta^* = 0$  or  $\beta^* = 1$ . Let  $\tilde{x}_\beta^*$  be the incompetent politician's threshold given  $\beta$ . Then the special interest group's net gain from inducing the subgame following  $\beta = 1$  relative to  $\beta = 0$  is defined by

$$\Gamma(\pi) = \pi G(\tilde{x}_1^*; 1) + (1 - \pi)G(\tilde{x}_1^*; 0) - \pi G(\tilde{x}_0^*; 1) - (1 - \pi)G(\tilde{x}_0^*; 0).$$

This net gain captures the special interest's tradeoff between the value of inaction when its messaging is completely uninformative ( $\beta = 1$ ) versus when it is completely truthful ( $\beta = 0$ ). Figure 3 plots this tradeoff, and demonstrates that the optimal strategy for the special interest group is to design truthful information when the expected severity of climate change is low ( $\pi < \pi^*$ ), and to jump to a completely uninformative message when the expected severity of climate change is high ( $\pi > \pi^*$ ). This is similar to the canonical result in the Bayesian persuasion literature ([Kamenica and Gentzkow 2011](#); [Kolotilin et al. 2017](#)), in which the receiver is predisposed to take the sender's preferred action at low levels of the prior, but works against the sender at high levels of the prior.

The interplay between pandering and persuasion determine the special interest group's choice of misreporting. Intuitively, if climate change poses a minimal threat such that action is almost never appropriate, it is likely that the politician would choose  $a = 0$  in the absence of a signal to obfuscate inference. The incompetent politician looks to pander toward the voter

with inaction. A truthful signal amplifies this: if  $\beta = 0$ , then the voter maximally punishes action following the signal  $s = 0$ , generating strong incentives for the incompetent politician to hold off on climate reforms. As the expected severity of climate change increases, the special interest group finds it optimal to generate a completely uninformative signal: here, the voter punishes pandering toward action already.

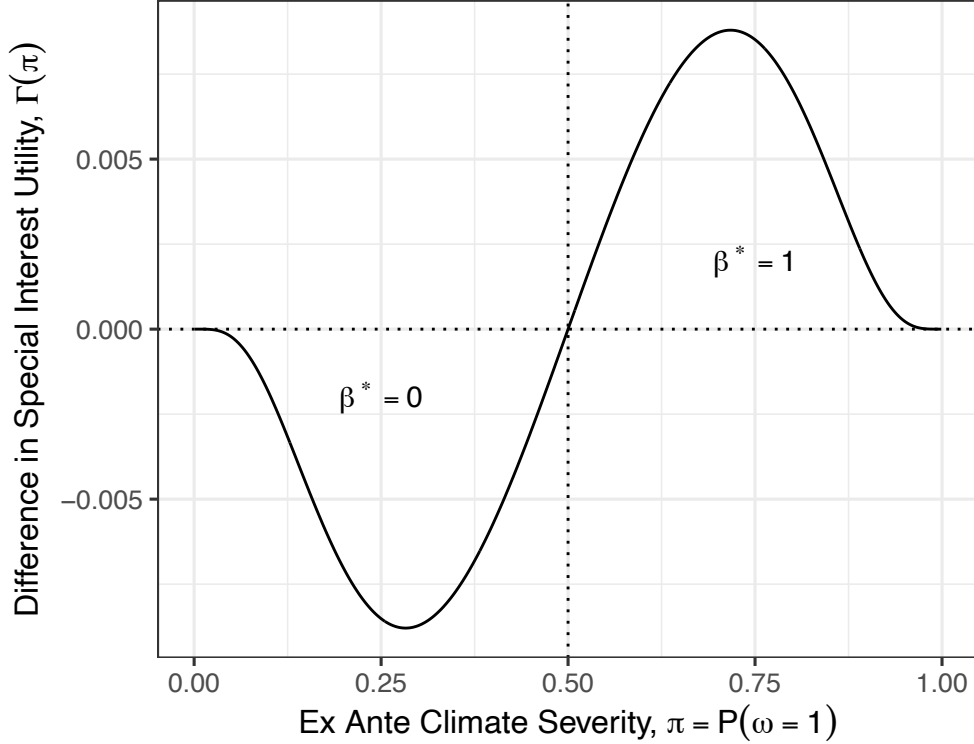


Figure 3: Optimal Misreporting Changes in *Ex Ante* Severity  
 $\tau = \frac{3}{4}$ ,  $\varepsilon \sim N(0, 1)$ ,  $\nu^0 \sim N(0, 1)$

This result underscores the cross-cutting nature of uncertainty in climate policymaking: when politicians and voters do not precisely know their vulnerabilities to climate change, they must make assessments about what types of policy responses are appropriate to address the problem. Furthermore, as is expected by the distributional nature of climate policy (Colgan, Green and Hale 2021), there may be special interest groups with an interest in delaying action, but can disseminate information to the public about the severity of the



climate threat. As the *ex ante* uncertainty about climate vulnerabilities increases, special interest groups proliferate information that downplays the risks of climate change and is likely to stymie political action by exploiting climate change’s uncertainties. This presents a countervailing force on politicians who would be more likely to take action as  $\pi$  increases as their prior expectations now heighten the need for climate reforms.

## International Coordination

This section now analyzes the full model which considers the interplay between domestic politics and international climate cooperation. I consider how the informational effects described in the previous sections—defined by the interplay between pandering and persuasion—interact with international efforts to coordinate climate policies.

Before proceeding with the formal analysis combining domestic and international politics, it is instructive to consider the global-level incentives that coordination brings. The international coordination mechanism fundamentally links the strategic calculus of politicians across borders. A leader’s electoral viability now depends in part on the policy choices of foreign counterparts. Coordinated action provides crucial political cover: when multiple nations implement reforms simultaneously, it strongly signals to domestic voters that the policy is a necessary response to severe climate damages rather than a costly mistake pursued by an incompetent politician.

The primary value of this nested modeling approach is to explicitly demonstrate the mechanics and consequences of how information spills over within this coordinated environment. By linking domestic politics through international strategic complementarities, the model elucidates how localized political distortions can affect decisionmaking abroad. When a domestic special interest group misreports the severity of climate damages, it directly affects the local politician’s threshold for action. However, because of the coordination

mechanism globally, this localized friction reverberates across borders, altering the strategic calculus of foreign leaders who rely on that country's participation in climate policymaking for political support.

**Proposition 3** *In the unique equilibrium of the model with the interest group and international coordination:*

- *Actions are strategic complements: if politician  $j$  is less likely to take climate action then so is politician  $i$ ,  $\tilde{x}_i^*$  is increasing in  $\tilde{x}_j^*$ .*
- *There are informational spillovers: increasing misreporting  $\beta_i$  increases incompetent politician  $j$ 's cutoff  $\tilde{x}_j^*$ .*
- *Global climate outcomes depend on misreporting: coordinated action is inverse U-shaped in  $\beta_i$ , coordinated inaction is U-shaped in  $\beta_i$ , and unilateral action is U-shaped in  $\beta_i$  if  $A_i(\tilde{x}_i^*) > \frac{1}{2}$  and  $A_j(\tilde{x}_j^*) > \frac{1}{2}$ .*
- *There exist country-specific thresholds  $\pi_i^*(1) < \pi_i^*(0)$  and  $\pi_j^*(1) < \pi_j^*(0)$  such that the equilibrium misreporting profiles  $(\beta_i^*, \beta_j^*)$  are characterized by:*

$$(\beta_i^*, \beta_j^*)(\pi) = \begin{cases} (0, 0) & \pi \leq \min\{\pi_i^*(0), \pi_j^*(0)\} \\ (1, 0) & \pi_i^*(0) < \pi < \pi_j^*(1) \\ (0, 1) & \pi_j^*(0) < \pi < \pi_i^*(1) \\ (1, 1) & \pi \geq \max\{\pi_i^*(1), \pi_j^*(1)\}. \end{cases}$$

As before, the climate policy subgame proceeds wherein voter  $i$  reelects politician  $i$  if and only if  $\mu_i(a_i, s_i, a_j) \geq \varepsilon_i$ , occurring with probability  $F(\mu_i(a_i, s_i, a_j))$ .<sup>10</sup> To consider the

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<sup>10</sup>This reelection decision is equivalent to a reduced form of a two-period game in which the politician and the voter share the same policy preferences (i.e., that the voter cares directly about  $a_i$  and  $a_j$ ).

difference in electoral returns for politician  $i$  fixing the signal  $s_i$  and politician  $j$ 's action  $a_j$ , write  $\Delta_i(s_i, a_j) = F(\mu_i(1, s_i, a_j)) - F(\mu_i(0, s_i, a_j))$ .

At the international level, politician  $i$  must form an assessment of politician  $j$ 's likelihood of taking climate action, or the belief that politician  $j$  views climate change as sufficiently severe. Because signals are all centered around the same  $\omega$ , they are correlated across countries. Climate change presents a common values uncertainty problem. This means that, from politician  $i$ 's perspective who has signal  $x_i^\theta = x_i$ ,  $x_j^\theta | x_i \sim \eta(x_i)G(\cdot; 1) + (1 - \eta(x_i))G(\cdot; 0)$ . Politician  $i$  uses her updated beliefs about the state  $\eta(x_i)$  to infer what politician  $j$  knows about the global climate threat (or lack thereof).

As in the single country case, competent politicians always follow their signals: since the international climate response requires both politicians to match their actions to the state of the world, it is optimal in policy terms to do the right thing. Interestingly, there are cases where the competent politician might pander as well, but I assume this away to keep the analysis tractable and comparable to the single country case (see the appendix for further technical details).<sup>11</sup> However, incompetent politicians, who do not know the true vulnerability to climate change, must consider two factors. First, as in the domestic politics analysis, an incompetent politician must consider how her actions play domestically in terms of informing the voter about her type. Second, her climate policy must be a best response to the other nation's climate policymaking. Let  $p_{j\omega} = P(a_j = 1 | \omega)$  be the belief that politician  $j$  engages in climate reforms  $a_j = 1$  when the state is  $\omega$ . She then pursues climate action herself,  $a_i = 1$  if and only if

$$\underbrace{\eta(x_i)p_{j1} - (1 - \eta(x_i))(1 - p_{j0})}_{\text{net belief } a_i=1 \text{ correct} \\ + \text{coordination}} + \underbrace{\eta(x_i)(1 - \beta_i)\left(p_{j1}\Delta_i(1, 1) + (1 - p_{j1})\Delta_i(1, 0)\right)}_{\text{net electoral gain if } s_i=1}$$

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<sup>11</sup>Since policy payoffs now depend on the action of politician  $j$ , the expected value that the competent politician gets from choosing the correct policy is less than 1 and thus not enough to outweigh electoral incentives.

$$+ \underbrace{\left( \eta(x_i)p_{j1}\beta_i + (1 - \eta(x_i))p_{j0} \right) \Delta_i(0, 1) + \left( \eta(x_i)(1 - p_{j1})\beta_i + (1 - \eta(x_i))(1 - p_{j0}) \right) \Delta_i(0, 0)}_{\text{net electoral gain if } s_i=0} \geq 0,$$

which resembles the condition characterizing  $\tilde{x}^*$  in the domestic politics analysis, but also endogenizes the behavior of politician  $j$ . Hence, in equilibrium, an incompetent politician will pursue climate reform if and only if her signal about its appropriateness is sufficiently high, which means she also has to be convinced that politician  $j$  will do the same. Since the incompetent politician  $j$  faces an analogous problem, the equilibrium to the international coordination game is characterized by a pair of cutoffs  $(\tilde{x}_i^*, \tilde{x}_j^*)$ , the solution to a system of two equations, which delineate the quality of information about the state of the world that an incompetent politician in each country would require to take climate action.

It is also worth noting that the informational environment is much richer in the game with international politics. Now, the voter has access to three pieces of information when assessing politician competence: the domestic action  $a_i$ , the domestic report  $s_i$ , and the foreign action  $a_j$ . Importantly, as  $s_i$  changes in informativeness—due to a smaller  $\beta_i$  creating a more informative signal or a larger  $\beta_i$  generating a noisy, uninformative report—the voter places differential weight on it compared to countries' climate actions. If, for example,  $\beta_i = 1$ ,  $s_i$  is pure noise and the voter heavily shifts his assessment of politician  $i$  to the coordination of climate reforms.

## Informational Spillovers and International Climate Cooperation

The model highlights two relevant sources of information that affect international climate policymaking. First, the signal  $x_i^\theta$  provides information about whether politician  $j$  is sufficiently likely to take action because signals are correlated. Hence, varying the cutoff rule  $\tilde{x}_j^*$ , or the ease with which an incompetent politician  $j$  pursues climate reform, also affects how politician  $i$  will respond. Politicians' actions are strategic complements internationally:

if politician  $i$  knows that politician  $j$  uses a more stringent threshold, making it less likely that  $j$  takes climate action, then politician  $i$  updates negatively on the appropriateness of climate reform and is less likely to take action as well. This follows directly from the fact that politicians need to coordinate their behavior around the true state of the world.

The second source of information stems from the special interest group in each country, affecting how voters assess the appropriateness of the international climate policy outcome. Since countries want to coordinate their policy responses at the international level, changes in the domestic environment of one country will affect international climate action. Consider the effects of increased misreporting about the severity of climate change within country  $i$ . Since misreporting impacts climate action in country  $i$ —the probability of climate action is greatest when misreporting is intermediate—and country  $i$ 's actions matter for country  $j$ , such misreporting affects country  $j$  as well. Indeed, misreporting anywhere affects climate action everywhere, creating an *informational spillover*.

These spillover effects arise because of the equilibrium forces that incentivize global climate coordination. Misreporting in country  $i$  has no *direct* effect on policymaking in country  $j$ , but spillovers occur because of the *strategic* effects that interlock each politician's willingness to undertake climate policy. Clearly, this willingness is a function of countries' domestic politics: the cutoffs  $\tilde{x}_i^*$  and  $\tilde{x}_j^*$  depend on and amplify one another. Formally, this can be written as

$$\frac{d\tilde{x}_j^*}{d\beta_i} = \underbrace{\frac{\partial \tilde{x}_j^*}{\partial \beta_i}}_{=0 \text{ no direct effect}} + \underbrace{\frac{\partial \tilde{x}_j^*}{\partial \tilde{x}_i^*}}_{>0} \underbrace{\frac{d\tilde{x}_i^*}{d\beta_i}}_{\text{U-shape}},$$

such that  $\tilde{x}_j^*$  is also U-shaped in country  $i$ 's level of misreporting  $\beta_i$ .

To see how these informational spillovers operate, it is instructive to first consider the boundary case of a perfectly informative public communication  $s_i$ . If  $\beta_i = 0$ , the public in country  $i$  learns the true severity of the climate damages, with certainty. This transparency severs the transnational informational linkage. When country  $i$ 's voters are fully informed

about the need for climate action by their own domestic signal, the policy choice of country  $j$  loses its informational value for country  $i$ 's electorate. Formally, if  $\beta_i = 0$ , then voter  $i$ 's posterior beliefs about politician  $i$ 's competence are completely insensitive to climate action in country  $j$ . In short, if a group's message is perfectly truthful, the foreign action matters significantly less for domestic electoral politics, and vice versa.

The strategic complementarity in the politicians' policy choices extends to the special interest groups' informational strategies. Suppose the interest group in country  $j$  increases misreporting  $\beta_j$ . Public communications in country  $j$  about climate damages  $s_j$  become noisier, forcing the voter in  $j$  to lean more heavily on his prior beliefs  $\pi$ . Moreover, in a noisier information environment at home, a voter can also extract more informational value from the observable policy choices of other countries. This dynamic fundamentally alters the politician  $i$ 's pandering incentives: because voter  $j$  is now heavily reliant on cross-border actions to infer the state, politician  $i$ 's policy choice becomes more pivotal for politician  $j$ 's electoral survival. Conversely, if the foreign group is perfectly truthful, voter  $j$  is fully informed by his own state's signal. This severs the informational reliance on country  $i$ , weakening the coordination pressure and allowing politician  $i$  to set a higher, more demanding cutoff for action.

Because of these strategic complementarities, misreporting in either country distorts global climate action, as the domestic suboptimalities created by information manipulation reverberate across borders. The consequences of these informational spillovers are immediate, though non-linear. From the above analysis, we know that the relationship between misreporting and climate action is not strictly decreasing; rather, because partial suppression triggers a political overreaction, the probabilities of action in both countries,  $A_i(\tilde{x}_i^*)$  and  $A_j(\tilde{x}_j^*)$ , are strictly inverse U-shaped with respect to  $\beta_i$ . At the international level, we can define three outcomes: (1) *coordinated climate action*, the probability that both nations pursue climate reform,  $A_i(\tilde{x}_i^*)A_j(\tilde{x}_j^*)$ ; (2) *unilateral climate action*, the probability

that only one nation pursues climate reform,  $(1 - A_i(\tilde{x}_i^*))A_j(\tilde{x}_j^*) + A_i(\tilde{x}_i^*)(1 - A_j(\tilde{x}_j^*))$ ; and (3) *coordinated climate inaction*, the probability that neither nation pursues climate reform,  $(1 - A_i(\tilde{x}_i^*))(1 - A_j(\tilde{x}_j^*))$ . Because of the non-monotonicity in domestic action, increasing  $\beta_i$  exerts an inverse U-shaped effect on coordinated action, and a U-shaped effect on coordinated inaction. Furthermore, unilateral action also exhibits a U-shape when the baseline probability of action in both countries exceeds  $\frac{1}{2}$ . Note that all three of these quantities are likely to be nonzero in equilibrium, which provides a more general characterization of the likelihood of global climate action than extant theories. In particular, unilateral climate action is possible in equilibrium: incomplete information about the true severity of climate change  $\omega$  means that transnational best responses account for the possibility of miscoordination” because a politician could get it wrong.”

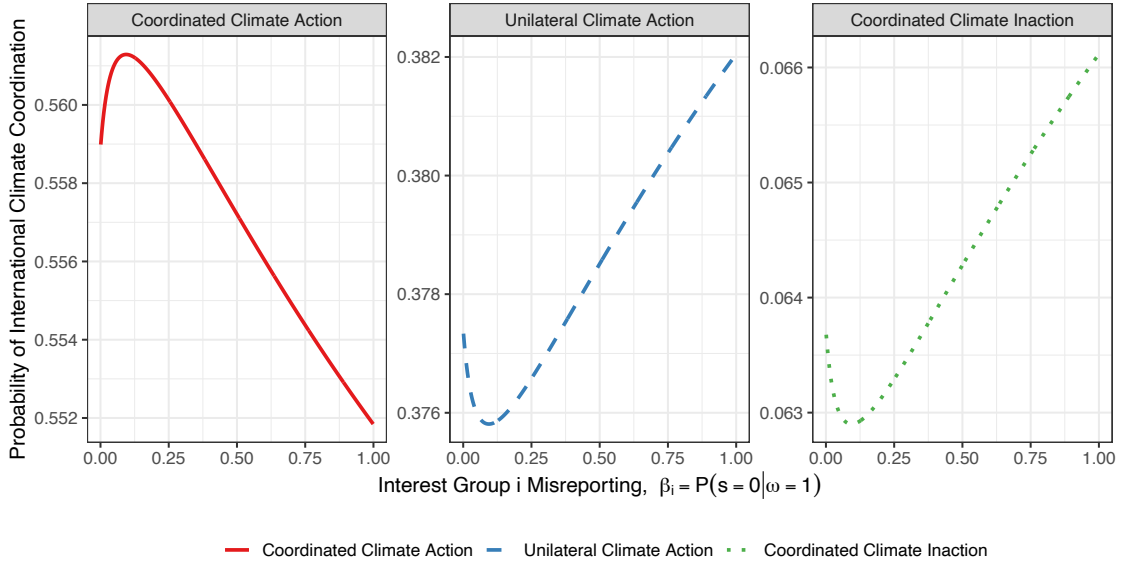


Figure 4: Misreporting and International Climate Coordination Outcomes

$$\pi = \frac{2}{3}, \tau_i = \frac{1}{2}, \tau_j = \frac{1}{2}, \beta_j = \frac{1}{2}, \varepsilon_i, \varepsilon_j \sim N(0, 1), \nu_i^0, \nu_j^0 \sim N(0, 1)$$

The first and third of these findings—that coordinated action is inverse U-shaped and coordinated inaction is U-shaped in  $\beta_i$ —follow intuitively from the strategic complementarity of countries’ climate actions. Figure 4, the international analog of Figure 2, illustrates this

result: rather than a monotonic decline, the solid red line shows a spike in coordinated climate action, while the dotted green line shows a cratering of coordinated climate inaction at interior levels of misreporting by special interest  $i$ . The effects of misreporting on unilateral climate action, the dashed blue line in the figure, are more subtle, as we are looking at the effect of increased misreporting in country  $i$  while conditioning on the eventuality that countries mismatch their climate policies. Differentiating the probability of unilateral climate action with respect to  $\beta_i$  yields:

$$\frac{dA_i(\tilde{x}_i^*)}{d\beta_i}(1 - 2A_j(\tilde{x}_j^*)) + \frac{dA_j(\tilde{x}_j^*)}{d\beta_i}(1 - 2A_i(\tilde{x}_i^*)).$$

Because the domestic marginal effects  $\frac{dA_i(\tilde{x}_i^*)}{d\beta_i}$  and  $\frac{dA_j(\tilde{x}_j^*)}{d\beta_i}$  flip from positive to negative as  $\beta_i$  increases (reflecting the inverse U-shape of domestic action), the trajectory of unilateral action depends on the baseline probabilities  $A_i(\tilde{x}_i^*)$  and  $A_j(\tilde{x}_j^*)$ . If climate action is the baseline expectation in both countries ( $A_i(\tilde{x}_i^*) > \frac{1}{2}$  and  $A_j(\tilde{x}_j^*) > \frac{1}{2}$ ), the bracketed terms are negative, which directly inverts the sign of the overall derivative, producing a U-shape for unilateral action (as seen in Figure 4).

## Optimal International Misreporting

To finalize analysis of the model, consider how special interests  $i$  and  $j$  design information in their nation to best prevent climate action. Like in the single country case, each group seeks to minimize the probability that their country pursues climate reforms, maximizing

$$\begin{aligned} u_S^i &= 1 - A_i(\tilde{x}_i^*(\beta_i, \beta_j)). \\ u_S^j &= 1 - A_j(\tilde{x}_j^*(\beta_j, \beta_i)). \end{aligned}$$

As reflected in the objective functions, special interest group  $i$ 's primary motivation is



to shape information to discourage domestic support for climate policies, but cross-national strategic interactions between interest groups are embedded within the problem. This occurs because the cutoffs  $\tilde{x}_i^*$  and  $\tilde{x}_j^*$  are functions of both  $\beta_i$  and  $\beta_j$ ; each politician is playing a mutual best response to their international counterpart given their domestic informational environments. Consequently, each group must optimally design its misreporting strategy,  $\beta_i$ , while considering the strategy of group  $j$ ,  $\beta_j$ , and vice versa.

To understand the equilibrium considerations of each interest group, it is instructive to contrast the international game with the single-country baseline. Within a single country, recall that an interest group's optimal misreporting strategy follows a simple threshold rule governed by the prior probability of severe climate damages  $\pi$ . If the prior is sufficiently low ( $\pi < \pi^*$ ), the group prefers transparency ( $\beta = 0$ ); otherwise, it prefers complete misreporting ( $\beta = 1$ ). The fundamental logic of this threshold rule extends to the multi-country setting, but the critical point of departure is that the cutoffs now differ by country and are endogenously linked to the information strategy of the foreign interest group. Because the politicians' policy actions are strategic complements, the interest groups' informational strategies exhibit strict complementarity globally.

Specifically, if the interest group in country  $j$  is perfectly truthful ( $\beta_j = 0$ ), the politician  $i$  need only worry about how her action plays domestically. Given this favorable baseline, the interest group in  $i$  can afford to remain truthful up to a much higher global prior before the risk of domestic action forces them to obfuscate. This establishes the higher, more permissive threshold,  $\pi_i^*(0)$ . Conversely, if the interest group in country  $j$  chooses to misreport ( $\beta_j = 1$ ), the resulting uncertainty in the foreign electorate increases the cross-border electoral pressure on politician  $i$ . To suppress this induced demand for action, the interest group in  $i$  must resort to misreporting at a strictly lower prior. This downward adjustment establishes the tighter threshold,  $\pi_i^*(1)$ . Ultimately, the complementary nature of informational spillovers characterizes the strict ordering of the thresholds:  $\pi_i^*(1) < \pi_i^*(0)$ .

This strategic complementarity generally drives the system toward symmetric outcomes, generating a strong positive correlation in misreporting across countries. When the global prior is sufficiently low ( $\pi \leq \min\{\pi_i^*(0), \pi_j^*(0)\}$ ), the electoral environment is benign enough in both countries that both interest groups can safely maintain full informativeness. Conversely, when expected climate damages are high ( $\pi \geq \max\{\pi_i^*(1), \pi_j^*(1)\}$ ), the strong electoral demand for climate reform forces both groups to maximally obscure their signals. In this high-prior region, mutual obfuscation becomes self-reinforcing: because one country’s misreporting lowers the other politician’s threshold for action, both groups are compelled to misreport.

## Suboptimal Climate Action and Misreporting

In canonical models of international climate cooperation, the free rider problem claims that relative to a social optimum—because countries must undertake personally costly actions for global benefits and policies are assumed to be strategic substitutes—there is an underprovision of climate policy ([Kennard and Schnakenberg 2023](#)). In this model, I study an alternative version of global climate cooperation, and so I define the globally optimal provision of climate policy via “appropriateness,” or the probability that each politician takes action commensurate with the state of the world,  $R_i(\tilde{x}_i^*) = P(a_i = \omega)$ . Define this optimality benchmark for each country  $i$  as

$$R_i(\tilde{x}_i^*) = \underbrace{\tau_i}_{\substack{\text{competent type} \\ \text{always correct}}} + \underbrace{(1 - \tau_i)\pi(1 - G(\tilde{x}_i^*; 1))}_{\substack{\text{incompetent type correct if } \omega=1}} + \underbrace{(1 - \tau_i)(1 - \pi)G(\tilde{x}_i^*; 0)}_{\substack{\text{incompetent type correct if } \omega=0}} .$$

Two points are immediate. First, as shown in the equilibrium analysis, the competent type always takes the correct policy action. Any “mistakes” ( $a_i \neq \omega$ ) come from incompetent politicians. Second, being correct always entails a nonzero probability of climate inaction,

the appropriate policy whenever  $\omega = 0$ , and the benchmark accounts for this eventuality.

In traditional theoretical analyses of climate action, the extent of the collective action problem is measured as the distance from the social optimum to the equilibrium level of policy. Analogously, I measure the distance between the optimal provision of climate policy and the equilibrium probability of climate action,

$$\left| R_i(\tilde{x}_i^*) - A_i(\tilde{x}_i^*) \right| = \left| \tau_i(1 - \pi) + 2(1 - \tau_i)(1 - \pi) \left( G(\tilde{x}_i^*; 0) - \frac{1}{2} \right) \right|.$$

The first term represents the competent politician's restraint from reform when she knows that  $\omega = 0$ . The second term represents the net difference of mistakes made by the incompetent politician. Hence, what appears to be suboptimal provision of climate reforms is driven by two factors: competent types knowing when it is appropriate to pursue climate action and when it is not, and incompetent types making mistakes.

Now consider the effects of misreporting on this optimal policy provision. The interaction between domestic pandering incentives and international informational spillovers yields a non-monotonic relationship.

**Corollary 2** *Suboptimal climate policy is greatest at extreme levels of misreporting,  $\beta_i = \beta_j = 0$  or  $\beta_i = \beta_j = 1$ .*

Misreporting distorts the optimality of climate policy via two reinforcing channels that drive this inverse-U dynamic. One force is domestic pandering. As misreporting initially increases from zero, the introduction of noise degrades the precision of the voter's signal. The incompetent politician is forced to overcompensate, inefficiently increasing the likelihood of climate action to signal competence and guard against severe electoral punishment if  $\omega = 1$ . This drives the upward trajectory of the inverse-U. However, because the incompetent politician takes action more often than a competent politician would, it sharply diverges from the optimal policy benchmark  $R_i(\tilde{x}_i^*)$ .

Crucially, this non-monotonicity is amplified by a second channel: the international coordination mechanism. Through strategic complementarities, an incompetent politician’s proclivity toward overreform in country  $i$  affects the incentives of country  $j$ . Similarly, a collapse into inaction provides the mutual political cover necessary to freeze global reform. The distance between equilibrium behavior and optimal climate policy thus widens, and the suboptimal provision of climate policy is thus exacerbated by international coordination incentives that politicians face.

The fundamental prediction of collective action theories is that countries will underprovide climate policy relative to a normatively desirable optimum. Suboptimality arises because providing global benefits are personally costly. My theory generates an alternative benchmark that accounts for the role of information and the appropriateness of climate policy. With such a benchmark, I demonstrate that the probability of doing the right thing and the probability of taking climate action diverge in a world where misreporting is high. This result underscores the failure of politicians to take climate action (even if it is warranted) in a noisy informational environment as they compete with special interests to favorably shape voters’ assessments of their competence.

## Conclusion

This paper posits a unified model of domestic and international climate policymaking that explains several key empirical facts about the political economy of climate change. I point to changes in the domestic informational environment to document variation in climate policy, its intensity and complementarities across borders, as well as the evolution in messaging strategies pursued by special interests about the severity of the climate threat over time. The theoretical analysis demonstrates that when special interests are able to proliferate “misreported” information about climate change’s risks to the public, downplaying environmental

harms, imperfectly informed politicians cut back on their provision of climate reforms in order to salvage their electoral prospects. In a world of international cooperation, misreporting spills over across borders in a negative feedback loop, stagnating global climate action.

The contemporary growth in climate policy adoption can therefore be explained not by a transition toward truthfulness by special interests, but by the inherent limits of coordinated informational suppression. As the probability of expected climate damages has risen, the public's baseline expectation of environmental vulnerability has grown sufficiently strong that even maximally coordinated misreporting can no longer override demands for action. Forced to pander to an electorate whose prior demands reform, politicians must increasingly pursue climate action to signal competence, shattering the coordinated status quo that historically allowed politicians to safely mirror one another's inaction.

## References

- Aklin, Michaël and Johannes Urpelainen. 2013. “Political Competition, Path Dependence, and the Strategy of Sustainable Energy Transitions.” *American Journal of Political Science* 57(3):643–658.
- Aklin, Michaël and Matto Mildemberger. 2020. “Prisoners of the Wrong Dilemma: Why Distributive Conflict, Not Collective Action, Characterizes the Politics of Climate Change.” *Global Environmental Politics* 20(4):4–27.
- Antonio, Robert J. and Robert J. Brulle. 2011. “The Unbearable Lightness of Politics: Climate Change Denial and Political Polarization.” *The Sociological Quarterly* 52(2):195–202.
- Bago, Bence, David G Rand and Gordon Pennycook. 2023. “Reasoning about climate change.” *PNAS Nexus* 2(5):pgad100.
- Balcazar, Carlos Felipe and Amanda Kennard. 2025. “Climate Change and Political Mobilization: Theory and Evidence from India.” <https://drive.google.com/file/d/14yiR15XTWylc8-xE3RosKL03i2-Ta989/view>.
- Barrett, Scott. 2003. *Environment and Statecraft: The Strategy of Environmental Treaty-Making*. Oxford: Oxford University Press.
- Barrett, Scott. 2016. “Coordination vs. voluntarism and enforcement in sustaining international environmental cooperation.” *Proceedings of the National Academy of Sciences* 113(51):14515–14522.
- Battaglini, Marco and Bård Harstad. 2020. “The Political Economy of Weak Treaties.” *Journal of Political Economy* 128(2):544–590.

- Bayes, Robin, James N. Druckman, Avery Goods and Daniel C. Molden. 2020. “When and how different motives can drive motivated political reasoning.” *Political Psychology* 41(5):1031–1052.
- Bernauer, Thomas. 2013. “Climate Change Politics.” *Annual Review of Political Science* 16:421–448.
- Bolet, Diane, Fergus Green and Mikel González-Eguino. 2024. “How to Get Coal Country to Vote for Climate Policy: The Effect of a “Just Transition Agreement” on Spanish Election Results.” *American Political Science Review* 118(3):1344 – 1359.
- Brulle, Robert J. 2014. “Institutionalizing delay: foundation funding and the creation of U.S. climate change counter-movement organizations.” *Climatic Change* 122(4):681–694.
- Brulle, Robert J. 2018. “The climate lobby: a sectoral analysis of lobbying spending on climate change in the USA, 2000 to 2016.” *Climatic Change* 149(3):289–303.
- Brulle, Robert J. 2021. “Networks of Opposition: A Structural Analysis of U.S. Climate Change Countermovement Coalitions 1989–2015.” *Sociological Inquiry* 91(3):603–624.
- Bueno de Mesquita, Bruce, Alastair Smith, Randolph M. Siverson and James D. Morrow. 2003. *The Logic of Political Survival*. Cambridge: The MIT Press.
- Canes-Wrone, Brandice, Michael C. Herron and Kenneth W. Shotts. 2001. “Leadership and Pandering: A Theory of Executive Policymaking.” *American Journal of Political Science* 45(3):532–550.
- Carattini, Stefano, Ulrich Matter and Matthias Roesti. 2024. “Lobbying in Disguise.”.
- Chater, Nick and George Loewenstein. 2023. “The i-frame and the s-frame: How focusing on individual-level solutions has led behavioral public policy astray.” *Behavioral and Brain Sciences* 46:e147.

- Cheon, Andrew and Johannes Urpelainen. 2013. "How do Competing Interest Groups Influence Environmental Policy? The Case of Renewable Electricity in Industrialized Democracies, 1989–2007." *Political Studies* 61(4):874–897.
- Colantone, Italo, Livio Di Lonardo, Yotam Margalit and Marco Percoco. 2024. "The Political Consequences of Green Policies: Evidence from Italy." *American Political Science Review* 118(1):108–126.
- Colgan, Jeff D., Jessica F. Green and Thomas N. Hale. 2021. "Asset Revaluation and the Existential Politics of Climate Change." *International Organization* 75(2):586–610.
- Cory, Jared, Michael Lerner and Iain Osgood. 2021. "Supply Chain Linkages and the Extended Carbon Coalition." *American Journal of Political Science* 65(1):69–87.
- Druckman, James N. and Mary C. McGrath. 2019. "The evidence for motivated reasoning in climate change preference formation." *Nature Climate Change* 9(2):111–119.
- Dunlap, Riley and A.M. McCright. 2011. Organized Climate Change Denial. In *The Oxford Handbook of Climate Change and Society*, ed. John S. Dryzek, Richard B. Norgaard and David Schlosberg. pp. 144–160.
- Dunlap, Riley E. and Aaron M. McCright. 2015. Challenging Climate Change: The Denial Countermovement. In *Climate Change and Society: Sociological Perspectives*, ed. Riley E. Dunlap and Robert J. Brulle. New York: Oxford University Press.
- Egan, Patrick J. and Megan Mullin. 2012. "Turning Personal Experience into Political Attitudes: The Effect of Local Weather on Americans' Perceptions about Global Warming." *The Journal of Politics* 74(3):796–809.
- Ekwurz, B., J. Boneham, M. W. Dalton, R. Heede, R. J. Mera, M. R. Allen and P. C.



- Frumhoff. 2017. “The rise in global atmospheric CO<sub>2</sub>, surface temperature, and sea level from emissions traced to major carbon producers.” *Climatic Change* 144(4):579–590.
- Finnegan, Jared J. 2022. “Institutions, Climate Change, and the Foundations of Long-Term Policymaking.” *Comparative Political Studies* 55(7):1198–1235.
- Frumhoff, Peter C., Richard Heede and Naomi Oreskes. 2015. “The climate responsibilities of industrial carbon producers.” *Climatic Change* 132(2):157–171.
- Gazmararian, Alexander F. 2025. “Sources of Partisan Change: Evidence from the Shale Gas Shock in American Coal Country.” *Journal of Politics* .
- Gazmararian, Alexander F. and Dustin Tingley. 2023. *Uncertain Futures: How to Unlock the Climate Impasse*. New York: Cambridge University Press.
- Gazmararian, Alexander F. and Helen V. Milner. 2024a. “Personal Experience and Self-Interest: Diverging Responses to Global Warming.” <https://osf.io/preprints/osf/g4js9> .
- Gazmararian, Alexander F. and Helen V. Milner. 2024b. “Political Cleavages and Changing Exposure to Global Warming.” *Comparative Political Studies* .
- Green, Jessica, Jennifer Hadden, Thomas Hale and Paasha Mahdavi. 2022. “Transition, hedge, or resist? Understanding political and economic behavior toward decarbonization in the oil and gas industry.” *Review of International Political Economy* 29(6):2036–2063.
- Hai, Zuhad. 2024. “The Global Politics of Scientific Consensus: Evidence from the Intergovernmental Panel on Climate Change.” *International Organization* .
- Harrison, Rodrigo and Roger Lagunoff. 2017. “Dynamic Mechanism Design for a Global Commons.” *International Economic Review* 58(3):751–782.

- Heede, Richard. 2014. "Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010." *Climatic Change* 122(1):229–241.
- Hughes, Llewelyn and Johannes Urpelainen. 2015. "Interests, institutions, and climate policy: Explaining the choice of policy instruments for the energy sector." *Environmental Science & Policy* 54:52–63.
- Institute, American Petroleum. 1998. Global Climate Science Communications Plan. Technical report.
- Kamenica, Emir and Matthew Gentzkow. 2011. "Bayesian Persuasion." *American Economic Review* 101(6):2590–2615.
- Kennard, Amanda. 2025. "The Impacts of Globalization on Political Knowledge: Evidence from Climate Awareness in Africa."
- Kennard, Amanda and Keith E. Schnakenberg. 2023. "Comment: Global Climate Policy and Collective Action." *Global Environmental Politics* 23(1):133–144.
- Keohane, Robert O. and David G. Victor. 2016. "Cooperation and discord in global climate policy." *Nature Climate Change* 6:570–575.
- Kim, Sung Eun, Johannes Urpelainen and Joonseok Yang. 2016. "Electric utilities and American climate policy: lobbying by expected winners and losers." *Journal of Public Policy* 36(2):251–275.
- Kollman, Ken. 1998. *Outside Lobbying: Public Opinion and Interest Group Strategies*. Princeton: Princeton University Press.
- Kolotilin, Anton, Tymofiy Mylovanov, Andriy Zapechelnuk and Ming Li. 2017. "Persuasion of a Privately Informed Receiver." *Econometrica* 85(6):1949–1964.

- Lee, Tien Ming, Ezra M. Markowitz, Peter D. Howe, Chia-Ying Ko and Anthony A. Leiserowitz. 2015. “Predictors of public climate change awareness and risk perception around the world.” *Nature Climate Change* 5(11):1014–1020.
- Little, Andrew T. 2023. “Bayesian explanations for persuasion.” *Journal of Theoretical Politics* 35(3):147–181.
- Little, Andrew T. 2025. “How to Distinguish Motivated Reasoning from Bayesian Updating.” *Political Behavior* .
- McAllister, Jordan H. and Keith E. Schnakenberg. 2022. “Designing the Optimal International Climate Agreement with Variability in Commitments.” *International Organization* 76(2):469–486.
- Melnick, Justin. 2024. “Domestic Politics in the European Union’s Emissions Trading System: Evidence from Free Allowance Allocation.” *Journal of Political Institutions and Political Economy* 5(4):627–657.
- Melnick, Justin and Alastair Smith. 2025. “Shaming Paris: A Political Economy of Climate Commitments.” *International Organization* 79(2):281–305.
- Mildenberger, Matto. 2020. *Carbon Captured: How Business and Labor Control Climate Politics*. Cambridge: The MIT Press.
- Mildenberger, Matto and Dustin Tingley. 2019. “Beliefs about Climate Beliefs: The Importance of Second-Order Opinions for Climate Politics.” *British Journal of Political Science* 49(4):1279–1307.
- Nordhaus, William. 2015. “Climate Clubs: Overcoming Free-Riding in International Climate Policy.” *American Economic Review* 105(4):1339–1370.

- of Concerned Scientists, Union. 2007. ExxonMobil’s Disinformation Campaign. Technical report Union of Concerned Scientists.
- Oreskes, Naomi and Erik M. Conway. 2011. *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Climate Change*. New York: Bloomsbury Publishing.
- Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Dallas, TX: Cambridge University Press.
- Saunders, Kyle L. 2017. “The impact of elite frames and motivated reasoning on beliefs in a global warming conspiracy: The promise and limits of trust.” *Research & Politics* 4(3):2053168017717602.
- Schnakenberg, Keith E. and Ian R. Turner. 2024. “Formal Theories of Special Interest Influence.” *Annual Review of Political Science* 27.
- Stern, Nicholas. 2007. *The Economics of Climate Change: The Stern Review*. Cambridge: Cambridge University Press.
- Stokes, Leah C. 2016. “Electoral Backlash against Climate Policy: A Natural Experiment on Retrospective Voting and Local Resistance to Public Policy.” *American Journal of Political Science* 60(4):958–974.
- Stokes, Leah C. 2020. *Short Circuiting Policy: Interest Groups and the Battle Over Clean Energy and Climate Policy in the American States*. New York: Oxford University Press.
- Supran, Geoffrey. 2022. “Three shades of green(washing): Content analysis of social media discourse by European oil, car, and airline companies.”
- Supran, Geoffrey and Naomi Oreskes. 2021. “Rhetoric and frame analysis of ExxonMobil’s climate change communications.” *One Earth* 4(5):696–719.

- Urpelainen, Johannes and Alice Tianbo Zhang. 2022. “Electoral Backlash or Positive Reinforcement? Wind Power and Congressional Elections in the United States.” *The Journal of Politics* 84(3):1306–1321.
- Voeten, Erik. 2025. “The Energy Transition and Support for the Radical Right: Evidence from the Netherlands.” *Comparative Political Studies* 58(2):394–428.
- Williams, Emily L., Sydney A. Bartone, Emma K. Swanson and Leah C. Stokes. 2022. “The American electric utility industry’s role in promoting climate denial, doubt, and delay.” *Environmental Research Letters* 17(9):094026.