Informational Spillovers and Climate Policy Appropriateness*

Justin Melnick†

May 19, 2026

Abstract

Addressing climate change requires politicians and citizens to assess whether policy action is appropriate given underlying risks. This paper develops a formal theory of domestic and international climate policymaking centered on the relationship among politicians, anti-climate interest groups, and voters under uncertainty about climate severity. The model shows how anti-climate interests strategically shape what voters can learn about climate risks through public messaging, and how the political effects of that messaging evolve as public concerns about climate severity increase. Voters also observe climate policies adopted abroad, linking domestic climate politics to foreign policy choices through a novel mechanism of informational spillovers. Foreign climate action can therefore shape domestic support for reform, even when climate politics is rooted in domestic distributive conflict, and even in the absence of collective action concerns. Descriptive evidence on fossil fuel industry messaging and European public opinion supports the theory's core informational mechanisms.

*I thank Bruce Bueno de Mesquita, Eric Dickson, Sandy Gordon, Zuhad Hai, Peter Rosendorff, Tara Slough, Alastair Smith, Aleksandra Conevska, Kun Heo, Carolina Torreblanca, Stefano Carattini, Zhengyan Li, and audiences at New York University, APSA 2024, and EPG 2025 for helpful comments.

†Ph.D. Candidate, Department of Politics, New York University. Contact: melnickj@nyu.edu and justinmelnick.github.io.

Formulating policies to combat climate change requires politicians and citizens to assess whether climate risks warrant policy action (Balcazar and Kennard 2025; Gazmararian and Milner 2025; 2026). In forming these assessments, publics rely on informational cues about the need for climate reforms, including both the messages disseminated by special interest groups (Kollman 1998; Stokes 2020; Schnakenberg and Turner 2024) and the climate policies adopted by other countries (Tingley and Tomz 2014; 2020; 2022). How these signals shape domestic support for climate action is therefore central to understanding both domestic climate policymaking and international climate cooperation.

This paper develops a formal theory of domestic and international climate policymaking centered on the trilateral relationship among politicians, special interests, and voters under uncertainty about climate risks. Politicians, with an eye toward reelection, determine climate policy anticipating that voters will judge their choices by inferring whether reforms were appropriate given the expected severity of climate change. Special interests, seeking to deter climate action, invest in public messaging that shapes what voters can learn about climate risks. Voters, in turn, assess the *appropriateness* of domestic climate policy by using information from both special interest messaging and foreign climate actions.

The model produces several novel insights about how special interests and foreign governments shape domestic climate politics through the information they provide to voters. I demonstrate that the messaging strategies of anti-climate special interests evolve sharply with public expectations about the severity of climate change. These groups have long had access to accurate climate models and forecasting (Oreskes and Conway 2011; Supran and Oreskes 2021; Supran, Rahmstorf and Oreskes 2023); however, when messaging to the public, they face a strategic choice about whether to honestly report these findings or to "misreport" and downplay the climate threat to discourage support for reforms. When voters perceive climate risks to be limited, special interests engage in maximal misreporting, issuing communications that understate expected environmental harms. Although voters discount these messages, climate action is nevertheless deterred because politicians anticipate electoral punishment for pursuing reforms viewed as a disproportionate response. As public perceptions of climate severity rise and climate action is broadly viewed as warranted, politicians instead anticipate electoral pressure to pursue reforms. Counterintuitively, special interests then shift to unbiased messaging: by acknowledging severe climate risks, the interest group can constrain politicians via the threat of electoral removal following incommensurate policymaking.

This domestic dynamic shapes the prospects for and importance of international climate action (cf. Battaglini and Harstad 2020; Melnick and Smith 2025). Because voters also draw inferences from climate policies adopted abroad, domestic climate politics becomes linked across countries through *informational spillovers*. I show that these spillovers generate strategic interactions across countries, but the effects of international political dynamics are conditional: foreign climate action shapes domestic support for reform when special interests maximally misreport, and loses its informational value when special interests instead provide unbiased messaging about climate risks. International cooperation thus matters most for domestic climate action precisely when domestic conditions are least favorable to reform.

The informational mechanism developed here reconciles international climate politics with distributive accounts of climate policymaking (e.g., Aklin and Mildenberger 2020; Colgan, Green and Hale 2021; Gazmararian and Tingley 2026). The model features distributive conflict: special interests consistently oppose climate reforms while publics support them if policies are viewed as warranted. Nevertheless, international climate actions influence domestic politics because voters use foreign policy choices as informational cues when evaluating climate policy appropriateness at home. This mechanism departs from standard theories of international climate cooperation, which assume climate policies are strategically complementary through coordination incentives (Barrett 2016; Keohane and Victor 2016; Hale 2020) or substitutable through free-riding incentives (McAllister and Schnakenberg 2022; Kennard and Schnakenberg 2023). Instead, whether foreign climate action raises or dampens domestic reform depends on how voters interpret the information available to them.

I evaluate the theory's empirical implications with descriptive evidence on both special interest climate messaging and public opinion toward climate policy. First, I trace the evolution of public communications of major fossil fuel interests such as ExxonMobil, shifting from strategies exploiting climate uncertainty to decrease support for reform toward greater acknowledgment of climate risks and support for limited climate action (Dunlap and McCright 2011; Williams et al. 2022). This trajectory is consistent with the theory's expectation that misreporting becomes less persuasive as public perceptions of climate severity rise. Second, using Eurobarometer surveys and data on climate law adoption, I show that foreign climate actions shape public perceptions of climate seriousness. International cues shape domestic opinion most strongly when special interest messaging is uninformative, demonstrating how international informational spillovers propagate across countries through their effects on domestic political beliefs. These patterns are difficult to reconcile with collective action accounts of global climate cooperation, as observed effects operate through shifts in public perceptions rather than through changes in countries' exposure to foreign climate policy.

The paper's broader contribution lies in demonstrating that international political dynamics may shape domestic climate policymaking through informational channels that extend beyond traditional cooperative mechanisms. A growing literature argues that climate politics is primarily structured by domestic distributive conflict (Aklin and Mildenberger 2020) rather than by the collective action problems emphasized in canonical theories of international environmental cooperation (Barrett 2003; Stavins 2011; Kennard and Schnakenberg 2023). This perspective has substantially improved our understanding of the domestic political economy of decarbonization,[1] but leaves open the question of whether and how international politics still matters for domestic climate policymaking. The theory developed

[1]Extant studies point to electoral institutions and electoral 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 drivers of climate policymaking.

here takes up that question by identifying an informational mechanism through which foreign climate action directly influences domestic political incentives, even in the absence of formal coordination mechanisms or direct material incentives for cooperation.

The model also contributes to literatures on the electoral effects of climate policy. In the framework developed here, voters update beliefs about climate-related uncertainties based on the information they receive, rather than experiencing wholesale changes in policy preferences. Observational 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). The theory developed here helps unpack this empirical ambiguity: whether climate action elicits electoral reward or punishment depends on what voters expect *ex ante* about climate severity, so the same policy can be electorally costly in one context and electorally beneficial in another.

This paper also sheds light on the role of "outside lobbying" (Kollman 1998) in climate politics. Public messaging may promote doubt or denialism to delay climate action (e.g., Oreskes and Conway 2011; Frumhoff, Heede and Oreskes 2015; Supran 2022), and complements 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). This paper isolates how special interests strategically design public messaging to shape beliefs about the necessity of climate action, thereby influencing climate policymaking through electoral incentives. Notably, the theory proposes a rationale for why interest groups may acknowledge climate risks, and why such messaging may nevertheless deter climate action.

Model

The model studies how uncertainty about climate risks shapes domestic and global climate politics. Politicians must decide whether to pursue climate reforms when voters are uncertain whether such reforms are warranted. Voters therefore rely on informational cues to assess the appropriateness of climate policy, including both messages disseminated by special interests and climate policies adopted abroad. Special interests strategically shape what voters can learn about climate severity in an effort to discourage reform.

Accordingly, the model studies two countries, i and j. Each nation contains a politician P ("she") and a representative or median voter V ("he").[2] There is also a special interest group S ("it") that seeks to influence policy in both nations.

There are two policy-relevant states of the world $\omega \in \{0, 1\}$. In simplified terms, ω represents the severity of climate change's effects or the vulnerabilities to climate-related damages. Each state of the world carries a "correct" or "appropriate" policy response that is commensurate with anticipated environmental harms: state $\omega = 1$ indicates a scenario in which greater climate policy reforms are appropriate because climate change's effects are more severe, while the case of $\omega = 0$ represents an instance in which the status quo is sufficient. As will be detailed below, players have policy preferences that depend on this underlying state. The true value of ω is unobserved, but players share a common prior $P(\omega = 1) = \pi \in (0, 1)$, capturing the expected severity of climate change.[3]

The game begins with the special interest group committing to the design of information about the state of the world ω. This takes the form of designing a signal s with distribution $P(s|\omega)$. This signal represents a report about climate change's severity, which takes on two values $s \in \{0, 1\}$. Since I focus on the case of an anti-climate interest group like ExxonMobil,[4]

[2]The language of voters and elections is used to ease exposition, but the model need not be scoped to democratic countries. In nondemocratic states, this player may be an elite or other individual whose political support is pivotal for the leader's survival in office.

[3]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 2025).

[4]I model a single interest group that opposes climate action. Concentrating on a single group allows for a concrete understanding of the incentive structure for misreporting, and captures the empirical regularity of anti-climate lobbying, especially in the United States (Dunlap and McCright 2011; Brulle 2014; Dunlap and McCright 2015). One could also interpret s as the "net messaging" a voter receives from multiple groups. See the appendix for robustness.

S seeks to convince domestic publics 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 written as

$$P(s = 0|\omega = 0) = 1. \quad P(s = 1|\omega = 0) = 0.$$
$$P(s = 0|\omega = 1) = \beta. \quad P(s = 1|\omega = 1) = 1 - \beta.$$

Whenever the true state is $\omega = 0$, the group will always send the signal $s = 0$: 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 $\beta \in [0, 1]$ that the special interest reports signal $s = 0$. I will therefore refer to β as the level or intensity of "misreporting" about the true effects of climate change. Higher values of β 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 β is isomorphic to the choice of the experiment. S chooses β optimally in order to maximize the chances that politicians enact policy congruent with $\omega = 0$; the group receives a payoff of 1 for each country that does not act and zero otherwise.

After the special interest group chooses misreporting β, which is known to all players, the politicians in each country 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.[5]

While climate change's expected 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 politician's signal is $x_i \sim G(\cdot; \omega)$, where the

[5]Explicitly modeling costs to climate action would only bias the results toward $a_i = 0$ and does not qualitatively alter the equilibrium intuitions or mechanisms at play.

distribution function $G(x;\omega)$ admits a log-concave density $g(x;\omega)$ with the monotone likelihood ratio property and is state-symmetric[6] (e.g., the normal distribution, $x \sim N(\omega, \sigma)$). I assume signals are sufficiently precise such that a unique equilibrium is ensured (e.g., if $x \sim N(\omega, \sigma)$, assume that σ is sufficiently small; see Lemma A.8 for more discussion). Politicians' signals x_i and x_j are conditionally independent given ω.

Politicians and voters share aligned policy preferences: both prefer that policy matches the state, $a_i = \omega$, or that climate policy is "appropriate." When this occurs, both receive a policy payoff of 1. However, since voters cannot directly observe ω, they must instead infer whether incumbent politicians acted appropriately. Once policies are implemented, voters observe the triple (a_i, s, a_j), consisting of the domestic policy choice, the special interest group's message, and the foreign country's action. Based on these observables, voter i forms a posterior belief about the incumbent leader's appropriateness, $\mu_i(a_i, s_i, a_j) = P(\omega = a_i | a_i, s_i, a_j)$, and either retains or replaces the politician, $r_i \in \{0, 1\}$. The politician receives a payoff of 1 if retained.

If the voter reelects the incumbent, he receives 1 if the policy was appropriate, i.e., if $a_i = \omega$, and 0 otherwise. If he replaces the incumbent, his payoff is a random draw $\varepsilon_i \sim F(\cdot)$ where $F(\cdot)$ is a distribution function with a log-concave density. This payoff could represent the probability that a challenger pursues appropriate climate policy 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 and biases or incumbency advantages.[7]

[6]State symmetry assumes that there exists a "center" c such that $g(c+x;1) = g(c-x;0)$ for any x. Most results only require MLRP but state symmetry greatly facilitates exposition, simplifies results, and allows for comparisons across domestic and international politics.

[7]The empirical literature documents that individuals might display partisan motivated reasoning when learning about climate change (Druckman and McGrath 2019). Given a prior, motivated reasoning may be observationally equivalent to Bayesian updating (Little 2025). The model only requires that the politician's reelection probability to be increasing in the voter's belief that she took the correct action.

For the special interest group and players in country i (country j's are analogous), payoffs are formalized as follows:

$$u_S = 2 - a_i - a_j.$$

$$u_P = a_i\omega + (1 - a_i)(1 - \omega) + r_i.$$

$$u_V = r_i(a_i\omega + (1 - a_i)(1 - \omega)) + (1 - r_i)\varepsilon_i.$$

The timing of the game is summarized as follows:

0. Nature randomly draws the state ω.

1. The interest group chooses misreporting level $\beta \in [0, 1]$.

2. Politicians observe signals (x_i, x_j) and choose climate policies, $(a_i, a_j) \in \{0, 1\}^2$.

3. The interest group's message $s \in \{0, 1\}$ is realized. Voters form posterior beliefs $(\mu_i(a_i, s, a_j),\ \mu_j(a_j, s, a_i)) \in [0, 1]^2$ and retain or replace politicians, $(r_i, r_j) \in \{0, 1\}^2$.

I examine Perfect Bayesian equilibria. A strategy for the special interest group is a misreporting level $\beta \in [0, 1]$. A strategy for politician i is a function $\sigma_i : \mathbb{R} \to [0, 1]$ mapping her private signal x_i to a probability of choosing $a_i = 1$. A strategy for voter i maps the observed history (a_i, s, a_j) into a retention rule, $r_i : \{0, 1\} \times \{0, 1\} \times \{0, 1\} \to [0, 1]$. Voter i's posterior beliefs are formed by Bayes's Rule on the equilibrium path.

Comments on the Model

The model makes several simplifying assumptions that warrant further interpretation.

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).[8] 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 cares about the policy outcome, preventing politicians from implementing climate reforms, it achieves this indirectly by targeting what the public can learn about climate severity. By manipulating the public signal s, 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), one can interpret 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 β 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 the evidence, with probability β, the public receives the favorable signal $s = 0$. If the suppression apparatus fails, with probability $1-\beta$, the truth about climate damages leaks, and the public receives $s = 1$. In this setup, the group does not "promise" to occasionally tell the truth; rather, $1-\beta$ is the probability that the truth escapes their control. Symmetric uncertainty ensures there is no signaling embedded in the ex-ante choice of β.

Strategic adjustments. Models of international climate cooperation often assume that nations' actions are substitutable, creating a free-rider problem (e.g., Kennard and Schnaken-

[8] Unlike standard Bayesian persuasion models where the receiver of the signal directly takes the action, this setup separates the belief-updater (voter) from the decisionmaker (politician). The sender's (interest group) message operates indirectly, persuading the voter to electorally discount climate action, which subsequently filters upward to constrain the politician's policy choice.

berg 2023), or that they are complementary because there is some international institution seeking to coordinate policy (e.g., Barrett 2016). The model does not explicitly assume either strategic complementarity or substitutability in countries' climate policies. Rather, as we shall see, these strategic effects emerge endogenously in the model as a result of how voters perceive the appropriateness of foreign climate reforms and whether incumbent leaders are rewarded for matching or diverging from foreign behavior. Hence, in this model, international action shapes climate policy precisely through its effects on domestic politics, rather than through assumed strategic structure at the international level.

A natural concern is that the model omits any direct effects of policy externalities on countries' propensities to take climate action. The aim of the theory is to isolate the informational channel through which foreign action shapes domestic politics, and adding a standard externality term would obscure rather than illuminate this mechanism (cf. Paine and Tyson 2020). The model should therefore be understood as characterizing one mechanism, voter inference about policy appropriateness, that operates alongside extant arguments that emphasize collective action and coordination problems.

Domestic politics. Similar to extant electoral accountability models (e.g., Canes-Wrone, Herron and Shotts 2001; Maskin and Tirole 2004; Schultz 2005; Malis 2024), the animating force behind the domestic political interaction is an informational asymmetry between the politician and the voter. This generates an adverse selection problem: the voter cannot directly assess whether the politician's chosen policy was appropriate. The present model differs from this tradition, however, in the locus of the asymmetry. In canonical accountability models, voters are uncertain about politician type—competence, congruence, or ideological alignment—and the voter's task to screen politicians who have favorable characteristics from those who do not. Here, by contrast, politicians are *ex ante* identical, and the voter seeks to simply reelect politicians who were more likely to have chosen appropriate policy.

Interpretation of the state, actions, and the politician's signal. There is a connection between "appropriate" policy responses and the state of the world, which generates distributional conflict between the special interest, which has state-independent preferences, and the politician and voter, who have state-dependent preferences over policy. By way of interpretation, policy $a_i = 0$, the preferred choice of the special interest regardless of the state, might typify minimal climate reforms or consumer-facing policies that still allow for the combustion of fossil fuels, including policies that invoke the "individualization of responsibility." Policy $a_i = 1$ encompasses more comprehensive reform or actions more likely to affect the production of fossil fuels. The politician's signal x_i captures variation in the ability to identify the appropriate policy response. This may arise from differences in bureaucratic capacity, the quality of available scientific knowledge, or sensitivity to voters' willingness to pay for climate policy given their beliefs about environmental risks.

Analysis

In what follows, I build the model sequentially to examine how each of the three sources of information—the domestic politician's action, the special interest's message, and the foreign politician's action—affects climate policymaking. As we shall see, each of these actions is associated with a key mechanism—pandering, persuasion, and international cooperation. Let $\mathcal{I}$ be the set of information that the voter uses to form his assessment of appropriateness.

Additionally, it is useful to state up front that the equilibrium takes the following form:

1. The special interest chooses optimal misreporting $\beta^* \in [0, 1]$.

2. A unique, (symmetric) cutoff $\tilde{x}^*$ exists such that a politician in country i chooses policy $a_i = 1$ in state ω given signal x_i with probability $\sigma^*(x_i) = 1 - G(\tilde{x}^*; \omega) \in [0, 1]$.

3. Given $\mathcal{I}$, the voter in country i forms posterior belief about politician appropriateness

$\mu_i(\mathcal{I};\tilde{x}^*)$ and reelects the politician with probability $F(\mu_i(\mathcal{I};\tilde{x}^*))$.

Pandering

First suppose that the only piece of information that the voter can observe is the politician's choice to engage in climate reforms at home. This baseline setting isolates how electoral incentives generate *pandering*. Pandering refers to the politician's tendency to choose the policy that the voter is *ex ante* more likely to perceive as appropriate in order to improve reelection prospects. Proposition 1 summarizes the core insights of the mechanism; proofs for all formal results can be found in Appendix A.

Proposition 1 *Let $\mathcal{I} = \{a_i\}$. There exists a unique equilibrium in which:*

- *the probability of climate action is increasing in π;*
- *there exists a $\pi^\dagger$ such that the voter is more likely to reward $a = 0$ when $\pi < \pi^\dagger$ and more likely to reward $a = 1$ when $\pi > \pi^\dagger$;*
- *the politician panders to $a = 0$ when $\pi < \pi^\dagger$ and panders to $a = 1$ when $\pi > \pi^\dagger$.*

In this stylized setting, the voter evaluates the politician using only observed policy choices and reelects the incumbent when climate policy appears justified given expected climate risks. Let $\mu(a) = P(\omega = 1|a)$ be the voter's posterior belief about the politician's appropriateness given the policy choice such that the probability the politician is reelected is simply $F(\mu(a))$.

Although the politician is better informed than the voter, she does not perfectly observe the true severity of climate risks. She therefore forms beliefs about whether climate reform is warranted given her private signal x. This posterior belief is $\eta(x) = P(\omega = 1|x) = \frac{\pi g(x;1)}{\pi g(x;1)+(1-\pi)g(x;0)}$ where $g(x;\omega)$ is the density of the politician's signal x in state ω. The politician thus weighs two considerations when deciding whether to pursue reform: her private assessment of climate risks and the electoral consequences of climate action; she chooses $a = 1$ when

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

Write $\Delta = F(\mu(1)) - F(\mu(0))$ as the difference in reelection probabilities, or the net electoral value of pursuing climate reforms. Then there is a cutoff signal $\tilde{x}^*$ at which the politician is indifferent between enacting climate policy and not, solving

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

The politician therefore pursues climate reform only when sufficiently convinced that climate risks justify action given expected electoral consequences. Because reelection incentives depend on voter expectations, the politician is more likely to adopt whichever policy the voter views as appropriate *ex ante*: she panders. In equilibrium, the probability of climate action can be written as

$$A(\tilde{x}^*) = \pi\Big(1 - G(\tilde{x}^*; 1)\Big) + (1 - \pi)\Big(1 - G(\tilde{x}^*; 0)\Big).$$

If the politician knew the state of the world perfectly, she would engage in climate reforms only when appropriate, which occurs with probability π. The presence of pandering can therefore be diagnosed by comparing the equilibrium probability of action $A(\tilde{x}^*)$ to the prior π: when $A(\tilde{x}^*) > \pi$, the politician enacts reforms more often than expected, pandering toward action; when $A(\tilde{x}^*) < \pi$, she acts less often, pandering toward inaction.

The effects of pandering on politician behavior are shown in the left panel of Figure 1. The solid line illustrates the equilibrium probability of climate action, which is increasing in π. Notably, it is below the 45° line when π is low, and above it when π is high. This disjuncture

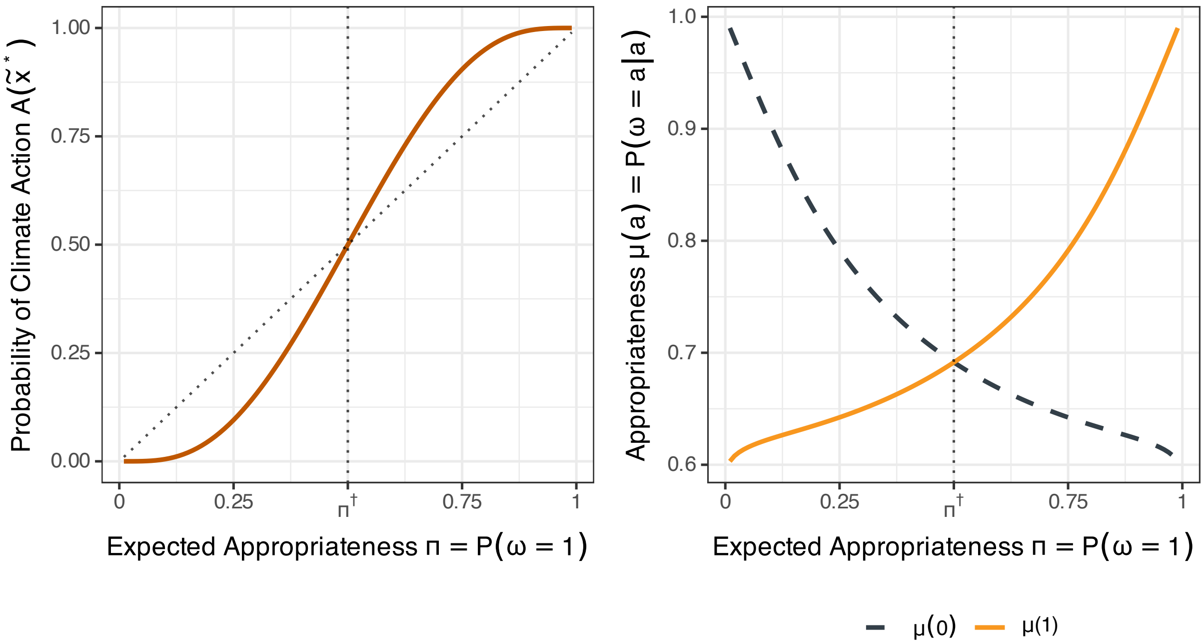

Figure 1: Pandering Equilibrium: Probability of Climate Action and Voter Beliefs
$G(x;\omega) = N(\omega, 1)$, $F(\varepsilon) = N(0, 1)$

occurs because when expectations about climate severity are low, the voter perceives climate reforms to be less appropriate, which demotivates the politician from pursuing them. The politician tempers climate reforms precisely because she knows that the voter would not perceive them to be appropriate. By contrast, when expectations about climate severity are high, the politician engages in climate reforms more than expected because the voter perceives it as the appropriate policy.

Voter beliefs about the politician's appropriateness are shown in the right panel of Figure 1. The solid line illustrates that $\mu(1)$, the belief that climate action is appropriate, increases as expectations of climate severity increase; the dashed line $\mu(0)$, the belief that climate inaction is appropriate, conversely decreases in expected severity. These curves intersect at a unique threshold $\pi^\dagger$, which is where the voter is indifferent between, and thus most uncertain about, climate policy appropriateness. As voter beliefs about appropriateness directly translate into electoral rewards, it is clear that the voter is more likely to penalize climate action when $\pi < \pi^\dagger$, and more likely to reward it when $\pi > \pi^\dagger$. This dynamic is central to what follows, as it is precisely this electoral reward that the interest group will seek to nullify through its choice of messaging strategy.

Persuasion

Building off of this discussion, I now introduce the interest group that can design a public-facing report to minimize the probability that the politician enacts climate reforms. This is done indirectly by *persuading* voters to punish reforming politicians, because the message forms a lens through which the voter perceives climate policy appropriateness. Beyond the foundations from Proposition 1, Proposition 2 describes the additional features of the equilibrium that emerge once the interest group is introduced.

Proposition 2 *Let $\mathcal{I} = \{a_i, s\}$. There exists a unique equilibrium in which:*

- *as $\beta \to 1$, the equilibrium converges to the game without the interest group;*
- *the probability of climate action is inverse U-shaped in β;*
- *the special interest's optimal misreporting strategy is*

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

With the special interest group present, the voter now conditions his assessment of appropriateness, and consequently his reelection decision, on both the politician's action and the interest group's message: $\mu(a, s) = P(\omega = a|a, s)$. The politician is reelected with probability $F(\mu(a, s))$.

The interest group's messaging strategy changes the politician's electoral problem because she now anticipates how different public messages will shape voter reactions to climate policy. The politician weighs both her private assessment of climate risks and the electoral consequences associated with taking action given what the voter may know about climate severity. Let $\Delta(s) = F(\mu(1, s)) - F(\mu(0, s))$ denote the electoral return to climate action conditional on message s. The cutoff $\tilde{x}^*$ at which the politician is indifferent between climate action and inaction then solves

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

Relative to the pandering baseline, the electoral return to climate action depends on how the voter would react under each possible message realization, weighted by the politician's belief about the likelihood of each message being observed. Importantly, the interest group's message functions as a lens through which the voter interprets the politician's policy choice. Because the group is biased toward the status quo, this effect is asymmetric: the message $s = 1$ is sent only when climate reform is truly appropriate, so observing it reveals severe climate risks with certainty. By contrast, $s = 0$ is ambiguous: it may reflect truly limited climate risks or strategic misreporting when reforms are actually warranted.

The parameter β determines how often this ambiguity arises, and consequently how informative the message is overall. When $\beta = 0$, messaging is unbiased: the voter can perfectly infer whether climate reform is warranted, and actions inconsistent with the message are revealed to be inappropriate. But if $\beta = 1$, the group always misreports when climate reforms are warranted: the message carries no information about climate risks, and the voter rationally discounts it, reducing the game to the pandering baseline of Proposition 1. Between these extremes, the message is partially informative, and the voter combines it with the politician's action when assessing appropriateness.

Changes in β therefore affect climate policymaking through two competing effects. Greater misreporting makes anti-climate messages more common, which mechanically discourages reform by increasing the likelihood that voters observe messages downplaying climate risks. At the same time, such messages become less informative, causing the voter to discount them more heavily when evaluating the politician. These two effects generate a nonmonotonic relationship between misreporting and climate action: when misreporting is low, the marginal change in voter beliefs dominates and the politician's threshold falls, but when misreporting is widespread, voters already heavily discount the message and the mechanical effect dominates, raising the politician's threshold for reform. As a result, the equilibrium probability of climate action is inverse U-shaped in β.

Accordingly, for a special interest group seeking to deter climate action, the optimal choice of β is either to misreport entirely, $\beta = 1$, or to be an unbiased arbiter of the need for climate reform, $\beta = 0$.[9] As shown in Proposition 2, the equilibrium level of misreporting depends on a connection between the prior π and the pandering threshold $\pi^\dagger$, with $\beta^* = 1$ when $\pi < \pi^\dagger$ and $\beta^* = 0$ when $\pi > \pi^\dagger$.

To see why, compare politician behavior under each case. When the interest group communicates truthfully, $\beta = 0$, the voter can perfectly infer whether climate reform is warranted from the observed message. On the politician's side, electoral distortions disappear, and she pursues reform whenever she privately believes climate action is more likely than not to be appropriate. By contrast, if the interest group maximally misreports, choosing $\beta = 1$, its message becomes entirely uninformative and the game collapses to the pandering baseline from Proposition 1. Pandering incentives push the politician toward whichever policy the voter already expects to be appropriate *ex ante*.

[9]This result departs from the canonical Bayesian persuasion framework (Kamenica and Gentzkow 2011; Alonso and Câmara 2016), in which optimal experiments are typically partially informative, occasionally triggering the sender's preferred action without fully revealing the state. The departure stems from the indirect structure of persuasion in this model: the special interest persuades the voter, who disciplines the politician through the electoral channel, rather than the politician herself.

The connection between persuasion and pandering therefore depends on voter expectations about climate severity. When expected climate risks are low, $\pi < \pi^\dagger$, the voter is likely to penalize climate reform relative to inaction. The politician consequently panders toward the status quo by pursuing reform less frequently than underlying climate conditions warrant. Under these conditions, anti-climate interests benefit from maximal misreporting because uninformative messaging preserves these electoral incentives against climate action. Notably, the mechanism deterring climate action is not misinformation or motivated reasoning: the voter rationally discounts the message, but the politician is still deterred because taking climate action remains electorally risky.

However, when expected climate severity is high, $\pi > \pi^\dagger$, the politician's incentive to pander flips toward implementing climate action. The special interest group can counter, and entirely neutralize, this electoral gain by sending a truthful, unbiased message about the need for climate reforms. Counterintuitively, by making the message $s = 0$ a reliable signal of $\omega = 0$, the group equips the voter with information to punish a politician who pursues climate reform when it is not appropriate. This electoral threat shuts down the politician's pandering pressure toward action, making her more conservative in her propensity to implement climate reforms. When *ex ante* climate severity is high, a special interest group thus optimally persuades politicians away from climate action with the threat of electoral removal by a perfectly informed voter.

Figure 2 illustrates the equilibrium consequences of the special interest's strategy for voter inference. The solid line plots $\mu(1, 0; \tilde{x}^*)$, the voter's posterior that climate action is appropriate when $s = 0$, and the dashed line depicts $\mu(0, 0; \tilde{x}^*)$, the posterior that inaction is warranted. To the left of $\pi^\dagger$, where the interest group fully misreports, the voter rationally discounts $s = 0$ as uninformative and falls back on the prior to evaluate the politician's policy choice. The posteriors mirror the pandering baseline of Proposition 1: the voter becomes more confident that climate action is appropriate as expected severity rises. However, there

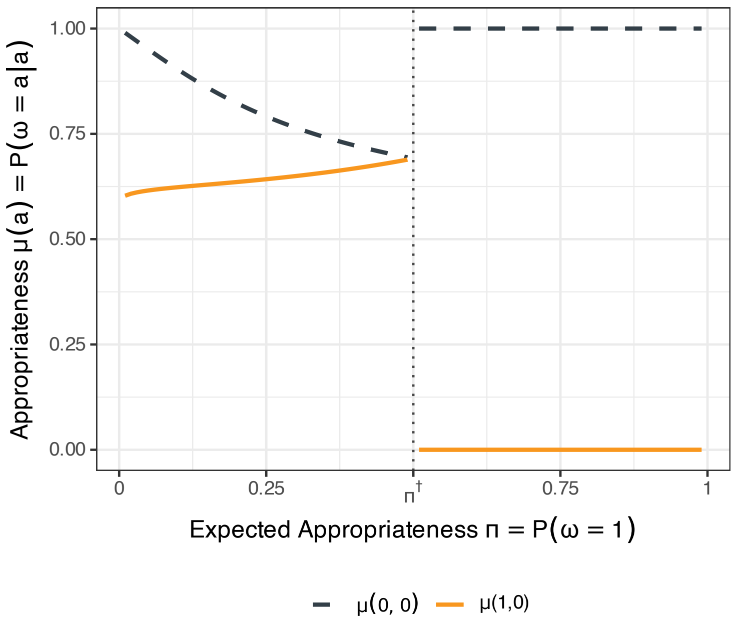

Figure 2: Persuasion Equilibrium: Voter Beliefs
$G(x;\omega) = N(\omega, 1)$, $F(\varepsilon) = N(0, 1)$

is a sharp discontinuity at $\pi = \pi^{\dagger}$, when the special interest shifts from maximal misreporting to reporting an unbiased signal about the need for climate reforms. To the right of $\pi^{\dagger}$, the message $s = 0$ is perfectly informative of $\omega = 0$, and voter inference collapses to certainty: $\mu(0, 0; \tilde{x}^*) = 1$ and $\mu(1, 0; \tilde{x}^*) = 0$ for any value of the prior. The interest group thus conditions what the voter can learn about climate risks and how they interpret the policy choices they observe.

The special interest group's optimal choice of misreporting speaks directly to the empirical evolution of anti-climate public messaging. Existing accounts have emphasized concealment and manufactured doubt as the central tools of public messaging about climate change (Dunlap and McCright 2011; Brulle 2014), an emphasis that fits the model's expectations for messaging when severity is low. But as public expectations of climate severity have risen, the model elucidates a shift in interest group strategy from maximal misreporting toward unbiasedness—a strategy in which interest groups deploy accurate information about climate change to constrain politicians whose electoral incentives now favor action. The result thus offers a unified rationale for the historical regularity of misreporting and for the more recent partial pivot toward acknowledgment among major fossil-fuel interests (Stokes 2020; Williams et al. 2022), without invoking changes in the group's underlying preferences.

International Cooperation

Climate policymaking is distinctive for its international flavor: voters observe both their own governments' policies and the climate actions pursued abroad. Foreign climate policies therefore shape domestic politics by affecting how voters evaluate whether climate reforms are warranted. Proposition 3 characterizes the equilibrium with *international cooperation* and establishes three core results. First, foreign climate actions generate informational spillovers that link domestic political incentives across countries. Second, these spillovers can produce either strategic complementarity or substitutability in climate policymaking. Third, the political importance of foreign climate action depends critically on the information disseminated by special interests.

Proposition 3 *Let $\mathcal{I} = \{a_i, s, a_j\}$. There exists a unique equilibrium in which:*

- *international climate actions can either be strategic complements or substitutes;*
- *observation of international climate policies increases climate action relative to the domestic model when $\pi < \pi^\dagger$ and has no effect when $\pi > \pi^\dagger$;*
- *bilateral climate action increases in π, bilateral inaction decreases in π, and unilateral climate action is inverse-U shaped in π, peaking at $\pi^\dagger$.*

Domestic politicians now anticipate that voters will evaluate climate policy in light of foreign actions as well. When foreign governments pursue climate reforms, voters may interpret those actions as evidence that climate risks are severe and that reform is warranted.

Foreign climate policy therefore becomes an informational cue that shapes domestic electoral incentives. The voter in country i observes the triple (a_i, s, a_j) and forms posterior belief $\mu_i(a_i, s, a_j)$ about whether domestic climate action is appropriate. Politicians consequently care not only about how voters interpret domestic policy choices and special interest messaging, but also about how voters interpret climate action from abroad.

Incorporating the foreign action into electoral incentives, write $\Delta_i(s, a_j) = F(\mu_i(1, s, a_j)) - F(\mu_i(0, s, a_j))$ as the electoral return to climate action conditional on the special interest's message and foreign policy realization. Let $p_{j\omega} = P(a_j = 1|\omega)$ be politician i's belief about country j's likelihood of pursuing climate reforms in state ω. The unique symmetric equilibrium cutoff $\tilde{x}^*$ satisfies

$$\underbrace{2\eta(\tilde{x}^*) - 1}_{\text{net belief } a_i=1 \text{ appropriate}} + \underbrace{(1-\beta)\eta(\tilde{x}^*)\Delta_i(1, a_j)}_{\text{net electoral return if } s=1}$$
$$+ \underbrace{\Big(\beta\eta(\tilde{x}^*)p_{j1}(\tilde{x}^*) + (1-\eta(\tilde{x}^*))p_{j0}(\tilde{x}^*)\Big)\Delta_i(0, 1; \tilde{x}^*)}_{\text{net electoral return if } s=0 \text{ and } a_j=1}$$
$$+ \underbrace{\Big(\beta\eta(\tilde{x}^*)(1-p_{j1}(\tilde{x}^*)) + (1-\eta(\tilde{x}^*))(1-p_{j0}(\tilde{x}^*))\Big)\Delta_i(0, 0; \tilde{x}^*)}_{\text{net electoral return if } s=0 \text{ and } a_j=0} = 0.$$

The politician's willingness to pursue climate reform now depends not only on her own assessment of climate risks, but also on how voters interpret her actions in light of both special interest messaging and foreign climate policy. Note that foreign climate policy adoption does not affect the politician's preferences for action independently of domestic concerns: there are no direct free-rider or coordination effects. Instead, any international effects on domestic climate policy adoption operate through how the voter interprets the appropriateness of climate action given foreign behavior.

Through domestic politics, international climate action shapes domestic reform incentives through two distinct channels. The first operates through politicians' expectations about foreign behavior. If the foreign politician becomes more likely to pursue climate reforms, the domestic politician anticipates more instances in which her own action will coincide with foreign action. Voters, seeking to infer whether climate reform is warranted, therefore reward domestic action more when foreign governments also adopt climate policies—in equilibrium, $\Delta_i(0, 1; \tilde{x}^*) \geq \Delta_i(0, 0; \tilde{x}^*)$. Foreign climate action reassures voters that reform was appropriate, increasing the domestic politician's electoral incentive to act. Through this channel, climate policies behave as strategic complements: a greater expected willingness to act abroad strengthens incentives for domestic climate reform.

The second force operates through voter inference. If the foreign politician adopts climate reforms even when signals of climate severity are weak, then foreign action provides only limited evidence that reform is truly warranted. By contrast, when the foreign politician acts selectively, pursuing reform only after sufficiently strong signals, foreign climate action becomes a more informative signal of underlying climate risks. Domestic voters then reward climate action more strongly when it coincides with foreign reform, increasing the domestic politician's electoral incentive to act—formally, $\Delta_i(0, a_j)$ is increasing in $\tilde{x}^*$. Through this channel, climate policies act as strategic substitutes: greater selectivity abroad reduces the frequency of foreign action while increasing its informational value domestically, so the two countries' propensities to reform move in opposite directions.

These two forces operate simultaneously, and the overall strategic relationship between countries depends on which effect is stronger in equilibrium.[10] Existing theories of international climate politics typically impose a strategic structure by assumption—substitutability when the focus is on free-riding incentives (e.g., Kennard and Schnakenberg 2023), or complementarity when the focus is on institutional coordination (e.g., Barrett 2016)—and then derive implications conditional on that structure. Here, by contrast, the strategic relationship

[10]It should be noted that, formally, these strategic effects are quantitatively smaller than the domestic politician's response to her own signal x_i, thereby guaranteeing a unique equilibrium (see Lemma A.8).

between countries emerges endogenously from how voters interpret foreign climate actions.

A second consequence of the interconnectedness of international and domestic politics is that the political importance of foreign climate action is itself conditional on what voters can learn about climate severity. The special interest's optimal strategy is unchanged from Proposition 2: $\beta^* = 1$ when $\pi < \pi^\dagger$ and $\beta^* = 0$ when $\pi > \pi^\dagger$. But this messaging strategy disciplines what voters can learn from foreign action. When $\pi < \pi^\dagger$ and special interests maximally misreport, voters lack a reliable domestic signal of climate policy appropriateness, and foreign climate action becomes a meaningful alternative source of information. The domestic politician anticipates this, and her electoral incentive to pursue reform rises when foreign action is expected. The likelihood she takes action is therefore greater than in a model without international cooperation. But when $\pi > \pi^\dagger$ and special interests provide unbiased messaging, foreign action provides no additional informational content. International political dynamics therefore matter most for domestic climate action precisely when domestic informational conditions are least conducive to reform, but the effect attenuates when special interests send unbiased messages about climate severity.

Recall that the probability of climate action in either country is $A(\tilde{x}^*)$, and three aggregate international outcomes are possible: bilateral climate action, in which both countries pursue reforms, occurs with probability $A(\tilde{x}^*)^2$; bilateral climate inaction, in which neither pursues reforms, occurs with probability $(1-A(\tilde{x}^*))^2$; and unilateral climate action, in which exactly one country acts, occurs with probability $2A(\tilde{x}^*)(1-A(\tilde{x}^*))$. Extant theories typically focus on one of these outcomes. International accounts emphasize the tragedy of the commons in explaining mutual inaction or the institutional structures that sustain conditional cooperation (Barrett 2003; Rowan 2025), while domestic accounts focus on unilateral action (Aklin and Mildenberger 2020). This model instead yields a unified framework in which all three outcomes occur with positive probability, with their relative likelihoods determined by the same informational mechanisms that shape domestic policymaking.

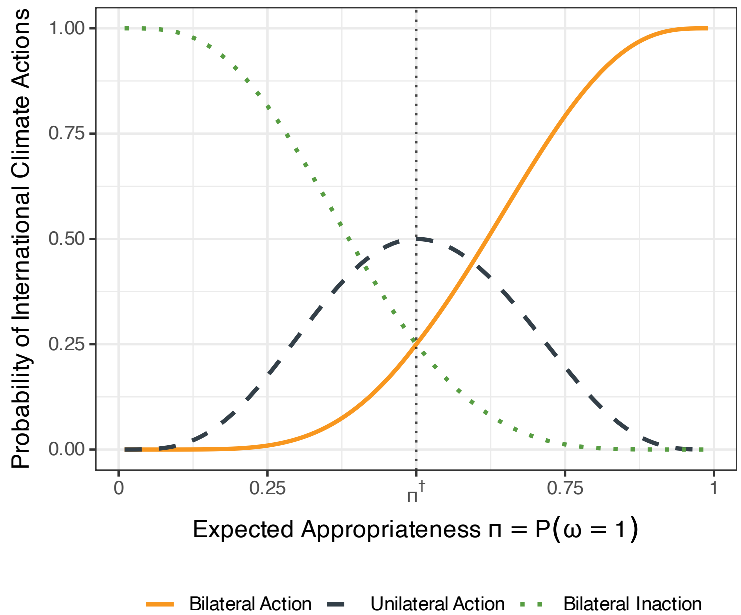

Figure 3: Cooperation Equilibrium: Probability of International Climate Action
$G(x;\omega) = N(\omega, 1)$, $F(\varepsilon) = N(0, 1)$

Figure 3 illustrates how these international climate policy outcomes evolve as a function of expected climate severity. The solid line plots the probability of bilateral action; the dotted line plots the probability of bilateral inaction; and the dashed line plots the probability of unilateral action. Intuitively, bilateral action is increasing in π, and bilateral inaction is decreasing in π. These curves are not symmetric, however, because the special interest's optimal misreporting shifts as expected severity crosses $\pi^\dagger$. Bilateral climate action rises in π but converges more slowly toward 1 in its upper tail: as π approaches 1, the special interest shifts to unbiased messaging, leading politicians to become more conservative in their pursuit of climate reforms, slowing bilateral action.

The probability of unilateral action, however, is inverse-U shaped in π and peaks at $\pi = \pi^\dagger$, where the variance of policy outcomes across countries is maximized. Substantively, this means that unilateral, or "uncoordinated," outcomes are most likely when electoral returns to climate policy are most muted. Around $\pi = \pi^\dagger$, pandering incentives are weakest, and voters are most uncertain *ex ante* about the appropriateness of reforms. With electoral incentives muted, politicians rely more heavily on their private signals when determining policy. Because signals are independently realized across countries, governments may reach different conclusions about whether reform is warranted, increasing the likelihood of unilateral action. The international system's coordination failures are not produced by free-riding incentives or the absence of cooperation institutions, but by the inferential structure of domestic politics in conditions where appropriateness is genuinely uncertain.

Empirical Implications

To assess the empirical plausibility of the theory's implications, I present qualitative and quantitative evidence of the mechanisms at play. I first describe variation in special interest messaging behavior, focusing on ExxonMobil's strategies to craft public reports to downplay climate risks when severity was low, but ultimately shifting toward acknowledgment of climate harms in 2014. This evolution is consistent with the theory's expectation that misreporting becomes less politically sustainable as public concern about climate risks rises. Quantitatively, I examine descriptive patterns in cross-national survey data on voter beliefs about climate policy and climate law adoption.

Trajectories of Exxon's Public Messaging

A substantial share of historical greenhouse gas emissions can be traced to a relatively small number of fossil fuel firms, many of which had strong incentives to oppose climate regulation (Heede 2014; Ekwurzel et al. 2017). Existing research documents that these firms frequently emphasized uncertainty surrounding climate science in public communications, seeking to weaken support for environmental regulation (Oreskes and Conway 2011; Brulle 2014; Williams et al. 2022). Over time, however, several major firms shifted toward greater public acknowledgment of climate risks and limited support for climate policy.

ExxonMobil offers the clearest documented illustration of this trajectory, and the regulatory and academic attention paid to the company makes its messaging history especially well-traced. Figure 4 displays a timeline of some key events pertaining to Exxon's disclosure of climate-related information (see Appendix B for further details on sources in the figure). Beginning in the late 1990s and through the mid-2000s, Exxon exploited the uncertainty inherent to climate science, engaging in public communication campaigns that emphasized uncertainty surrounding climate risks, attempting to convince citizens that climate change did not warrant broad policy action. While climate reforms would run counter to Exxon's interests, the company nevertheless shifted its messaging in 2014, when it publicly acknowledged its role in fostering climate risks. Since then, Exxon has advocated for policy solutions like carbon pricing that both recognize the climate threat and take steps toward addressing it. This pattern of accepting climate science and policies, even lobbying in favor of reforms, has been documented within extant literature (Kennard 2020; Green et al. 2022).

Exxon's public messaging campaign dovetailed with a global movement to delay climate action by downplaying risks to audiences across borders (Schlichting 2013). While most of Exxon's documented public-facing communications targeted American audiences directly, this content circulated internationally through transnational media coverage, and the company directly funded a network of European think tanks. Additionally, other companies pursued similar messaging campaigns to dissuade their publics against climate action. Shell and BP, as well as many other firms through the lobbying group Global Climate Coalition, produced documents that privately recognized the well-established scientific basis of increasing greenhouse gas emissions on global climate, but disseminated information to the public that contradicted these findings.[11]

[11] For example, BP's carbon footprint calculator, launched in 2004, reframed climate responsibility around individual consumption choices rather than fossil fuel production, potentially dampening support for broad regulatory responses.

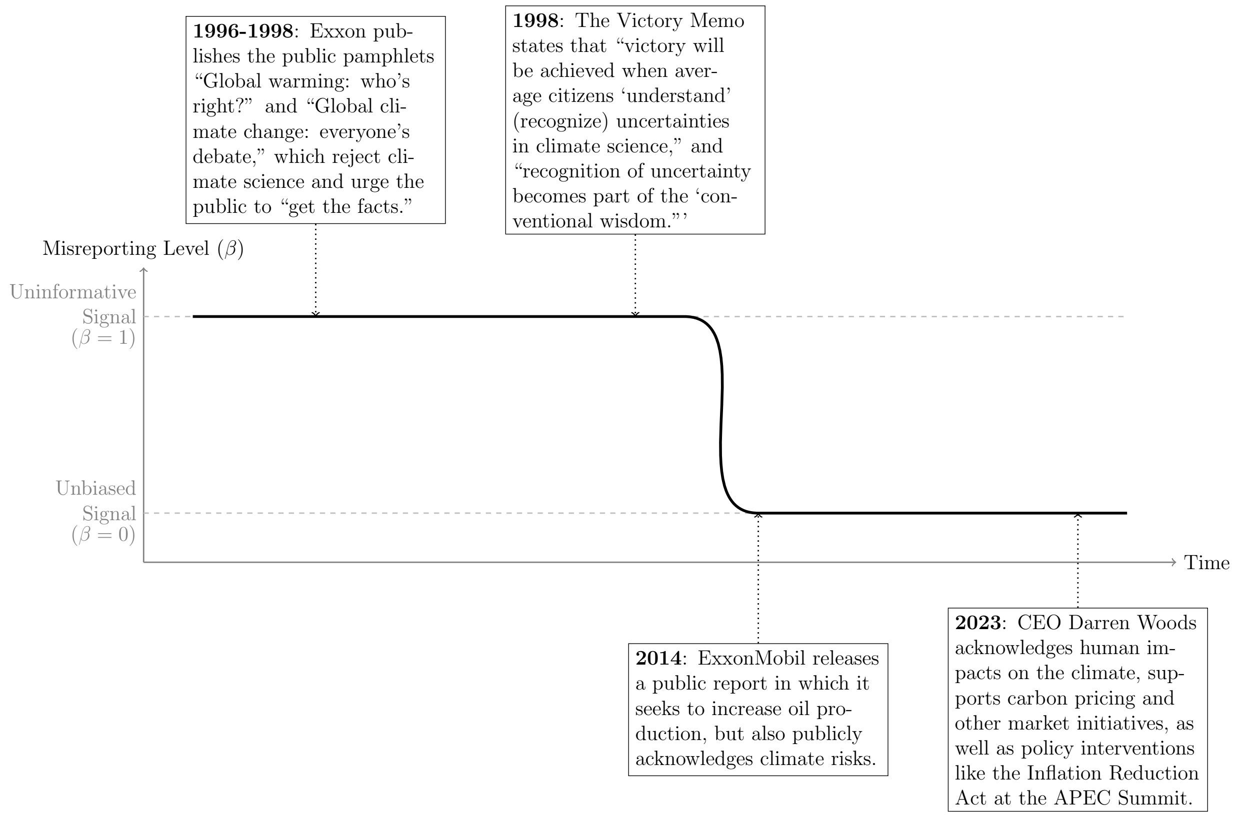

Figure 4: Variation in Exxon's Climate Messaging

The transnational character of Exxon's messaging strategy makes it reasonable to examine its 2014 pivot as a shift in the rhetorical environment facing global publics, providing a useful empirical anchor for the model's shift in optimal misreporting at $\pi = \pi^{\dagger}$. In the quantitative analysis that follows, I exploit this messaging pivot to examine how individual-level beliefs about climate policy appropriateness vary across the pre- and post-2014 periods as a function of domestic and foreign climate policy adoption.

Voter Beliefs and Climate Law Adoption

The theory generates observable implications for how individuals evaluate the seriousness of climate change as a function of three inputs: their own government's climate policies, special interest messaging about climate risks, and climate policies adopted abroad.

To measure individual beliefs about climate policy appropriateness, I use repeated cross-sectional data from Eurobarometer to capture public opinion on the seriousness of climate change across 27 European countries and six survey waves between 2011 and 2021. Eurobarometer asks citizens to assess whether they believe that climate change is a serious problem on a scale from 1 to 10, where 1 is "not at all a serious problem" and 10 is "an extremely serious problem." While perceived seriousness is not identical to the model's concept of climate policy appropriateness, greater concern about climate risks should closely track beliefs that stronger climate policies are warranted.

To measure climate action, I compile a list of mitigation-related laws adopted by each country in a given year from the Climate Change Laws of the World dataset (Nachmany et al. 2017). I create a binary indicator for whether a country has adopted a climate law in a given year, paralleling the model's conception of climate action. Since climate law adoption is measured at the country-year level, I aggregate respondents' beliefs about the importance of climate change by taking the average within countries for each surveyed year.

I leverage Exxon's 2014 admission of climate harms as a measure of changes in special interest public messaging about the severity of climate change. As mentioned above, Exxon was a global leader in disseminating anti-climate public messaging, and its shift to acknowledging climate risks was influential globally. I thus interpret time prior to 2014 as representing the case where $\pi < \pi^{\dagger}$, in which the optimal messaging strategy is full misreporting whereby $s = 0$ is always realized. Time after 2014 represents when $\pi > \pi^{\dagger}$, in particular when Exxon reports $s = 1$.

Because the theory concerns how domestic and foreign climate policies jointly shape public beliefs, I structure the data as a dyadic panel linking each country to every other European country in a given year. For each dyad-year, I observe whether the home European country adopted a climate law, whether the foreign partner country adopted a climate law, and whether the observation occurs before or after Exxon's 2014 messaging shift. I then compare average beliefs within EU countries (demeaned by dyad and year) about climate seriousness across these combinations. To reduce concerns about simultaneity, climate law adoption is lagged by one year. Confidence intervals are based on dyad-clustered standard errors. Additional details are provided in Appendix C.

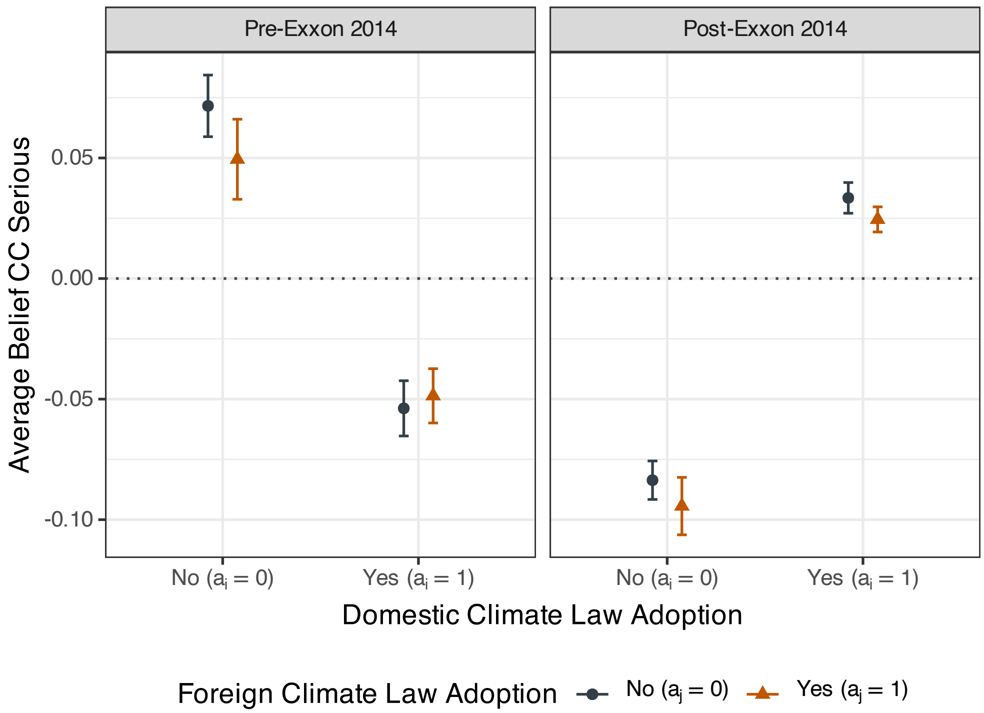

Figure 5: Average Beliefs, Exxon Messaging, and Climate Law Adoption

Figure 5 reports average beliefs that climate change is a serious problem from the vantage point of citizens in country i in year t, $E[\text{CC Serious}|a_i, s, a_j]$, given domestic and foreign climate law adoption in the previous year and expected special interest messaging (pre- or post-2014). The theory provides several expectations about the differences between these beliefs based on climate policy adoption, presented in Figure 6. Domestic contrasts assess the pandering mechanism by comparing beliefs about climate seriousness when the home country adopts a climate law relative to when it does not, holding foreign policy adoption and special interest messaging fixed. Foreign contrasts assess the persuasion and cooperation mechanisms by comparing beliefs when a foreign country adopts a climate law relative to when it does not, holding domestic policy adoption and special interest messaging fixed.

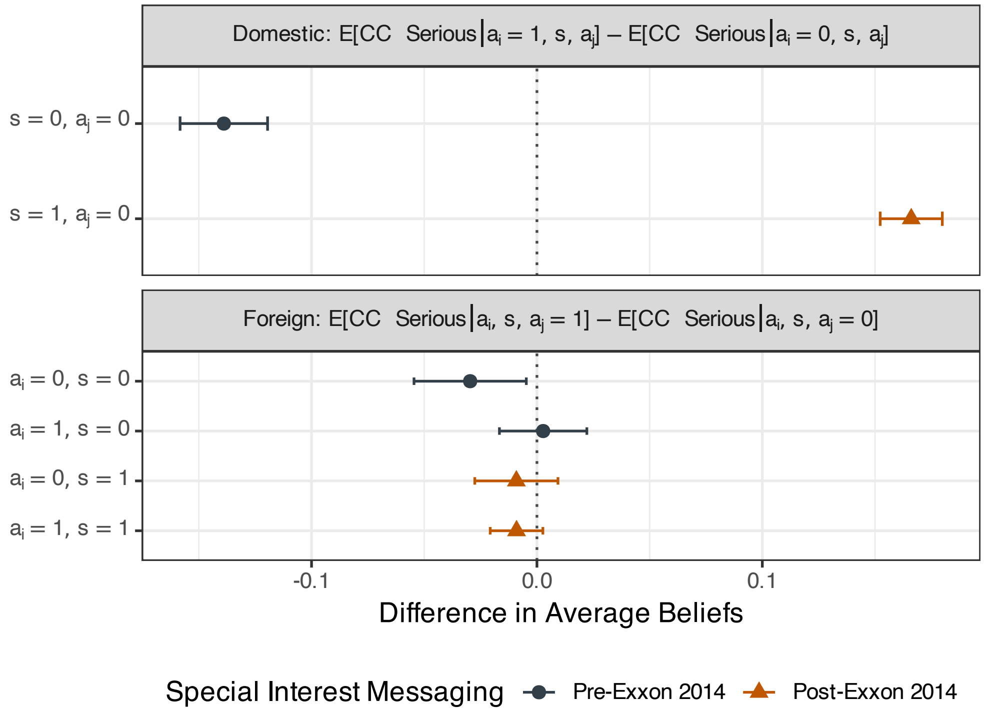

Figure 6: Differences in Average Beliefs

The first pattern concerns domestic climate policy adoption. When public expectations of climate severity are low, the theory states that the voter is more likely to reward politicians for climate inaction rather than action, as it is the *ex ante* appropriate action, $\mu(1) < \mu(0)$. Looking at the left panel of Figure 5 or the first line of top panel of Figure 6, domestic climate action is associated with lower perceived climate seriousness compared to inaction. After the shift toward more acknowledgment of climate harms, the relationship reverses: domestic climate action is associated with higher perceived seriousness compared to inaction, as shown in the right panel of Figure 5 and the second line of the top panel of Figure 6. These comparisons are consistent with the theoretical implication that electoral incentives flip as public expectations about climate severity rise.

The second pattern concerns informational spillovers from foreign climate action. The model finds that international climate action is informative when expectations of climate severity are low and special interests maximally misreport. Here, the theory expects that $\mu(0,0,1) < \mu(0,0,0)$ and $\mu(1,0,1) > \mu(1,0,0)$, as voters are more likely to update favorably following policy coordination. The first two lines of the bottom panel of Figure 6 are directionally consistent with these theoretical expectation, though the second comparison is not statistically significant. After Exxon's messaging shift, foreign climate action no longer has a statistically meaningful relationship with domestic beliefs about climate seriousness, which the theory also anticipates. This asymmetry is difficult to reconcile with standard collective action theories of international climate politics, which do not predict that the domestic influence of foreign climate action should depend on the information disseminated by special interests. Taken together, these results demonstrate that international cooperation meaningfully affects assessments of climate appropriateness when special interests are uninformative, with the relationship attenuating once special interest messaging becomes unbiased.

Discussion

This paper speaks to a central debate in the climate politics literature concerning the relative importance of domestic distributive conflict and international strategic interaction in shaping climate policy outcomes. Recent work has argued that climate politics is structured by domestic political economy considerations rather than by the collective action problems that animate canonical international environmental politics models (Aklin and Mildenberger 2020). From this perspective, climate policy outcomes are primarily determined by conflicts between domestic winners and losers from decarbonization, implying a more limited role for international politics in explaining variation in climate action (Urpelainen and Van de Graaf 2018). By contrast, other work emphasizes the strategic interdependence of states' climate policies, documenting how different cooperative dynamics affect policy outcomes (Barrett 2003; 2016; Kennard and Schnakenberg 2023; Rowan 2025).

The theory developed here suggests that these perspectives are not necessarily in tension. The model is fundamentally domestic in its political logic: politicians pursue climate policy with an eye toward reelection, and there is distributive conflict between voters and a special interest that influences policy indirectly through public messaging. Yet international forces still matter because voters use the climate policies adopted abroad to evaluate whether domestic climate reforms are warranted. International politics therefore affects domestic policymaking by shaping electoral assessments of policy appropriateness.

The empirical evidence is broadly consistent with this interpretation. In the pre-2014 period, when the theory expects special interests to engage in maximal misreporting, foreign climate law adoption meaningfully shapes domestic beliefs about climate seriousness. But once special interest messaging shifts toward greater acknowledgment of climate harms, the informational value of foreign climate action attenuates. This pattern is difficult to reconcile with accounts in which international climate politics operates solely through free-riding incentives or direct coordination effects. Instead, the findings suggest that foreign climate actions partly shape domestic politics by influencing how publics evaluate the appropriateness of climate policy when environmental risks are uncertain.

More broadly, the theory suggests that international climate politics retains independent political importance even when domestic distributive conflict is central to policymaking. International climate politics therefore matters because foreign policy choices become inputs into domestic political learning processes. Ignoring these informational dynamics risks understating the ways in which international climate actions can propagate across countries even in the absence of formal coordination mechanisms or collective action concerns.

Conclusion

This paper develops a formal theory of how informational environments shape climate policymaking at home and abroad. The results suggest a reframing of how international climate politics affects domestic climate policymaking. In addition to traditional explanations of international climate action that rely on collective action, international politics may shape domestic climate action through the informational cues that foreign policy choices provide to domestic publics. This informational channel offers a way to integrate accounts of climate politics that emphasize domestic distributive conflict with those that emphasize the relevance of international action, and suggests that the propagation of climate policy across countries may depend as much on the informational environments confronting voters as on the formal institutions designed to coordinate state behavior.

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 Mildenberger. 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.

Alonso, Ricardo and Odilon Câmara. 2016. "Persuading Voters." *American Economic Review* 106(11):3590–3605.

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.

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.

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.

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.

Ekwurzel, B., J. Boneham, M. W. Dalton, R. Heede, R. J. Mera, M. R. Allen and P. C. Frumhoff. 2017. "The rise in global atmospheric CO2, 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. 2026. "The Political Economy of the Clean Energy Transition.".

Gazmararian, Alexander F. and Helen V. Milner. 2025. "Political Cleavages and Changing Exposure to Global Warming." *Comparative Political Studies* 58(9):1965–1999.

Gazmararian, Alexander F. and Helen V. Milner. 2026. "Experience and self-interest: Diverging responses to global warming." *American Journal of Political Science* .

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. 2025. "The Global Politics of Scientific Consensus: Evidence from the Intergovernmental Panel on Climate Change." *International Organization* 79(2):233–256.

Hale, Thomas. 2020. "Catalytic Cooperation." *Global Environmental Politics* 20(4):73–98.

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.

Kamenica, Emir and Matthew Gentzkow. 2011. "Bayesian Persuasion." *American Economic Review* 101(6):2590–2615.

Kennard, Amanda. 2020. "The Enemy of My Enemy: When Firms Support Climate Change Regulation." *International Organization* 74(2):187–221.

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.

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* .

Malis, Matt. 2024. "Foreign Policy Appointments." *International Organization* 78(3):501–537.

Maskin, Eric and Jean Tirole. 2004. "The Politician and the Judge: Accountability in Government." *American Economic Review* 94(4):1034–1054.

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.

Nachmany, Michal, Sam Fankhauser, Joana Setzer and Alina Averchenkova. 2017. Global trends in climate change legislation and litigation. Technical report Grantham Institute.

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.

Paine, Jack and Scott A. Tyson. 2020. Uses and abuses of formal models in political science. In *The SAGE Handbook of Political Science*, ed. Dirk Berg-Schlosser, Bertrand Badie and Leonardo Morlino. Oxford: Oxford University Press pp. 188–202.

Rowan, Sam S. 2025. "From Gridlock to Ratchet: Conditional Cooperation on Climate Change." *International Organization* 79(2):257–280.

Schlichting, Inga. 2013. "Strategic Framing of Climate Change by Industry Actors: A Meta-analysis." *Environmental Communication* 7(4):493–511.

Schnakenberg, Keith E. and Ian R. Turner. 2024. "Formal Theories of Special Interest Influence." *Annual Review of Political Science* 27(Volume 27, 2024):401–421.

Schultz, Kenneth A. 2005. "The Politics of Risking Peace: Do Hawks or Doves Deliver the Olive Branch?" *International Organization* 59(1):1–38.

Stavins, Robert N. 2011. "The Problem of the Commons: Still Unsettled after 100 Years." *American Economic Review* 101(1):81–108.

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, G., S. Rahmstorf and N. Oreskes. 2023. "Assessing ExxonMobil's global warming projections." *Science* 379(6628):eabk0063.

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.

Tingley, Dustin and Michael Tomz. 2014. "Conditional Cooperation and Climate Change." *Comparative Political Studies* 47(3):344–368.

Tingley, Dustin and Michael Tomz. 2020. "International commitments and domestic opinion: the effect of the Paris Agreement on public support for policies to address climate change." *Environmental Politics* 29(7):1135–1156.

Tingley, Dustin and Michael Tomz. 2022. "The Effects of Naming and Shaming on Public Support for Compliance with International Agreements: An Experimental Analysis of the Paris Agreement." *International Organization* 76:445–468.

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.

Urpelainen, Johannes and Thijs Van de Graaf. 2018. "United States non-cooperation and the Paris agreement." *Climate Policy* 18(7):839–851.

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.

Appendix: Informational Spillovers and Climate Policy Appropriateness

Contents

A Formal Proofs

Pandering

Proof of Proposition 1: The proof of the proposition proceeds in three parts. First I show existence and uniqueness of the equilibrium in Lemma A.1. The first bullet of the proposition is given by Lemma A.2 and the second and third bullets are given by Lemma A.3.

Lemma A.1 *Let $\mathcal{I} = \{a_i\}$. There exists a unique equilibrium.*

Proof of Lemma A.1: The voter observes $a \in \{0, 1\}$ and so his posterior belief about politician appropriateness is $\mu(a) = P(\omega = a|a)$. He reelects the politician iff $\mu(a) \geq \varepsilon$, and so the probability that the politician is reelected is simply $F(\mu(a))$.

Given her signal x, the politician does not know the state with certainty but has the updated posterior belief $\eta(x) = P(\omega = 1|x) = \frac{\pi g(x;1)}{\pi g(x;1)+(1-\pi)g(x;0)}$ where $g(x;\omega)$ is the density of the politician's signal. Then it is optimal for the politician to choose $a = 1$ iff

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

Define $\tilde{x}$ as the signal that makes the politician indifferent between choosing $a = 1$ and $a = 0$. Then with probability $1 - G(\tilde{x};\omega)$, the politician chooses $a = 1$ in state ω. Given this cutoff, the voter's posterior beliefs can be written as

$$\mu(1;\tilde{x}) = \frac{\pi(1 - G(\tilde{x}; 1))}{\pi(1 - G(\tilde{x}; 1)) + (1 - \pi)(1 - G(\tilde{x}; 0))}.$$

$$\mu(0;\tilde{x}) = \frac{(1 - \pi)G(\tilde{x}; 0)}{(1 - \pi)G(\tilde{x}; 0) + \pi G(\tilde{x}; 1)}.$$

The politician's problem can be rewritten such that the equilibrium cutoff signal $\tilde{x}^*$ satisfies

$$2\eta(\tilde{x}^*) - 1 + F(\mu(1;\tilde{x}^*)) - F(\mu(0;\tilde{x}^*)) = 0. \quad (1)$$

By the MLRP, $\eta(x)$ is increasing in x. Observe that $\mu(1;\tilde{x})$ is increasing in $\tilde{x}$ and $\mu(0;\tilde{x})$ is decreasing in $\tilde{x}$, because the MLRP implies the hazard rate order. Hence the LHS is strictly increasing in $\tilde{x}$ such that the politician chooses $a = 1$ iff $x \geq \tilde{x}^*$, which is unique and well-defined. As $\tilde{x}^*$ is unique, the equilibrium is unique. ■

Lemma A.2 *The equilibrium probability of action is increasing in π.*

Proof of Lemma A.2: Define $I(\tilde{x})$ as

$$I(\tilde{x}) = 2\eta(\tilde{x}) - 1 + F(\mu(1;\tilde{x})) - F(\mu(0;\tilde{x})).$$

This function is increasing in $\tilde{x}$ by definition of the equilibrium, proved in Lemma A.1. By the implicit function theorem,

$$\frac{d\tilde{x}^*}{d\pi} = -\frac{\partial I(\tilde{x})/\partial\pi}{\partial I(\tilde{x})/\partial\tilde{x}}.$$

Observe that as $\pi \to 0$, $I(\tilde{x}) < 0$ so $\tilde{x}^* \to \infty$; as $\pi \to 1$, $I(\tilde{x}) > 0$ so $\tilde{x}^* \to -\infty$. By the MLRP, $\eta(\tilde{x})$ is increasing in π. Moreover, $\mu(1;\tilde{x})$ is increasing in π and $\mu(0;\tilde{x})$ is decreasing in π. Hence $I(\tilde{x})$ is increasing in π and $\frac{d\tilde{x}^*}{d\pi} \leq 0$.

The equilibrium probability of action is then

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

Differentiating with respect to π yields

$$\begin{aligned}\frac{dA(\tilde{x}^*)}{d\pi} &= 1 - G(\tilde{x}^*;1) - \pi g(\tilde{x}^*;1)\frac{d\tilde{x}^*}{d\pi} - 1 + G(\tilde{x}^*;0) - (1-\pi)g(\tilde{x}^*;0)\frac{d\tilde{x}^*}{d\pi} \\ &= G(\tilde{x}^*;0) - G(\tilde{x}^*;1) - \frac{d\tilde{x}^*}{d\pi}\left(\pi g(\tilde{x}^*;1) + (1-\pi)g(\tilde{x}^*;0)\right) > 0,\end{aligned}$$

where the result follows from first-order stochastic dominance. ■

Lemma A.3 *There exists a unique $\pi^\dagger$ such that $\mu(1) \geq \mu(0)$ iff $\pi > \pi^\dagger$.*

Proof of Lemma A.3: Clearly $F(\mu(1)) \geq F(\mu(0))$ iff $\mu(1) \geq \mu(0)$ so there are positive electoral returns to choosing $a = 1$. In equilibrium, $\mu(1) = \mu(0)$ iff

$$\begin{aligned}\frac{\pi(1 - G(\tilde{x};1))}{\pi(1 - G(\tilde{x};1)) + (1-\pi)(1 - G(\tilde{x};0))} &= \frac{(1-\pi)G(\tilde{x};0)}{(1-\pi)G(\tilde{x};0) + \pi G(\tilde{x};1)} \\ \Leftrightarrow\ \pi^2 G(\tilde{x}^*;1)(1 - G(\tilde{x}^*;1)) &= (1-\pi)^2 G(\tilde{x}^*;0)(1 - G(\tilde{x}^*;0)).\end{aligned}$$

Call any π that satisfies this equality $\pi^\dagger$. Now observe that at $\pi = \pi^\dagger$, $\mu(1) = \mu(0)$ and so the politician's optimal threshold solves

$$2\eta(x) - 1 = 0,$$

which has a unique solution because $\eta(x)$ is increasing in both π and x by the MLRP. So $\pi^\dagger$ must be unique.

Note that $\lim_{\pi\to 0}\mu(0) = 1$ and $\lim_{\pi \to 1}\mu(1) = 1$. So for any nonconstant μ on π these posterior beliefs must cross.

By state symmetry of $g(\cdot;\omega)$, we can further characterize $\pi^\dagger = \frac{1}{2}$. At $\pi = \pi^\dagger$, the politician's threshold solves $2\eta(x) - 1 = 0$ or, using the definition of $\eta(x)$, $\frac{\pi^\dagger g(x;1)}{\pi^\dagger g(x;1) + (1-\pi^\dagger)g(x;0)} = \frac{1}{2}$. Rearranging gives $\frac{g(x;1)}{g(x;0)} = \frac{1-\pi^\dagger}{\pi^\dagger}$. By definition of state symmetry, $\frac{g(c;1)}{g(c;0)} = 1$ which is satisfied iff $\pi^\dagger = \frac{1}{2}$. Substituting $\pi^\dagger = \frac{1}{2}$ into the indifference between $\mu(1) = \mu(0)$ gives

$$G(x;1)(1 - G(x;1)) = G(x;0)(1 - G(x;0)),$$

which holds iff $x = c$. ■ ■

Persuasion

Proof of Proposition 2: The proof of the proposition proceeds in four parts. First I show existence and uniqueness of the equilibrium in Lemma A.4. The second bullet of the proposition is given by Lemma A.5. The first bullet of the proposition is given by Lemma A.6. The third bullet of the proposition is given by Lemma A.7.

Lemma A.4 *Let $\mathcal{I} = \{a_i, s\}$. There exists a unique equilibrium.*

Proof of Lemma A.4: The voter now conditions his reelection decision on both a and s such that $\mu(a,s) = P(\omega = a|a,s)$, and reelects the incumbent politician iff $\mu(a,s) \geq \varepsilon$. The incumbent's probability of reelection is simply $F(\mu(a,s))$.

Importantly the politician does not know which signal will be realized, but can update her beliefs about the likelihood of s given her own signal x, giving posterior beliefs $\eta(x) = P(\omega = 1|x) = \frac{\pi g(x;1)}{\pi g(x;1)+(1-\pi)g(x;0)}$. The expected utility from choosing $a = 1$ vs. $a = 0$ can be expressed as

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

Define $\Delta(s) = F(\mu(1,s)) - F(\mu(0,s))$ so that the politician is indifferent between $a = 1$ and $a = 0$ when

$$2\eta(\tilde{x}) - 1 + \eta(\tilde{x})(1-\beta)\Delta(1) + (1-\eta(\tilde{x})+\eta(\tilde{x})\beta)\Delta(0) = 0, \tag{2}$$

where $\tilde{x}$ is the signal that satisfies at equality, as before. Given this cutoff, voters have posterior beliefs

$$\begin{aligned}
\mu(1,1;\tilde{x}) &= 1. \\
\mu(1,0;\tilde{x}) &= \frac{\pi\beta(1-G(\tilde{x};1))}{\pi\beta(1-G(\tilde{x};1)) + (1-\pi)(1-G(\tilde{x};0))}. \\
\mu(0,0;\tilde{x}) &= \frac{(1-\pi)G(\tilde{x};0)}{(1-\pi)G(\tilde{x};0) + \pi\beta G(\tilde{x};1)}. \\
\mu(0,1;\tilde{x}) &= 0.
\end{aligned}$$

Differentiating Equation 2 with respect to $\tilde{x}$ yields

$$2\frac{\partial\eta(\tilde{x})}{\partial\tilde{x}} + (1-\beta)\frac{\partial\eta(\tilde{x})}{\partial\tilde{x}}(\Delta(1;\tilde{x}) - \Delta(0;\tilde{x})) + (1-\eta(\tilde{x})\beta\eta(\tilde{x}))\frac{\partial\Delta(0;\tilde{x})}{\partial\tilde{x}}.$$

Since $g(\cdot)$ has the monotone likelihood ratio property, $\eta(\tilde{x})$ is increasing in $\tilde{x}$. Now observe that $\mu^*(1,0;\tilde{x})$ is increasing in $\tilde{x}$ and $\mu^*(0,0;\tilde{x})$ is decreasing in $\tilde{x}$, which means that $\Delta(0)$ is increasing in $\tilde{x}$. Further, by definition of posterior beliefs we have $\Delta(1;\tilde{x}) \geq \Delta(0;\tilde{x})$ so this expression is increasing in $\tilde{x}$. Hence by the intermediate value theorem there is a unique $\tilde{x}^*$ solving Equation 2 such that the politician chooses $a = 1$ iff $x \geq \tilde{x}^*$. ■

Lemma A.5 *The equilibrium is identical to that without the interest group as $\beta \to 1$.*

Proof of Lemma A.5: When $\beta \to 1$, $\mu(1,0) \to \mu(1)$ and $\mu(0,0) \to \mu(0)$, defined in Lemmas A.4 and A.1 respectively. The politician's cutoff $\tilde{x}^*$ solves

$$2\eta(\tilde{x}^*) - 1 + \Delta(0;\tilde{x}^*) = 0,$$

where $\Delta(0) = F(\mu(1,0)) - F(\mu(0,0)) \to F(\mu(1)) - F(\mu(0))$. ■

Lemma A.6 *The probability of climate action is inverse U-shaped in β.*

Proof of Lemma A.6: Define $I(\tilde{x})$ as

$$I(\tilde{x}) = 2\eta(\tilde{x}) - 1 + \eta(\tilde{x})(1-\beta)\Delta(1;\tilde{x}) + (1 - \eta(\tilde{x}) + \eta(\tilde{x})\beta)\Delta(0;\tilde{x}).$$

By the implicit function theorem,

$$\frac{d\tilde{x}^*}{d\beta} = -\frac{\partial I(\tilde{x})/\partial\beta}{\partial I(\tilde{x})/\partial\tilde{x}}.$$

By definition of the equilibrium cutoff, $I(\tilde{x})$ is increasing in $\tilde{x}$. Partially differentiating with respect to β gives

$$\frac{\partial I(\tilde{x})}{\partial\beta} = -\eta(\tilde{x})(\Delta(1;\tilde{x}) - \Delta(0;\tilde{x})) + (1 - \eta(\tilde{x}) + \eta(\tilde{x})\beta)\frac{\partial\Delta(0;\tilde{x})}{\partial\beta}.$$

The first term is negative and the second term is positive because $\mu(1,0;\tilde{x})$ is increasing in β and $\mu(0,0;\tilde{x})$ is decreasing in β. Note that at $\beta = 0$, $\mu(1,0;\tilde{x}) = 0$ so $\Delta(0;\tilde{x})$ is at its minimum. But $\frac{\partial\Delta(0;\tilde{x})}{\partial\beta}$ is at a maximum because $\frac{\partial\Delta(0;\tilde{x})}{\partial\beta}$ is decreasing in β:

$$\begin{aligned}\frac{\partial^2\Delta(0;\tilde{x})}{\partial\beta^2} &= \frac{\partial^2\mu(1,0;\tilde{x})}{\partial\beta^2}F'(\mu(1,0;\tilde{x})) + (\frac{\partial\mu(1,0;\tilde{x})}{\partial\beta})^2 F''(\mu(1,0;\tilde{x})) \\ &\quad - \frac{\partial^2\mu(0,0;\tilde{x})}{\partial\beta^2}F'(\mu(0,0;\tilde{x})) - (\frac{\partial\mu(0,0;\tilde{x})}{\partial\beta})^2 F''(\mu(0,0;\tilde{x})) < 0,\end{aligned}$$

because $F(\cdot)$ has a log-concave density and $\frac{\partial^2\mu(1,0;\tilde{x})}{\partial\beta^2} < 0$ and $\frac{\partial^2\mu(0,0;\tilde{x})}{\partial\beta^2} > 0$. Since $\frac{\partial\Delta(0;\tilde{x})}{\partial\beta}$ is maximized at $\beta = 0$ and is scaled by $(1 - \eta(\tilde{x})) > 0$, the second term is strictly positive and dominates the first term. Hence $\frac{\partial I}{\partial\beta} > 0$ at $\beta = 0$.

Furthermore, as $\beta \to 1$, the posterior beliefs converge to those in the model without the interest group from Lemma A.5. This means that $\frac{\partial\Delta(0;\tilde{x})}{\partial\beta} \to 0$ and $\frac{\partial I(\tilde{x})}{\partial\beta} < 0$ for large β. Thus, $\frac{d\tilde{x}^*}{d\beta}$ is U-shaped in β by the implicit function theorem.

The probability of climate action is

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

Differentiating with respect to β gives

$$\frac{dA(\tilde{x}^*)}{d\beta} = -\pi g(\tilde{x}^*; 1)\frac{d\tilde{x}^*}{d\beta} - (1-\pi)g(\tilde{x}^*; 0)\frac{d\tilde{x}^*}{d\beta}.$$

As $\frac{d\tilde{x}^*}{d\beta}$ is U-shaped in β, $\frac{dA(\tilde{x}^*)}{d\beta}$ is inverse U-shaped in β. ■

Lemma A.7 *There exists a unique $\pi^\dagger$ such that the special interest's optimal misreporting strategy is*

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

Proof of Lemma A.7: The special interest has the objective function

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

By Lemma A.6, $\tilde{x}^*$ is U-shaped in β so $1 - A(\tilde{x}^*)$ is also U-shaped in β. This implies that the maximum lies either at $\beta = 0$ or $\beta = 1$.

Let $\tilde{x}^*_\beta$ be the politician's optimal cutoff for a misreporting level β. Observing what happens at each of the endpoints, we see that at $\beta = 0$, $\tilde{x}^*_0$ solves

$$\begin{aligned} 2\eta(\tilde{x}^*_0) - 1 + \eta(\tilde{x}^*_0)\Delta(1) + (1 - \eta(\tilde{x}^*_0))\Delta(0) &= 0 \\ (2\eta(\tilde{x}^*_0) - 1)(1 + \Delta(1)) &= 0 \\ \eta(\tilde{x}^*_0) &= \frac{1}{2}. \end{aligned}$$

The first line comes from direct substitution for $\beta = 0$, the second line uses the fact that $\Delta(0) = F(0) - F(1) = -\Delta(1)$ when $\beta = 0$, and the third line rearranges.

When $\beta = 1$, the politician's problem is the same as the model without the interest group from Lemma A.5,

$$\begin{aligned} 2\eta(\tilde{x}^*_1) - 1 + \underbrace{F(\mu(1)) - F(\mu(0))}_{\Delta} &= 0 \\ \eta(\tilde{x}^*_1) &= \frac{1-\Delta}{2}. \end{aligned}$$

To order the cutpoints, we simply need to know the sign of Δ. By Lemma A.3, we know that $\mu(1) > \mu(0)$ and thus $\Delta > 0$ iff $\pi > \pi^\dagger$, so when $\pi > \pi^\dagger$ we have $\tilde{x}^*_1 < \tilde{x}^*_0$. Symmetrically, $\mu(1) < \mu(0)$ and $\Delta < 0$ iff $\pi < \pi^\dagger$, yielding$\tilde{x}^*_0 < \tilde{x}^*_1$. Hence when $\pi < \pi^\dagger$ the special interest group sends $\beta = 1$ and when $\pi > \pi^\dagger$ the special interest group sends $\beta = 0$. ■ ■

International Cooperation

Proof of Proposition 3: I proceed in several parts. Lemma A.8 show the existence of a unique equilibrium, holding β fixed. The first bullet of the proposition is proven in Lemma A.11, with Lemmas A.9 and A.10 proving international analogs to Lemmas A.2 and A.6. The second bullet of the proposition is proven in Lemma A.12, the third bullet in Lemma A.13, and the fourth bullet in Lemma A.14.

Lemma A.8 *Let $\mathcal{I} = \{a_i, s, a_j\}$. There exists a unique, symmetric cutoff $\tilde{x}^*$ that characterizes the equilibrium.*

Proof of Lemma A.8: The voter in country i observes the triple (a_i, s, a_j) and forms posterior belief $\mu_i(a_i, s, a_j) = P(\omega = a_i | a_i, s, a_j)$. The voter reelects politician i iff $\mu_i(a_i, s, a_j) \geq \varepsilon_i$, or with probability $F(\mu_i(a_i, s, a_j))$.

Let $p_{j\omega} = P(a_j = 1|\omega)$ be the belief that politician j chooses $a_j = 1$ in state ω for actors in country i. Write $\Delta_i(s, a_j) = F(\mu_i(1, s, a_j)) - F(\mu_i(0, s, a_j))$. Then the politician plays $a_i = 1$ iff

$$\eta(x_i)\Big[1+p_{j1}\beta\Delta_i(0,1) + p_{j1}(1-\beta)\Delta_i(1,1) + (1-p_{j1})(1-\beta)\Delta_i(1,0) + (1-p_{j1})\beta\Delta_i(0,0)\Big]$$
$$\geq (1-\eta(x_i))\Big[1 - p_{j0}\Delta_i(0,1) - (1-p_{j0})\Delta_i(0,0)\Big],$$

which can be rearranged to

$$\frac{g(x_i;1)}{g(x_i;0)} \geq \frac{1-\pi}{\pi}\frac{1 - p_{j0}\Delta_i(0,1) - (1-p_{j0})\Delta_i(0,0)}{1 + p_{j1}\beta\Delta_i(0,1) + p_{j1}(1-\beta)\Delta_i(1,1) + (1-p_{j1})(1-\beta)\Delta_i(1,0) + (1-p_{j1})\beta\Delta_i(0,0)}.$$

Now the RHS is constant in x_i and the LHS is increasing in x_i such that there is a solution $\tilde{x}_i$ satisfying with equality. Analogously for j, there is a $\tilde{x}_j$. This means that politician i's best response to politician j and voter i is a cutoff rule. Then the politician plays $a = 1$ when $x \geq \tilde{x}$ for each respective country. Moreover, country i's beliefs about the behavior of country j are $p_{j\omega} = 1 - G(\tilde{x}_j; \omega)$, which is decreasing in $\tilde{x}_j$.

Given cutoffs $(\tilde{x}_i, \tilde{x}_j)$, the voter has posterior beliefs $\mu_i(a_i, s, a_j; \tilde{x}_i, \tilde{x}_j)$:

$$\mu_i(1,1,a_j;\tilde{x}_i,\tilde{x}_j) = 1.$$
$$\mu_i(0,1,a_j;\tilde{x}_i,\tilde{x}_j) = 0.$$
$$\mu_i(1,0,1;\tilde{x}_i,\tilde{x}_j) = \frac{\pi\beta p_{j1}(1-G(\tilde{x}_i;1))}{\pi\beta p_{j1}(1-G(\tilde{x}_i;1)) + (1-\pi)p_{j0}(1-G(\tilde{x}_i;0))}.$$
$$\mu_i(1,0,0;\tilde{x}_i,\tilde{x}_j) = \frac{\pi\beta(1-p_{j1})(1-G(\tilde{x}_i;1))}{\pi\beta(1-p_{j1})(1-G(\tilde{x}_i;1)) + (1-\pi)(1-p_{j0})(1-G(\tilde{x}_i;0))}.$$
$$\mu_i(0,0,1;\tilde{x}_i,\tilde{x}_j) = \frac{(1-\pi)p_{j0}G(\tilde{x}_i;0)}{(1-\pi)p_{j0}G(\tilde{x}_i;0) + \pi\beta p_{j1}G(\tilde{x}_i;1)}.$$
$$\mu_i(0,0,0;\tilde{x}_i,\tilde{x}_j) = \frac{(1-\pi)(1-p_{j0})G(\tilde{x}_i;0)}{(1-\pi)(1-p_{j0})G(\tilde{x}_i;0) + \pi\beta(1-p_{j1})G(\tilde{x}_i;1)}.$$

Since $\mu_i(1,1,1;\tilde{x}_i,\tilde{x}_j) = \mu_i(1,1,0;\tilde{x}_i,\tilde{x}_j)$ and $\mu_i(0,1,1;\tilde{x}_i,\tilde{x}_j) = \mu_i(0,1,0;\tilde{x}_i,\tilde{x}_j)$, it follows that $\Delta_i(1,1) = \Delta_i(1,0) = \Delta_i(1)$. It is evident that $\mu_i(1,s,a_j;\tilde{x}_i,\tilde{x}_j)$ is increasing in $\tilde{x}_i$ and $\mu_i(0,s,a_j;\tilde{x}_i,\tilde{x}_j)$ is decreasing in $\tilde{x}_i$ so $\Delta_i(s_i,a_j)$ is increasing in $\tilde{x}_i$. Then the politician's cutoff $\tilde{x}_i$, given any $\tilde{x}_j$, solves

$$\begin{aligned}2\eta(\tilde{x}_i) - 1 + (1-\beta)\eta(\tilde{x}_i)\Delta_i(1) + (\beta\eta(\tilde{x}_i)p_{j1} + (1-\eta(\tilde{x}_i))p_{j0})\Delta_i(0,1;\tilde{x}_i,\tilde{x}_j)\\ +(\beta\eta(\tilde{x}_i)(1-p_{j1}) + (1-\eta(\tilde{x}_i))(1-p_{j0}))\Delta_i(0,0;\tilde{x}_i,\tilde{x}_j) = 0.\end{aligned} \tag{3}$$

Define $I(\tilde{x}_i,\tilde{x}_j)$ as the politician's constraint as in Equation 3. Now imposing symmetry such that $\tilde{x}_i = \tilde{x}_j = \tilde{x}$, the equilibrium cutoff solves

$$\begin{aligned}I(\tilde{x},\tilde{x}) = {} & 2\eta(\tilde{x}) - 1 + \eta(\tilde{x})(1-\beta)\Delta(1)\\ & + \Big(\eta(\tilde{x})p_{j1}(\tilde{x})\beta + (1-\eta(\tilde{x}))p_{j0}(\tilde{x})\Big)\Delta(0,1;\tilde{x},\tilde{x})\\ & + \Big(\eta(\tilde{x})(1-p_{j1}(\tilde{x}))\beta + (1-\eta(\tilde{x}))(1-p_{j0}(\tilde{x}))\Big)\Delta(0,0;\tilde{x},\tilde{x}).\end{aligned}$$

Differentiating with respect to $\tilde{x}$ (and suppressing dependence on $\tilde{x}$ to economize notation) gives

$$\begin{aligned}\frac{\partial I(\tilde{x},\tilde{x})}{\partial \tilde{x}} = {} & \Big(2 + (1-\beta)\Delta(1)\Big)\frac{\partial \eta}{\partial \tilde{x}} + \left(\frac{\partial \eta}{\partial \tilde{x}}(\beta p_{j1} - p_{j0}) + \eta\beta\frac{\partial p_{j1}}{\partial \tilde{x}} + (1-\eta)\frac{\partial p_{j0}}{\partial \tilde{x}}\right)\Delta(0,1)\\ & + \Big(\eta\beta p_{j1} + (1-\eta)p_{j0}\Big)\frac{\partial \Delta(0,1)}{\partial \tilde{x}} + \Big(\eta\beta(1-p_{j1}) + (1-\eta)(1-p_{j0})\Big)\frac{\partial \Delta(0,0)}{\partial \tilde{x}}\\ & + \left(\frac{\partial \eta}{\partial \tilde{x}}(\beta(1-p_{j1}) - (1-p_{j0})) - \eta\beta\frac{\partial p_{j1}}{\partial \tilde{x}} - (1-\eta)\frac{\partial p_{j0}}{\partial \tilde{x}}\right)\Delta(0,0).\end{aligned}$$

Since MLRP implies hazard rate ordering, it can be shown that $\mu_i(1,0,a_j;\tilde{x},\tilde{x})$ is increasing in $\tilde{x}$ and $\mu_i(0,0,a_j;\tilde{x},\tilde{x})$ is decreasing in $\tilde{x}$. Hence $\Delta(0,a_j)$ is increasing in $\tilde{x}$. Regrouping terms,

$$\begin{aligned}\frac{\partial I(\tilde{x},\tilde{x})}{\partial \tilde{x}} = {} & \Bigg(2 + (1-\beta)\Delta(1) + (\beta p_{j1} - p_{j0})\Delta(0,1) + (\beta(1-p_{j1}) - (1-p_{j0}))\Delta(0,0)\Bigg)\frac{\partial \eta}{\partial \tilde{x}}\\ & + \Big(\eta\beta p_{j1} + (1-\eta)p_{j0}\Big)\frac{\partial \Delta(0,1)}{\partial \tilde{x}} + \Big(\eta\beta(1-p_{j1}) + (1-\eta)(1-p_{j0})\Big)\frac{\partial \Delta(0,0)}{\partial \tilde{x}}\\ & + \left(\eta\beta\frac{\partial p_{j1}}{\partial \tilde{x}} + (1-\eta)\frac{\partial p_{j0}}{\partial \tilde{x}}\right)\Big(\Delta(0,1) - \Delta(0,0)\Big).\end{aligned}$$

The first line is positive because in equilibrium $\Delta(1) \geq \Delta(0,1) \geq \Delta(0,0)$ and each Δ is bounded in $[-1,1]$. The second line is also positive. The third line is negative because $\Delta(0,1) \geq \Delta(0,0)$. It is thus sufficient to demonstrate that the positive, informational direct effect of increasing $\tilde{x}$ given by the first line exceeds the negative, strategic effect given in the third line.

Observe that $\frac{\partial \eta}{\partial \tilde{x}}$ can be decomposed as

$$\frac{\partial \eta}{\partial \tilde{x}} = \eta(1-\eta)\left(\frac{g'(\tilde{x};1)}{g(\tilde{x};1)} - \frac{g'(\tilde{x};0)}{g(\tilde{x};0)}\right) > 0,$$

where $g'(x;\omega)$ is the derivative of the density $g(x;\omega)$. Let $C = 2 + (1-\beta)\Delta(1) + (\beta p_{j1} - p_{j0})\Delta(0,1) + (\beta(1-p_{j1}) - (1-p_{j0}))\Delta(0,0)$. Then the informational effect dominates the strategic effect iff

$$\begin{aligned}\eta(1-\eta)\left(\frac{g'(\tilde{x};1)}{g(\tilde{x};1)} - \frac{g'(\tilde{x};0)}{g(\tilde{x};0)}\right)C &> \Big(\eta\beta g(\tilde{x};1) + (1-\eta)g(\tilde{x};0)\Big)\Big(\Delta(0,1) - \Delta(0,0)\Big)\\ \Leftrightarrow \left(\frac{g'(\tilde{x};1)}{g(\tilde{x};1)} - \frac{g'(\tilde{x};0)}{g(\tilde{x};0)}\right) &> \left(\frac{\beta g(\tilde{x};1)}{1-\eta} + \frac{g(\tilde{x};0)}{\eta}\right)\frac{\Delta(0,1)-\Delta(0,0)}{C}.\end{aligned}$$

The LHS represents the speed with which the politician's beliefs about ω change. The RHS is the strategic uncertainty of the foreign politician's action. I assume that this holds in order to ensure a unique equilibrium; if the signal distribution $G(\cdot;\omega)$ is the normal distribution with mean ω and variance σ^2, the LHS is simply $\frac{1}{\sigma^2}$ and there is an upper bound $\sigma < \overline{\sigma}$ that can be parameterized. Thus, since $\frac{\partial I(\tilde{x},\tilde{x})}{\partial \tilde{x}} > 0$, there exists a unique $\tilde{x}^*$ such that each politician chooses $a_i = 1$ iff $x_i \geq \tilde{x}^*$. ∎

Lemma A.9 *The threshold $\tilde{x}^*$ is decreasing in π.*

Proof of Lemma A.9: By the implicit function theorem,

$$\frac{d\tilde{x}^*}{d\pi} = -\frac{\partial I(\tilde{x},\tilde{x})/\partial \pi}{\partial I(\tilde{x},\tilde{x})/\partial \tilde{x}}.$$

Partially differentiating with respect to π gives

$$\begin{aligned}\frac{\partial I(\tilde{x},\tilde{x})}{\partial \pi} &= \frac{\partial \eta}{\partial \pi}\Bigg[2 + (1-\beta)\Delta(1) + (\beta p_{j1} - p_{j0})\Delta(0,1) + (\beta(1-p_{j1}) - (1-p_{j0}))\Delta(0,0)\Bigg]\\ &\quad + (\beta\eta p_{j1} + (1-\eta)p_{j0})\frac{\partial \Delta(0,1)}{\partial \pi} + (\beta\eta(1-p_{j1}) + (1-\eta)(1-p_{j0}))\frac{\partial \Delta(0,0)}{\partial \pi}.\end{aligned}$$

The first line is positive because $\frac{\partial \eta}{\partial \pi} > 0$ by MLRP and the term in brackets is positive akin to the argument in Lemma A.8. Since $\mu_i(1,0,a_j;\tilde{x},\tilde{x})$ is increasing in π and $\mu_i(0,0,a_j;\tilde{x},\tilde{x})$ is decreasing in π, we have $\frac{\partial \Delta(0,a_j)}{\partial \pi} \geq 0$ so the third line is positive as well. Then $\frac{\partial I(\tilde{x},\tilde{x})}{\partial \pi} \geq 0$ and by the implicit function theorem $\frac{d\tilde{x}^*}{d\pi} \leq 0$. ∎

Lemma A.10 *The threshold $\tilde{x}^*$ is U-shaped in β.*

Proof of Lemma A.10: This proof is analogous to Lemma A.6. By the implicit function theorem,

$$\frac{d\tilde{x}^*}{d\beta} = -\frac{\partial I(\tilde{x},\tilde{x})/\partial \beta}{\partial I(\tilde{x},\tilde{x})/\partial \tilde{x}}.$$

The denominator is positive at the equilibrium threshold $\tilde{x}^*$ as shown in Lemma A.8. Partially differentiating with respect to β yields

$$\begin{aligned}\frac{\partial I(\tilde{x},\tilde{x})}{\partial \beta} &= -\eta\Big(\Delta(1) - p_{j1}\Delta(0,1) - (1-p_{j1})\Delta(0,0)\Big) \\ &\quad + \Big(\eta p_{j1}\beta + (1-\eta)p_{j0}\Big)\frac{\partial \Delta(0,1)}{\partial \beta} + \Big(\eta(1-p_{j1})\beta + (1-\eta)(1-p_{j0})\Big)\frac{\partial \Delta(0,0)}{\partial \beta}.\end{aligned}$$

It can be shown that $\mu_i(1,0,a_j)$ are increasing in β and $\mu_i(0,0,a_j)$ are decreasing in β. Then $\Delta(0,a_j)$ is also increasing in β_i. By definition of posterior beliefs, $\Delta_i(1) \geq \Delta(0,1) \geq \Delta(0,0)$. This means that first term is negative and the second and third terms are positive. Observe that this expression is exactly the same as in Lemma A.6 except it also incorporates the behavior of politician j. Then, as in Lemma A.6, it can be shown that $I(\tilde{x},\tilde{x})$ is increasing in β for small β and decreasing in β for large β. Then by the implicit function theorem $\frac{d\tilde{x}^*}{d\beta}$ is U-shaped. ■

Lemma A.11 *There exists a unique $\pi^{\dagger}_{intl}$ such that the special interest's optimal misreporting strategy is*

$$\beta^*(\pi) = \begin{cases} 1 & \pi < \pi^{\dagger}_{intl} \\ 0 & \pi > \pi^{\dagger}_{intl}. \end{cases}$$

Proof of Lemma A.11: The special interest group has the objective function

$$\max_{\beta\in[0,1]} \; 2 - A_i(\tilde{x}^*) - A_j(\tilde{x}^*),$$

where $A_i(\tilde{x}^*) = P(a_i = 1|\tilde{x}^*) = \pi(1 - G(\tilde{x}^*;1)) + (1-\pi)(1-G(\tilde{x}^*;0))$. By symmetry, this reduces to

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

Analogous to Lemma A.7, since $\tilde{x}^*$ is U-shaped in β, the special interest group's choice of β must either be $\beta^* = 0$ or $\beta^* = 1$. Let $\tilde{x}^*_\beta$ be the optimal threshold at a given β.

If $\beta^* = 0$, the politician's threshold $\tilde{x}^*$ solves

$$2\eta(\tilde{x}^*_0) - 1 + \eta(\tilde{x}^*_0)\Delta(1) + (1-\eta(\tilde{x}^*_0))p_{j0}\Delta(0,1) + (1-\eta(\tilde{x}^*_0))(1-p_{j0})\Delta(0,0) = 0.$$

Notice that when $\beta_i = 0$, $\Delta(0,1) = \Delta(0,0) = F(0) - F(1) = -\Delta(1)$. Simplifying yields that $\eta(\tilde{x}^*_0) = \frac{1}{2}$.

Similarly, if $\beta = 1$, the cutoff $\tilde{x}^*_1$ solves

$$2\eta(\tilde{x}^*_1) - 1 + (\eta(\tilde{x}^*_1)p_{j1} + (1-\eta(\tilde{x}^*_1))p_{j0})\Delta(0,1) + (\eta(\tilde{x}^*_1)(1-p_{j1}) + (1-\eta(\tilde{x}^*_1))(1-p_{j0}))\Delta(0,0) = 0.$$

Call the LHS of this equation $\mathcal{B}(\tilde{x})$, which is the politician's indifference condition when $\beta = 1$. From Lemma A.8 it is clear that $\mathcal{B}(\tilde{x})$ is increasing in $\tilde{x}$, where the zero is at $\tilde{x}^*_1$. If we were to evaluate $\mathcal{B}(\tilde{x})$ at any other $\tilde{x}$, we would know whether such a $\tilde{x}$ is greater than or less than $\tilde{x}_1^*$ based on the sign of $\mathcal{B}(\tilde{x})$.

Evaluating $\mathcal{B}(\tilde{x}_0^*)$ and noting from above that $\eta(\tilde{x}_0^*) = \frac{1}{2}$, we have

$$\mathcal{B}(\tilde{x}_0^*) = \overline{p}_j \Delta(0,1) + \left(1 - \overline{p}_j\right) \Delta(0,0),$$

where $\overline{p}_j = \frac{p_{j1}+p_{j0}}{2}$. If $\mathcal{B}(\tilde{x}_0^*) < 0$, then $\tilde{x}_0^* < \tilde{x}_1^*$ and the special interest group chooses $\beta^* = 1$. If $\mathcal{B}(\tilde{x}_0^*) > 0$, then $\tilde{x}_0^* > \tilde{x}_1^*$ and the special interest group chooses $\beta^* = 0$. Differentiating with respect to π gives

$$\frac{d\mathcal{B}(\tilde{x}_0^*)}{d\pi} = \frac{d\overline{p}_j}{d\pi}(\Delta(0,1) - \Delta(0,0)) + \overline{p}_j \frac{d\Delta(0,1)}{d\pi} + (1 - \overline{p}_j)\frac{d\Delta(0,0)}{d\pi} > 0.$$

At $\pi = 0$, $\mathcal{B}(\tilde{x}_0^*) = \Delta(0,0)|_{\pi=0} = F(0) - F(1) < 0$. At $\pi = 1$, $\mathcal{B}(\tilde{x}_1^*) = \Delta(0,1)|_{\pi=1} = F(1) - F(0) > 0$. Hence there is a unique $\pi_{intl}^\dagger$ such that $\mathcal{B}(\tilde{x}_0^*) = 0$ and where $\tilde{x}_0^* = \tilde{x}_1^*$. When $\pi < \pi_{intl}^\dagger$, $\tilde{x}_0^* < \tilde{x}_1^*$ and $\beta^* = 1$. When $\pi > \pi_{intl}^\dagger$, $\tilde{x}_0^* > \tilde{x}_1^*$ and $\beta^* = 0$.

By state-symmetry of $g(\cdot;\omega)$, we can further characterize $\pi_{intl}^\dagger = \frac{1}{2}$. The point of indifference, i.e. at $\pi = \pi_{intl}^\dagger$, is where $\mathcal{B}(\tilde{x}_0^*) = \overline{p}_j\Delta(0,1) + (1-\overline{p}_j)\Delta(0,0) = 0$. Suppose that $\pi_{intl}^\dagger = \frac{1}{2}$ and $\tilde{x}_0^* = c$. By state-symmetry, $G(c;1) + G(c;0) = 1$. Then $p_{j1} = 1 - G(c;1) = G(c;0)$ and $p_{j0} = 1 - G(c;0) = G(c;1)$, and $\overline{p}_j = \frac{1}{2}$. We now have that at $\pi = \pi_{intl}^\dagger$,

$$\Delta(0,1) + \Delta(0,0) = 0.$$

To verify this, observe that at $\pi = \frac{1}{2}$, $\beta = 1$, and $\tilde{x} = c$, the posterior beliefs $\mu_i(1,0,a_j;c,c)$ and $\mu_i(0,0,a_j;c,c)$ satisfy

$$\mu_i(1,0,1;c,c) = \mu_i(0,0,0;c,c) = \frac{G(c;0)^2}{G(c;0)^2 + G(c;1)^2}.$$
$$\mu_i(1,0,0;c,c) = \mu_i(0,0,1;c,c) = \frac{1}{2}.$$

Then $\Delta(0,1) = F\left(\frac{G(c;0)^2}{G(c;0)^2+G(c;1)^2}\right) - F\left(\frac{1}{2}\right)$ and $\Delta(0,0) = F\left(\frac{1}{2}\right) - F\left(\frac{G(c;0)^2}{G(c;0)^2+G(c;1)^2}\right)$, as desired. Hence since $\pi_{intl}^\dagger$ is unique, $\mathcal{B}(\tilde{x}_0^*) = 0$ iff $\pi = \pi_{intl}^\dagger = \frac{1}{2}$. ■

Lemma A.12 *Countries' thresholds can either be strategic complements or strategic substitutes.*

Proof of Lemma A.12: To study strategic complementarity and substitutability, consider the effect of changing $\tilde{x}_j$ prior to imposing symmetry of cutoffs. By the implicit function theorem, strategic effects are given by

$$\frac{d\tilde{x}_i}{d\tilde{x}_j} = -\frac{\partial I(\tilde{x}_i, \tilde{x}_j)/\partial \tilde{x}_j}{\partial I(\tilde{x}_i, \tilde{x}_j)/\partial \tilde{x}_i},$$

where the denominator is positive by Lemma A.8. Partially differentiating with respect to $\tilde{x}_j$ gives

$$\frac{\partial I(\tilde{x}_i,\tilde{x}_j)}{\partial \tilde{x}_j} = \Big(\beta\eta(\tilde{x}_i)\frac{\partial p_{j1}}{\partial \tilde{x}_j} + (1-\eta(\tilde{x}_i))\frac{\partial p_{j0}}{\partial \tilde{x}_j}\Big)(\Delta_i(0,1)-\Delta_i(0,0)) \\ + (\beta\eta(\tilde{x}_i)p_{j1} + (1-\eta(\tilde{x}_i))p_{j0})\frac{\partial \Delta_i(0,1)}{\partial \tilde{x}_j} + (\beta\eta(\tilde{x}_i)(1-p_{j1}) + (1-\eta(\tilde{x}_i))(1-p_{j0}))\frac{\partial \Delta_i(0,0)}{\partial \tilde{x}_j}.$$

The first line is negative because $\frac{\partial p_{j\omega}}{\partial \tilde{x}_j} < 0$ and $\Delta_i(0,1) \geq \Delta_i(0,0)$. The second line is positive as the MLRP implies the hazard rate ordering: $\mu_i(1,0,a_j;\tilde{x}_i,\tilde{x}_j)$ is increasing in $\tilde{x}_j$, $\mu_i(0,0,a_j;\tilde{x}_i,\tilde{x}_j)$ is decreasing in $\tilde{x}_j$, so $\Delta_i(0,a_j)$ is increasing in $\tilde{x}_j$. This cannot be signed in general, but when the first term dominates, $\frac{\partial I(\tilde{x}_i,\tilde{x}_j)}{\partial \tilde{x}_j} < 0$ and actions are strategic complements, $\frac{d\tilde{x}_i}{d\tilde{x}_j} \geq 0$. If the second and third terms dominate, $\frac{\partial I(\tilde{x}_i,\tilde{x}_j)}{\partial \tilde{x}_j} > 0$ and actions are strategic substitutes, $\frac{d\tilde{x}_i}{d\tilde{x}_j} \leq 0$. ■

Lemma A.13 *Call $\tilde{x}_D^*$ the optimal threshold that the politician sets in the domestic game, characterized in Lemma A.4, and call $\tilde{x}_I^*$ the optimal threshold that the politician sets in the international game, characterized in Lemma A.8. When $\pi < \pi^\dagger_{intl}$, $\tilde{x}_I^* < \tilde{x}_D^*$.*

Proof of Lemma A.13: Observe that at $\pi = 0$, $\tilde{x}_D^* = \tilde{x}_I^* \to \infty$. Moreover, by state-symmetry, at $\pi^\dagger = \pi^\dagger_{intl} = \frac{1}{2}$, $\tilde{x}_D^* = \tilde{x}_I^* = c$. On the interior, define $\mathcal{B}_D(\tilde{x}_D^*) = 0$ such that $\tilde{x}_D^*$ solves

$$2\eta(\tilde{x}_D^*) - 1 + \Delta(0;\tilde{x}_D^*) = 0,$$

and define $\mathcal{B}_I(\tilde{x}_I^*) = 0$ $\tilde{x}_I^*$ solves

$$2\eta(\tilde{x}_I^*) - 1 + (\eta(\tilde{x}_I^*)p_{j1}(\tilde{x}_I^*) + (1-\eta(\tilde{x}_I^*)p_{j0}(\tilde{x}_I^*))\Delta(0,1;\tilde{x}_I^*,\tilde{x}_I^*) \\ + (\eta(\tilde{x}_I^*)(1-p_{j1}(\tilde{x}_I^*)) + (1-\eta(\tilde{x}_I^*))(1-p_{j0}(\tilde{x}_I^*))\Delta(0,0;\tilde{x}_I^*,\tilde{x}_I^*) = 0.$$

Observe that $\mathcal{B}_I(\cdot)$ is identical to $\mathcal{B}(\tilde{x}_0^*)$ in Lemma A.11, and the proof follows an analogous structure. Since $\mathcal{B}_I(\cdot)$ is increasing in its argument by Lemma A.8, if $\mathcal{B}_I(\tilde{x}_D^*) > 0$, then $\tilde{x}_I^* < \tilde{x}_D^*$. Observe that $\tilde{x}_D^*$, we have $\eta(\tilde{x}_D^*) = \frac{1-\Delta(0)}{2} > 0$ and when $\pi < \pi^\dagger$, $\Delta(0) < 0$. Substituting in and simplifying yields

$$\mathcal{B}_I(\tilde{x}_D^*) = -\Delta(0) + \frac{\Delta(0,1)-\Delta(0,0)}{2}\Big(p_{j1} + p_{j0} - \Delta(0)(p_{j1}-p_{j0})\Big) + \Delta(0,0).$$

It suffices to show that $-\Delta(0) > \Delta(0,0)$ at $\pi < \pi^\dagger$. Then we need $F(\mu(0,0)) - F(\mu(1,0)) \geq F(\mu(1,0,0)) - F(\mu(0,0,0))$. By definition of posterior beliefs, $\mu(0,0) \geq \mu(1,0,0)$ and $\mu(0,0,0) \geq \mu(1,0)$ iff $\frac{(1-\pi)^2}{\pi^2} \geq \frac{(1-p_{j1})G(\tilde{x}_D^*;1)(1-G(\tilde{x}_D^*;1))}{(1-p_{j0})G(\tilde{x}_D^*;0)(1-G(\tilde{x}_D^*;0))}$, which is true for $\pi < \pi^\dagger$. Hence for $\pi < \pi^\dagger$, $\mathcal{B}_I(\tilde{x}_D^*) > 0$ and $\tilde{x}_I^* < \tilde{x}_D^*$, as desired. ■

Lemma A.14 *Let $A(\tilde{x}^*)$ be the probability of climate action. Then define bilateral climate action as $A(\tilde{x}^*)^2$, bilateral climate inaction as $(1-A(\tilde{x}^*))^2$ and unilateral climate action* *as $2A(\tilde{x}^*)(1 - A(\tilde{x}^*))$. Then bilateral climate action is increasing in π, bilateral climate inaction is decreasing in π, and unilateral climate action is increasing in π when $\pi < \pi^\dagger$ and decreasing in π when $\pi > \pi^\dagger$.*

Proof of Lemma A.14: From Lemma A.9, $\tilde{x}^*$ is decreasing in π and so the probability of climate action is increasing in π (see also Lemma A.2).

Differentiating with respect to π, bilateral climate action is increasing: $2A(\tilde{x}^*)\frac{dA(\tilde{x}^*)}{d\pi} \geq 0$ and bilateral climate inaction is decreasing: $-2(1 - A(\tilde{x}^*))\frac{dA(\tilde{x}^*)}{d\pi} \leq 0$. The derivative of unilateral climate action with respect to π is $2(1 - A(\tilde{x}^*))\frac{dA(\tilde{x}^*)}{d\pi}$, where the sign depends on whether $A(\tilde{x}^*)$ is above or below $\frac{1}{2}$. Observe that when $\pi = \pi^\dagger = \frac{1}{2}$, we have that $A(\tilde{x}^*)$ such that for any $\pi < \pi^\dagger$, $A(\tilde{x}^*) < \frac{1}{2}$ and the expression is increasing, while for any $\pi > \pi^\dagger$, $A(\tilde{x}^*) > \frac{1}{2}$ and the expression is decreasing:

$$\begin{aligned} A(\tilde{x}^*)|_{\pi=\pi^\dagger} &= \frac{1}{2}(1 - G(\tilde{x}^*; 1)) + \frac{1}{2}(1 - G(\tilde{x}^*; 0)) \\ &= \frac{1}{2}G(c; 0) + \frac{1}{2}G(c; 1) \\ &= \frac{1}{2}. \end{aligned}$$

■ ■

Model Extensions

Here I briefly sketch two model extensions: a pro-climate interest group and a revised model in which the politician can condition directly on s.

Pro-Climate Interest Group

Suppose that instead of a special interest group biased against climate action, the group that disseminates information to the voter is in favor of ambitious climate policies. Specifically, the group designs a signal $s \in \{0, 1\}$ according to the experiment

$$\begin{aligned} P(s = 0|\omega = 0) = 1 - \gamma. \quad P(s = 1|\omega = 0) = \gamma. \\ P(s = 0|\omega = 1) = 0. \quad P(s = 1|\omega = 1) = 1. \end{aligned}$$

The interest group therefore chooses the parameter $\gamma \in [0, 1]$. All of the analysis remains as before. I characterize the equilibrium of the domestic model.

Proposition A.1 *In the unique equilibrium of the model with a pro-climate interest group:*

- *the probability of climate action is inverse U-shaped in γ;*

- *there exists a π^γ such that the special interest's optimal misreporting strategy is*

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

Proof of Proposition A.1: First I show that the game has a unique equilibrium in the exact fashion as those in the main text. Then I demonstrate that $\tilde{x}^*$ is inverse U-shaped in γ. Finally I show that the interest group chooses $\gamma^* = 0$ when $\pi < \pi^\gamma$ and $\gamma^* = 1$ when $\pi > \pi^\gamma$.

Lemma A.15 *The model with a pro-climate interest group has a unique equilibrium given by the threshold $\tilde{x}^*$.*

Proof of Lemma A.15: The voter observes (a, s) and retains the politician when $\mu(a, s) \geq \varepsilon$, occurring with probability $F(\mu(a, s))$.

Given the signal x, and using similar notation as in the main text, the politician chooses $a = 1$ iff

$$2\eta(x) - 1 + (\eta(x) + (1 - \eta(x))\gamma)\Delta(1) + (1 - \eta(x))(1 - \gamma)\Delta(0) \geq 0.$$

Let $\tilde{x}$ be the value of x that solves this at equality. The posterior beliefs induced by these strategies are

$$\begin{aligned}
\mu(1, 0) &= 0. \\
\mu(1, 1) &= \frac{\pi(1 - G(\tilde{x}; 1))}{\pi(1 - G(\tilde{x}; 1)) + (1 - \pi)\gamma(1 - G(\tilde{x}; 0))}. \\
\mu(0, 0) &= 1. \\
\mu(0, 1) &= \frac{(1 - \pi)\gamma G(\tilde{x}; 0)}{(1 - \pi)\gamma G(\tilde{x}; 0) + \pi G(\tilde{x}; 1)}.
\end{aligned}$$

Differentiating with respect to x yields

$$\frac{\partial \eta(\tilde{x})}{\partial \tilde{x}}\Big(2 + (1 - \gamma)(\Delta(1; \tilde{x}) - \Delta(0; \tilde{x}))\Big) + (\gamma(1 - \eta(\tilde{x})) + \eta(\tilde{x}))\frac{\partial \Delta(1; \tilde{x})}{\partial \tilde{x}}.$$

The first term is positive because $\eta(\tilde{x})$ is increasing in $\tilde{x}$ by MLRP. Since $\mu(1, 1; \tilde{x})$ is increasing in $\tilde{x}$ and $\mu(0, 1; \tilde{x})$ is decreasing in $\tilde{x}$, $\Delta(1; \tilde{x})$ is increasing in $\tilde{x}$. Then there is a $\tilde{x}^*$ such that the politician chooses $a = 1$ iff $x \geq \tilde{x}^*$. ■

Lemma A.16 *The equilibrium signal cutoff $\tilde{x}$ is inverse U-shaped in γ in the model with a pro-climate interest group.*

Proof of Lemma A.16: Define the function

$$I_\gamma(\tilde{x}) := 2\eta(\tilde{x}) - 1 + (\gamma - \gamma\eta(\tilde{x}) + \eta(\tilde{x}))\Delta(1;\tilde{x}) + (1-\gamma)(1-\eta(\tilde{x}))\Delta(0;\tilde{x}).$$

Clearly, $I_\gamma(\tilde{x})$ is increasing in $\tilde{x}$ and the point $\tilde{x}^*$ is defined by $I_\gamma(\tilde{x}^*) = 0$. By the implicit function theorem,

$$\frac{d\tilde{x}^*}{d\gamma} = -\frac{\partial I_\gamma(\tilde{x})/\partial\gamma}{\partial I_\gamma(\tilde{x})/\partial\tilde{x}}.$$

Differentiating with respect to γ yields

$$\frac{\partial I_\gamma(\tilde{x})}{\partial\gamma} = (1-\eta(\tilde{x}))(\Delta(1;\tilde{x}) - \Delta(0;\tilde{x})) + (\gamma - \gamma\eta(\tilde{x}) + \eta(\tilde{x}))\frac{\partial\Delta(1;\tilde{x})}{\partial\gamma}.$$

Now, $\mu(1,1)$ is decreasing in γ and $\mu(1,0)$ is increasing in γ so $\frac{\partial\Delta(1;\tilde{x})}{\partial\gamma} < 0$. Then the first term is positive and the second term is negative. Analogous to Lemma A.6, this function is negative for high γ and positive for low γ. Hence by the implicit function theorem $\tilde{x}^*$ is U-shaped in γ. ■

Lemma A.17 *There exists π^γ such that $\gamma^* = 1$ when $\pi > \pi^\gamma$ and $\gamma^* = 0$ when $\pi < \pi^\gamma$.*

Proof of Lemma A.17: The argument is analogous to Lemma A.7 and so I omit details. As $\tilde{x}^*$ is U-shaped in γ, the probability of climate action is inverse U-shaped in γ. The special interest group seeks to maximize climate action, which happens at either $\gamma = 0$ or $\gamma = 1$. Since high π aligns with the interest group's preferred action, it selects $\gamma^* = 1$ when $\pi > \pi^\gamma$ and $\gamma^* = 0$ when $\pi < \pi^\gamma$. ■ ■

Politician and Interest Group Signal

In the main model, the politician is unable to condition her strategy on the signal s sent by the interest group. I now relax that assumption. This means that the politician's strategy is now a function her private signal x as well as the public signal s.

Proposition A.2 *In the model where the politician can observe the interest group's signal:*

- *the probability of climate action is increasing in β;*
- *the optimal level of misreporting is $\beta^* = 0$.*

The results of this proposition are relatively straightforward and uninteresting. If the politician can observe the interest group's signal and the interest group inflates the possibility of false negatives, then the politician and the voter rationally discount this. This entices the politician to pursue action more, as the voter uses the politician's action more heavily as an assessment of appropriateness. These results also imply that there is an importance of having the politician not know what the interest group will ultimately report to the public.

Proof of Proposition A.2: Define $\rho(x, s; \beta) = P(\omega = 1|x, s; \beta)$ to be the politician's posterior belief that $\omega = 1$ given her private signal x and the realization of the interest group's message s given β. Since $s = 1$ is a truthful message, $\rho(x, 1) = 1$ for any value of x. Hence in the subgame following $s = 1$, the politician chooses $a = 1$ iff

$$1 + F(\mu(1, 1)) \geq F(\mu(0, 1)),$$

which is always satisfied: the politician always plays $a = 1$.

Following $s = 0$, the politician does not know if the special interest is truthfully reporting $\omega = 0$ or if with some probability β it misreported. Her posterior belief is $\rho(x, 0; \beta) = \frac{g(x;1)\beta\pi}{g(x;1)\beta\pi+g(x;0)(1-\pi)}$. Then the politician's problem is to choose $a = 1$ whenever

$$\rho(x, 0; \beta) + F(\mu(1, 0)) \geq (1 - \rho(x, 0; \beta)) + F(\mu(0, 0)) \;\Leftrightarrow\; 2\rho(x, 0; \beta) - 1 + \Delta(0) \geq 0.$$

The posterior beliefs $\mu(1, 0; \tilde{x})$ and $\mu(0, 0; \tilde{x})$ are defined as in Lemma **??** and are thus increasing in $\tilde{x}$ and decreasing in $\tilde{x}$ respectively. Then there is a cutoff $\tilde{x}^*$ such that the politician plays $a = 1$ iff $x \geq \tilde{x}^*$.

Now observe that $\frac{\partial\rho(x,0;\beta)}{\partial\beta} = \frac{\pi(1-\pi)g(x;1)g(x;0)}{(g(x;1)\pi\beta+g(x;0)(1-\pi))^2} > 0$ for any β and any signal x, as the politician rationally discounts the special interest group's signal as reporting is more likely to be biased. Moreover, as in Lemma A.6, $\frac{\partial\Delta(0)}{\partial\beta} > 0$ and so by the implicit function theorem $\frac{d\tilde{x}^*}{d\beta} \leq 0$, or misreporting increases climate action. This is simply because the politician rationally discounts the signal $s = 0$ at higher values of β. As action is monotonically increasing in β, the optimal misreporting is $\beta^* = 0$. ■

B Exxon Source Documents

- In 1996 and 1998, Exxon released pamphlets to the masses that sought to inject doubt into the public discourse about the validity of climate science and the subsequent need for policy action. In particular, one such pamphlet was entitled "Global climate change: everyone's debate," and is available at https://www.climatefiles.com/exxonmobil/1998-exxon-pamphlet-global-climate-change-everyones-debate/. The pamphlet "Global warming: who's right?" admonishes readers not to "ignore the facts" about climate change and is available at https://climateintegrity.org/uploads/deception/1996-Exxon-Global-Warming-Whos-Right.pdf.

- The "Victory Memo" of 1998 makes the goal to inject uncertainty into the public sphere clear: "victory will be achieved when average citizens 'understand' (recognize) uncertainties in climate science," and "recognition of uncertainty becomes part of the 'conventional wisdom."' The memo can be found at https://www.climatefiles.com/trade-group/american-petroleum-institute/1998-global-climate-science-communications-team-action-plan/.

- The Global Climate Coalition was a lobbying group of several large oil and gas companies that operated between 1989 and 2001. Its primary function was to coordinate messaging against global climate action like the ratification of the Kyoto Protocol. In 1995, the GCC internally circulated *Predicting Future Climate Change: A Primer*, which summarized the state of climate science. Notably, it reads, "The scientific basis for the Greenhouse Effect and the potential impact of human emissions of greenhouse gases such as CO2 on climate is well established and cannot be denied." The full document is available at https://www.ucsusa.org/sites/default/files/attach/2015/07/Climate-Deception-Dossier-7_GCC-Climate-Primer.pdf.

- While the GCC internally circulated *Predicting Future Climate Change: A Primer*, its public-facing publications of the time were very different. In 1995, it also published "Climate Change: Your Passport To The Facts," a booklet allegedly intended to introduce readers to essential facts about climate change. Facts include that "the notion that scientists have reached consensus that man-made emissions of greenhouse gases are leading to a dangerous level of global warming is not true" and "computer climate models, which are the basis for "predictions" of global climate change, suffer from severe flaws." The document is available at https://www.worthingtoncaron.com/documents/1995-CLIMATE-CHANGE-YOUR-PASSPORT.pdf.

- ExxonMobil published a series of newspaper ads in order to sow doubt into the public about climate science. In the spring of 2000, ExxonMobil rad the ad "Unsettled Science" in major news outlets (e.g., the *New York Times*). These ads also tried to discredit climate scientists.[1]

[1] https://insideclimatenews.org/news/22102015/exxon-sowed-doubt-about-climate-science-for-decades-by-stressing-uncertainty/

C Empirical Implications

I study empirical implications of the model using data from Eurobarometer and the Climate Change Laws of the World Project. Across six survey waves (2011, 2013, 2015, 2017, 2019, 2021) administered in 27 EU countries, Eurobarometer asks: "how serious a problem do you think climate change is at this moment? Please use a scale from 1 to 10, '1' would mean that it is 'not at all a serious problem' and '10' would mean that it is a problem that is 'extremely serious.' " I take the average of respondents' answers within each country for each such that I have a measure of average beliefs at the country-year level.

The CCLW data provides information about climate law adoption for 194 countries. I code a simple binary indicator that equals 1 if a country adopts a climate law in a given year and is 0 otherwise. I subset the data to laws that are related to mitigation, and also remove any documents in the dataset flagged as "UNFCCC submissions" to study implemented laws.

I construct a dyadic panel to most easily study the relationship between domestic and foreign law adoption and climate beliefs. Each dyad is thus described by columns `iso1`, `iso2`, and `year`. Within each dyad, I let the country designated as `iso2` be the home country i, and the country designated as `iso1` be the foreign country j. Table A.1 reports descriptive statistics for the two variables used in the analysis.

Statistic	Mean	St. Dev.	Min	Max
Panel A: Full Sample (N = 32,011)				
Avg. Belief CC Serious	7.537	0.619	5.587	8.852
Climate Law Adoption	0.687	0.464	0	1
Panel B: Pre-2014, Exxon = 0 (N = 10,588)				
Avg. Belief CC Serious	7.338	0.674	5.587	8.852
Climate Law Adoption	0.546	0.498	0	1
Panel C: Post-2014, Exxon = 1 (N = 21,423)				
Avg. Belief CC Serious	7.635	0.564	5.676	8.757
Climate Law Adoption	0.757	0.429	0	1

Table A.1: Descriptive Statistics

Table A.2 provides the cell means shown in Figure 5.

a_i	s	a_j	Mean
0	0	0	0.0716
0	0	1	0.0495
1	0	0	-0.0538
1	0	1	-0.0486
0	1	0	-0.0836
0	1	1	-0.0944
1	1	0	0.0335
1	1	1	0.0245

Table A.2: Average Beliefs by Triple

The theory defines the voter's posterior belief about climate policy appropriateness based on three inputs: domestic climate action a_i, special interest messaging s, and foreign climate action a_j. Given the dyadic structure of the data, a dyad-year is thus completely characterized by one of eight combinations of these three indicators. Figure 5 reports the (demeaned) average beliefs for each of these eight eventualities. Equivalently, one could set up a linear regression with dyad and year fixed effects, which I specify here. In particular, Let $a_{i,t-1}$, s_t, and $a_{j,t-1}$ be binary indicators for whether the domestic country adopted a climate law in the previous year, whether the year is post-2014 (Exxon's acknowledgment of climate risks), and whether the foreign country adopted a climate law in the previous year, respectively. Then I estimate the following regression with dyad-clustered standard errors:

$$\begin{aligned}\text{CC Serious}_{i,t} = {} & \delta_1 a_{i,t-1} + \delta_2 a_{j,t-1} + \delta_3 a_{i,t-1} \times s_t + \delta_4 a_{i,t-1} \times a_{j,t-1} \\ & + \delta_5 s_t \times a_{j,t-1} + \delta_6 a_{i,t-1} \times s_t \times a_{j,t-1} + \alpha_d + \zeta_t + \varepsilon_{dt},\end{aligned}$$

where α_d are dyad fixed effects and ζ_t are year fixed effects. The main effect of s_t is absorbed by year fixed effects.

Results are shown in Table A.3. As can be seen, the coefficients conform to the theory's expectations, and together can be combined to state the linear hypothesis test comparisons reported in the main text. Recall that comparisons are of the form:

$$\begin{aligned}\text{Domestic}(s_t, a_{j,t-1}) &= E[\text{CC Serious}_{i,t} | a_{i,t-1} = 1, s_t, a_{j,t-1}] - E[\text{CC Serious}_{i,t} | a_{i,t-1} = 0, s_t, a_{j,t-1}]. \\ \text{Foreign}(a_{i,t-1}, s_t) &= E[\text{CC Serious}_{i,t} | a_{i,t-1}, s_t, a_{j,t-1} = 1] - E[\text{CC Serious}_{i,t} | a_{i,t-1}, s_t, a_{j,t-1} = 0].\end{aligned}$$

Then, the linear hypothesis tests reported in Figure 6 can be expressed as

$$\begin{aligned}\text{Domestic}(s_t = 0, a_{j,t-1} = 0) &= \delta_1. \\ \text{Domestic}(s_t = 1, a_{j,t-1} = 0) &= \delta_1 + \delta_3. \\ \text{Foreign}(a_{i,t-1} = 0, s_t = 0) &= \delta_2. \\ \text{Foreign}(a_{i,t-1} = 1, s_t = 0) &= \delta_2 + \delta_4. \\ \text{Foreign}(a_{i,t-1} = 0, s_t = 1) &= \delta_2 + \delta_5. \\ \text{Foreign}(a_{i,t-1} = 1, s_t = 1) &= \delta_2 + \delta_4 + \delta_5 + \delta_6.\end{aligned}$$

	CC Serious (1)
Domestic Adopt ($a_{i,t-1} = 1$)	-0.139***
	(0.010)
Foreign Adopt ($a_{j,t-1} = 1$)	-0.030**
	(0.013)
Domestic Adopt ($a_{i,t-1} = 1$) × Post-Exxon 2014 ($s_t = 1$)	0.305***
	(0.012)
Domestic Adopt ($a_{i,t-1} = 1$) × Foreign Adopt ($a_{j,t-1} = 1$)	0.032**
	(0.014)
Post-Exxon 2014 ($s_t = 1$) × Foreign Adopt ($a_{j,t-1} = 1$)	0.021
	(0.015)
Domestic Adopt ($a_{i,t-1} = 1$) × Post-Exxon 2014 ($s_t = 1$) × Foreign Adopt ($a_{j,t-1} = 1$)	-0.032*
	(0.017)
Observations	32,011
R^2	0.778
Within R^2	0.041
Dyad fixed effects	✓
Year fixed effects	✓

p-values: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
Robust standard errors clustered at the dyad level

Table A.3: Climate Change Seriousness Beliefs and Climate Law Adoption, Before and After Exxon's 2014 Climate Change Revelation

We may be worried that the results are sensitive to the demarcation of the shift in special interest messaging. Table A.4 reports the four key comparisons (the linear hypothesis test results reported in text) for alternative cutoff windows. The qualitative pattern is preserved across all credible cutoff choices: the pre-pivot Domestic effect is consistently negative, the post-pivot effect is consistently positive, and the foreign-action effect attenuates from pre- to post-pivot regimes. Variation in magnitudes across cutoffs reflects which Eurobarometer waves are classified pre- vs. post-pivot rather than instability of the underlying relationships.

Cutoff	Domestic($s = 0, a_j = 0$)	Domestic($s = 1, a_j = 0$)	Foreign($a_i = 0, s = 0$)	Foreign($a_i = 0, s = 1$)
2012-2013	-0.262 (0.015)	0.116 (0.006)	-0.019 (0.019)	-0.013 (0.008)
2014-2015 (baseline)	-0.139 (0.010)	0.166 (0.007)	-0.030 (0.013)	-0.009 (0.009)
2016-2017	-0.052 (0.008)	0.168 (0.010)	-0.035 (0.011)	0.003 (0.011)

Table A.4: Robustness of Exxon Cutoff