The Effects of Naming and Shaming on Public Support for Compliance with International Agreements: An Experimental Analysis of the Paris Agreement

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Abstract How does naming and shaming affect public support for compliance with international agreements? We investigated this question by conducting survey experiments about the Paris Agreement, which relies on social pressure for enforcement. Our experiments, administered to national samples in the United States, produced three sets of findings. First, shaming by foreign countries shifted domestic public opinion in favor of compliance, increasing the political incentive to honor the Paris Agreement. Second, the effects of shaming varied with the behavior of the target. Shaming was more effective against partial compliers than against targets that took no action or honored their obligations completely. Moreover, even partial compliers managed to reduce the effects of shaming through the strategic use of counter-rhetoric. Third, identity moderated responses to shaming. Shaming by allies was not significantly more effective than shaming by non-allies, but Democrats were more receptive to shaming than Republicans. Overall, our experiments expose both the power and the limits of shaming as a strategy for enforcing the Paris Agreement. At the same time, they advance our understanding of the most significant environmental problem facing the planet.

Climate change is one of the most significant challenges facing the planet. Given the worldwide reliance on fossil fuels, addressing the problem will require international cooperation. The 2015 Paris Agreement represents the most recent attempt to promote international cooperation on climate change. Each country that joined the agreement publicly declared how it would contribute to the collective goal of mitigating climate change. The agreement did not stipulate legal or economic sanctions for members that failed to meet their promises, however, leading many scholars and policymakers to decry the lack of formal enforcement as the agreement’s Achilles’ heel.

In the absence of formal enforcement, what might incentivize countries to honor their climate commitments? Some have expressed hope that “naming and shaming” could sustain international cooperation. Naming and shaming occurs when some actors publicly denounce others for doing something wrong. Countries could apply this strategy to climate change by criticizing nations for violating their Paris Agreement pledges. Jacquet and Jamieson characterized the potential to
shame laggards as the “soft but significant power” of the Paris Agreement,¹ and Falkner regarded shaming as the main tool countries could use to “exhort laggards to raise their game.”² We investigate how shaming by foreign countries might affect domestic political support for honoring the Paris Agreement. We know of no direct studies on this question, but research about the effect of shaming on respect for human rights suggests several possibilities. On the one hand, shaming could increase public support for compliance by convincing citizens that their nation’s policies are shameful and need to change.³ On the other hand, shaming could backfire by provoking a defiant reaction in which citizens rally behind their own leaders and denounce foreign shamers.⁴ Finally, shaming could prove inconsequential if domestic audiences are insensitive to foreign opinion or believe the costs of quelling foreign criticism outweigh the benefits.⁵ Which of these three reactions we observe seems likely to depend on the behavior and identities of the shamers and the targets.

To shed light on these logical possibilities, we used experiments to study whether, and under what conditions, shaming might increase US public support for compliance with the Paris Agreement. Our experiments focused on three key questions. First, could shaming shift domestic opinion in favor of compliance? Second, would the effects of shaming depend on the target’s behavior, including its level of compliance and use of counter-rhetoric? Finally, how might the identity of shamers and targets moderate responses to shaming?

In our experiments, all participants considered a future scenario in which the United States joined the Paris Agreement and pledged to reduce carbon emissions by 25 percent. We randomized whether the US subsequently complied with this commitment, whether foreign countries shamed the US, which countries expressed criticism, and how the US responded. We then measured whether participants approved or disapproved of what the US government did.

We conducted our experiments in the US for several reasons. First, the US is an established democracy in which public opinion matters for environmental policy.⁶ As such, it provides an appropriate context for studying how shaming could affect compliance via changes in public opinion. Second, the US is of paramount importance in the global campaign against climate change. The US emits more carbon than any other democracy, and US carbon consumption per capita is among the highest in the world. Third, political events in the US opened a unique research opportunity. In 2017 President Donald Trump announced that the US would

¹. Jacquet and Jamieson 2016, 643.
². Falkner 2016, 1121.
⁵. Hafner-Burton 2008; Hendrix and Wong 2013.
⁶. Many studies have shown that “public opinion has a significant effect on policy choices in environmental and other policy domains.” Moreover, “although public opinion is far from being the only factor influencing a country’s acceptance and implementation of international environmental commitments, it is certainly an important one.” Bernauer and Gampfer 2015, 317.
withdraw from the Paris Agreement. Trump’s decision made it possible to present a hypothetical future scenario in which the US had just entered the Paris Agreement and was making decisions about compliance. It would, of course, be instructive to run experiments in other countries with different preferences and political institutions. Our focus on the US offers unique insight into a critical case, while also providing a template for future experiments about the effects of shaming in other political systems.

Our experiments yielded three sets of findings. First, shaming by foreign countries shifted US public opinion in favor of compliance, increasing the political incentive to honor the Paris Agreement.

Second, the effects of shaming depended on the target’s behavior: specifically, its level of compliance and use of rhetoric. In our experiments, shaming had little impact when the US government made no attempt to comply or met its obligations in full. Shaming was, however, effective when the government took partial steps toward compliance but fell short of its Paris commitments. These findings suggest that shaming may be most potent when directed against “intermediate” policies that are prima facie neither shameful nor laudable.

Our experiments also revealed how rhetoric could reduce the effects of shaming. Shamed countries have a variety of counter-rhetorical options, ranging from contrition to defiance. We studied both ends of this counter-rhetorical spectrum. Although defiance did little to move domestic opinion, contrition substantially reduced—but failed to erase—the impact of shaming. In summary, our experiments demonstrated how states can adjust their compliance and rhetoric to reduce the domestic costs of shaming.

Our third set of findings concerns the role of identity. Studies of human rights have found that shaming by allies is more effective than shaming by non-allies. We did not observe this pattern for climate change, suggesting that the distinction between allies and non-allies may be more relevant on some issues than on others. We also considered the identity of domestic audiences. In the US, Democrats and Republicans differ in their beliefs about climate change and support for emission controls. We therefore estimated reactions to shaming not only among the general public but also for each partisan cluster that future administrations might want to court. Democrats and Independents were more receptive to shaming than Republicans, a finding with important political implications.

We provide, to our knowledge, the first experimental evidence about how shaming could affect domestic incentives to comply with international agreements. As such, this research note complements a growing body of observational studies that use historical cases and cross-national statistical analyses to investigate the effects of shaming. At the same time, it advances our understanding of the most significant environmental issue facing the planet. The current approach to climate cooperation,

8. For experiments about other aspects of the Paris Agreement, see Barrett and Dannenburg 2016; Tingley and Tomz 2020.
embodied in the Paris Agreement, relies on shaming. Our study exposes the power and limits of shaming as a strategy for inducing countries to honor their climate commitments.

Could Shaming Contribute to Compliance?

Agreements without formal enforcement may attract wider membership and prove more sustainable than agreements with harsh penalties. The Paris Agreement fits this mold; it achieved nearly universal participation because the key obligations were flexible and unenforceable, at least by traditional legal means. Whether the Paris Agreement succeeds will, therefore, depend on nontraditional enforcement strategies such as shaming.

Shaming could affect target governments at two levels. First, shaming could create international pressure to comply by imposing material and social costs. Materially, shaming could make it harder to attract international partners and trigger economic sanctions or military intervention against the target. Shaming could also inflict international social costs. Research has shown that governments value not only their material welfare but also their status in the international community. By disparaging a country for bad behavior, shaming could undermine a country’s status or prestige on the world stage.

Second, shaming could generate domestic pressure to comply. It is well known that compliance with international agreements depends not only on international calculations about welfare and prestige but also on the opinions of domestic audiences such as voters, interest groups, and elites. Foreign shaming could affect compliance by swaying these domestic groups. Indeed, studies of economic, social, and military issues have shown that foreign commentary can “resonate in domestic politics, creating new demands on governments.”

Although both types of pressure are important, we focus on domestic pressure. To our knowledge, scholars have not tested how foreign shaming affects domestic support for compliance with international environmental agreements. They have, however, investigated a related issue: the impact of foreign shaming on domestic mobilization for human rights. A lively debate exists about whether foreign shaming increases, decreases, or has no effect on domestic demands for human rights. We review this literature and adapt it to develop expectations about why

16. Kelley and Simmons 2019, 500; see also Hayes and Guardino 2011.
foreign shaming might succeed, backfire, or have no effect on adherence to climate commitments.

Some scholars argue that foreign shaming can mobilize domestic audiences to demand better respect for human rights. Shaming could spur domestic demands for several reasons. First, shaming could inform domestic audiences. By exposing violations of human rights, foreign shaming could help domestic audiences recognize the depth and breadth of misconduct by their own government. Second, foreign shaming could persuade domestic audiences. By framing behavior as shameful, foreign actors could convince domestic audiences that their government’s behavior is wrong—that it violates rights, treaty commitments, or international norms. Finally, foreign shaming could sensitize domestic audiences to the international costs of bad behavior, including the material costs of being labeled as unreliable and the social costs of being castigated as a pariah.

Other scholars argue that foreign shaming can backfire, provoking defiance instead of compliance. In a series of pioneering studies about human rights, Terman shows that domestic audiences often perceive foreign condemnation as a threat to their status. Political entrepreneurs can reinforce the perceived threat to status by characterizing foreign shaming as an attack on the nation’s prestige, identity, and sovereignty. According to Terman, this defensive reaction can change domestic politics, increasing the likelihood that leaders “will not only ignore outside pressure, but double down on violations as a response.” Thus, shaming could backfire by pushing citizens to rally behind their government instead of clamoring for reform.

Shaming could also backfire by eroding the norms shamers hope to defend. A large literature in international relations examines how international norms emerge and evolve. This literature suggests two possibilities. On the one hand, shaming could reinforce norms by clarifying which behaviors are socially (un)acceptable. On the other hand, shaming could erode norms by suggesting that allegedly inappropriate behaviors are common or “normal.” As Carnegie and Carson contend, shaming countries for violating a commitment could ironically reduce the “perceived social opprobrium that results from a violation.” Thus, shaming could backfire not only by triggering a defensive reaction but also by throwing norms into doubt.

17. Krain 2012; Murdie and Bhasin 2011; Murdie and Davis 2012.
20. Studies have shown that domestic audiences are sensitive to their country’s international reputation. Brutger and Kertzer 2018; Tomz 2007b.
23. See also Ayoub 2014 and Wachman 2001. The hypothesis that shaming could trigger defiance fits with psychological research showing that criticism can backfire when the target views the critic as an “outgroup.” Hornsey and Imani 2004. We test this hypothesis by experimentally varying the identity of the shamer.
A final group of scholars argues that foreign shaming might not be consequential.\textsuperscript{26} Effects could be null for many reasons. Domestic audiences might question the credibility and motives of foreign critics,\textsuperscript{27} counteract shaming by mounting a rebuttal,\textsuperscript{28} or conclude that the costs of foreign shaming seem minor, compared to the economic or cultural costs of reform.

In summary, scholars disagree about whether foreign shaming promotes, undermines, or has no effect on domestic demands for human rights. All three reactions are plausible, and each has some empirical support.

Given ongoing debates about the effects of shaming on human rights, one should not take for granted that shaming would work in other realms of international relations. Moreover, even if scholars agreed about the consequences of shaming for human rights, one would have to be cautious about extrapolating those findings to other issues. As others have emphasized, the effectiveness of international agreements, and the strategies for enforcing them, vary with the nature of the problem, including the number of actors, the distribution of costs and benefits, and the severity of informational problems.\textsuperscript{29} How shaming affects domestic support for climate policies is ultimately an empirical question, which we address through experiments.

Under What Conditions Might Shaming Be Effective?

Shaming may be more effective in some situations in than in others. In this section, we discuss why the effects of shaming should depend on the \textit{behavior} of the target country—specifically, its level of compliance and use of counter-rhetoric. We also consider how the \textit{identity} of shamers and targets could moderate responses to shaming.

\textbf{Compliance As a Moderator}

Domestic reactions to shaming should depend on how extensively the target government complied with its international commitments. For simplicity, we distinguish three levels of compliance with Paris Agreement pledges. Full compliance occurs when a country does exactly what it pledged; partial compliance involves making progress toward the stated goal but ultimately falling short; and noncompliance occurs when the country makes no progress toward its pledges.

Although shaming could be consequential in all three situations, we believe shaming stands the best chance of success against partial compliers. \textit{Prima facie}, partial compliance is neither laudable nor shameful. On the one hand,

\begin{itemize}
\item \textsuperscript{26} Hafner-Burton 2008; Hendrix and Wong 2013.
\item \textsuperscript{27} Entman 2004, 55.
\item \textsuperscript{28} Bailey 2008.
\item \textsuperscript{29} Mitchell 2006; Koremenos, Lipson, and Snidal 2001.
\end{itemize}
citizens may credit a partially complying government with making progress and keeping some of its promises. On the other hand, citizens may question whether a partially complying government had done enough to solve the problem and meet its commitments.

This domestic ambivalence creates space for shaming to succeed. Research on election campaigns shows that campaign messages are more likely to persuade citizens who feel ambivalent or cross-pressured. We extend this logic to international shaming. Other factors equal, foreign shaming should be more likely to change the minds of citizens who feel ambivalent about their government’s behavior than of citizens who are not weighing competing considerations. In short, foreigners may be able to sway an ambivalent public by emphasizing the negative side of the ledger and downplaying the positive side.

Shaming seems less likely to sway citizens when their country is complying fully. In such situations, domestic audiences may perceive shaming as unjustified, a perception the government could reinforce by highlighting its respect for promises. Búzás argues that countries can deflect normative criticism about human rights by noting that they are complying with international law, even when the letter of the law falls short of human rights norms. Similarly, governments could counter criticism on climate change by touting their full compliance with the Paris Agreement.

Finally, foreign shaming seems less likely to move domestic opinion when the government is making no effort than when it has taken partial steps to honor its commitments. A large literature in international relations shows that citizens disapprove of noncompliance, even in the absence of shaming. To citizens who already viewed noncompliance as deplorable, shaming would restate the obvious.

To be clear, we are not claiming that shaming could work against only partial compliers. On the contrary, we recognize that shaming could move opinion even in cases of full compliance or complete noncompliance. Nevertheless, our logic implies that shaming should be more effective against partial compliers.

Our conjecture fits with recent work about public reactions to corporate environmentalism. Experiments have shown that corporations can earn the goodwill of citizens, interest groups, and politicians by taking partial steps to address environmental problems. But shaming by nongovernmental organizations (NGOs) can prevent corporations from reaping the full public relations benefits of their half-hearted actions. A similar logic could apply to governments: the public may be most persuadable, and shaming most effective, in cases of partial compliance.

33. Kertzer and Brutger 2016; Simmons 2009; Tomz 2007a; Trager and Vavreck 2011; Wallace 2013.
Counter-Rhetoric As a Moderator

As Adler-Nissen points out, “states do not just accept being stigmatized; they develop a variety of ways to cope with their sullied identity.”\(^{36}\) We consider one approach to stigma management: using counter-rhetoric to minimize or even reverse the effect of shaming.\(^{37}\)

Accused countries, like accused criminals, can employ a variety of rhetorical strategies, ranging from contrition to defiance. At the contrite end of the spectrum, countries could respond by acknowledging that foreign shamers are right, apologizing for falling short, and committing to do better. Expressing contrition could help the country earn forgiveness in the court of domestic opinion, just as apologizing for a crime could help an individual earn forgiveness in a court of law.

Scholars have begun to study contrition, expressed through apologies, in world affairs. We now have a good understanding of how apologies affect foreign countries and interstate relations,\(^{38}\) but we know less about how apologies affect domestic audiences.\(^{39}\) Would apologies lead domestic audiences to forgive the government for past transgressions, or would they backfire—especially among nationalist publics—by signaling that the contrite government had caved to foreign pressure?

At the opposite end of the rhetorical spectrum, a government could fight shaming with defiance: denying that it had done anything wrong, arguing that outsiders have no right to meddle in the country’s internal affairs, and characterizing foreign shaming as an attack. Countries have tried this strategy in the realm of human rights. China, for example, responded to foreign shaming about human rights by arguing that Western states were trying to “usurp the issue of human rights to use it as a political lever against developing states, interfering in their internal affairs in a culturally hegemonic fashion.”\(^{40}\) Defiant rhetoric could lead citizens to dismiss foreign criticism and/or rally behind their own government.\(^{41}\)

In general, we expect counter-rhetoric to attenuate the effects of foreign shaming, but the degree of attenuation is an open question. In the literature on political persuasion, there is no consensus about how citizens respond to competing arguments. Some studies find that competing voices offset each other, yielding no net change in public opinion. Other studies find that even in competitive political environments, some arguments carry more weight than others, causing public opinion to change.\(^{42}\) Given this controversy, we designed experiments to estimate whether and to what degree contrition and defiance would moderate the effects of shaming.

38. Lind 2011.
41. Terman 2020.
42. Druckman and Lupia 2016.
Identities As Moderators

Finally, identities could moderate the effects of shaming. Previous work has emphasized the identities of the shamers. Social psychologists have found, for example, that people are more receptive to shaming by members of their ingroup than by members of an outgroup.43 Likewise, international relations researchers have shown that countries respond more favorably to human rights shaming by allies than by adversaries.44 Applying these insights to the Paris Agreement, one might expect shaming by allies to be more effective than shaming by non-allies.

The effects of shaming could also vary with the identities of domestic audiences. Consider party affiliation, the most important political identity in the US. Belief in anthropogenic climate change, support for emissions control policies, and support for the Paris Agreement tend to be stronger among Democrats than among Republicans. Shaming could therefore have weaker effects on Republicans, who might question the credibility and motives of foreign critics or conclude that the costs of complying with Paris outweigh the costs of shaming. Alternatively, shaming could have weaker effects on Democrats, to the extent that foreign shamers articulate pro-compliance opinions Democrats would have reached on their own.

In the next section we describe a set of experiments, which we designed to estimate the effects of shaming, and to study how the impact of shaming might depend on the compliance and rhetoric of the target, as well as on the identities of foreign shamers and domestic audiences.

An Experimental Approach

Three considerations led us to study shaming experimentally. First, experiments provided a credible way to isolate the causal effect of shaming. If shaming in international relations occurred randomly, one could confidently use historical data to estimate the effect of shaming on domestic audiences. In reality, though, shaming is a “selective and political” decision.45 When choosing whether to shame, governments and NGOs weigh many factors, including the behavior, political institutions, and geopolitical relations of the potential target.46 These complications make it difficult, with historical data, to separate the effects of shaming from the effects of background conditions that contributed to the shaming decision.47 We overcame this inferential challenge by experimentally manipulating whether foreign countries shamed or not.

45. Terman and Voeten 2018, 6; see also Terman and Byun forthcoming.
47. Ausderan 2014.
Second, experiments provided a way to isolate the effects of moderator variables. We hypothesized that the effects of shaming would depend on the target’s level of compliance and use of counter-rhetoric. Both moderators are endogenous, depending not only on political factors in the target state, but also on expectations about shaming itself. This endogeneity makes it difficult, with historical data, to draw firm conclusions about interaction effects. We also hypothesized that the effects of shaming would depend on the identifies of foreign shamers, another endogenous variable in historical settings. We overcame these limitations by randomizing moderator variables, including the compliance and rhetoric of the target, and the identity of foreign shamers.

Finally, experiments helped address the unfortunate paucity of historical data. The Paris Agreement is a new development, and the first global stocktake—designed to assess progress and inform new pledges—will not take place until 2023. Without experiments, researchers would need to wait for years for information to emerge about compliance, shaming, counter-rhetoric, and the reactions of domestic audiences. Our experiments offered a glimpse into the future, a way to anticipate events that have not yet taken place.

In summary, we designed our experiments to offer unique insight about public reactions to shaming. We acknowledge, however, that all methods, including experiments, have limitations. Our experiments exposed respondents to news about shaming by foreign countries. In practice, would citizens know whether foreign countries were being critical or not? On the one hand, previous research has found “impressive evidence” of the prevalence of foreign voices in American news. On the other hand, some people, especially those with little interest in politics and public affairs, might not follow the news or take note of foreign criticism. Our experiments reveal the potential effects of shaming—how citizens would react if they learned about foreign shaming. The actual effects of shaming are likely to vary from case to case, depending on public awareness of foreign commentary.

We conducted four experiments, which we embedded in public opinion surveys of adults in the US. The first three were fielded in September and October 2018, and the fourth in early January 2021. Respondents were recruited by Lucid, which used quota sampling to approximate the US adult population with respect to gender, age, race/ethnicity, and region. We weighted the sample to match the distribution of party affiliation in the US population around the time of our study (32.7% Democrat, 41.8% Independent, 25.5% Republican).

In all experiments, respondents considered a hypothetical future in which the US had joined the Paris Agreement and pledged to reduce emissions. We designed Experiment 1 to estimate the effects of shaming and assess the importance of two moderators: the

49. A separate and important consideration is whether public opinion about climate change can put pressure on elected officials. Egan and Mullin 2017 suggest modest influence, whereas others emphasize the increasing salience of climate change to US voters. Leiserowitz et al. 2020.
50. For details about the sample, its representativeness, and balance across the experimental conditions, see the online supplement.
target’s level of compliance, and the partisan identity of domestic audiences. The other experiments assessed the remaining moderators: the target’s use of counter-rhetoric (Experiments 2 and 3) and the identity of the shamers (Experiment 4).

Experiment 1

Our first experiment \( (N = 2,884) \) contained two randomized elements: the level of compliance the US achieved after joining the Paris Agreement, and whether foreign countries shamed the US. Experiment 1 served as a template for three follow-up experiments, described later.51

In Experiment 1, all participants read this preamble:

The Paris Agreement is an international agreement about climate change. Every country that joins the agreement promises to contribute to the worldwide goal of fighting climate change, by developing and carrying out a plan to reduce its emissions of carbon dioxide as quickly as possible.

In the future, the US government must decide whether to join the Paris Agreement, and whether to pass new laws to reduce US emissions of carbon dioxide. On the following screens, we will describe one approach the US government could take in the future, and ask whether you approve or disapprove.

All participants then considered a scenario in which a future US administration joined the Paris Agreement.

In 2021, the US government announced that it would join the Paris Agreement. When it officially joined later that year, the US said: “As a member of the Paris Agreement, we pledge to reduce US emissions of carbon dioxide by 25 percent.”

Having established this context, we randomized what steps, if any, the US government took to comply. Some participants read that the US did not pass any new laws to reduce carbon emissions. Others read that the US passed laws to reduce emissions by either 5 percent or 25 percent. We randomized the costs (in square brackets) of these emission-control policies, but because costs were not our focus here, we averaged over costs when analyzing the data. The three conditions appear in what follows.

No Action: Over the next few years, the government did not pass any new laws to reduce carbon dioxide emissions. Because it did not pass any new laws, the government did not affect US energy prices or US carbon emissions.

51. For the text of the experiments, see the online supplement. We included comprehension questions to make sure participants understood the scenario they received. When analyzing the data, we restricted the sample to respondents who correctly answered at least 80 percent of the comprehension questions, though the online supplement shows that our conclusions were similar when we included all respondents.
Cut 5 percent: Over the next few years, the government passed new laws to reduce carbon dioxide emissions. Experts agreed that the new laws would increase US energy prices by [4 or 10] percent and reduce US carbon emissions by 5 percent.

Cut 25 percent: Over the next few years, the government passed new laws to reduce carbon dioxide emissions. Experts agreed that the new laws would increase US energy prices by [4 or 10] percent and reduce US carbon emissions by 25 percent.

These policies differed not only in their effects on carbon emissions, but also in their compliance with the Paris Agreement. Cut 25 percent amounted to full compliance, cut 5 percent represented partial compliance, and no action amounted to noncompliance.

We independently randomized whether foreign countries shamed the US. Half the participants saw no mention of foreign shaming; the other half received a passage in which foreign countries shamed. The content of the shaming varied, depending on what the US had done.

Shaming If No Action: Many countries said the US should be ashamed of itself. They criticized the US for doing nothing to reduce US emissions, and for violating the promises it made when it joined the Paris Agreement.

Shaming If Cut 5 percent: Many countries said the US should be ashamed of itself. They criticized the US for doing so little to reduce US emissions, and for violating the promises it made when it joined the Paris Agreement.

Shaming If Cut 25 percent: Many countries said the US should be ashamed of itself. They criticized the US for doing so little to reduce US emissions.

Having presented the scenario, we asked: “Taking into account all the decisions the US government made in the passage you read, would you approve or disapprove of what the US government did overall?” The response options were approve strongly, approve somewhat, neither approve nor disapprove, disapprove somewhat, and disapprove strongly.52 We report a natural and easily interpretable statistic, the percentage of respondents who approved, but our conclusions also held when we analyzed the full five-point scale.53

Main Effects in Experiment 1

Having described Experiment 1, we now report how participants responded. Figure 1 displays the percentage of Americans who approved of how the US government behaved. The solid dots represent approval without shaming; the hollow dots represent approval with shaming; and the lines bisecting the dots are 95 percent confidence intervals.

52. If we had measured approval of specific politicians, rather than policies, the effects of shaming might have been smaller, since many factors beyond climate policy affect approval of politicians.
53. See the online supplement.
In vignettes without shaming (solid dots), three findings emerged. First, very few Americans (only 17%) approved of inaction, implying little support for noncompliance even in the absence of shaming. Second, a large majority (64%) approved when the government slashed emissions by 5 percent. Compared to doing nothing, this modest action increased the government’s popularity by $64 - 17 = 47$ percentage points. Finally, when the government quintupled its cuts from 5 to 25 percent, thereby living up to its Paris pledge, approval rose by only $73 - 64 = 9$ percentage points. We conclude that, without shaming, the government could substantially increase its public image by passing modest legislation, but additional environmental effort—including full compliance with international commitments—would not bring commensurate gains in popularity.

We now consider how shaming affected these conclusions. Comparing the hollow versus solid dots, we see that shaming proved inconsequential when the US took no action (noncompliance), and when it cut emissions by 25 percent (full compliance). In contrast, shaming substantially changed American perceptions of partial compliance. When the government cut emissions by 5 percent, shaming reduced public approval from 64 to 42 percent, depriving the government of nearly half of the credit it would have reaped for taking modest action without shaming.

These patterns not only document the power of shaming but also speak to ongoing research about unilateralism versus reciprocity in climate policy. Studies have found strong public support for doing something about climate change, regardless of how other countries behave. We add, however, that without shaming, most Americans would approve of modest efforts, such as reducing emissions by only 5 percent.

54. Bechtel and Scheve 2013; Beiser-McGrath and Bernauer 2019; Bernauer and Gampfer 2015; Tingley and Tomz 2014.
percent. Foreign pressure—applied via shaming—may help galvanize public support for bolder action on climate change.

**Incentives to Comply in Experiment 1**

How might shaming affect the government’s incentive to comply with its Paris commitments? To find out, we used data from Experiment 1 to estimate how approval would change if the government complied fully (25% cut) instead of partially (5% cut), and how foreign shaming would affect the size of the gain. We use “incentive” as shorthand for the estimated gain in public approval. Although many factors in addition to public opinion affect the government’s incentive to comply, our conclusions should hold as long as the incentive to adopt a policy is increasing in the domestic popularity a government could gain by adopting the policy.

When foreign countries abstained from shaming (solid dots in Figure 1), 64 percent approved when the government complied partially, versus 73 percent when it complied fully. Thus, without shaming, the government could gain nine approval points by increasing its compliance from partial to full. Suppose instead that foreign countries shamed strategically by criticizing the US if and only if it failed to honor its Paris pledge. In that case, the government could gain around thirty approval points by complying fully with the Paris Agreement. These values imply that shaming can incentivize governments to honor their international commitments. In our experiments, the political incentive to comply fully instead of partially was three times stronger when foreign countries shamed than when they did not (Figure 2).

**Effects in Experiment 1, by the Partisan Identity of Domestic Audiences**

Using data from Experiment 1, we also tested whether the effects of shaming varied with the partisan identity of domestic audiences. Splitting the sample by party is informative not only to test for moderation, but also because politicians might pander to their own party rather than the electorate as a whole.

Figure 3, which splits the sample by party ID, supports several conclusions. First, consistent with previous research, support for climate action was strongest among Democrats and weakest among Republicans, with Independents in between. Second, in all three groups, shaming reduced approval of partial compliance, while having little effect when the government took no action or cut emissions by 25 percent. The sole exception was Democrats, whose impressions of a 25 percent cut soured when foreigners criticized the US for not doing enough.

Third, for each level of government action, Democrats were more receptive to shaming than Republicans. This is most evident in the middle row, where shaming reduced approval of a 5 percent cut by twenty-four points among Democrats,

55. In scenarios involving partial compliance, the effects on all three partisan groups were substantively and statistically significant. For a plot of the treatment effects, see the online supplement.
versus only fifteen points among Republicans, and the bottom row, where shaming reduced approval of a 25 percent cut by nine points among Democrats, while increasing approval by five points among Republicans.

Although reactions to shaming varied by party, our experiments suggest that shaming would increase the incentive to comply, regardless of which electoral segment the government was courting. When pandering to a Democratic audience, the incentive to honor US commitments fully, rather than partially, would be $88 - 80 = 8$ points in the absence of shaming, $79 - 56 = 23$ points with blanket shaming, and $88 - 56 = 32$ points with selective shaming. The analogous incentives would be $11$, $24$, and $35$ points among Independents, and $7$, $27$, and $22$ points among Republicans. We conclude that foreign shaming can alter domestic political incentives not only on average, but also for governments with strong partisan biases.

**Experiments 2 and 3**

In Experiments 2 and 3, we tested whether governments could use counter-rhetoric to negate the effects of shaming. Experiment 2 focused on one end of the counter-
rhetorical spectrum: contrition. Participants read: “The US government responded by saying that other countries were right. It apologized for not doing more and said it would work to reduce US emissions in the future.” We administered this condition to 1,160 participants in October 2018.

![Figure 4. Effects of shaming without a rebuttal (solid dots) and with contrition (hollow dots)](https://doi.org/10.1017/S0020818321000394)

By combining the data from Experiment 2 with information from Experiment 1, we estimated the effects of shaming with and without contrition. Figure 4 shows how shaming affected approval when the US did not respond (solid dots), and when it responded with contrition (hollow dots). All treatment effects in Figure 4 were estimated with respect to a baseline in which foreign countries abstained from shaming.

Figure 4 shows that contrition was somewhat effective in counteracting shaming. When the government cut emissions by 5 percent, shaming alone caused approval to fall by twenty-two percentage points, but contrition reduced the effect to only eight points.56 Thus, a partially compliant government could minimize the political consequences of shaming by acknowledging that foreign critiques were valid and promising to do more in the future.

Although expressing contrition could counteract shaming in the short run, it is not clear how long the public would accept this excuse. If, as time passed, the US failed to take additional action and bring itself into full compliance, would shamers regain the rhetorical advantage? Future research could examine the long-run sustainability of expressing contrition.

Experiment 3 focused on the other end of the counter-rhetorical spectrum: defiance. Participants read: “The US government responded by saying that other countries had no right to meddle in our affairs. It said other countries were trying

56. Here, too, reactions varied by political party. Contrition counteracted shaming among all three partisan subgroups but was most effective among Independents and Republicans. See the online supplement.
to hurt or control the United States.” We administered this condition to 1,214 participants in October 2018. By combining these data with measures from Experiment 1, we estimated the effects of shaming with and without a defiant rebuttal. Defiance was far less effective than contrition at counteracting the effects of shaming (Figure 5).57

Experiment 4

In Experiment 4, we varied the identity of shamers while holding US action constant at a 5 percent cut. There were five experimental conditions: a control condition with no shaming, and four treatment conditions involving different sets of shamers. In the many countries condition, we repeated the language from earlier experiments, in which “many countries” said the US should be ashamed. In the allies only condition, “many US allies” said the US should be ashamed but “there were no comments from countries that were not US allies.” In the non-allies only condition, “many countries that were not US allies” said the US should be ashamed, but “there were no comments from US allies.” Finally, in the allies and non-allies condition, “many US allies and many countries that were not US allies” said the US should be ashamed. We fielded the experiment to 2,878 subjects in early January 2021, before President-elect Joseph Biden took office and rejoined the Paris Agreement.

We did not find systematic differences by who shamed; the treatment effects (approval with shaming, minus approval without shaming) were similar across these new conditions (Figure 6).58 We conclude that the traditional distinction

57. Although defiance was not effective on average, reactions varied by political party. Defiant rhetoric reduced the effect of shaming on Independents and Republicans, while backfiring among Democrats. See the online supplement.

58. The effect of shaming by “many countries” was nineteen points in Experiment 4, similar to the twenty-two-point effect we found when we fielded Experiment 1 two years earlier.
between allies and non-allies, though important for human rights, may not be as relevant to shaming on climate change.

Conclusion

We used experiments to investigate how naming and shaming could affect domestic support for compliance with the Paris Agreement. We found that shaming by foreign countries shifted domestic public opinion in favor of compliance, increasing the political incentive to honor the agreement. The effects of shaming depended on the behavior of the target, however. Shaming was more effective against partial compliers than against targets that took no action or honored their obligations completely. Moreover, even partial compliers could use counter-rhetoric such as contrition to reduce the effects of shaming. Finally, the identities of actors played a moderating role. Although shaming by allies was not significantly more effective than shaming by non-allies, Democrats were more receptive to shaming than Republicans. Overall, our experiments exposed both the power and the limits of shaming as a strategy for enforcing the Paris Agreement.

Our findings also speak to debates about environmental pacts beyond the Paris Agreement. Most international environmental agreements lack formal enforcement mechanisms. Could informal enforcement strategies such as shaming compensate for the absence of legal and economic penalties? In showing how shaming could help enforce the Paris Agreement, our experiments suggest that shaming could contribute to compliance with other environmental accords, as well.

Beyond its substantive findings, this research note offers a methodological template for future experiments about shaming. One could, for example, design new experiments to clarify how the identities of shamers would affect the enforcement

of climate agreements. In our studies, the traditional distinction between allies and non-allies proved surprisingly inconsequential, but other aspects of identity could have more explanatory power. The credibility of shaming could depend, for example, on whether shamers had honored their own international climate commitments, or whether their efforts to curtail carbon emissions were ambitious or trivial. Shaming might also be more effective among economic peers than among countries at disparate levels of economic development. Follow-up experiments could explore these possibilities to gain a better understanding of how identity matters.

Future experiments could also address various concerns about external validity. We asked respondents to consider a hypothetical scenario and omitted details some people might know if they were living through the experience. It is not obvious whether a more concrete and detailed experimental design would have generated different findings, however. Indeed, new research on survey experiments finds few differences in how participants respond to hypothetical versus real scenarios, and to abstract versus concrete vignettes.60 Nevertheless, one could assess the robustness of our conclusions by adding details to subsequent experiments.

Researchers could, for instance, provide a more elaborate chronology of events.61 Our vignette summarized how the US government behaved “over the next few years,” without offering a detailed timeline. Future work could specify how quickly the US acted and how the government’s actions affected the trajectory of energy prices62 and carbon emissions. Follow-up work could also vary when foreign shaming occurred, since domestic reactions might depend on the timing of foreign criticism. Finally, by presenting the narrative in stages, researchers could measure approval at different junctures, opening opportunities to study the evolution of domestic opinion.

Researchers could also embellish our account of the rhetorical battle between shamers and targets. Future experiments could, for instance, present the full transcripts of remarks by shamers and indicate where and how often they registered complaints. Next-generation experiments could also include thicker descriptions of counter-rhetoric and more rebuttals, articulated individually or conjointly. Nations often cite adverse economic shocks as reasons for defaulting on trade and financial commitments.63 Countries that default on their Paris commitments could offer similar excuses to supplement or replace the counter-rhetoric we studied.

Finally, researchers could expand our vignettes to cover a wider range of domestic actors and policy instruments. In the US, all levels of government—federal, state, and local—contribute to climate policy through a complex mix of laws and regulations. We simplified this reality by focusing on whether the US government had passed new laws to reduce carbon emissions. Future experiments could provide a more

61. We thank the editors and anonymous reviewers for these suggestions.
comprehensive discussion of domestic actors and policies. One could then measure public approval not only of government policies but also of the politicians and bureaucrats who were most influential in shaping the outcomes.

By extending our experiments in these ways, researchers could shed more light on the politics of shaming and climate change. We caution, however, that too much complexity could make the vignettes inaccessible and reduce, rather than increase, external validity. Too many details could create an artificial situation in which participants know far more about the experimental scenario than ordinary citizens would know about the real world. When designing the experiments here, we sought a middle ground: providing enough detail for participants to process the scenario, without overwhelming them or relaying more information than a typical American might know about climate politics.

We conducted our experiments in the United States, the world’s most powerful democracy and the largest democratic contributor to climate change. It is natural to wonder whether the effects of shaming would be different in other countries. Would shaming be more effective in democracies such as France, Germany, Japan, and the UK, where there is greater consensus on the need for climate action and less polarization along partisan lines? Could shaming be effective in urging autocratic countries such as China to honor their Paris commitments? Scholars could pursue these questions by administering our experiments in other political contexts.

Finally, our experiments focused on climate change, an issue of undisputed importance for the future of the planet. How might shaming affect opinions about other international issues? When theorizing about reactions to shaming, we drew inspiration from the human rights literature. We acknowledge, however, that shaming may have different consequences for climate change than for other topics. It would therefore be instructive to theorize about how the effects of shaming might vary across issues. Such a theory might emphasize differences in underlying problem types and whether shamers are clamoring for reforms that would threaten the target’s sovereignty. A general theory of shaming’s effectiveness across issues is beyond the scope of this research note. We expect, however, that future theoretical innovations and randomized experiments will complement observational studies to provide a fuller understanding of the role of shaming in international relations.

Data Availability Statement

Replication files for this research note may be found at <https://doi.org/10.7910/DVN/JVKQLC>.

65. Terman and Byun forthcoming.
Supplementary Material

Supplementary material for this research note is available at <https://doi.org/10.1017/S0020818321000394>.

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Key Words

Naming and shaming; compliance; international agreements; Paris agreement; climate change; public opinion; survey experiments

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