FRAMING THE SUPER WICKED PROBLEM: THREE ESSAYS ON AMERICAN CLIMATE ATTITUDES

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ABSTRACT

Eric Parajon: Framing the Super Wicked Problem: Three Essays on American Climate Attitudes
(Under the direction of Cameron Ballard-Rosa)

Addressing global climate change effectively and equitably requires significant political will and public support. In the United States, persistent climate skepticism complicates this effort. This dissertation investigates the political psychology of climate attitudes, with a focus on how identity-based factors, particularly racial resentment and nationalism, influence support for climate action.

This dissertation consists of three papers. The first paper examines how the perceived racial distributional effects of climate policy shape the views of White Americans. I argue that racial resentment has emerged as a key determinant of climate attitudes, especially when policies are seen as benefiting communities of color. Using both correlational and experimental survey data, I find that higher levels of racial resentment are associated with lower support for domestic and international climate policy, regardless of partisanship. An original survey experiment shows that support declines further when respondents are explicitly informed about the racial equity goals of climate action.

The second paper investigates whether racial resentment operates as a distinct mechanism or merely reflects broader conservative worldviews. Using an original survey of White Americans, I test competing explanations for the linkage finding that racial resentment remains a significant and independent predictor of opposition to climate policy, even after accounting for other psychological and ideological factors. These results indicate that racial resentment is not merely a proxy for cultural conservatism, but represents a distinct form of out-group animus that actively shapes climate attitudes.

The third paper, co-authored with Tyler Ditmore, explores strategies to overcome climate skepticism. Through a vignette and a conjoint experiment, we find that framing green industrial policy as a tool of international economic competition, particularly with China, is especially effective in shifting opinions among ex-ante climate skeptics.

Collectively, these papers highlight the importance of non-material factors, such as racial attitudes and sociotropic concerns, in shaping public support for climate policy. They offer critical insights for scholars and policymakers on how climate messaging can either build or erode coalitions for action. Understanding these dynamics is essential for crafting politically viable and inclusive climate strategies.

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INTRODUCTION: FRAMING THE SUPER WICKED PROBLEM

> Scholars long ago characterized a public-policy problem with the kinds of features presented by climate change as a "wicked problem" that defies resolution because of the enormous interdependencies, uncertainties, circularities, and conflicting stakeholders implicated by any effort to develop a solution... Climate change, however, has been fairly described as a "super wicked problem" because of its even further exacerbating features.
>
> Richard J. Lazarus
> "Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future" (2009)

Motivation

Effectively and equitably addressing global climate change demands not only ambitious action but also significant political and public support. Because a meaningful climate response requires coordinated domestic and international efforts, understanding how to cultivate that support among the public is essential. This dissertation emphasizes the critical role of framing strategies in shaping public attitudes toward climate action, using surveys and experiments to identify the causal mechanisms that influence support for both domestic climate policies and international agreements. Specifically, I examine the domestic politics of public support for climate policy in the United States, a key actor in the fight against the impacts of climate change. The central question that guides my research is: What factors shape American public opinion on climate change?

For meaningful climate policy to stick, citizens need to approve of it. An emerging consensus among the American public about the importance of addressing climate change is one of the few means that could move American political elites toward taking direct action (Erikson, MacKuen, and Stimson 2002a; Page, Shapiro, and Dempsey 1987). Individuals matter in the environmental movement, both in terms

of their own preferences and actions and in the collective opinion of the general public, which serves, in part, to shape government policy (Brulle, Carmichael, and Jenkins 2012; Mildenberger and Tingley 2017). Understanding both what individuals think about climate change, and how their opinions are formed, is vital to understanding what policies are palatable to the public and thus more likely to be passed and adhered to. In this dissertation, I primarily focus on the opinions of White Americans. As the U.S. is the world's second-largest emitter of greenhouse gases (Barrett 2003) and a key player in global climate negotiations (Urpelainen and Van de Graaf 2018) it holds a pivotal role in addressing the climate crisis. Additionally, I concentrate on the opinions of White Americans for both theoretical and practical reasons. Practically Whites make up the racial and voting majority in the U.S., therefore their opinions wield a high degree of political power. Theoretically, focusing on the attitude of White Americans connects this dissertation to the broader debate surrounding the linkage between racial resentment and climate attitudes. Additionally, it is unclear how cleanly non-White Americans would fit into this argument (Davis and Wilson 2021).

To date, existing explanations for support for environmental action among the American public are lacking in fully addressing the role of racial attitudes.[1] Much of the literature has focused on the partisan divide in climate attitudes Brulle, Carmichael, and Jenkins (2012) investigates how American public opinion about climate change has evolved over the first decade of the 21st century, finding that mobilization by political elites is the most critical influence of public opinion.[2]

Congressional Republicans' votes against climate change both directly impede action to address climate change and strengthen the belief of Republicans that climate change is not a serious problem. Additionally, Benegal and Green (2022) finds that Americans prefer climate proposals introduced by members of their own party. These results match others that indicate the increasing partisan polarization of the issue of climate change (Egan, Konisky, and Mullin 2022).

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[1]Two notable exceptions are Benegal (2018) and Benegal and Holman (2021).

[2](e.g., Egan and Mullin 2017; Goldberg et al. 2021; Kahan 2013; McCright and Dunlap 2013).

Understanding the climate change beliefs of political elites, and the statements they make about the issue, is key to explaining how the public forms its own views. Elite discourse can also racialize climate change, encouraging racially resentful White individuals to perceive climate action as primarily benefiting non-White groups (Benegal 2018). Mildenberger and Tingley (2017) examine the impact of second-order climate beliefs, people's beliefs about the climate preferences of others, on individual climate attitudes. They argue that because climate mitigation often requires personally costly behavior, individuals' perceptions of others' views and actions are central to their own willingness to act. When people believe others will free-ride, they are less inclined to support mitigation efforts. Their findings show that individuals who oppose climate policy tend to underestimate how many others support it (Mildenberger and Tingley 2017, 1300), reinforcing and justifying their own opposition. In the U.S., climate skepticism is concentrated among individuals who identify with the Republican Party (McCright and Dunlap 2013).

Partisanship is certainly a significant predictor of both opinions about race and climate policy in the United States. For example, Jardina and Ollerenshaw (2022) finds an increasingly wide partisan gap on issues of race. During the past few decades, Republicans have become increasingly conservative on the issues of race and exhibit higher levels of racial resentment (Jardina and Ollerenshaw 2022). Democrats, on the other hand, have become increasingly liberal on issues of race and policies designed to achieve racial equity (Jardina and Ollerenshaw 2022, 7).

Another broad swath of the literature identifies individual demographic characteristics as a key determinant of climate opinion (Egan and Mullin 2017). This includes income (Bakaki and Bernauer 2018), employment sector (Tvinnereim and Ivarsflaten 2016), education (Kahan 2015), gender (Bush and Clayton 2022), and geographic region exposure to climate impacts (Arias and Blair 2024). Recently emerging literature has found a key role for psychological mindsets, including time horizons (Gazmararian 2024), empathy (Arias and Blair 2022), or consideration of future consequences (Beiser-McGrath and Huber 2018).

In this dissertation, I contribute to the literature discussed above theoretically by combining insights from American politics, emphasizing the role of racial attitudes in policy preference formation, and

findings in international political economy emphasizing non-material determinants of foreign policy preferences. In this way, the dissertation expands previous findings that demonstrates a link between racial attitudes and climate opinion (Benegal 2018; Benegal and Holman 2021; Chanin 2018) by conceptualizing different mechanisms through which the relationship could be activated 1). emphasizing that climate policy either benefits people of color, 2). or that people of color are the most harmed by climate change. Additionally, in the third paper, I highlight how an alternative identity cue (international economic competition), could move American climate skeptics in support for climate policy.

Empirically, I begin with correlational analysis on a nationally representative sample of Americans, then employ a series of original vignette experiments, a conjoint experiment, and random forest machine learning techniques to better understand American climate attitudes.

Overall, the three papers in this dissertation each take a different approach to examining climate-related public opinion. In particular, I highlight the role of non-material factors, such as identity and sociotropic perceptions, in shaping climate attitudes. Collectively, these studies provide insights into the factors that persuade or dissuade Americans from supporting climate action, improving our understanding of both what people think about climate change and how their opinions are formed.

Dissertation Overview

The first paper, "The Effect of Racial Resentment and Out-Group Cues on Support for Climate Policy," argues that White Americans' climate opinions are shaped by the perceived racial distributive effects of climate policy. Specifically, some White individuals may oppose climate action if they believe it benefits people of color, who racially resentful respondents view as an out-group, or protects them from climate-related harm. This perception stems from both actual legislation, such as the Inflation Reduction Act, which provides material benefits to disadvantaged communities, and elite discourse highlighting environmental racism and justice.

Using data from the Cooperative Election Study and an original pre-registered survey experiment conducted on a national sample of White Americans, I demonstrate that heightened racial resentment correlates with lower support for both domestic and international climate policies, regardless of partisanship.

Experimental results indicate that informing White respondents about the benefits of climate action for people of color, or the disproportionate harm climate change inflicts on them reduces support for climate action, particularly among respondents with ex-ante higher levels of racial resentment.

This paper makes theoretical and empirical contributions to the study of public opinion on climate policy. Theoretically, it bridges research in American politics, where racial prejudice and group-based considerations are well established as drivers of domestic policy attitudes (Davis and Wilson 2021; DeSante 2013; Gilens 1999; Tesler 2012), with emerging work in international political economy that emphasizes non-material determinants of foreign policy preferences (Mansfield and Mutz 2009a; Mutz, Mansfield, and Kim 2021; Mutz and Lee 2020a). In doing so, the paper contributes to a growing literature that positions race as a central factor shaping White Americans' views on foreign policy (Mutz, Mansfield, and Kim 2021; Rathbun, Parker, and Pomeroy 2024a; Rosenberg 2022). It extends beyond the Obama spillover effect (Benegal 2018) to propose a broader framework in which racial resentment operates through two key mechanisms: diminished empathy for out-groups disproportionately harmed by climate change, and opposition to policies perceived to benefit those same groups. This contributes to better establishing the mechanisms underpinning the linkage between racial resentment and climate attitudes.

Empirically, I develop this framework through an original survey experiment that primes respondents with information about the racial distributional impacts of climate policy. Additionally, I add evidence on domestic and international climate policies preferences based on perceived material beneficiaries of climate policy. Taken together results show that framing climate action in terms of racial equity can reduce support among racially resentful White Americans.[3] These findings highlight the public opinion tradeoffs of intersectional climate messaging and underscore the importance of communication strategies that anticipate and mitigate identity-based backlash.

The second paper, "Principled Conservatism or Out-Group Animus? Disentangling the Linkage between Racial Resentment and Climate Opinions Among White Americans," builds on this finding by endeavoring to better disentangle the mechanisms linking racial resentment to climate opinion. This study uses an original survey of White Americans to test competing explanations, examining racial resentment

[3]See also Marshall et al. (2024), and English and Kalla (2021).

alongside alternative worldview factors such as personal attribution and traditionalism. The findings confirm that racial resentment significantly reduces support for climate policy, particularly when the policy is framed around environmental justice, even when accounting for these alternative worldviews.

However, this effect is weaker for policies that are less explicitly racialized such as climate policy emphasizing business regulation. Additionally, the negative affect toward Barack Obama predicts lower climate policy support, but racial resentment remains a significant factor even when controlling for this sentiment. These results indicate that racial resentment is not merely a proxy for cultural conservatism, but represents a distinct form of out-group animus that actively shapes climate attitudes, reinforcing racialized resistance to climate action. Thus, these results have crucial implications for understanding public attitudes toward climate action and for policy makers crafting climate policy.

The third paper, "International Economic Competition and Public Support for Climate Policy" (co-authored with Tyler Ditmore) transitions from factors that may dissuade to factors that may persuade. We examine how framing green industrial policy as part of international economic competition with China, a key geopolitical rival, can convert climate skeptics, especially Republicans and nationalists. We argue that defining green industrial policy as a means of enhancing national economic competitiveness is an effective strategy for increasing public support for climate action by activating sociotropic anxieties about economic security. Using two survey experiments on a sample of Americans, we find that when climate policy is framed in this way, it becomes more popular, especially among Republicans and nationalists without activating a backlash effect among ex-ante climate supporters.

Taken together, the three papers make several contributions to the study of climate attitudes and the role of non-material attitudes in shaping public opinion. First, they broaden our understanding of the link between racial resentment and support for climate policy by analyzing its effects across both domestic and international domains. Second, they probe the mechanisms underlying this relationship, showing that it operates through both benefit framing (i.e., policies helping people of color) and harm framing (i.e., policies protecting people of color from climate impacts). Third, they establish that racial resentment reflects more than generalized conservatism, it is a distinct animus-driven factor shaping climate opinion.

Finally, the dissertation highlights the malleability of public opinion in response to different frames, pointing to strategic avenues for increasing support among skeptical groups.

PAPER 1: THE EFFECT OF RACIAL RESENTMENT AND OUT-GROUP CUES ON SUPPORT FOR CLIMATE POLICY

Climate change is a global phenomenon that demands coordinated international and domestic policy responses (Peterson 2022). Yet, despite growing awareness of its devastating effects, especially on vulnerable populations (Newell 2005), public support for large-scale climate action in the United States remains fractured. The U.S., as the world's second-largest emitter of greenhouse gases (Barrett 2003) and a key player in global negotiations (Urpelainen and Van de Graaf 2018), holds a pivotal role in addressing the climate crisis. Domestic political support is a first-order condition for ambitious climate policy (Gaikwad, Genovese, and Tingley 2022; Mildenberger and Tingley 2017), making it essential to understand how public opinion, particularly that of White Americans, who constitute the racial and voting majority in the U.S. and wield a high degree of political power, shapes climate action.

This paper centers racial attitudes of Americans as a fundamental axis in the study of climate policy support. While public opinion on climate change has been widely studied (Egan and Mullin 2017), less attention has been paid to how perceptions of racial group interests influence this opinion. Racial dynamics are central to American politics and policy preferences (Metzl 2019; O'Brian 2024), and climate policy is no exception.

As policymakers increasingly highlight the disproportionate harms of climate change on communities of color—through initiatives like the White House Office of Environmental Justice created under Former U.S. President Joe Biden, the Inflation Reduction Act (IRA) (Friedman and Plumer 2022) and global appeals to climate justice—public opinion is inevitably shaped not just by environmental concerns but also by perceived group-based distributions of policy benefits. This concern is also amplified by right wing voices like Tucker Carlson who stated about the IRA, "The EPA alone gets...more than $30 billion for so-called disadvantaged communities. What are those? Well, they're not really defined, people who vote for Joe Biden. So, what it really means is the EPA is going to spread more identity politics and race

hate...this is about spreading race hate... They call it equity". For White Americans already concerned that non-Whites are benefiting from governmental action this type of policy and rhetoric may shape how they view climate action.

I argue that perceptions of which racial groups benefit from climate policy play a key role in shaping opinion among White Americans. Theoretically, I bridge insights from American politics where racial prejudice and group-based considerations are known to shape domestic policy attitudes with recent work in international political economy emphasizing non-material determinants of foreign policy preferences. I extend previous findings linking racial resentment and climate attitudes (Benegal 2018; Chanin 2018) to propose a broader theoretical framework framework in which racial resentment operates through two key mechanisms: a lack of empathy toward perceived out-groups harmed by climate change, and hostility toward policies perceived to disproportionately benefit those same groups. As a result perceptions that climate action disproportionately benefits people of color, particularly when coupled with high levels of racial resentment, reduce support among White Americans for climate action.

Using an original experiment, I demonstrate that priming individuals with information about race-based distributional policy effects shapes public support for climate action and find a pivotal role for racial attitudes in influencing White Americans' support for climate action. This is crucial because an emerging public consensus on the importance of addressing climate change may push American political elites towards action (Erikson, MacKuen, and Stimson 2002a; Schaffer, Oehl, and Bernauer 2022). Understanding both what individuals think about climate change, and how their opinions form, is vital to understanding what policies are palatable to the public and thus more likely to be passed and adhered to.

Methodologically, I extend the literature on the linkage between racial resentment and public opinion of the climate in two primary ways. First, I use correlational data from the 2020 Cooperative Election Study (CES) to investigate the relationship between feelings of racial resentment and approval of climate policy and explore how this relationship holds across two types of climate policy: domestic and international. By analyzing the relationship between racial resentment and international climate action (in this case, the Paris Agreement), I extend existing work that has primarily focused on domestic climate action in an important direction.

International climate agreements that seek to address the climate crisis through multilateralism are both essential to addressing the global impacts of a changing climate and of electoral consequence in the United States. Additionally, there is evidence that climate action framed within the context of U.S. involvement in broader international efforts may be more popular (Tingley and Tomz 2020) but may also suffer from "whataboutism" rhetoric reducing support among some segments of the populace (Kulin 2024). Thus it is useful to investigate the linkage between racial attitudes and international climate policy. Therefore, understanding how racial attitudes influence public opinion about international climate efforts is useful to successfully addressing the impact of climate change.

Second, to provide causal leverage on two potential mechanisms through which higher levels of racial resentment[4] might impact climate preferences, I employ an original survey conducted on a representative sample of White Americans to test this linkage experimentally. While scholarly work exploring the link between climate attitudes and racial resentment does exist (e.g., Benegal 2018; Benegal and Holman 2021; Chanin 2018) this work is correlational rather than experimental and focused on climate action as a domestic phenomenon. Therefore, I investigate the linkage between in-group racial preferences and climate opinion through a survey experiment leveraging cues about the distributional effects of climate action that capture two potential ways in which racial attitudes may translate to lower support for climate policy 1). emphasizing that climate policy either benefits people of color, 2). or that people of color are the most harmed by climate change.

By decoupling the effect of the treatments by level of racial resentment, I find evidence of a linkage between feelings of racial resentment and reduced support for climate action. In particular, I find that higher levels of racial resentment exacerbate the negative effect of a cue emphasizing that people of color are the group most harmed by climate change. This suggests that racial resentment is linked to climate opinion by heightened hostility to the racial out-group that may be protected by climate policy.

My findings provide new insight into the conditions that influence public support for climate policy among members of the American public. I find evidence that suggests a pivotal role for racial attitudes,

[4]Racial resentment is also referred to as symbolic racism (Henry and Sears 2002) and is partially concerned with individual compared to structural attributions for racial inequality (Kam and Burge 2018).

and in particular, feelings of racial resentment on public support for effects to address climate change among White Americans. Furthermore, throughout both sets of data respondents prefer international climate action to domestic.[5] This is important because it suggests that Americans' may be discerning in which types of climate action that they are more willing to support.

Additionally, recent climate change mitigation policy including the Inflation Reduction Act (IRA) in the U.S. includes elements of environmental justice policy (Friedman and Plumer 2022; Senate Democrats 2022) seeking to correct historic inequities and address the scientific reality that non-Whites will be the group most impacted by climate change (Bullard 2018). The evidence on if policies that include such elements are popular among the American public is mixed; while some research finds that climate policy that includes social justice elements is preferred (Bergquist, Mildenberger, and Stokes 2020) other work finds that climate policy with components addressing racial inequities (English and Kalla 2021) or social justice policies (Marshall et al. 2024) are less popular.

This paper adds to a growing body of evidence that racial resentment and out-group racial prejudice influence climate beliefs, finding that respondents with higher levels of racial resentment are less supportive of both domestic and international climate policy. Additionally, by randomly presenting some White respondents with information on the environmental justice goals of a hypothetical climate policy, I contribute to a body of literature showing that among some White Americans connecting climate policy with environmental justice or social policy aims may come with a cost in terms of public support.

In doing so, I bridge a divide between literature from American Politics, which repeatedly finds that race and feelings of racial prejudice are critical to how Americans form opinions about policies, and findings from international political economy concerning non-material explanations for policy preferences. Additionally, I contribute to an emerging literature that situates race and racial attitudes as crucial to foreign policy opinion formation (e.g., Mutz, Mansfield, and Kim 2021; Rathbun, Parker, and Pomeroy 2024a; Rosenberg 2022)

[5]The finding that the public has a preference for multilateral climate action is in line with other recent research (e.g., Bechtel, Scheve, and Lieshout 2022a).

Theory

In this paper, I specifically study the views of White Americans. Since the United States is both a large emitter of greenhouse gasses and a necessary contributor to global efforts to combat climate change through international action, it is important to understand U.S. domestic climate opinion. The climate attitudes of White Americans play an out-sized role in terms of the pace of the transition towards green energy, a crucial component of combating the climate crisis.

For example, Stokes et al. (2023) finds that opposition to the deployment of wind energy is higher in areas with a higher concentration of White people leading to an "energy privilege" phenomenon where the climate attitudes of Whites result in communities of color continuing to suffer out-sized effects of pollution. Therefore, White Americans represent an ideal group to study in an effort to explore the impact of racial attitudes on climate opinion. As a result, I restrict the focus of my analysis and theory to self-identified White Americans.

In the remainder of this section I detail explanations for climate attitudes then position my theory within existing research on the connection between racial beliefs and climate opinion. I further extend this literature by examining how racial resentment influences public opinion on international climate agreements. To examine how high racial resentment could translate to lower support for climate policy, I leverage a framework involving two mechanisms that affect perceptions of the racial distributive effects of climate policy: awareness of the scientific consensus that non-Whites are most harmed by climate change, and cues from political leaders about environmental justice.

The literature on American climate opinion has often focused on exploring the partisan divide on climate attitudes.[6] Partisan polarization of climate opinions has increased over time (Egan, Konisky, and Mullin 2022) with Republicans remaining far less likely to support efforts to address climate change (Dunlap, McCright, and Yarosh 2016; Tyson, Funk, and Kennedy 2023). The gap in approval of climate action among political elites means partisans are able to effectively take cues from their respective political party (Brulle, Carmichael, and Jenkins 2012; Lupia and McCubbins 1998).

[6](e.g., Egan and Mullin 2017; Goldberg et al. 2021).

As a result, understanding how political elites frame the issue of climate change through statements and policies is important to understanding how the public views climate change. Statements by Republican elites can racialize climate action, encouraging Whites to see climate action as benefiting people of color (Benegal 2018). Conversely, Democrats emphasize climate justice initiatives in policies like the IRA or the Green New Deal, raising the profile of climate justice.[7] Thus, to better understand climate opinion formation, it is useful to understand the importance of racial attitudes in American politics.

Race as a central feature in American politics

Scholars systematically studying American public opinion have long noted the centrality (Converse 1964, 238) and stability (Kinder and Sanders 1996) of racial attitudes among members of the public. Additionally, opinions about Black Americans among White Americans is frequently based on perceived material interest (Giles and Evans 1986). Whites who exhibit high levels of racial resentment are concerned that resources, such as funding to address climate impacts, will be used on the interests of Black Americans (Dietz et al. 2018). This resentment based on material interests causes a variety of spillover effects, whereby public opinion on issues that are not explicitly racial become racialized (Tesler 2012).

Recent scholarship has found support for the idea that racial attitudes can influence public opinion in a wide array of issue areas. For example, Ballard-Rosa, Martin, and Scheve (2017) find that White Americans with higher levels of racial resentment desire lower taxes on wealthy Americans who they believe are more likely to be White. Because income and race are correlated, this finding suggests that Whites who exhibit higher levels of racial resentment are more opposed to income redistribution because they fear that poorer non-White people will benefit.

Other work including Metzl (2019) goes further and argues that some White Americans would rather destroy public goods before sharing them with people of color. Therefore, it is important to consider how perceptions of the beneficiaries of policy develop. If a policy has been racialized then Whites who are

[7] See for example, Representative Barbara Lee noting "Black, brown, and low-income communities bear the brunt of pollution and environmental degradation, accelerated by climate change. . .that's why addressing climate change is not just an environmental issue, but also an imperative to achieve racial and economic justice" (Coleman 2019).

concerned with maximizing benefits to their own group are more likely to perceive the beneficiaries of the policy as non-White and less likely to support it (Jardina 2019, 44).[8]

This "spillover of racialization" (Tesler 2016) phenomenon is observed in a variety of topics including healthcare (Tesler 2012) and public opinion about the existence of global warming (Benegal 2018). This line of research has served to formalize the linkage between racial attitudes and shifting public opinion about nonracial issues, arguing that the election of the first Black President of the United States, Barack Obama, created a strengthened mechanism through which nonracial issues may be seen in a racialized light.

Benegal (2018) demonstrates that due to associations between Obama and environmental action similar dynamics hold for climate policy. Individuals who score highly on a scale of racial resentment may be more likely to view climate policy as benefiting specifically Black Americans, partially because of this association between Obama and climate action and therefore, be less supportive of environmental action.[9]

Influence of racial resentment on international policy preferences

A burgeoning literature suggests that the attitudes of White Americans towards racial out-groups influences their foreign policy attitudes (Green-Riley and Leber 2023; Maass 2023; Mutz, Mansfield, and Kim 2021; Rathbun, Parker, and Pomeroy 2024a). As Richard W. Maass writes, racialization "blurs the common theoretical distinction between domestic and foreign policy"(Maass 2023, 101) and casts "phenomena directly in terms of racial identities and generating clearly observable racial implications" (Maass 2023, 103). This process underscores the crucial role that racial perceptions can play in terms of foreign and domestic policy opinion formation.

I extend these findings to public attitudes towards international environmental action, and argue that both the explicitly racial and economic elements of racial resentment act in order to reduce support for climate action. Notably Evers and Schaaf (2024) find that a measure of racial resentment towards foreign

[8]For a key example of how perceptions of deservingness shape policy views see Gilens (1999).

[9]See also Konisky and Woods (2016) for an overview of the priority the Obama administration placed on climate policy.

Black people is highly correlated with the classic Kinder and Sanders (1996) measure. They note that "Americans broadly harbor racial sympathy/antipathy toward Black people writ large" (Evers and Schaaf 2024, SI:15). Regarding international climate action, Americans with higher levels of racial resentment are influenced by both explicit racism (discrimination towards people of color) and principled conservative ideology (emphasizing norms such as individualism and hard work). For individuals with high levels of racial resentment, these factors combine to reduce support for climate action.

International agreements including climate policy may suffer an additional dilemma of activating feelings of competition and sociotropic perceptions (Ditmore and Parajon 2024). Mansfield and Mutz (2009a) find that Americans who believe trade agreements unfairly benefit other countries at the expense of the U.S. are more likely to be xenophobic and exhibit nationalistic beliefs. Other research demonstrates that perceptions of how agreements influence the country as a whole are a determinant of an individual's preferences (Mutz and Lee 2020a).

However, less scholarly attention has been paid to the role that an individual's race or their perceptions of race may play in their preferences for international cooperation. Mutz, Mansfield, and Kim (2021) find evidence that the perceived dominant racial group of a country influences the willingness of White Americans to support trade with that country. Additionally, Rathbun, Parker, and Pomeroy (2024a) argue that public reluctance to support the use of force against democracies is primarily a preference for countries perceived to be majority White. Further exploring perceptions of which racial group is perceived by the public to be benefiting or harmed by cooperation is an important piece to the puzzle when seeking to explore how individual's form their international policy preferences.

Just as "trade has become yet another 'racialized' issue" (Mutz, Mansfield, and Kim 2021, 562), I suggest that feelings of racial resentment combine with feelings of competition and sociotropic perceptions to negatively influence Americans' opinion of international climate agreements. Respondents high in racial resentment may perceive international climate agreements as costly to the American people and economy and will not want American resources to be spent to support interests (particularly those of people of color) abroad.

For an example of this line of thinking, see former President Donald Trump's statements on the COP21 climate agreement. When Trump announced the withdrawal of the U.S. from the agreement, he claimed the COP21 agreement "disadvantages the United States to the exclusive benefit of other countries" and noted the agreement includes a "scheme to redistribute wealth out of the United States...to send $100 billion to developing countries" (Trump 2017). This logic likely strikes a note with individuals who perceive international climate agreements as benefiting other nations, particularly those in the developing world, at the expense of the U.S..

In doing so, Trump is expressing similar rhetoric to that of a host of right-wing parties outside the U.S. who communicate high levels of doubt in the benefit of climate change policies, especially those involving multilateral cooperation (Kulin, Johansson Sevä, and Dunlap 2021). For some this rhetoric may be effective; members of the public, particularly those with higher levels of racial animus or nationalistic tendencies (Kulin, Johansson Sevä, and Dunlap 2021), may be less likely to support climate action when they feel that countries perceived as "undeserving" are benefiting from American involvement.[10]

Pathways through which racial resentment influences climate beliefs

In emphasizing the role of racial resentment in reducing the probability of public support for climate policy, I build on a small but growing area of the environmental politics literature.[11] Benegal and Holman (2021) find that high racial resentment respondents are more likely to oppose climate policy and less likely

[10]In the experimental results section, I find little evidence that nationalism moderates the effect of out-group cues on support for climate agreements.

[11]Notably, the evidence is not unanimous, Makovi and Kasak-Gliboff (2021) find no effect of a cue providing a story of a Black family impacted by air pollution (compared to White), and additionally no interaction effect between racial resentment and the treatment. In contrast to their setup, I potentially provide a more direct manipulation of the perceived beneficiaries of environmental action leveraging salient aspects of the environmental justice movement, which may partially explain the negative treatment effects I observe compared to the null effects in Makovi and Kasak-Gliboff (2021).

to believe in the scientific consensus around anthropogenic climate change (Benegal and Holman 2021, 1917).[12]

Benegal (2018) also finds support for the racialization hypotheses finding that after Obama's election, those with higher levels of racial resentment are less likely to believe global warming is happening. One explanation for this is that Republican elites opposed to environmental action explicitly linked Obama to climate policy (Benegal 2018, 738–739). As a result, individuals with higher levels of racial resentment associated environmental issues with Obama, a Black leader.[13]

Additionally, if the spillover of racialization stems entirely from negative opinions about Obama, we might expect its influence to have diminished over time since he left office. While Obama's association with climate policy likely still plays some role, it is unlikely to fully account for the continued relationship between racial resentment and climate attitudes in the years since his presidency. This suggests the need for a deeper investigation into the mechanisms linking racial resentment to climate opinion. In particular, experimental evidence is essential for unpacking these mechanisms.

An explanation of the persistence of racial resentment reducing climate support may concern a conception of what feelings of racial resentment is capturing. In employing racial resentment as a key explanatory variable of climate policy preferences I build on work by Davis and Wilson (2021) who argue that racial resentment, rather than merely being an explicit measure of prejudice towards Black Americans, is rooted in perceptions of distributional fairness and a belief that non-Whites are unfairly receiving policy benefits. Kam and Burge (2018) also investigate the racial resentment index and find that when Americans consider the core questions that make up the racial resentment scale "themes of individualism, and themes of discrimination stream through their minds" (Kam and Burge 2018, 318). Both of these elements of racial resentment are likely to be activated when racially resentful Whites consider the distributional effects of environmental justice policies.

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[12] See also (Chanin 2018; Dietz et al. 2018) both of which find a relationship between racial resentment and environmental public opinion.

[13] See Hacker and Pierson (2020) for a discussion of how Republican politicians have long used racialized language to reduce public support for a variety of progressive policies.

As a result, one possible explanation for the finding linking racial resentment and lower support for climate action persisting over time and type of climate action is that White respondents who are high in racial resentment believe that climate action is likely to result in a benefit to a group they disfavor (people of color), or help people of color to avoid harm from climate change (Chanin 2018).[14] White Americans may also perceive lower personal risk for themselves and higher risk for people of color (Chanin 2018) resulting in lower support for climate action. I test this logic by experimentally cuing respondents to consider the effects of climate change on people of color explicitly.

By extending research emphasizing the role of elite cues (Benegal 2018), perceptions of harm (Chanin 2018) and the perceived distributional effects of climate policy, I formalize two pathways through which perceptions about the racial impacts of climate policy could be driven. The first is that individuals are aware of the reality that non-White people *are* the most impacted by climate change. Scholars studying the differential effects of climate change and broader environmental impacts have found consistent evidence that Black Americans are more negatively impacted by the changing climate than White Americans (Bullard 2018; Tessum et al. 2021). Additional environmental research finds that people of color are also more likely to suffer from negative externalities that are associated with the green energy transition (Carley and Konisky 2020). It is possible that people are aware of this scientific consensus and update their preferences for climate policy accordingly.

A September 2023 survey by the Yale Program on Climate Change Communication found that 49% of Americans believe that climate change harms some groups in the United States more than others and 32% answered that "people of color" are more harmed than White people (Carman et al. 2023, 5). This answer matches the scientific consensus that people of color do face the largest risks from environmental issues and climate change.

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[14] See also Zucker (Forthcoming) which provides evidence that perceptions that the government favors Whites/non-Whites is an important determinate of climate attitudes, whereas this paper provides explicit cues about government policy and thus tests the effects of framing directly. Regardless of setup, Zucker (Forthcoming) provides an important test of the plausibility of respondents perceiving non-Whites as politically favored in terms of climate policy.

Partially in response to these concerns, the Inflation Reduction Act (IRA), which former U.S. President Biden signed into law August 16, 2022, includes $60 Billion to address the unequal impacts of a changing climate on communities of color (Friedman and Plumer 2022; Senate Democrats 2022). The IRA's focus on prioritizing investment in communities of color may be one reason that, according to a 2023 survey by the Yale Program on Climate change communication, support for the IRA among Black Americans is higher than among Whites (Leiserowitz et al. 2023a). It is possible that some White Americans may view climate change as disproportionately harming people of color and thus unworthy of attention (Chanin 2018; Dietz and Whitley 2018; Pearson et al. 2018).

The second pathway is driven by continued messaging from political leaders and climate activists about the racial effects of climate change and the benefits of progressive climate policies for non-Whites. Even if individuals are not aware of the scientific consensus that people of color are the group most likely to suffer harm from climate change it is possible that they have connected climate and race due to messaging from political elites.[15] Pro-climate action messaging by Democratic politicians is often focused on racial equality and explicitly references the inequity of the effects of climate change (e.g. Coleman 2019; Friedman 2023).

Climate policy is thus an important issue of structural justice, but framing climate policy as an issue of racial justice may cause a spillover of racialization for racially resentful Whites thus driving down support for climate policies. For example, when addressing the importance of environmental justice former U.S. President Joe Biden stated "Fulfilling this basic obligation to all Americans — especially in low income, White, Black, brown and Native American communities, who too often don't have clean air and clean water — is not going to be easy…too often the brunt falls disproportionately on communities of color, exacerbating the need for environmental justice" (American Presidency Project 2020). Former President Biden pledged to focus on environmental justice and addressing environmental inequality through his administration's Justice40 initiative which promises that "40% of the federal government's

[15]Climate justice is not an unknown 34% of Americans report hearing or reading at least "a little" about it (Carman et al. 2023).

investments in climate and clean energy will go to disadvantaged communities" (Tollefson 2022).[16] Biden followed this announcement by creating a White House Office of Environmental Justice (Friedman 2023). When announcing the new office, Biden stated "environmental justice will be the mission of the entire government" (Friedman 2023). By highlighting the importance of environmental justice in responding to the climate crisis, Biden is both listening to the science and heightening the profile of environmental justice.

For those who are high in racial resentment and predisposed to oppose policy that may benefit Black Americans, the elite rhetoric may act to reduce their support of climate policy. Individuals who are racially prejudiced are more likely to view climate policy through the lens of racial resentment, and accordingly less likely to favor climate policies which they perceive as benefiting non-Whites.

As a result of this emphasis both in terms of actual legislation like the IRA and in statements referring to environmental racism (avoiding harm to people of color) and environmental justice initiatives (providing benefit to people of color) I argue that feelings of racial resentment are a crucial driver in public opinion regarding both international and domestic climate action. Individuals who exhibit higher levels of racial resentment, will be more likely to perceive the beneficiaries of climate policy, as non-White and thus undeserving of support.

The above discussion leads to a hypothesis on the linkage between racial resentment and climate opinion establishing that racial resentment moderates attitudes on both international and domestic climate policy.

H1: *Racial Resentment*: Individuals exhibiting higher levels of racial resentment will indicate **lower** probability of support for both international and domestic climate action.

Additionally, I conceptualize two possible mechanisms through which members of the public could connect race and climate; they could either be aware of the scientific consensus that people of color are the

[16]Research by the Clean Investment Monitor analyzing post-IRA investments found "44.5% of clean investment in the year following the passage of the IRA occurred in disadvantaged communities...considerably higher than the share of the national population residing in those communities (32.7%) (Bermel et al. 2023)." Indicating resources are flowing to communities prioritized as part of environmental justice initiatives.

group most likely to be harmed by negative climate impacts, or be cued by political leaders and a focus on environmental justice activism[17] that climate action will benefit people of color.

These factors combine to cause many White Americans, who are high in feelings of racial resentment, to view climate action, both international and domestic, through a racial lens. For Whites high in racial resentment, this suggests two possible mechanisms through which racial resentment could translate into lower climate approval, either perceived favoritism towards an out-group (benefit), or hostility towards an out-group (harm). The experimental results serve to disentangle these two by priming information on the distributional effects of the policy. Understanding which of these mechanisms more closely links racial resentment to reduced support for climate opinion is important to conceptualizing how to frame climate policy to avoid losing support among racially resentful Whites, and to understand what aspects of racial resentment are closely linked to climate opinions.

Therefore, I consider several hypotheses testable using experimental data that varies exposure to information that people of color disproportionately suffer from the effects of climate change (harm), that climate action is explicitly designed to benefit people of color (benefit), or no additional information (control). Here I am seeking to experimentally understand the mechanisms underpinning the linkage between racial attitudes and climate opinions. These pre-registered hypotheses[18] concern the negative effects of the treatment conditions at reducing support for climate action (regardless of scope) relative to a control condition:

H2a: *Out-group benefit*: White respondents will be **less** likely to support domestic and international climate action that is framed as benefiting people of color relative to the control group.

Secondly, I expect that White respondents will react to receiving information that non-White people are more negatively harmed by the changing climate than White people by reducing their support for the

[17] See, Bullard and Johnson (2009) for an overview.

[18] I pre-registered prior to data collection on the OSF registry https://osf.io/sq269?view_only=78b8dba047c8415782ce76d6df82aa43. Note that I renumbered the hypotheses relative to the pre-analysis plan for presentational reasons.

hypothetical climate action. Here I anticipate that Whites will be less likely to support climate action after learning that an out-group (people of color) are the most negatively impacted by climate change.

H2b: *Out-group harm*: White respondents will be **less** likely to support domestic and international climate action that is framed as addressing harm to non-White people relative to the control group.

As the $frame$ treatment is designed to cue perceptions concerning race based competition for resources in both treatment conditions, I anticipate that the negative effect of both the $harm$ and $benefit$ framing will be stronger among individuals with higher levels of racial resentment compared to individuals reporting lower levels of racial resentment.

In particular, I anticipate that the $harm$ condition, which emphasizes that people of color are the group that is most negatively impacted by the changing climate, will activate apathy for communities of color driving down climate support among high racial resentment respondents.

H3: *Racial Resentment Framing*: The effect of the $Frame$ conditions relative to the control will be more **negative** for individuals exhibiting higher levels of racial resentment compared to those with lower levels of racial resentment.

Correlation Data

Data source: CES

Throughout this section of the paper, I rely on data from the 2020 Cooperative Election Study (CES) (Ansolabehere, Schaffner, and Luks 2021). The 2020 CES surveyed 61,000 Americans, was conducted online, and is designed to be representative of national adults (Ansolabehere, Schaffner, and Luks 2021, 13).[19] Notably, as the target of my analysis is White Americans, I restrict my analysis to those who identify as non-Hispanic Whites (total n=43,112).[20]

[19]For a breakdown of the CES sample, see Table A21.

[20]Note that respondents were not required to answer every question so the number of responses on any given question may be lower.

Description of key variables

To create the racial resentment index, I rely on two questions from the CES where respondents were asked if they agree or disagree with the statements listed in Table 1.[21]

Table 1: Racial resentment questions: Independent Variable

Variable	Wording
RR_nofavors	Irish, Italians, Jewish and many other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors. [REVERSE CODED]
RR_slavery	Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class.

After re-coding the questions so that higher values represented increased levels of racial resentment, I then followed Tesler (2012) and re-scaled the two questions by coding each response from 0 to 4 in 1 point increments (where 2 is neutral) then summing and dividing the total by 8 (the number of questions multiplied by the increments) to create an index ranging from 0 (minimum racial resentment) to 1 (maximum racial resentment). The full distribution across respondents is shown in Figure 1.

For the two primary dependent variables, respondents were asked if they either supported or opposed the following decisions listed in Table 2. Crucially, the CES survey included questions about both domestic and international climate action enabling a full test of **H1**: *Racial Resentment*.[22]

I re-coded each of the dichotomous dependent variables so that a value of 1 represents the respondent approving of the climate action policy and a value of 0 represents the respondent opposing the climate

[21]I chose to use these two questions as they are the available questions from the four traditional racial resentment questions used in the historic battery (Kinder and Sanders 1996). For examples of other work using the paired-down CES racial resentment data see Benegal and Holman (2021) and Morris (2023). Additionally, the main results are robust to the inclusion of additional questions designed to measure racial attitudes. See appendix.

[22]The Pearson correlation between the two dependent variables is 0.52 ($p < 0.000$) which suggests that there exists a degree of variation between the two questions.

Table 2: Dependent Variables

Scope	Variable	Wording
International	climate_COP	For each of the following tell us whether you support or oppose these decisions...Withdraw the United States from the Paris Climate Agreement
Domestic	climate_CPP	For each of the following tell us whether you support or oppose these decisions...Repeal the Clean Power Plant Rules (the Clean Power Plant rules would require power plants to cut greenhouse gas emissions by 32 percent by 2030)

action policy. Overall, 61.05% of respondents opposed withdrawing the U.S. from the Paris climate agreement and 63.65% of the CPP.

Modeling strategy

I employed logistical (logit) regression to analyze the models of interest. I also estimate all models with several control variables that could plausibly influence the dispersion of the racial resentment variable and views of climate change policy. I follow Stephens-Dougan (2020, 100) in including controls for education, political ideology, partisanship (with leaners included), income, gender, age, and region.[23] As I seek to establish that feelings of racial resentment influence approval of climate action in a separate pathway, I also include control variables for political ideology and partisanship.

CES: results

In Figure 1, I visualize that respondents with higher levels of racial resentment have lower levels of support for climate action, presenting a band of climate support with a 95% confidence interval. This is a test of **H1**: *Racial Resentment* which suggests that increased feelings of racial resentment will be associated with a reduction in the probability of support for climate policy. The predicted probability plot, with all other regressor variables set at their modes, rounding numeric variable means to nearest whole number, and

[23]A description of those variables are available in the appendix. See Table A21.

varying the level of racial resentment across the entire observed spectrum (0 to 1), indicates that for both climate policies, as level of racial resentment increases towards the maximum value of 1.00, the likelihood of supporting the climate action decreases.

Respondents with higher levels of racial resentment, controlling for other demographic and political factors, have lower support for both a domestic climate policy (CPP), and an international climate agreement (COP21). Both of these declines are statistically significant at the ($p < 0.000$) level and substantively large. The predicted probability of support for COP21 in the average case declines from 0.951 95% CI [0.958, 0.942] at a racial resentment level of 0.00 (minimum) to 0.472 95% CI [0.508, 0.437] at a racial resentment level of 1.00 (maximum) a 47.8 percentage point decline in support; the predicted probability of support for CPP similarly declines from 0.839 95% CI [0.856, 0.821] to 0.409 95% CI [0.438, 0.381], a 43.0 percentage point decline.

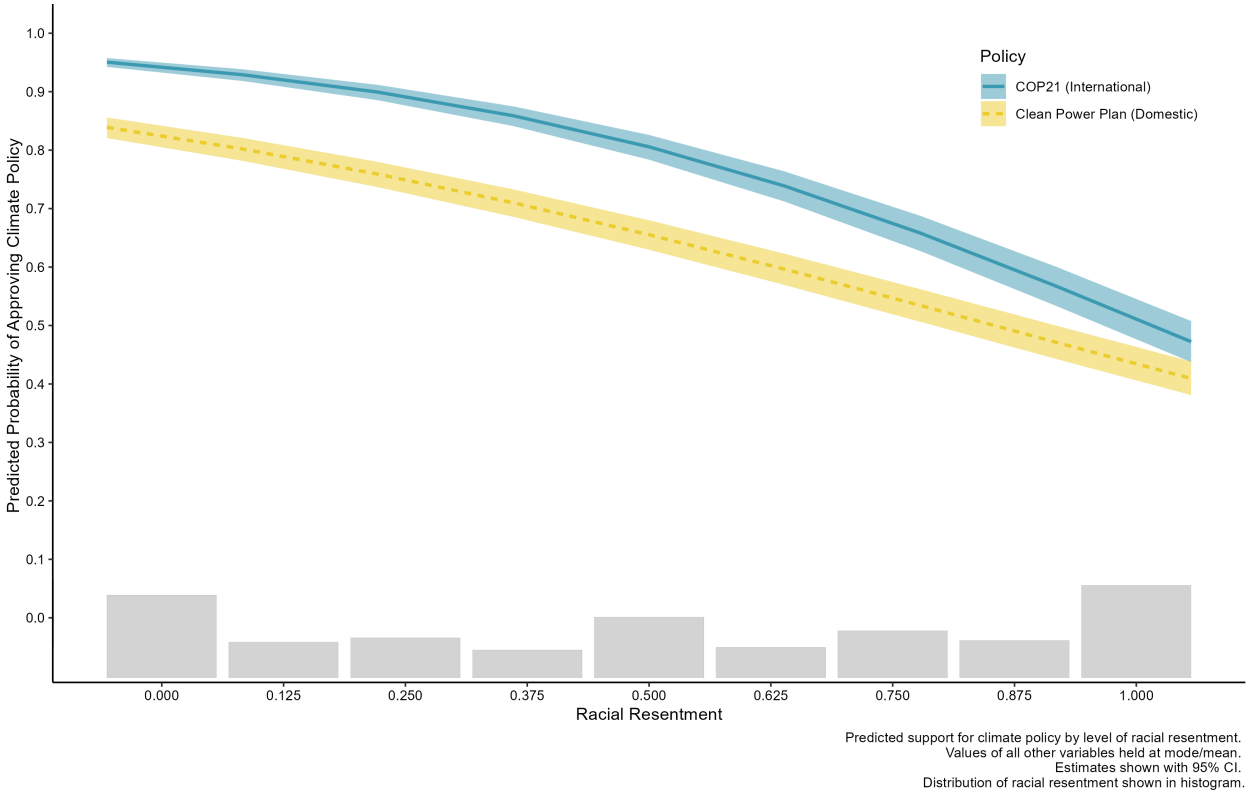

Figure 1: Effect of Racial Resentment on Climate Policy Approval

The results provide correlational evidence that racial resentment is associated with the climate preferences of Americans regardless of climate policy type (international or domestic).[24] These results are indicative of a relationship between measures of racial resentment, and climate opinions and provide both a replication of earlier findings of a relationship between racial resentment and domestic climate opinion (e.g. Benegal 2018; Chanin 2018) and an extension of those findings to public opinion about international climate policy.

However, to expand on the results it is helpful to conduct an additional study leveraging an original survey. This serves as a test of a mechanism linking racial attitudes and climate opinion, perceptions of which racial group is benefiting from climate action. The experimental results provide causal leverage on the relationship between perceptions of out-groups benefiting from climate policy and climate opinion.

Additionally, it is possible that the COP21 agreement, which is connected to U.S. domestic industry and concerns about a transition away from the coal industry (Hermwille and Sanderink 2019) could have been opposed by racially resentful Whites not as an exclusively international climate policy but rather due to the perceived domestic effects. To allay these concerns the experimental findings allow for a clear distinction by leveraging hypothetical international and domestic climate policies.

Study 2: The Effect of Out-Group Racial Cues on Support for Climate Policy

Next, using a survey experiment I test a pivotal role for cues on the racial distribution of climate benefits in influencing White Americans' support for both domestic and international efforts to address climate change. In doing so I provide experimental evidence of the linkage between perceptions that non-Whites are benefiting from climate policy and lower support for climate action among Whites. This provides insight into the conditions that influence public support for climate policy among White Americans

[24] In table A6 and table A8 I include the results of a variety of robustness checks of the main results; including alternative specifications of the dependent (concerning hypothetical climate proposals) and independent variables ("color-blind" questions created by Neville et al. (2000) which do not explicitly refer to Black Americans and thus attempt to tap into other elements of racial prejudice).

and suggests that framing climate policy by highlighting the benefits to non-Whites may carry a political downside.

Study design

I conducted the study on an overall sample of 1,500 American adults in Spring 2023. The results were gathered by Qualtrics and while not strictly representative of the American public as a whole included quotas on gender, age, race, income, and level of education.[25] I then restricted analysis to only respondents who identified as White. This resulted in a sample size of 1,157 White respondents. The experimental design is summarized in Figure 2 below.

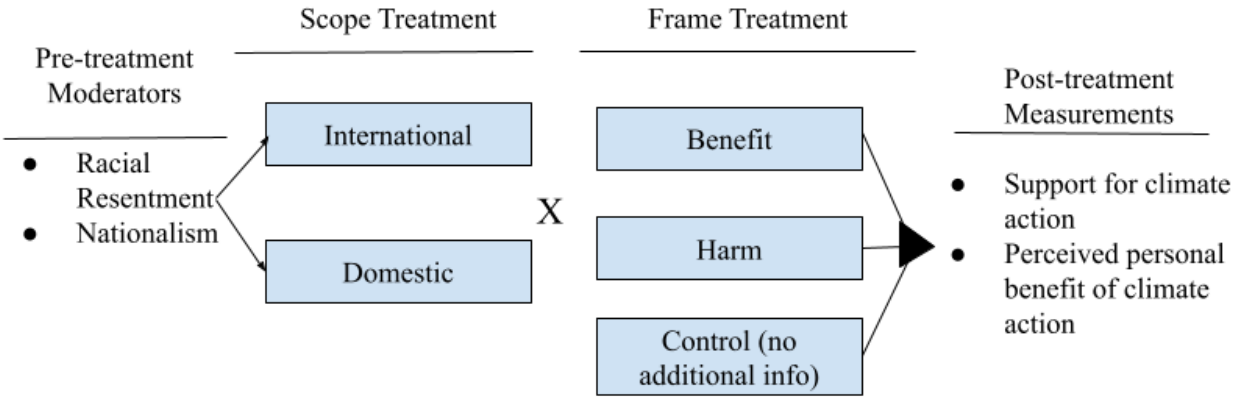

Figure 2: Experimental design

Prior to treatment all respondents answered a series of questions designed to measure their existing level of racial resentment and nationalism (two potential moderators), along with a series of demographic questions including partisanship. Respondents then viewed a preamble that differs slightly depending on which scope condition (international agreement or domestic policy) that they were randomly assigned into.[26] After the preamble, respondents viewed one of six different treatment conditions concerning the hypothetical [agreement/policy]. The scope treatment randomly presents respondents with information

[25] See Coppock and McClellan (2019) for a discussion of the validity of social science research conducted via online convenience samples like Qualtrics. See also the appendix for a discussion of research ethics.

[26] See the appendix for wording.

on either a domestic climate policy or an international climate agreement. The frame treatment randomized between a cue presenting either information that people of color (non-Whites) are harmed by climate change (Harm Frame), or that people of color (non-Whites) specifically benefit from the climate action (Benefit Frame).[27]

The experimental design leverages two possible reasons why racial resentment may be associated with environmental preferences. First, people who are high in racial resentment may be aware of the reality that people of color *are* most negatively impacted by climate change and thus less concerned about addressing climate change. Second, individuals may be aware that policies to address climate change seek to explicitly benefit people of color and as a result are less supportive of those policies. Therefore, the treatment conditions are designed to mimic two salient elements of recent climate policy discourse that historically marginalized populations are the most likely to suffer from negative climate impacts (Harm Frame), and that recent climate policy (such as the IRA) includes elements designed to mitigate those negative impacts (Benefit Frame).[28] Finally, the control group in the frame treatment sees no additional information about the hypothetical climate action.

Each respondent randomly saw **one** of six possible vignettes[29] before evaluating the [agreement/policy].

An example of the manipulation (in this case $International$ and $Harm$) presented to respondents is shown in Figure A4.

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[27] As I ex-ante did not hypothesize differential effects of the cues by scope condition, I primarily present results pooled across scope.

[28] See for example statements by Biden's communication team promoting the benefits of the IRA for Black Americans (The White House 2023). These benefits are not intended to be read as excludable, but rather to emphasize aspects of the agreement were intended to benefit non-Whites.

[29] The full text of the vignettes is listed in the appendix.

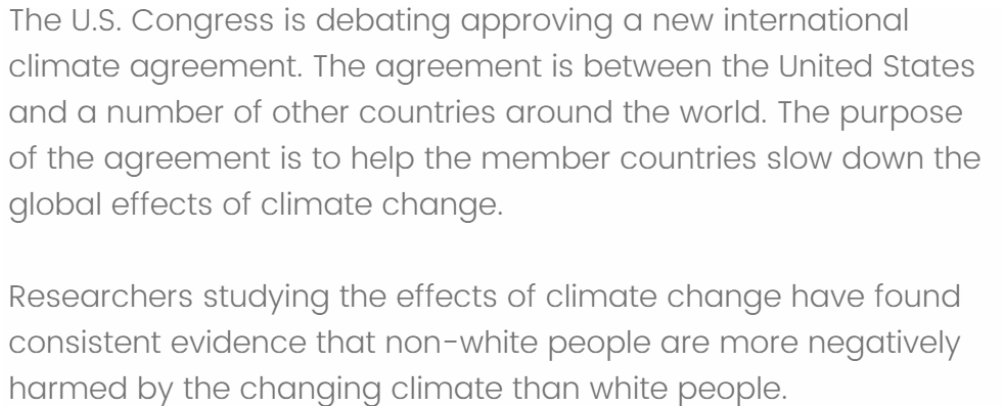

Figure 3: An example of how respondents learned about fictional agreement/policy.

After viewing the manipulation, respondents were asked to what extent do they support the proposed [policy/agreement] on a scale ranging from 0 (Strongly oppose) to 4 (Strongly support), along with a manipulation check designed to measure the effectiveness of the treatment.[30]

Effect of framing on respondent support for climate action

To investigate **H2a**: *Out-group benefit* and **H2b**: *Out-group harm* I ran an ordinary least squares (OLS) model regressing support for climate action on treatment assignment. As a reminder, each respondent was randomly assigned to one of three $frame$ conditions; $benefit$ which included additional information that non-White people will benefit from the hypothetical climate [policy/agreement], $harm$ which included information that non-White people are the group that is most harmed by climate change, and a $control$ condition which did not see any additional information.

In Figure 4, I present the marginal and substantive effects with 95% confidence interval for the treatment conditions compared to the $control$ condition.[31] Across the two conditions, I find substantive

[30]The wording of the dependent variable question and manipulation check is in Appendix B.3. Respondents who received the $benefit$ treatment answered that "non-Whites" are the group that most benefits from the hypothetical climate action at significantly ($p < 0.000$) higher rates (23 percentage points higher) than those in the control. Additionally, those who received the $harm$ treatment answered that that "non-Whites" are the group most negatively impacted by climate change at significantly ($p < 0.000$), 22 percentage points higher, higher rates than those in the control.

[31]Due to space constraints, tables underlying results are available upon request.

and statistically significant negative treatment effects. Compared to the control condition support for the climate action is lower in both the $benefit$ condition (-0.362, p <0.001) and the $harm$ condition (-0.285, p=0.003).

On a substantive level this is equal to a drop in support for the climate policy on the 0-4 point scale from 2.63 95% CI [2.50, 2.76] in the control condition to 2.27 95% CI [2.14, 2.39] in the $benefit$ condition and 2.34 95% CI [2.21, 2.48] in the $harm$ condition. Additionally, compared to those in the control, the percentage of respondents supporting the climate action[32] was 13.3 95% CI [-20.3, -6.31] percentage points smaller in the $benefit$ condition and 8.9 95% CI [-16.0, -1.77] percentage points lower in the $harm$ condition.

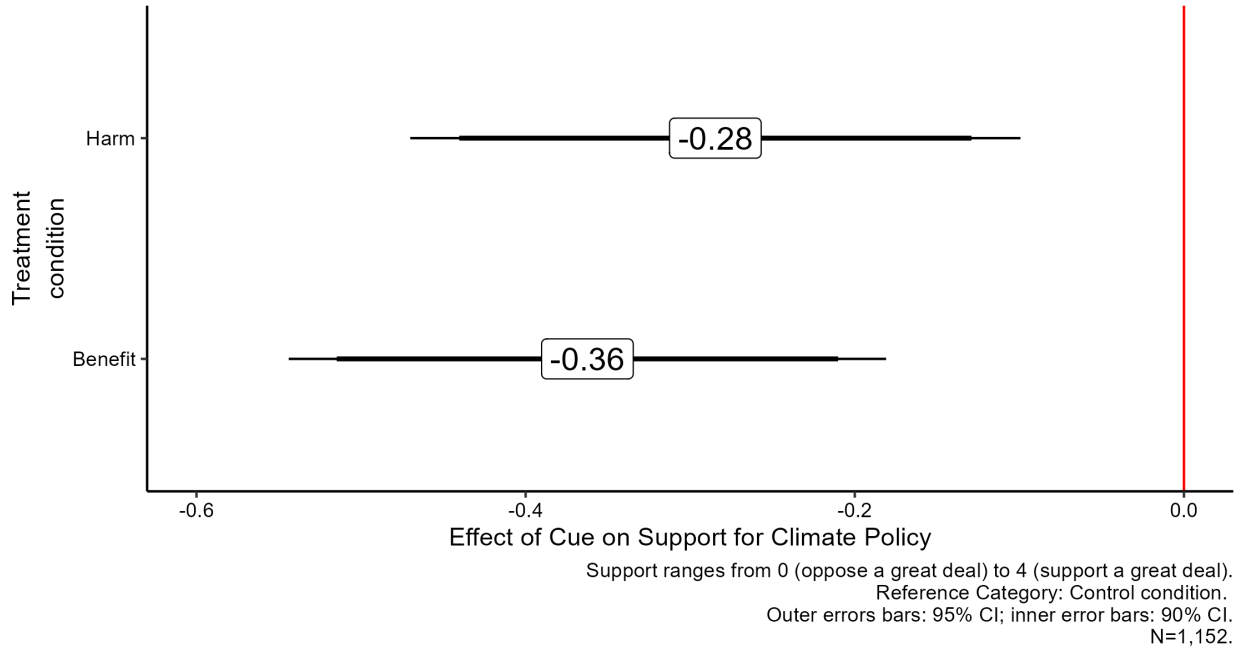

Figure 4: Effect of Cues on Support for Climate Action

Next, to investigate a possible mechanism behind the reduction in support for the climate action respondents answered "To what extent do you believe the proposed policy will help or harm people like

[32]To report percentage changes in support I collapse the primary measure of support into a binary, with responses "Support a moderate amount" or "Support a great deal" coded as supporting the policy and all other responses as opposing.

you"? Responses were coded from 0 (Hurt a great deal) to 4 (Help a great deal). The results presented in Figure 5 again show an effect of the $benefit$ cue (-0.306, $p < 0.001$) and the $harm$ cue (-0.14, p=0.098) in reducing the perceived personal benefit of the climate action. This mechanism test shows the cues reduced perceptions of the personal benefit of the hypothetical action.

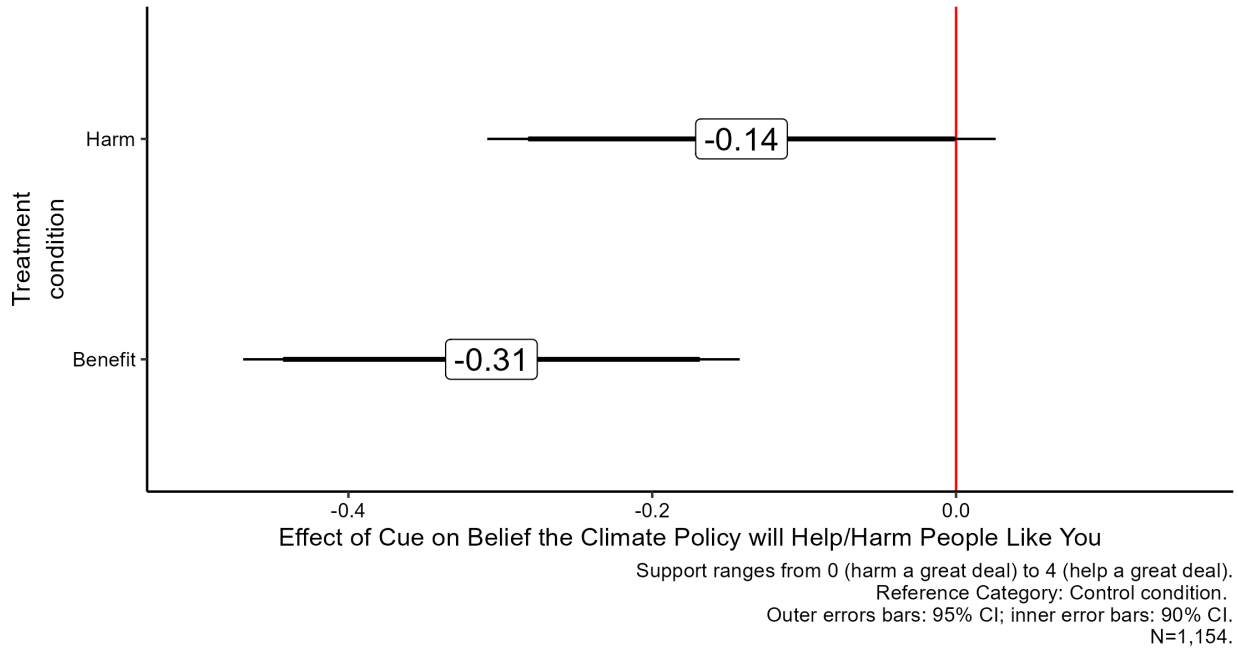

Figure 5: Effect of Cues on Perceived Personal Benefit of Climate Action

The $scope$ treatment allows me to disentangle the effect of the cues on both international and domestic climate action. In Figure 6 I break out the effects of the $frame$ by $scope$. Across all four treatment conditions, I find a negative effect for $frame$ treatment conditions compared to the control. The negative effect of the cues is statistically significant at the $p < 0.05$ level in all but harm for the domestic scope (p=0.26).

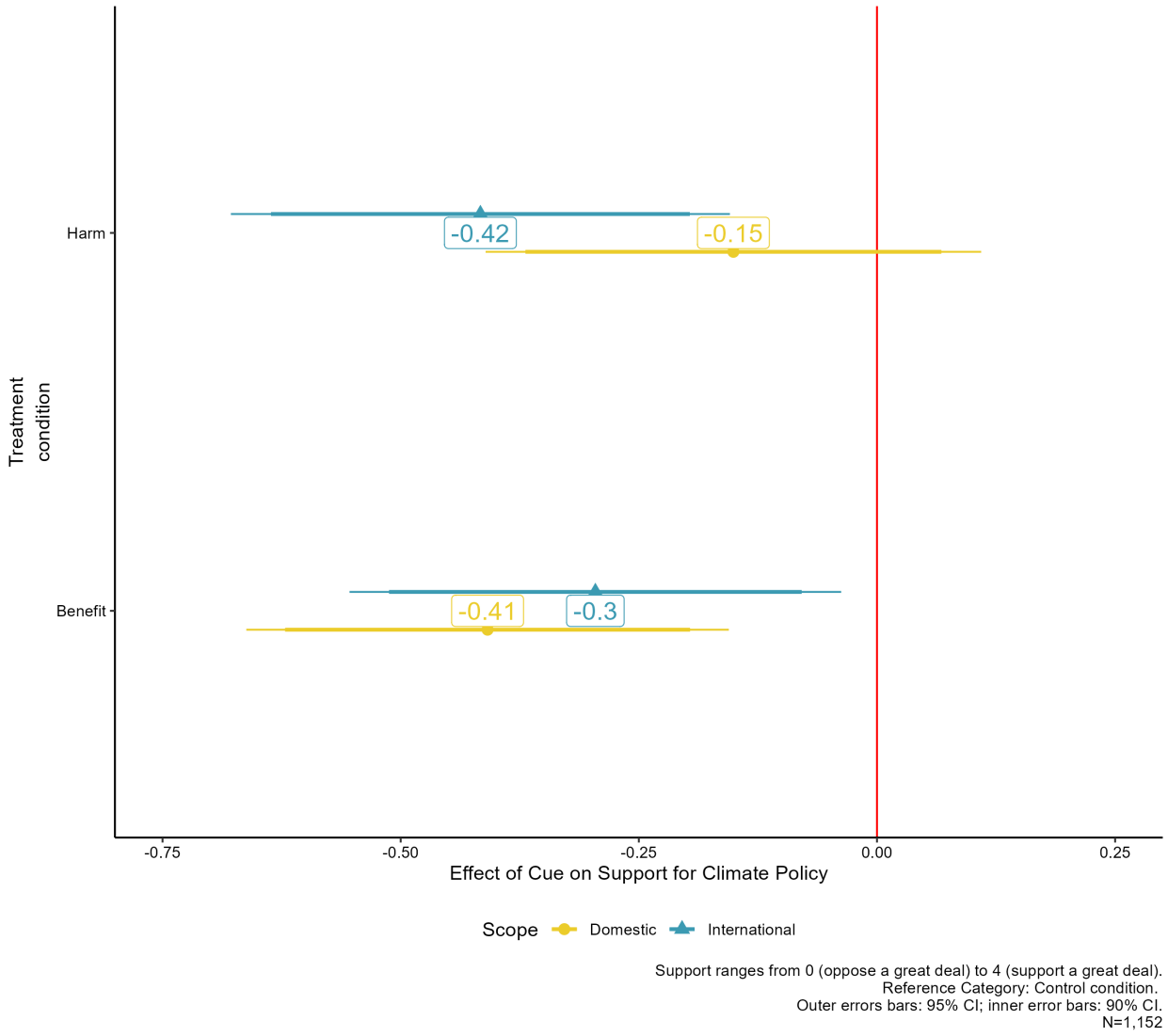

Figure 6: Effect of Cues on Support for Climate Action by Type

As before, I use the question concerning perceived personal benefit to explore a potential mechanism through which the treatments are reducing support. Again, I find evidence that those in either the $harm$ or $benefit$ condition, regardless of scope, reduced the respondent's perceptions that the climate action would benefit themselves relative to those randomized into the $control$.

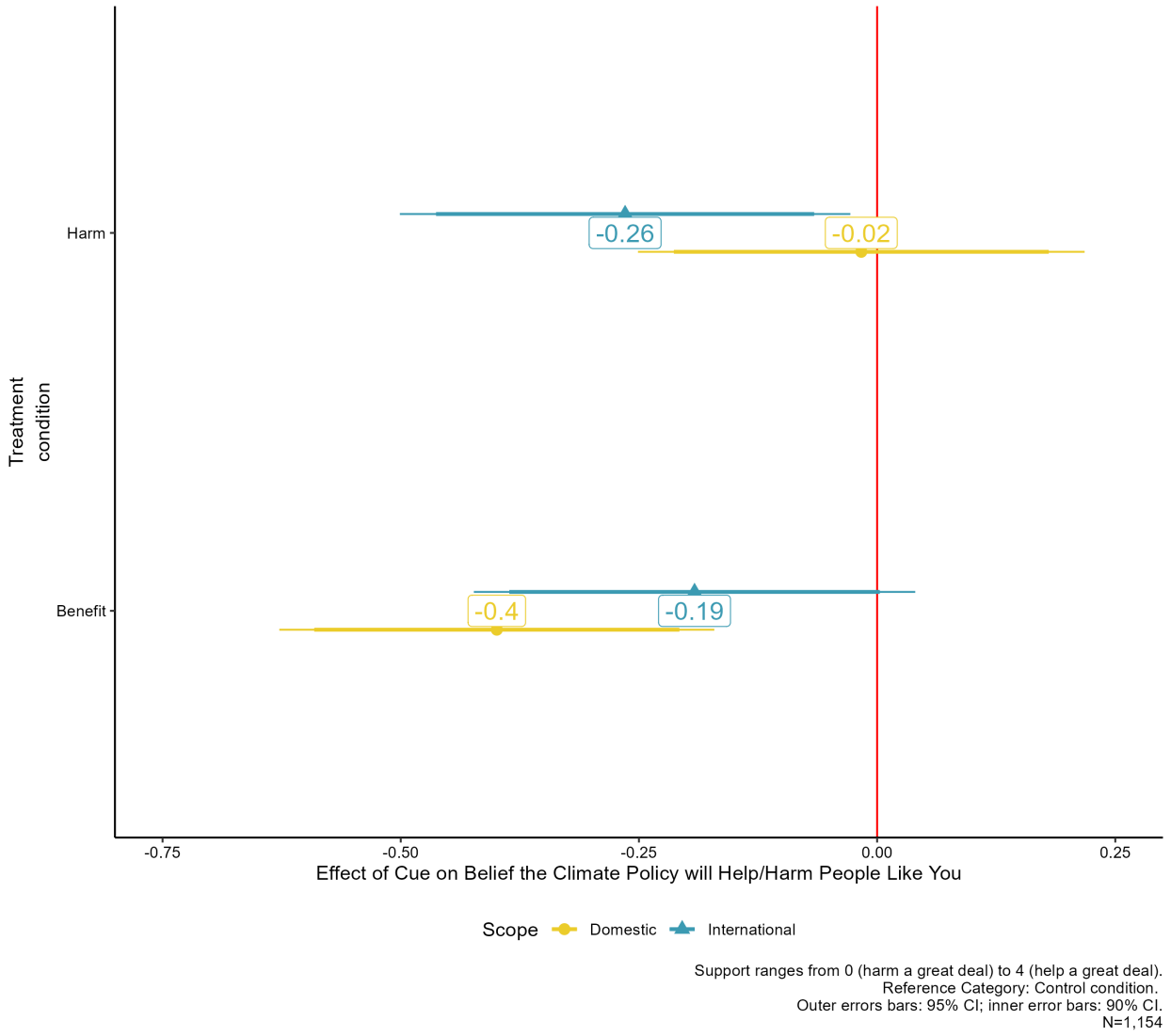

Figure 7: Effect of Cues on Perceived Personal Benefit of Climate Action by Type

While not pre-registered, I also find that respondents do appear to differentiate somewhat based on the scope of the treatment. The largest decline was among those in the $domesticXbenefit$ condition, who reported a -0.4 point decline (p <0.001) decline relative to respondents in $domesticXcontrol$. Those in the international condition who received the $harm$ cue had a decline in the perceived personal benefit of the climate action reducing their perception of personal benefit by 0.26 points (p=0.03); on the contrary, those in the $domesticXharm$ condition did not appear to have lowered belief that the policy would benefit them, compared to those in the $domesticXcontrol$.

Role of racial resentment

Next, I turn to testing the conditional effects of the treatments based on a potential mediator measured pre-treatment;[33], respondents' level of racial resentment (H3).

In Table A11, I list the four questions that made up the index (Kinder and Sanders 1996). I constructed the 0 (minimum racial resentment) to 1 (maximum racial resentment) racial resentment scale following the standard techniques (Tesler 2012). The mean racial resentment score for respondents was 0.54.[34]

Additionally, because several respondent features may be endogenous to both the racial resentment questions and their support for the climate policy I include a standard set of demographic control variables (age, gender, income, party ID, political interest, religiosity, political ideology, and education level) in the model (Jardina 2019; Stephens-Dougan 2020).

For the two $frame$ conditions, I find that respondents' who reported higher levels of racial resentment (closer to 1) reacted more negatively to the $frame$ cues, relative to those with the same level of racial resentment in the control. I show the interaction effect in Table 3. The interaction between $frame$ and racial resentment is most notable in the $harm$ condition with respondents with the highest level of racial resentment reporting a decline in support of -0.60 (p <0.00), relative to respondents with the highest level of racial resentment in the control. I display results graphically for the marginal effect of the harm cue by level of racial resentment in Figure 8.[35] While the coefficient for $HarmX\,RacialResentment$ is statistically significant ($p = 0.03$), the coefficient for $BenefitX\,X\,RacialResentment$ is not ($p = 0.30$).

[33]Sheagley and Clifford (2023) recommend measuring moderators pre-treatment and do not find evidence of priming effects.

[34]The racial resentment index Cronbach's alpha, a measure of item reliability and internal consistency, was 0.73 indicating the index is reliable.

[35]In Figure 8 I present point estimates with outer error bars at 95% CI as before, and inner bars that represent 83.4% CI in order to better facilitate visual comparison of statistically significant differences between groups (Goldstein and Healy 1995).

Table 3: Heterogeneous Effects of Treatment on Climate Policy Approval: Racial Resentment

Frame (reference= Control)	
Benefit * Racial Resentment	−0.316
	(0.303)
Harm * Racial Resentment	−0.660**
	(0.311)
Benefit	−0.176
	(0.178)
Harm	0.060
	(0.185)
Racial Resentment	−1.042***
	(0.230)
N	1,137
R^2	0.369
Control Variables	Yes

Coefficients reported from OLS regression model. Model includes control variables for age, gender, income, partyID, political interest, religiosity, political ideology, and education level. The dependent variable is coded on a five point scale, with four indicating support a great deal. Significance codes:*p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

Notably, even at the minimum level of racial resentment, those exposed to the $benefit$ condition did not increase their support for the hypothetical climate action (-0.17, p=0.32), and and respondents with the lowest level of racial resentment exposed to the $harm$ condition reporting an insignificant positive 0.06 (p=0.75) increase to the same condition again relative to the control baseline.

Overall, the results suggest that in line with my expectations in **H3**: *Racial Resentment Framing*, respondents with higher levels of racial resentment reacted more negatively to the out-group cues than those with lower levels of racial resentment. This indicates that feelings of racial resentment moderated the effect of the informational cues increasing the negative impact of the cues relative to the control. As anticipated the largest and most significant reaction was to the $harm$ condition suggesting that the two treatment conditions ($benefit$ and $harm$) may work differently in reducing support for climate action.

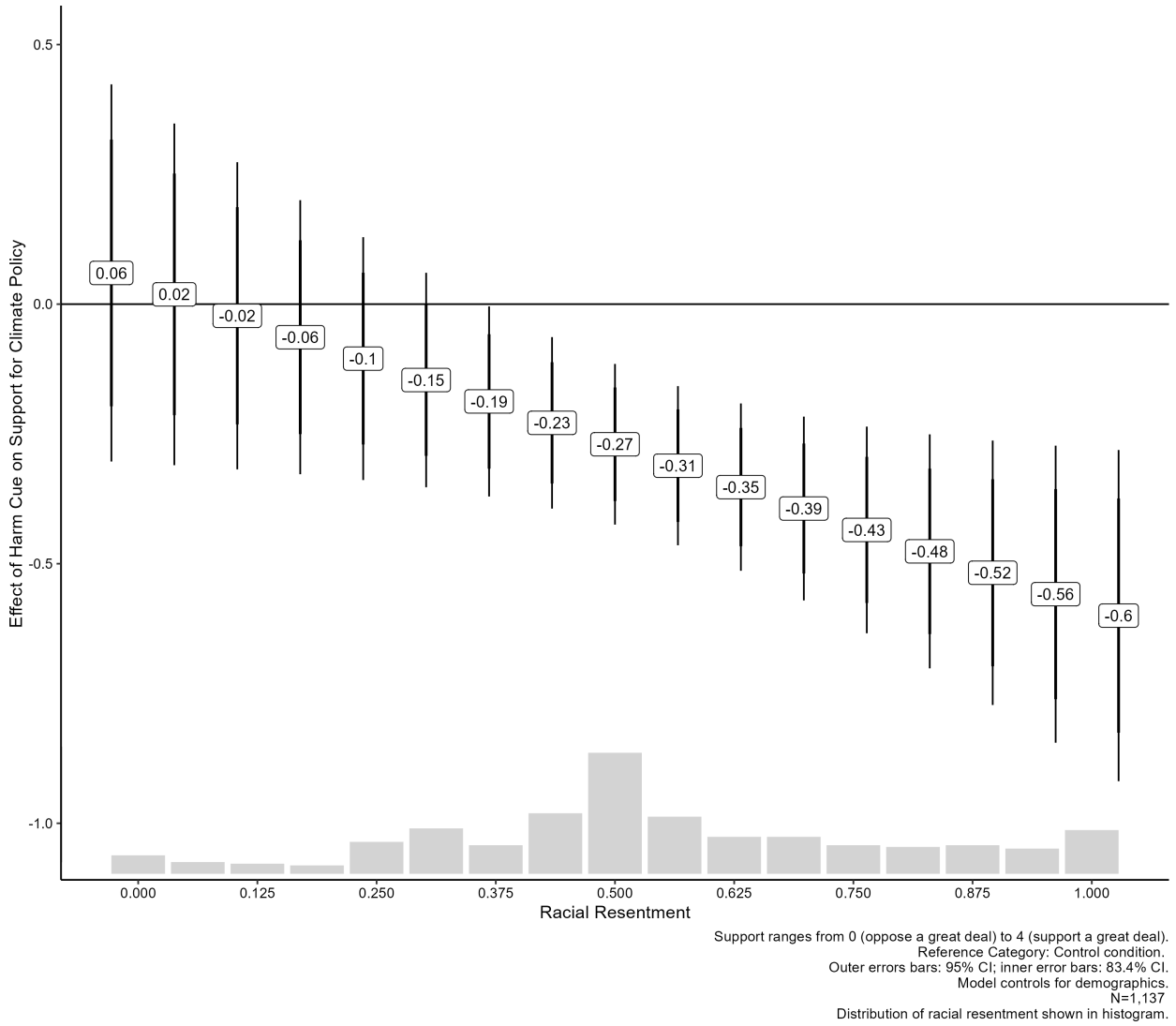

Figure 8: Effect of Harm Cue on Support By Level of Racial Resentment

Alternative explanations

I conclude by discussing two alternative explanations that could moderate the results: respondent's level of nationalism and the respondent's party affiliation. Unlike the racial resentment results, I find little evidence that nationalism moderates the treatment effect (parallel questions were not available in the correlational data). Additionally, I find that across the partisan spectrum higher levels of reported racial resentment are associated with lower support for climate action and that the experimental cues worked similarly.

It is possible that for individuals who express higher levels of nationalism, international climate agreements will also cause the respondent to consider feelings of ethnocentrism and competition towards the perceived "other" who may benefit from U.S. involvement in the agreement.[36] Thus, I consider feelings of nationalism as an additional attitude that may moderate the effect of the cues. Leveraging the nationalism index also enables me to measure if nationalism and racial resentment are measuring similar or different attitudes that may moderate the effect of the treatment conditions.

To explore the role of nationalism in moderating the treatment effects, I include an index of nationalism and restrict the scope to international. As with racial resentment, I constructed a scale of nationalism using standard techniques (Mutz and Kim 2017) to make a scale with ranging from 0 (minimum nationalism) to 1 (maximum nationalism).[37] The mean of the nationalism index is 0.59.[38]

Results are shown in Table 4. I find little evidence for the existence of conditional treatment effects by respondent's level of reported nationalism.[39] While respondents in the $harm$ condition do seem to move in a step-wise manor with larger negative effects among respondents with higher nationalism scores relative to those in the control condition, those in the $benefit$ condition do not and the interaction effect of $harmX Nationalism$ ($p = 0.43$), and $benefitX Nationalism$ ($p = 0.73$) is not statistically significant. This indicates that unlike racial resentment, feelings of heightened nationalism does not moderate the effect of the cues.

While I do not seek to discount the role of partisanship in how Americans form opinions regarding climate policy, I endeavor to establish feelings of racial resentment and cues that explicitly connect race to

[36] I restrict the analysis of nationalism as a moderator to the international scope as international agreements are the most likely scenario to trigger possible effects of nationalism. The results are similar when analyzing both domestic and international climate policy together.

[37] The Cronbach's alpha is 0.75 suggesting high internal reliability.

[38] The Pearson correlation coefficient between racial resentment and nationalism is 0.346 suggesting a weak relationship.

[39] Full results including controls are reported in Table A15

Table 4: Heterogeneous Effects of Treatment on Climate Policy Approval: Nationalism

Frame (reference= Control)	
Benefit * Nationalism	0.165
	(0.478)
Harm * Nationalism	−0.376
	(0.478)
Benefit	−0.370
	(0.311)
Harm	−0.161
	(0.315)
Nationalism	−0.141
	(0.357)
N	561
R^2	0.360
Control Variables	Yes

Coefficients reported from OLS regression model. Model includes control variables for age, gender, income, partyID, political interest, religiosity, political ideology, and education level. The dependent variable is coded on a five point scale, with four indicating support a great deal. Significance codes:*p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

climate as alternative pathways to partisanship, through which respondents' opinions concerning climate policy may be influenced.

I begin by returning to the CES data to investigate if the association between higher levels of racial resentment and lower support for climate action holds across the partisan spectrum. I split the CES respondents into three groups; those who identify with the Democratic Party including leaners, self-identified political independents, and those who identify with the Republican Party again including leaners. I then re-estimate the main models of interest. The results are shown in table form in Table 5. In the CES data I find that regardless of party racial resentment has a negative and statistically significant association with reduced support for climate action.[40]

For Republicans, Democrats, and Independents at higher levels of racial resentment there is a markedly lower support for both domestic (CPP) and international (COP21) climate policy.

[40]In Figure A1 I visualize predicted probability plots for the association of racial resentment on climate policy approval by party affiliation, with the values of all other regressors held to their means/modes for that respective party affiliation.

Table 5: Overall Effect of Racial Resentment on Climate Policy Approval (By Party)

	Democrats		Independents		Republicans	
	COP21	CPP	COP21	CPP	COP21	CPP
Racial Resentment	-3.355^{***}	-2.082^{***}	-3.403^{***}	-2.417^{***}	-2.672^{***}	-1.556^{***}
	(0.138)	(0.097)	(0.148)	(0.133)	(0.097)	(0.082)
N	15,172	15,182	4,022	4,035	13,391	13,397
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes

Coefficients reported from logistical regression models. Models include control variables for education, political ideology, gender, age, region, and income. The dependent variables are coded 1 if the respondent indicated supporting the climate policy option and 0 if they opposed the climate policy option. Significance codes: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$, two-tailed tests.

Among Republicans in the average case analysis, moving from the lowest level of racial resentment to the highest is associated with a 56.8 percentage point drop in support for COP21, and a 37.0 percentage point reduction in probability of support for the CPP.

Racial resentment also plays a role in climate support for respondents who identify as Democrats. This is perhaps more surprising because as discussed earlier, unlike Republican leaders, the Democratic party has elevated the importance of environmental justice.[41] One possible explanation is that racially resentful Democrats may not be effectively cued about the positive benefits of environmental justice. This indicates a possible role for the perceived benefits to people of color to influence climate opinions even among those who ex-ante we would anticipate to hold pro-climate opinions. This possibility is further interrogated in the experimental results section below.

For Democrats in the average case analysis, moving from the lowest level of racial resentment to the highest is associated with a 20.3 percentage point drop in support for COP21, and a 22.3 percentage point reduction in probability of support for CPP. Here it is worth noting that the overall level of support for the climate policies among Democrats remains markedly higher than among Republicans or Independents.

Additionally, I find a negative association among respondents who identify as political independents with movement from the lowest to the highest level of racial resentment associated with a statistically

[41] See for example Democratic National Committee (2020).

significant decline in the average case analysis of 52.6 percentage point decline in the probability of supporting COP21 and a 48.4 percentage point reduction in the probability of supporting the CPP. In summation, I find that regardless of party affiliation higher levels of racial resentment are associated with decreased support for climate action.

Next, I consider the role of partisanship in moderating the effect of the experiment. I break out the effects of treatment conditional on the respondent's reported party affiliation (again including leaners), and find that the relative to those in the control, across the partisan spectrum respondents who saw either the $harm$ and the $benefit$ cues significantly reduced their support for the climate action.[42] This suggests that the cues worked similarly regardless of respondent's partisanship. These negative effects of the cues are statistically significant at the $p < 0.01$ level. I display the marginal effects broken out by party identification in Figure 9.

The experimental findings indicate that perceptions of the beneficiaries of climate policy impacted the climate opinions of respondents who ex-ante we would anticipate to have far more positive perceptions of climate policy (Democrats). Additionally, Republicans had a negative reaction to the cues reducing their support for climate action. It is worth noting that support for climate policy among Democrats remains substantively higher than Republicans even after viewing the cues. Among Democrats support for the climate policy was higher in the two cue conditions (2.79 on the 0-4 scale in the benefit condition, and 2.82 in harm) than among Republicans in the control condition (2.33).

[42] Due to differences in question wording after combining partisans and leaners results for pure independents were not available in the experimental results. Results are similar among pure partisans.

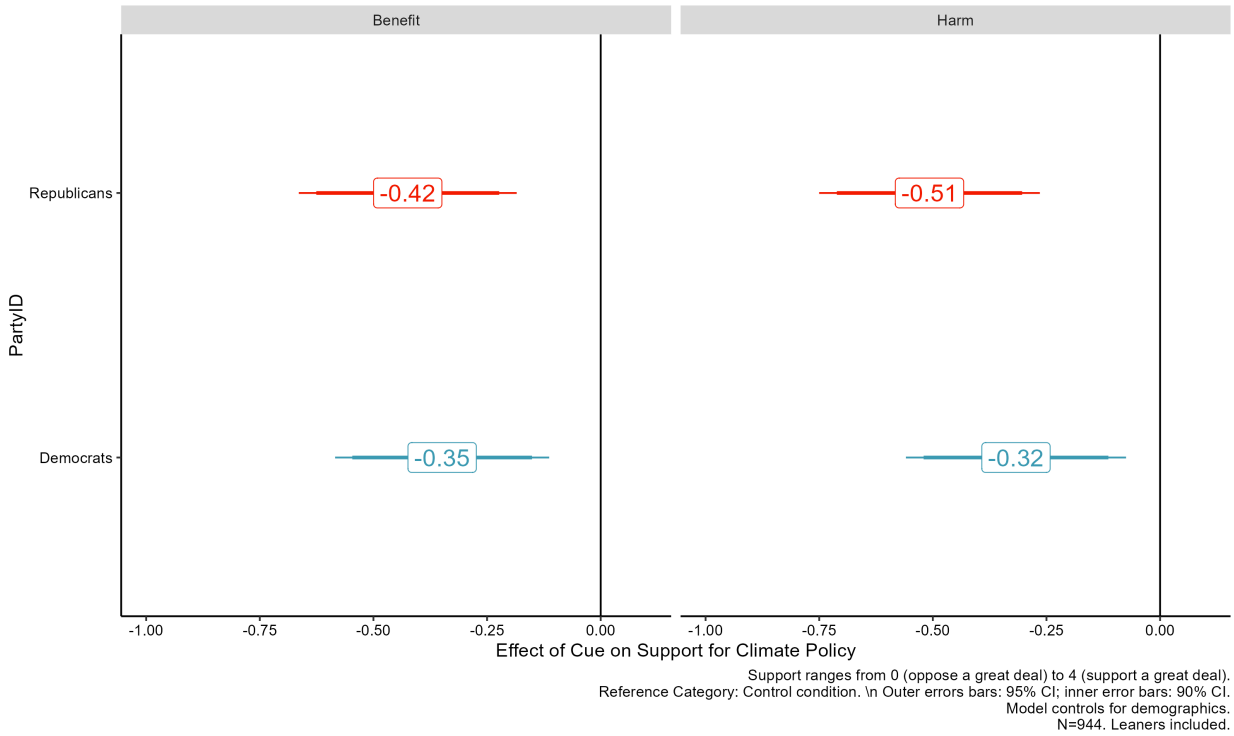

Figure 9: Effect of Cue on Support for Climate Action by Party ID

Discussion

This paper advances understanding of the linkage between racial resentment, out-group cues and climate opinion among White Americans. The data provide compelling evidence for a persistently negative effect of respondents' feelings of racial resentment at predicting support for White Americans' approval of both international and domestic climate action. First, in correlational data from the CES I find that respondents with higher levels of racial resentment are less supportive of action to address climate change. These effects persist across party lines, Democrats, independents, and Republicans with higher levels of racial resentment exhibit a lower propensity to support climate policies.

Second, in a survey experiment I find that White Americans respond to information that non-Whites are the desired beneficiaries of climate action ($benefit$) or that non-Whites are the most harmed by negative climate impacts ($harm$) by reducing their support for climate action relative to those in the $control$ condition.

Furthermore, information on non-White beneficiaries of climate action ($benefit$) has the most consistently negative impact on Whites' support for the climate policy across both international and domestic climate action. Through the use of an additional question on beliefs of the impact of the proposed climate action, I found that relative to those in the $control$ condition, respondents exposed to treatment cues had lower beliefs that the policy will help people like them.

Furthermore, I find the strongest negative impact of the cues among respondents' with the highest levels of racial resentment. In particular, among racially resentful Whites, learning that people of color are the group most harmed by climate change had the largest negative effect. This suggests something of a dichotomy where among the overall sample, learning about the non-White beneficiaries of climate action had the largest negative effect, however, among racially resentful Whites learning that people of color are the most harmed by the changing climate resulted in the steepest decline in support for climate action. This may suggest that racial resentment is not only capturing feelings of individualism and classical conservatism but also feelings of discrimination and negative out-group affect that results in a lack of support for policies framed as addressing harm to people of color. Future work can do more to disentangle these aspects of racial resentment as a moderator for climate opinions.

Additionally, I did not find evidence that nationalism moderated the effect of the treatment; individuals with higher levels of nationalism did not respond to the cues more strongly than individuals with lower levels of nationalism. Combined with the fact that across the two sets of data I found that respondents preferred international climate agreements over domestic climate policy, this indicates that public perceptions of international climate action may not be as impacted by nationalistic feelings of ethnocentrism and competition as trade agreements.

This work contributes to an emerging literature that has found that climate policies framed as highlighting the benefits to racial minorities (English and Kalla 2021) or as pursuing social justice policies (Marshall et al. 2024) are less popular among White Americans. Taken as part of this literature, these results have important implications for the study of American public opinion in the context of foreign policy issues and for scholars and policymakers wishing to better understand the conditions under which members of the American public are more or less likely to support action to address climate change.

It is possible that combining climate action with broader social justice goals or an explicitly racialized framing may carry with it a political cost particularly among White Americans. This matters because politicians on both sides of the political aisle can choose to frame climate policy as racial and lead to an activation of racial resentment. These results suggest that understanding racial attitudes and the impact of racial cues are a crucial variable for determining overall levels of support for climate policy among White Americans. Better understanding variation across the spectrum of racial attitudes of White Americans is vital to conceptualizing how to shape efforts to increase climate concern and support for climate change mitigation policies that benefit all Americans including communities of color.

PAPER 2: PRINCIPLED CONSERVATISM OR OUT-GROUP ANIMUS? DISENTANGLING THE LINKAGE BETWEEN RACIAL RESENTMENT AND CLIMATE OPINIONS AMONG WHITE AMERICANS

Catastrophic consequences such as severe weather, rising sea levels, rapidly increasing temperatures, pervasive drought, and various other climate-related impacts are evident around the world. However, the effects of climate change are not evenly felt. Newell (2005) writes that the effects of environmental destruction are experienced differently around the world due to "entrenched patterns of social inequality etched along racial, class and gender lines" (Newell 2005, 73). Therefore, addressing the impacts of global climate change is not only inherently complex, but also deeply intertwined with the political challenges of social justice.

Since supportive domestic politics is a prerequisite for large-scale climate action (Gaikwad, Genovese, and Tingley 2022), understanding the factors that shape public opinion is crucial. To date, much of the literature has focused on individual demographic characteristics (Egan and Mullin 2017). This includes gender (Bush and Clayton 2022), income (Bakaki and Bernauer 2018), employment sector (Tvinnereim and Ivarsflaten 2016), education (Kahan 2015), and geographic region exposure to climate impacts (Arias and Blair 2024). Additionally, an emerging literature has found a key role for psychological mindsets including time horizons (Gazmararian 2024), empathy (Arias and Blair 2022), or consideration of future consequences (Beiser-McGrath and Huber 2018).

The uneven distributional consequences of the effects of climate change also invites consideration of another psychological factor that may shape public attitudes; feelings of racial resentment. A nascent literature has observed that at least since the presidency of Barack Obama Americans with high levels of racial resentment have lower support for climate action (e.g., Benegal 2018; Benegal and Holman 2021; Chanin 2018; Parajon 2024). Although this link has been observed in a variety of circumstances, including hypothetical domestic policies (Benegal 2018) and international agreements (Parajon 2024),

the mechanisms underpinning the relationship between racial resentment and climate opinion remain uncertain due to the possibility of omitted variable bias resulting from the lack of consideration of factors of cultural conservatism and worldviews.

I conceptualize two possible mechanisms underpinning the link between racial resentment and climate policy preferences. The linkage between racial resentment and climate opinions may reflect respondents' worldviews of individualism and classical conservatism, shaping their broader policy preferences. However, it may also capture feelings of racial animus and negative out-group affect, leading to opposition specifically toward policies perceived as benefiting non-white communities. Additionally, while this article builds on previous research that examines the relationship between racial resentment and policy preferences (e.g., Davis and Wilson 2021; DeSante 2013; Kam and Burge 2018), my focus is specifically on identifying the mechanisms that drive the link between racial resentment and climate attitudes. In doing so, I argue that racial resentment is part of a wide-array of political attitudes that matter in how individuals form beliefs about climate policy. Understanding the mechanisms driving the linkage between racial resentment and climate policy preferences is important for climate persuasion efforts and for policy makers seeking political viable solutions.

To this end, I introduce three potential omitted variables: personal attribution worldview, belief in traditionalism, and negative affect toward Barack Obama, and examine whether the relationship between racial resentment and climate attitudes remains robust when accounting for these factors. My findings indicate that, while the strength of this relationship varies depending on the type of climate policy, racial resentment remains a significant predictor.

This study makes several key contributions to the literature on climate policy attitudes. First, it provides additional evidence that racial resentment is a significant predictor of climate policy preferences, influencing opinions across a range of climate policies. Second, it disentangles the role of ideological worldviews, demonstrating that while personal attribution beliefs and traditionalist values are also associated with climate policy support, the effect of racial resentment persists even when these factors are considered. Third, it highlights that negative affect toward Barack Obama independently predicts climate attitudes; however, racial resentment remains a strong predictor even after controlling for this association. This

reinforces the argument that racial resentment reflects more than just partisan or ideological conservatism. Finally, the study underscores that the type of climate policy matters: racial resentment has a stronger impact on support for policies explicitly framed around environmental justice compared to those centered on business regulation. Taken together, the findings refine our understanding of how racial attitudes shape climate policy preferences and have broader implications for public support of environmental action.

This article proceeds as follows. First, I review previous research on the connection between racial resentment and climate attitudes. Next, I introduce potential alternative explanations, including ideological worldviews and Obama affect, and explore whether they could account for the observed relationship. Finally, I test these mechanisms using an original survey, analyzing their relative influence on climate policy preferences. Although not a perfect measure, racial resentment captures distinct aspects of racial animus beyond cultural conservatism, highlighting its role in shaping White Americans' climate attitudes.

Pathways Through Which Racial Animus Could Result in Lower Support for Climate Policies

The relationship between racial resentment and climate policy beliefs is shaped by, among other factors, political messaging and elite cues emphasizing environmental justice, perceptions of harm, and beliefs about who benefits from climate action. Benegal (2018) argues that the election of the first Black American president Barack Obama represents a potential turning point in climate attitudes. Post-2008 Americans with higher levels of racial resentment began to see climate as related to "unfair" governmental assistance to people of color.

Benegal and Holman (2021) argue that this connection has only increased during the first Trump presidency noting "During the Trump presidency, elite rhetoric about restoring coal and jobs to rural, white mining communities further reinforced these relationships" (Benegal and Holman 2021, 1909). Furthermore, political leaders on both sides of the political aisle play a role in racializing climate policy, where prominent Democrats emphasize climate justice initiatives in policies like the IRA or the Green New Deal, thus raising the profile of climate justice. When climate action is depicted as favoring marginalized communities, individuals with higher racial resentment may be more likely to oppose it.

Chanin (2018) finds that individuals with higher levels of racial resentment may be less likely to support climate policies because they perceive the harms of climate change as disproportionately affecting people of color, and Dietz et al. (2018) argues that racial resentment influences attitudes toward climate policy by shaping perceptions of who benefits from environmental action. Whites with higher levels of racial resentment are concerned that material benefits will flow to address the impacts of climate change on Black Americans. This argument is similar to the logic that some White Americans would rather destroy public goods before sharing them with people of color (Metzl 2019), a canonical example of which is welfare policy (Gilens 1996). Furthermore, as Stephens-Dougan (2020) shows the association of Black Americans with a policy, for example affirmative action, results in lower support for the policy among Whites.

In the case of climate, racially resentful Americans may view climate policy as increasingly linked to racial justice efforts. These include, for example, the Inflation Reduction Act (IRA) which included $60 billion in environmental justice priorities to address the unequal impacts of climate change on communities of color (Friedman and Plumer 2022) potentially reinforcing the idea that climate spending is racial justice spending. Or Project 2025 a blueprint for Donald Trump's second term which refers to, "The Biden Administration's climate fanaticism will need a whole-of-government unwinding…the Biden Administration's leveraging of the federal government's resources to further the woke agenda should be reversed and scrubbed" (Project 2025 2024).

Together, these findings demonstrate that attitudes towards climate change are linked with racial resentment. Political messaging, perceptions of harm, and beliefs about policy beneficiaries shape what people think about climate policy. Parajon (2024) investigates this linkage through survey experiments varying exposure to information about the racial distributive effects of hypothetical climate policies, finding that when climate policies are framed as benefiting people of color, those with high racial resentment are more likely to reject them. Additionally, information that non-whites are the most impacted by climate change also leads to a decline in support among only those with the highest levels of racial resentment.

Alternative pathway I: Worldviews and climate

It is also possible that the racial resentment measure does not solely capture racial animus but instead reflects broader worldviews that influence climate attitudes. If this is the case, the observed relationship between racial resentment and climate opinions may be driven by underlying ideological perspectives rather than racial resentment itself, leading to omitted variable bias. This idea aligns with research showing that individuals develop political attachments and policy preferences based on personal experiences that shape their worldviews (Hetherington and Weiler 2018; Valentino and Sears 1998).

Although there is a literature exploring the role of psychological factors such as empathy (Arias and Blair 2022), collective efficiency (Feitsma 2024), and warm glow (personal satisfaction) (Hartmann et al. 2017; Jerit, Shin, and Barabas 2024) in predicting climate beliefs, research exploring worldviews that could conceivably be picked up in the racial resentment index is limited.

Based on previous work examining the mechanisms through which racial resentment impacts policy preferences and the existing literature exploring the linkage between racial resentment and the climate I conceptualize two existing worldviews that are of particular interest to study. The two worldview batteries of interest that could plausibly both influence the dispersion of the racial resentment variable and views of climate change policy are personal attribution (vs. societal/structural attribution) and traditionalism (vs. nontraditional). In the following I elaborate on the logic underpinning the potential linkages.

I start with a discussion of personal attribution which Wilson (2025) finds to be empirically related to racial resentment. The racial resentment scale was originally designed to measure attitudes reflecting the belief that Black individuals have received unfair advantages through government intervention. When critiquing the scale Wilson and Davis (2011) argue that what the original racial resentment scale captures is not only racial animus, but broader attitudes about personal responsibility, particularly the belief that success or failure is determined by individual effort rather than external factors (Wilson and Davis 2011, 119).

This idea aligns with the belief in a just world, which suggests that people generally get what they deserve because the world operates fairly and justly (Konicki 2018). In this framework, individuals are seen to be fully responsible for their own circumstances, reinforcing the notion that structural disadvantages

or systemic inequities are unimportant. Research by Carney and Enos (2015) provides further evidence for the connection between just-world beliefs, personal responsibility, and racial resentment. Their findings suggest that those who believe that life outcomes are determined by individual effort are also more likely to exhibit racial resentment, particularly when they perceive government assistance as unfairly benefiting certain groups.

Additionally, personal attribution is related to attitudes of self-enhancement or a self-focus which are negatively correlated with climate concern (Schultz and Zelezny 2003). Those who are higher in personal attribution may favor individualistic or market-based approaches to environmental issues rather than broad government-led interventions. This reluctance to embrace large-scale climate policies may stem from a broader worldview in which success is seen as a personal achievement rather than a collective responsibility.

Across similar lines, Feldman and Huddy (2005) find that among conservative Americans, higher levels of racial resentment correlate with decreased support for government aid to both White and Black individuals. As a result of finding that racial resentment drives policy opposition regardless of race, the authors suggests that racial resentment may not be only about opposition to aid for non-Whites but may be rooted in a broader ideological commitment to self-sufficiency and opposition to government intervention. As a result, it is possible that personal attribution is by itself connected to climate beliefs.

This reasoning leads to the first part of my second hypothesis: opposition to climate policies is driven not only by racial resentment, as discussed in the literature review above, but also by personal attribution for the harms of society.

H1a: *Worldview: Personal attribution*: Individuals exhibiting higher levels of agreement with personal (vs. societal/structural) attribution will indicate **lower** probability of support for climate policies.

The concept of racial resentment, as measured by the Racial Resentment Scale, can be traced back to early research on racial attitudes, including the work of Matthews and Prothro (1966) on perceptions of Black individuals. The scale was later formalized by Donald Kinder and Lynn Sanders who defined racial resentment as "the conjunction of whites' feelings towards blacks and their support for American values, especially secularized versions of the Protestant ethic" (Kinder and Sanders 1996, 293). Their definition

suggests that racial resentment is not simply hostility toward Black Americans but is intertwined with beliefs about hard work, self-reliance, and personal responsibility, values that are central to American traditionalism. In fact, they themselves note that Black Americans may be perceived as "violat[ing] such traditional American values as individualism and self-reliance, the work ethic, obedience, and discipline" Kinder and Sears (1981, 416).

As a result, if racial resentment is closely linked to beliefs in the Protestant work ethic and traditional values, then opposition to climate policies may not solely be a reaction to racialized framing but rather a broader rejection of governmental policies perceived as conflicting with these deeply held values. The Protestant work ethic emphasizes individual responsibility, self-sufficiency, and the idea that success is earned through individual hard work (Weber 2013). If climate policies are framed as redistributive, through direct government intervention, economic regulation, or international assistance, those who prioritize these values may view such policies as unfairly rewarding those who have not earned the support, reinforcing their opposition.

Additionally, ideological conservatives, particularly those who oppose government intervention in both economic and social matters, may perceive climate policies such as international climate agreements, regulatory measures, and subsidies for green industries as forms of government overreach. From this perspective, such policies not only impose undue burdens on businesses and individuals but also threaten free-market principles and personal autonomy. If traditionalist worldviews reinforce skepticism of government-led societal change, then climate action, especially when framed as requiring large-scale economic restructuring, may be met with reluctance, not just on economic grounds, but as an ideological stance against what is seen as excessive interference in the natural order of society and the economy.[43] In contrast, those with more progressive values (e.g. Progressivism (Smith 2015)) may prioritize broad change, social reforms, and favor large scale government intervention that would be required to address the climate crisis.

[43]See also DeSante (2013) and Hassell and Visalvanich (2015) for an overview of racial animus and principled ideology as competing explanations for whites' opposition to racialized policies.

This reasoning supports the second component of my second hypothesis: opposition to climate policies is influenced not only by racial resentment but also by stronger adherence to traditionalist values and skepticism of government intervention, both of which contribute to broader conservative resistance to climate action.

H1b: *Worldview: Traditionalism*: Individuals exhibiting higher levels of agreement with traditionalist (vs. progressive) attitudes will indicate **lower** probability of support for climate policies.

Alternative pathway II: Obama Affect

An additional alternative pathway, rather than racial resentment, concerns Americans' affect towards the first African American President of the United States; Barack Obama. Tesler (2012) argues that the association of former US President Obama with certain issues, such as healthcare care, serves to split public opinion by racial attitudes and by race. Tesler then utilizes Kinder and Sander's (1996) racial resentment scale to test the linkage between a respondent's level of racial resentment and their approval of healthcare spending, finding a clear relationship between the two caused by the "spillover of racialization" (Tesler 2016). Benegal (2018) demonstrates that because of public associations between Obama and climate policy similar dynamics are at play for climate policy. This shift was further reinforced during the Trump presidency, when political rhetoric framed climate policies as prioritizing marginalized communities over White, working-class voters (Benegal and Holman 2021).

As the first Black president of the United States, Obama became a symbolic figure in both racial and environmental politics. His administration championed major climate initiatives, including the Paris Climate Agreement and domestic regulatory policies such as the Clean Power Plan (Konisky and Woods 2016; Obama 2015). These policies, framed by conservative opponents as examples of government overreach, became politically charged. In this context, opposition to climate action became associated with negative views of Obama, particularly among individuals with conservative and racially resentful attitudes. Individuals who score highly on a scale of racial resentment will be more likely to view environmental policy as benefiting specifically Black Americans, partially because of this association between Obama and

climate action and therefore, be less supportive of environmental action than those who score lower on the scale.

However, the question remains if the linkage between Obama and climate action explains why racial resentment moderates climate opinion, would the effect persist over time in the nine years since he left office? It is plausible that the linkage would have diminished with time. Thus if both feelings of racial resentment and negative Obama affect are linked to climate opinion this suggests the two could be operating by different channels through which racial attitudes are linked to climate opinion. Given Obama's role as a symbolic figure in environmental policy and the broader racialized framing of climate action, negative affect toward him may serve as a key predictor of climate skepticism. This leads to the following hypothesis:

H2: *Obama FT persistence*: Individuals with less favorable views of Barack Obama will have lower support for climate policy compared to those with more positive views.

Disentangling the Linkage

To recap the above, I conceptualize three (non-mutually exclusive) pathways through which higher levels of racial resentment could be translated into lower levels of support for climate policy. The first is that racial resentment working through mechanisms based around feelings of discrimination and negative out-group affect results in lower support for policies believed by Whites to be benefiting non-whites. Empirically, this pathway would result in a significant relationship between racial resentment and climate beliefs even when accounting for alternative explanations like worldviews and Obama affect.

The second is that the classic racial resentment battery is simply capturing a spurious correlation and that, empirically, the linkage between racial resentment and climate beliefs should disappear when accounting for worldviews. An additional alternative pathway suggests that if the racialization of climate policy were solely an Obama phenomenon then negative attitudes toward the first Black president, who was closely associated with climate initiatives like the Paris Agreement (Konisky and Woods 2016; Obama 2015), should fully account for opposition to climate policy. In this case, racial resentment would no longer be a significant predictor of climate attitudes once attitudes toward Obama are taken into account.

In contrast to the above logic I argue that because addressing climate change is such a multifaceted issue with a variety of policy tools that could work to fix the problem, the factors that shape support for climate action are also multifaceted. There is room in individual's mental models for these different psychological constructs including racial resentment to play a role. In my other work I argue that "This may suggest that racial resentment is not only capturing feelings of individualism and classical conservatism but also feelings of discrimination and negative out-group affect that results in a lack of support for policies framed as addressing harm to people of color" (Parajon 2024, 30). This is a similar finding to Kam and Burge (2018) which evaluate the scale and find that for those with high levels of racial resentment "themes of individualism, and themes of discrimination stream through their minds" (Kam and Burge 2018, 318). Additionally,

Other work investigating competing explanations for Whites' attitudes towards racialized issues goes further in arguing persuasively that racial resentment captures elements of racial animus. DeSante (2013) argues that attitudes traditionally framed as principled conservatism or opposition to government intervention often intertwine with racialized perceptions of fairness and deservingness. For example, he finds that opposition to policies perceived as benefiting marginalized groups, such as Black Americans, is driven not only by ideological worldviews but also by underlying racial biases (DeSante 2013, 355).

More specifically, DeSante employs an experiment design investigating if Americans reward hard work in a color-blind manner. Similarly to this paper he considers if racial resentment is a proxy for cultural conservative ideology. Crucially, DeSante finds that it is not. He summarizes his findings "Thus, the difference between the spending ceiling and the amount whites are receiving may just be part of a "principled" component of racial resentment. However, the large and significant difference between the amounts given to white and black applicants can only be attributed to racial animus" (DeSante 2013, 350).

Similar findings are reported in (Hassell and Visalvanich 2015), who utilizing an experimental design to separate out the effects of racial attitudes from conservative ideology find that White Americans with higher levels of racial resentment are less supportive of policies viewed as benefiting racial minorities. These

findings underscore the significance of racial resentment as a distinct factor shaping policy preferences, separate from broader conservative ideology. [44]

Statements from advocates and politicians across the American political spectrum suggest that climate-related messaging can trigger both racial resentment and cultural conservatism in related but separate pathways. For example, U.S. Representative Barbara Lee (D. California), a cosponsor of the green new deal, noted "Black, brown, and low-income communities bear the brunt of pollution and environmental degradation, accelerated by climate change. . . that's why addressing climate change is not just an environmental issue, but also an imperative to achieve racial and economic justice" - (U.S. Representative Barbara Lee (D. California)). By connecting racial and economic justice with climate policy Barbara Lee may activate both racial resentment and worldviews that reflect a belief in individualism, meritocracy, and opposition to redistributive policies. Empirically, this suggests that both racial resentment and culturally conservative world views should predict climate attitudes.

Conservative commentators have often taken a different approach, seeking to link environmental issues and race in a negative and inflammatory way. For example, former Fox News host Tucker Carlson frequently associated immigration with environmental degradation (Atkin 2023). On one broadcast, he claimed, "The EPA alone gets...more than $30 billion for so-called disadvantaged communities. What are those? Well, they're not really defined—people who vote for Joe Biden. So, what it really means is the EPA is going to spread more identity politics and race hate...this is about spreading race hate...They call it equity." These statements are not only factually inaccurate; they reveal how influential conservative voices are framing environmental issues through a racialized lens. Rather than relying solely on cultural conservative arguments, Carlson's rhetoric ties environmental policy to the perceived replacement of White Americans by people of color, suggesting a deeper racialized narrative underpinning some conservative opposition to climate action.

[44] See also (Tarman and Sears 2005) who find that racial resentment is a consistent belief system distinct from cultural conservatism.

As a result, while both worldviews emphasizing cultural conservatism and racial resentment will be associated with lower levels of support for climate policy, I argue that racial resentment remains a distinct pathway. This results in my third and final hypothesis.

H3: *Racial resentment persistence*: The finding that individuals exhibiting higher levels of racial resentment will indicate **lower** support for climate policy will persist when accounting for alternative explanations.

Finally, as discussed throughout the theory section, climate policies explicitly referencing environmental justice should show the strongest and most consistent link between racial resentment and policy approval. This pattern emerges because environmental justice frameworks explicitly highlight racial disparities in environmental harm and frame policy interventions as benefiting marginalized racial groups. Given prior research showing that racial resentment reduces support for policies perceived as specifically benefiting people of color (Parajon 2024), we should expect a pronounced effect in this domain.

In contrast, climate policies more closely tied to a conservative worldview, such as business regulations, are likely to exhibit a weaker or less persistent racial resentment effect. This attenuation may occur because these policies are often framed through economic or regulatory lenses rather than explicitly invoking racialized harm or rectifying historical racial injustice. For example, policies framed around government intervention in business, due to longstanding conservative commitments to free-market capitalism, may be less explicitly racialized in public discourse. Furthermore, conservative opposition to environmental regulations could be driven by concerns over government overreach and economic freedom (Cook and Lewandowsky 2016; Heath and Gifford 2006; Stenhouse et al. 2014), which may dilute or override racial considerations.

More broadly, I anticipate variation in both the substantive and statistical significance of racial resentment depending on the type of climate policy in question, with the expectation that as climate policy becomes more racialized the linkage between high levels of racial resentment and lower levels of support for climate policy will be stronger. For example, policies that include explicit elements of environmental justice will be more prone to racialization and thus racial resentment will play a larger role in opinions. In contrast, policies framed around government intervention in business, due to connections between cultural conservatism and capitalism, may be less explicitly racialized.

Data

I commissioned Qualtrics to gather survey data from 1,519 Americans, targeting U.S. census benchmarks by race, education, gender, and age. The survey was in the field June 1st – June 21st, 2023. I then restricted analysis to only respondents who identified as White. This resulted in a sample size of 953 White respondents.

Description of Independent Variables

In this section, I describe my key variables of interest, starting with the racial resentment index. As shown in Table A17 to measure racial resentment, I asked respondents to "Please indicate the extent to which you agree or disagree with each of the following statements:" taken from the four questions on the (Kinder and Sanders 1996) scale. Then I constructed the scale of racial resentment 0 (minimum racial resentment) to 1 (maximum racial resentment) following standard techniques (Tesler 2012). The mean racial resentment score for respondents was 0.559.[45] The full distribution is shown in Figure 10.

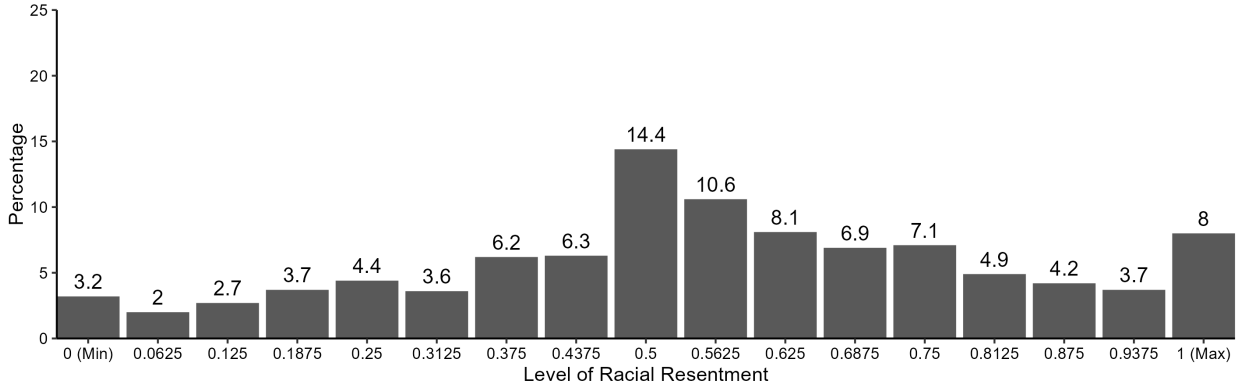

Figure 10: Distribution of Racial Resentment Across White Respondents

Next, I briefly describe, then visualize, the distributions of the worldview variables of interest (personal attribution and traditionalism). To create these indexes, respondents were first asked "Which comes closer

[45]The sample mean is remarkably similar to the 0.56 reported in DeSante (2013). Additionally, the racial resentment index Cronbach's alpha, a measure of item reliability and internal consistency, was 0.79 (again similar to the alpha of 0.86 reported in DeSante (2013), indicating the index is reliable.

to your own views, even if neither is exactly right?" Respondents were then asked a series of dichotomous questions summarized in the appendix. Each question was coded so that a response aligned with the worldview being measured was assigned a "1", while the alternative response was assigned a "0". The final indices were calculated by averaging responses across all items, resulting in a scale from 0 to 1, where higher values indicate stronger alignment with the given worldview. These indices were then used as continuous variables in the OLS regression analysis.

Below I visualize the distributions of the three batteries beginning with traditionalism which has a mean score of 0.65 and a Cronbach's alpha of 0.65. The traditionalism battery is made up of four questions averaged together so that higher values represent the respondent increasingly agreeing with the traditionalist viewpoint. For example, answering "Established traditions provide the wisdom necessary to understand the world" is coded a "1" and "To understand the world, people must free their minds from established traditions" is coded as a "0". Thus, averaged scores closer to "1" indicate a greater belief in traditionalism compared to progressivism ("0").

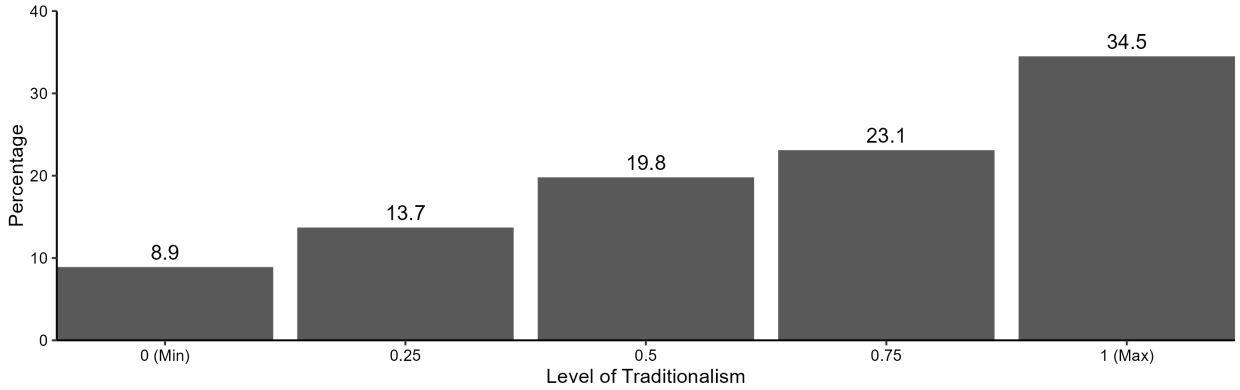

Figure 11: Distribution of Traditionalism Across White Respondents

Next, the personal attribution index which has a mean score of 0.47 and a Cronbach's alpha of 0.4. Again, a score of "1" represents total alignment with the underlying construct. For instance, in the personal attribution battery, selecting "Americans go bankrupt because they lack the personal responsibility and work ethic to pay their bills" was coded as "1", whereas responding "Americans go bankrupt because they lack access to affordable healthcare and good jobs" was coded as "0".

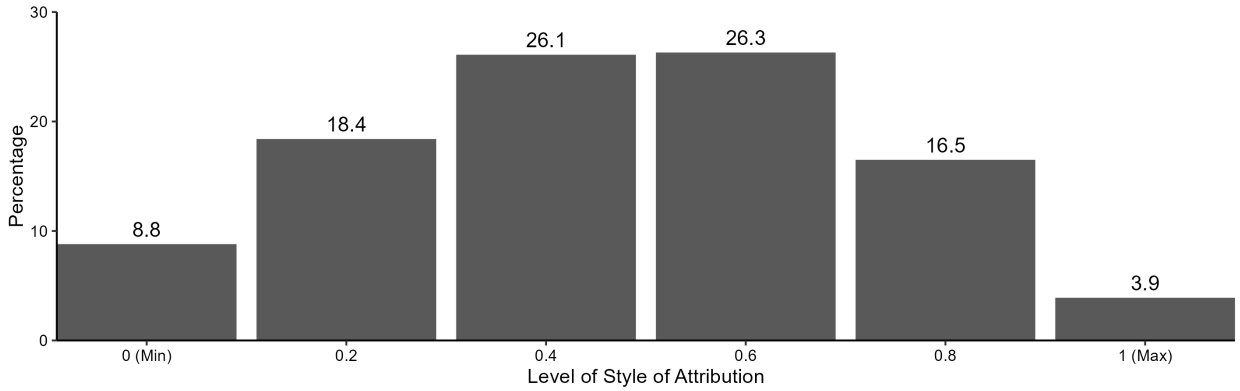

Figure 12: Distribution of Personal Attribution Across White Respondents

The final independent variable of interest is a feeling thermometer (FT) measuring feelings towards former President Barack Obama, Respondents were instructed to

> Please use the sliders below to indicate your feelings about the people they represent. Ratings between 50 and 100 mean that you feel favorable and warm toward the person. Ratings between 0 and 50 mean that you don't feel favorable toward the person and that you don't care too much for that person. You would rate the person at the 50 degree mark if you don't feel particularly warm or cold toward the person.

The distribution of responses is shown in Figure 13 with responses re-scaled from 0-1 for comparability, the FT had a mean score of 0.58 out of 1.

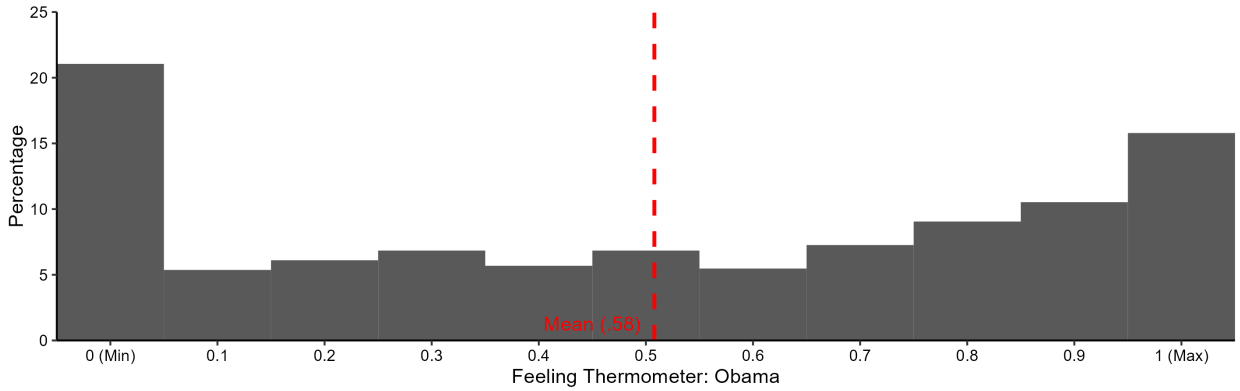

Figure 13: Distribution of Obama Feeling Thermometer Across White Respondents

Next in Figure A8 I display the bivariate correlations ranging from -1 to 1 between the independent variables. I also include a dummy variable measuring partisanship (with leaners), as it displays an interesting degree of variation. Among the variables of interest following conventional rules of thumb (Mukaka 2012) none rise above a moderate correlation. This is the first sign of evidence that worldviews, racial resentment, and Obama affect may be operating along distinct channels. Additionally, the correlation between the main independent variables are relatively low. Racial resentment is moderately correlated with personal attribution at 0.46 and traditionalism at 0.45 and Obama affect at a slightly higher -0.51. This negative correlation makes sense with respondents with higher levels of racial resentment being less supportive of Barack Obama.

Additionally, while party affiliation and racial resentment are correlated, as demonstrated by previous research (Jardina and Ollerenshaw 2022; Stephens-Dougan 2020), there is still notable variation. The correlation between racial resentment and identifying as a Republican is 0.42, suggesting a weak positive relationship (Mukaka 2012). Interestingly, the correlation between feelings towards former President Obama and partisanship is greater at -0.62 indicating a moderate negative correlation. Taken together, the bivariate correlations provide initial evidence that, as expected, these factors are moderately related but not so strongly correlated as to suggest they are dependent on one another.

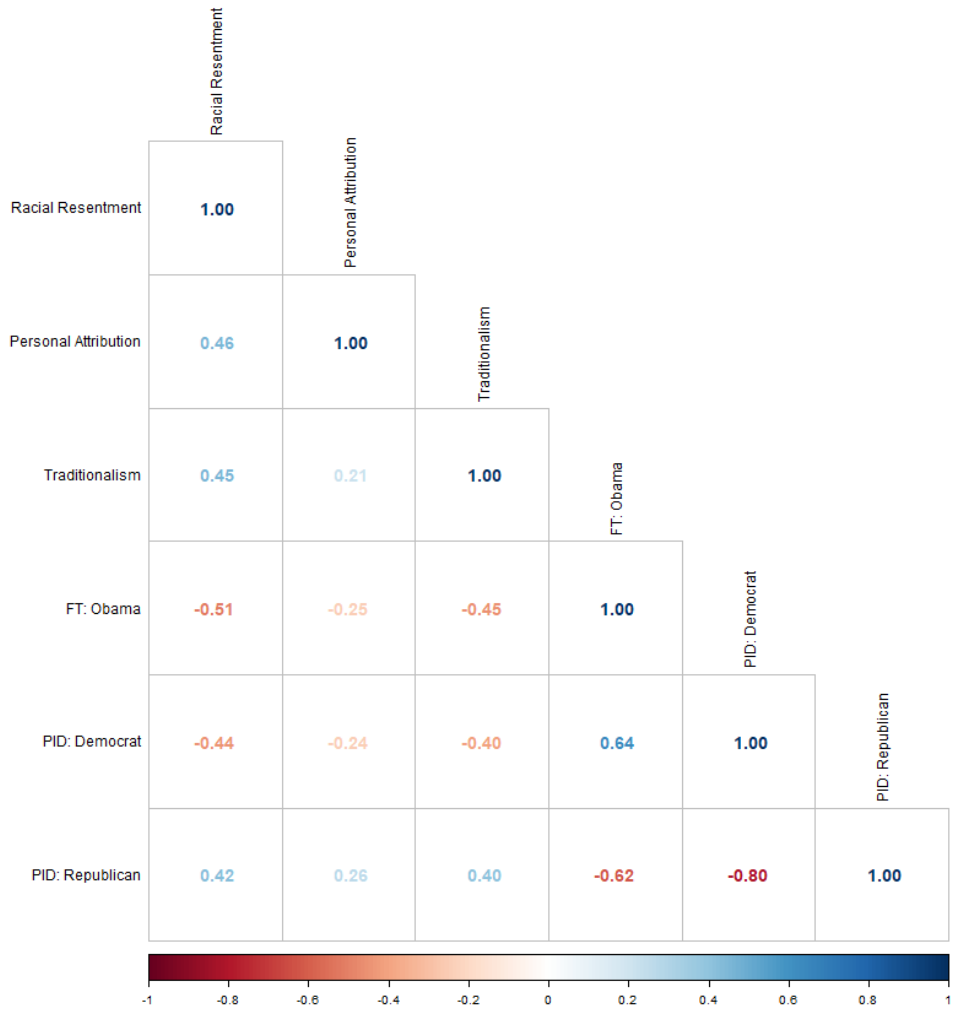

Figure 14: Bivariate Correlations (-1,1) between Relevant Variables

Description of Dependent Variables

After detailing the independent variables of interest, I now briefly describe the three dependent variables listed in Table 6. The three questions, asked in this order on the survey, are intended to explore the attitudes of the respondents toward various efforts to combat the effects of climate change and are all measured on a seven-point scale recoded from 0 "Strongly oppose" to 1 "strongly support". This enables interpretation of the OLS coefficient estimates as indicating percentage point changes in support across the entire unit.

Table 6: Climate Dependent Variables

Variable	Wording
Increased regulation on businesses	Do you support or oppose the government increasing its regulation of businesses that produce a great deal of pollution linked to climate change?
Support intl climate agreements	Do you support or oppose international climate agreements such as the Paris Climate agreement that are designed to help the member countries slow down the global effects of climate change?
Support climate aspects of IRA	The Inflation Reduction Act (IRA) authorized $391 billion for developing clean energy and addressing global warming, including tax incentives and rebates to help consumers and businesses buy energy-efficient appliances, solar panels, electric vehicles etc. The IRA also includes support for clean energy jobs and investments in communities that are most harmed by air and water pollution. To what extent do you support or oppose this law?

The first question concerns regulation on polluting businesses and is focused on domestic policy. This question is intended to be the hardest test for the linkage between racial resentment and climate preferences because it may directly trigger both partisanship, as regulation is often framed as government overreach by conservatives and as necessary intervention by progressives, and the worldview variables that may be linked to a desire for less regulation of American businesses. The second is international in scope and is focused on the potential benefits of international cooperation. As observed in Parajon (2024) international climate agreements can activate the same link to racial resentment. Additionally, Barack Obama was closely associated with multilateral climate agreements such as the Paris Agreement, so this question is useful to consider the robustness of the racial resentment linkage. These expectations based on type are formalized in table 7.

The final question taken from Leiserowitz et al. (2024) is the dependent variable most clearly linked to environmental justice explicitly mentioning "investments in communities that are most harmed by air and water pollution".

Table 7: Climate Dependent Variable Expectations

Variable	Anticipated Effect of Racial Resentment
Business	Small
International	Medium
IRA	Large

Results

To test the hypotheses, I employed a series of ordinary least squares (OLS) regressions. I also estimate all models with a standard set of demographic control variables (Stephens-Dougan 2020, 100) including gender, education, income, age, region, political ideology, partisanship (with leaners included), and a dummy variable measuring if the respondent is a strong or not very strong partisan. [46]

I begin by testing the isolated effect of racial resentment to confirm earlier findings demonstrating a linkage between feelings of racial resentment and climate policy opinions. As a reminder, there are three different dependent variables of interest measuring responses to different types of efforts to combat the effects of climate change. First, the primary results are shown in table form in Table 8. Across each of the three dependent variables, respondents with higher levels of racial resentment indicate lower levels of support at statistically significant levels ($p < 0.00$). In addition, there is some evidence of a differential effect of racial resentment depending on the policy in question. The R^2 values of the three models indicate that the racial resentment index (and the control variables) predicted much less variation in the business dependent variable than the other two dependent variables, indicating that the type of climate policy is an additional and important factor when accessing the impact of racial resentment.

Next, to explore the substantive significance in Figure 15, I visualize the effect of racial resentment on support for the three different climate action dependent variables by presenting point estimates with outer error bars at 95% CI as before, and inner bars that represent 83.4% CI in order to better facilitate visual comparison of statistically significant differences between grouped means (Goldstein and Healy 1995).

[46] A description of those variables are available in the appendix. See Table A21.

Table 8: Effect of Racial Resentment on Climate Opinions

	Increased reg on businesses	Support intl climate agreements	Support climate aspects of IRA
	(1)	(2)	(3)
Racial Resentment (0-1)	−0.146***	−0.260***	−0.325***
	(0.043)	(0.041)	(0.039)
N	948	948	948
R^2	0.210	0.312	0.362
Demographic Control Variables	Yes	Yes	Yes

Table entry is the OLS regression coefficient with standard error in parentheses. Significance codes: *p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

The predicted probability plot, with all control variables set to their mean or modal values, indicates that for all three climate policies, as the respondent's level of racial resentment increases towards the maximum value of 1.00, the likelihood of supporting the climate policy in question decreases.

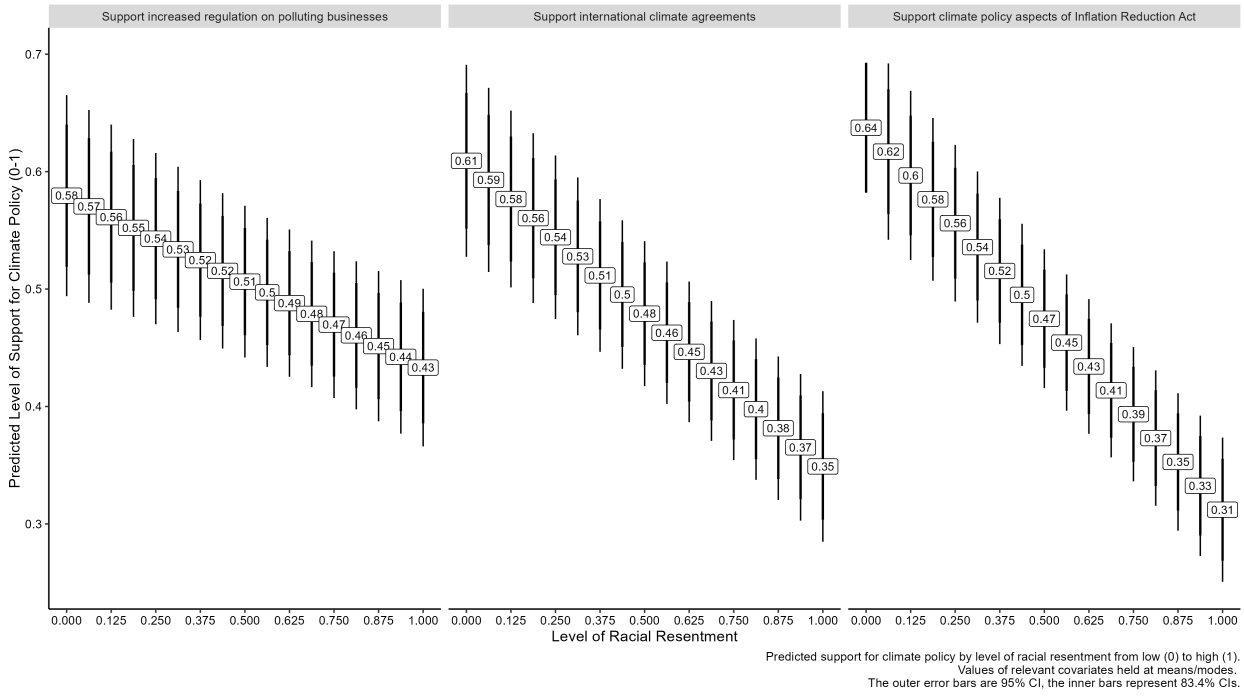

Figure 15: Climate Means by RR

More specifically, on the 0-1 scale, the mean level of support for increased regulation on polluting businesses decreased from 0.58 at the minimum racial resentment score to 0.506 at the midpoint (0.5), down to 0.433 at the maximum score a drop of 14.6 percentage points ($p < 0.00$). The mean responses from the other dependent variables were similar, with support for international efforts to address climate

change decreasing from 0.61 at the minimum, to 0.48 at the midpoint, down to 0.35 at the maximum a decline of 26 percentage points. Finally, support for the climate provisions of the inflation reduction act declined the largest from 0.64 at the minimum level of racial resentment to 0.47 at the midpoint to 0.31 at the maximum a total decline of 33 percentage points. Taken together, these results show strong support for the linkage between racial resentment and climate approval across the climate measurements. Across all three variables, as level of racial resentment increases towards the maximum value of 1.00, the likelihood of the respondent supporting the climate policy also decreases at statistically significant at the ($p < 0.001$) levels.

Next, I turn briefly to exploring the power of worldviews in predicting climate attitudes (H1a and H1b). As with the racial resentment battery, additional worldviews are highly predictive of climate attitudes. Respondents who exhibit stronger personal attribution (vs. structural) have lower levels of support for the three dependent variables. Additionally, respondents who have higher levels of traditionalism (vs. progressivism), are less supportive of the climate policies. While on average the coefficient sizes are noticeably smaller than those in the racial resentment models, it does appear that the worldview batteries are correlationally linked to lower support for climate policy.

Table 9: Effect of Worldviews on Climate Opinions

	Increased reg on businesses	Support intl climate agreements	Support climate aspects of IRA
	(1)	(2)	(3)
Personal Attribution (0-1)	−0.140***	−0.141***	−0.124***
	(0.038)	(0.037)	(0.036)
Traditionalism (0-1)	−0.128***	−0.222***	−0.209***
	(0.034)	(0.033)	(0.032)
N	946	946	946
R^2	0.226	0.331	0.358
Demographic Control Variables	Yes	Yes	Yes

Table entry is the OLS regression coefficient with standard error in parentheses. Significance codes:*p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

After finding correlational evidence that the worldview attitudes (personal attribution and traditionalism) are associated with the climate policy preferences of Americans, I now turn to investigating the worldview attitudes along side feelings of racial resentment. I now run a series of regressions including both the racial resentment index and the worldview batteries. This is a test of **H3**: *RR persistence* which anticipated that the correlation between high levels of racial resentment and lower support for climate

policy will persist when accounting for the potentially omitted worldview attitudes. Coefficient estimates from the three models are visualized in Figure 16 and the results are shown in table form in Table A24.

While it is important not to interpret control variables coefficients causally (Keele, Stevenson, and Elwert 2020), several interesting results are immediately apparent. In particular, in two of the three models controlling for worldview factors that could have caused a spurious relationship between racial resentment and climate attitudes, racial resentment remains statistically significant. Additionally, a series of Wald tests to explore equality of coefficients reveal that while the coefficients of none of the worldview batteries are statistically distinguishably larger than the racial resentment battery, the coefficient for racial resentment is distinguishable from personal attribution ($p = 0.0011$) in the IRA model (the most likely case hypothesized).

Additionally, in line with expectations that climate policies that most explicitly refer to climate justice would see the strongest effect of racial resentment and less racialized policies like increased regulation on polluting businesses, racial resentment is not a significant predictor of lower support for business regulation. Viewed together these results indicate that while the strength of the negative relationship depends on the climate policy in question, both feelings of racial resentment and worldview outlooks play a role in predicting climate policy preferences.[47]

[47]Notably, a principal component analysis indicates that racial resentment and the two worldviews do collapse onto one factor, with the one principal component account for 58.63% of the variance of the original data. Furthermore, within the factor, racial resentment has the largest factor loading and explains the highest amount of variance (0.95) compared to the other two variables 0.22 for personal attribution and 0.21 for traditionalism.

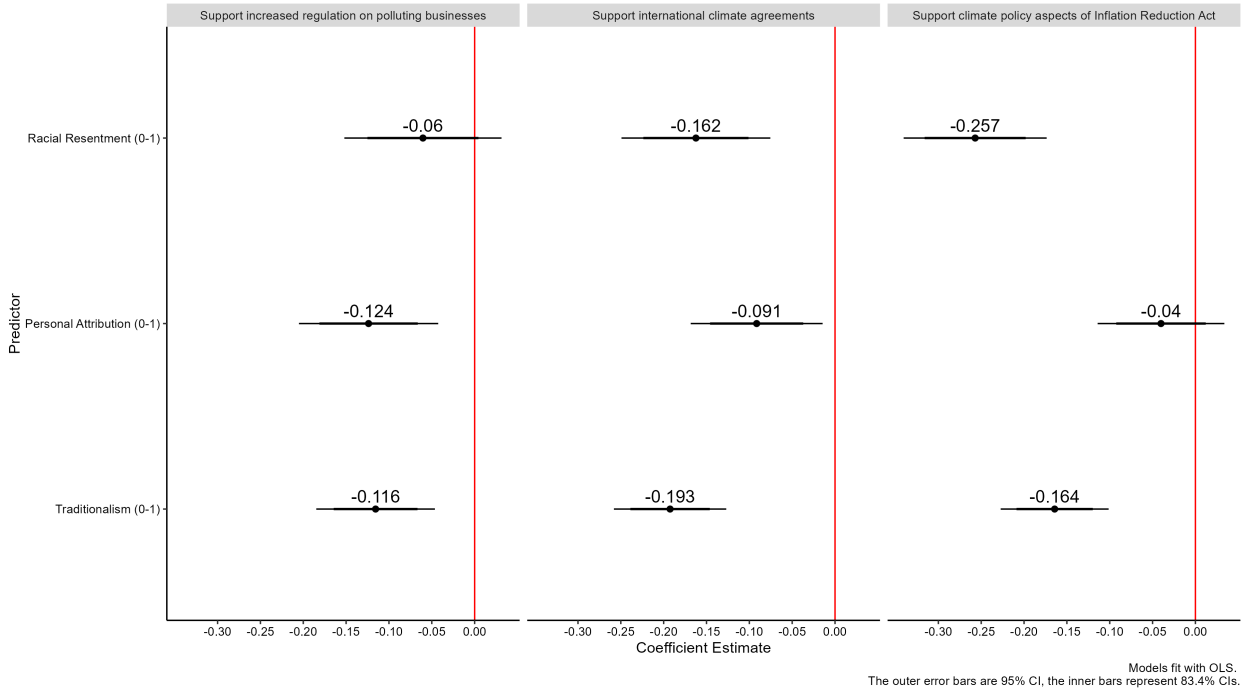

Figure 16: Model Estimates of Predictors on Climate Policy Support

Next, I explore the substantial significance of racial resentment using a series of marginal means plots displayed in Figure 17.

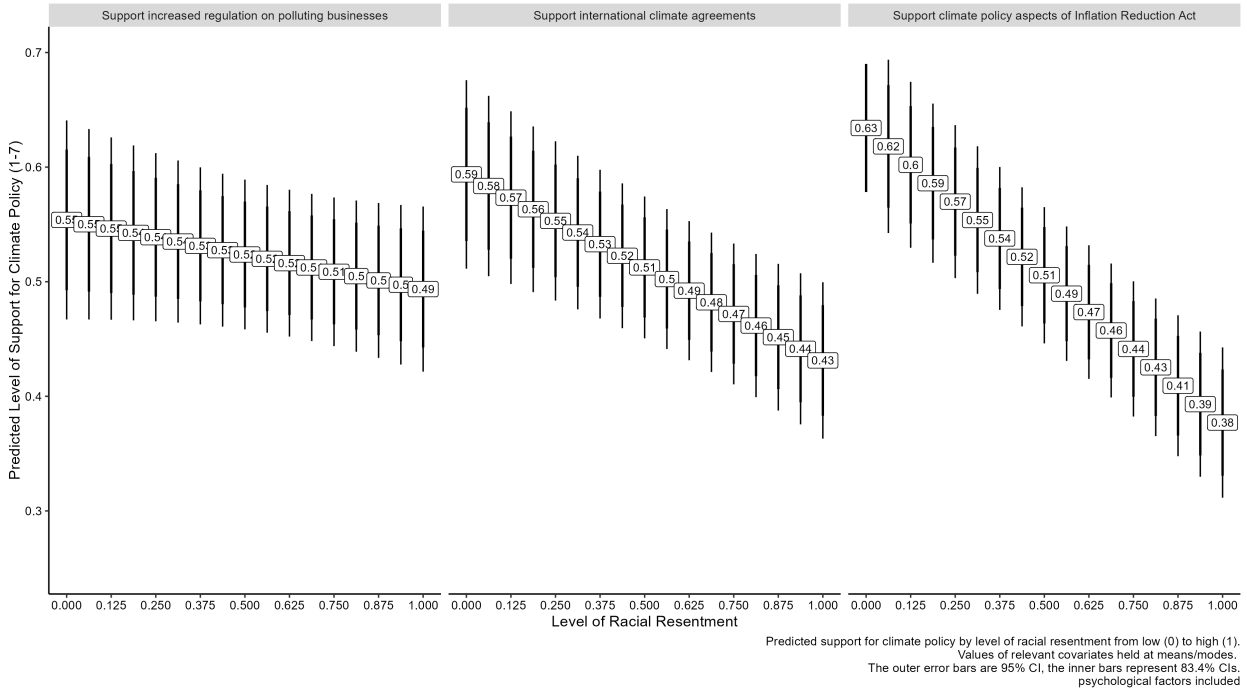

Figure 17: Climate Means by RR Controlling for Worldviews

The visualization shows a marked decline in support for international efforts to address climate change, and the climate elements of the inflation reduction act as the level of racial resentment increases. Specifically for the international variable, as racial resentment moves from the minimum of zero to the maximum of 1 support decreases from 0.59 to 0.43 a 16 percentage point decline ($p < 0.00$). Similarly for the inflation reduction act we observe a decline from 0.63 at the minimum to 0.38 a 26 percentage point decline ($p < 0.000$). These results confirm correlational evidence that racial resentment is associated with a substantially and statistically significant decline in the climate policy support of Americans even when accounting for a respondents' worldviews suggesting that racial resentment and worldviews are acting through distinct pathways.

Next, to test **H2**: *Obama*, I turn to investigating the extent to which respondents with lower affect towards former President Obama indicate lower levels of support for the climate questions. As before I begin by running a series of OLS models including the independent variable in question (in this case Obama FT) and covariates. This allows us to observe the relationship between Obama affect and climate policy.

These results are shown in Table 10 and indicate that for each of the dependent variables, respondents who felt more negatively toward Obama had lower levels of support for climate policy.

Table 10: Effect of Obama FT on Climate Opinions

	Increased reg on businesses	Support intl climate agreements	Support climate aspects of IRA
	(1)	(2)	(3)
Obama FT (0-1)	0.242***	0.340***	0.341***
	(0.035)	(0.033)	(0.032)
N	947	947	947
R^2	0.239	0.355	0.388
Demographic Control Variables	Yes	Yes	Yes

Table entry is the OLS regression coefficient with standard error in parentheses. Significance codes:*p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

Next, I move to including racial resentment in the models alongside the Obama FT.[48] These results are shown in Table 11. Here we observe evidence that feelings of racial resentment remain negative and statistically significant at conventional levels, when controlling for Obama affect, with the exception of the business DV ($p = 0.058$). Substantially, controlling for Obama affect and standard demographic controls, on average respondents at the lowest level of racial resentment (0) were 17.2 percentage points more supportive of international climate agreements compared to those at the highest level (1).

Additionally, respondents at the lowest level of racial resentment, again with the same controls, where 24.1 percentage points more support on average than those at the highest level of racial resentment. These results provide correlational evidence that, even when accounting for feelings toward the First Black President of the United States, racial resentment still plays a significant role in reducing support for climate policy. This suggests that while both low affect toward Obama and high racial resentment contribute to decreased climate policy support, they operate through distinct channels.[49]

[48]Notably, respondents with higher levels of racial resentment had much lower levels of affect for Obama. The coefficient on racial resentment from a model regressing the Obama FT on racial resentment and demographic controls was -0.26 (95%CI: -0.32, -0.20).

[49]See Table A27 for the results of a model including the Obama FT, both worldviews, and racial resentment. The results are broadly similar and racial resentment remains a significant predictor of lower support for both international climate agreements and the IRA.

Table 11: Effect of RR on Climate Opinions w/ Obama FT

	Increased reg on businesses	Support intl climate agreements	Support climate aspects of IRA
	(1)	(2)	(3)
Racial Resentment (0-1)	−0.082*	−0.172***	−0.241***
	(0.043)	(0.040)	(0.039)
Obama FT (0-1)	0.226***	0.305***	0.291***
	(0.037)	(0.034)	(0.033)
N	946	946	946
R^2	0.242	0.367	0.413
Demographic Control Variables	Yes	Yes	Yes

Table entry is the OLS regression coefficient with standard error in parentheses. Significance codes:*p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

Relative Variable Importance

Next to investigate the relative importance of the independent variables I probe my findings using generalized random forests (GRFs) (Athey, Tibshirani, and Wager 2019). This machine learning approach allows me to relax modeling assumptions—such as linearity of effects—to investigate heterogeneity from an atheoretical approach driven by the data itself in order to evaluate relative impact of the variables.[50] I conduct the GRFs including the same demographic covariates turned into dummies, and the relevant independent variables (Racial resentment, worldview batteries, and Obama FT) coded so that values above the median response represent high values and below low to glean the maximum possible information from the data. For each of the three forests, I created 2,000 trees to balance the error rate and computation time. Random forests were estimated using the randomForest package (Liaw, Wiener, et al. 2002) that implements Brieman's random forest algorithm (Breiman 2001).

[50]When assessing relative importance of factors in predicting climate attitudes random forests are of particular use (Beiser-McGrath and Huber 2018).

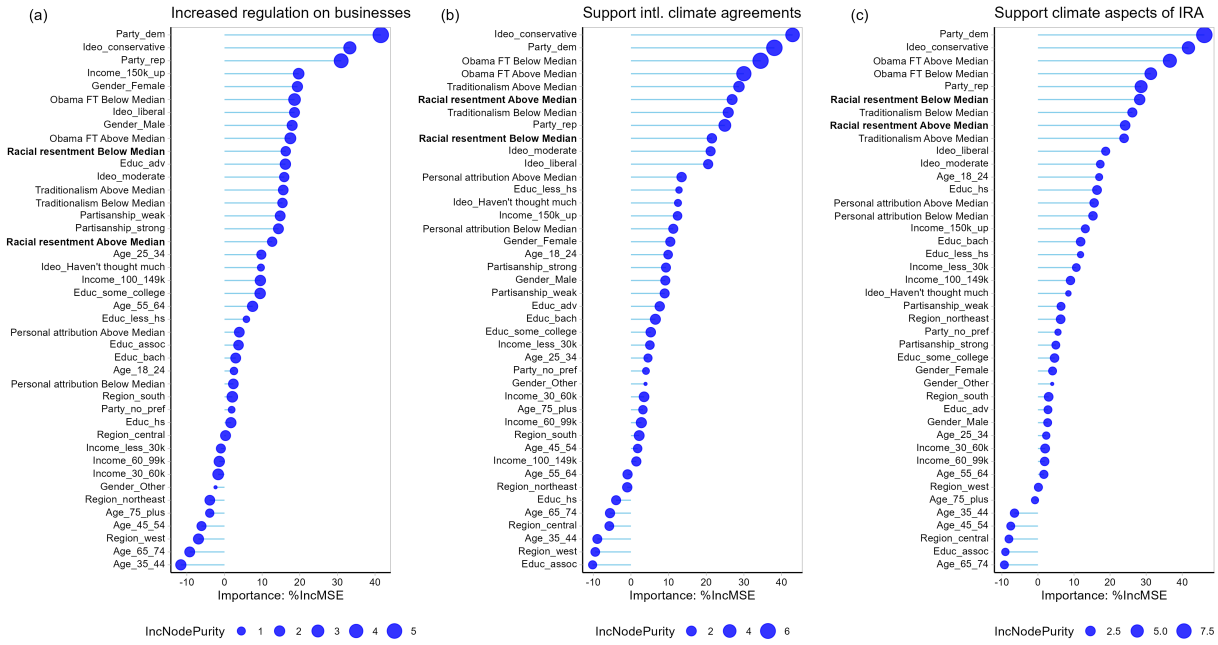

Figure 18: Random Forest: Variable Importance

The results in Figure 18 not only confirm the main results generated using linear models but also demonstrate that across two measures of variable importance[51] racial resentment, the two world view variables, and the Obama FT are among the most important variables in explaining climate policy preferences.[52]

Across the three dependent variables, racial resentment, the three worldview batteries, and the Obama FT measure are among the top 12 most predictive in all three. In the importance measures, several of the attitudes even outperform political ideology in predictive power. The atheoretical, data-driven approach validates the focus on these measures of interest and again confirms the importance of considering not

[51]The first measure, node purity refers to the decrease in residual sum of squares on that variable across the different trees. Essentially how well the predictor in question decreases variance (larger numbers indicate a larger decrease). The second measure % increase in mean squared error is considered the more reliable measure (Athey, Tibshirani, and Wager 2019) and indicates to what extent the variable in question has influence on prediction with higher values representing greater importance (Hastie et al. 2009; Liaw, Wiener, et al. 2002).

[52]Results in table form for %increaseMSE are in Table A35.

only racial resentment but other measures that may be linked to climate attitudes. It is clear that merely considering demographic variables leaves out a large part of the explanatory story. Additionally, by permuting the variables in isolation the random forests provide an additional piece of evidence of the importance of considering racial resentment, worldviews, and Obama affect as distinctive factors that are all connected to climate policy support.

Discussion

A deeper understanding of the factors shaping climate opinions is essential for evaluating public attitudes toward climate policy. This paper contributes to the literature by further investigating the relationship between racial resentment and climate opinion among White Americans. Specifically, I examine whether omitted variable bias could explain prior findings that racial resentment negatively influences climate attitudes. To address this, I test three potential confounding factors: personal attribution worldviews, traditionalist values, and negative affect toward former President Barack Obama.

My findings confirm a persistent link between racial resentment and climate policy attitudes. Among White Americans, higher levels of racial resentment correlate with lower support for climate action. Although worldviews such as personal attribution and traditionalism do also predict climate attitudes, controlling for these factors does not fully eliminate the effect of racial resentment, particularly in the case of international climate action and policies framed around environmental justice. This suggests that racial resentment captures more than just cultural conservatism or opposition to broad government intervention.

The policy framework plays a crucial role, with racial resentment exhibiting the strongest negative relationship on climate policy support when the policy explicitly benefits marginalized communities (e.g., the provisions of the Inflation Reduction Act). However, this weakens when policies focus on regulating polluting businesses. This reflects the multifaceted nature of climate politics and suggests that researchers should carefully consider policy framing when analyzing public attitudes and determining their choice of predictors, particularly in relation to climate policy that includes elements of environmental justice. This

also suggests that policymakers and climate advocates should take particular care in framing policies to avoid triggering attitudes of racial resentment.

Furthermore, my findings support the spillover of racialization hypothesis in climate policy attitudes. Negative feelings toward Barack Obama predict lower climate policy support, yet racial resentment remains a significant predictor even when controlling for this factor. Using generalized random forests, I also find that racial resentment, worldviews, and the Obama feeling thermometer are among the strongest predictors of climate policy opinions, surpassing commonly assumed drivers such as income, gender, region, or age.

These findings open several avenues for future research. First, additional experimental studies on racial framing in climate policies could provide causal insights into how different policy narratives influence public opinion. This could help identify which types of climate policies are most susceptible to racialized opposition. Because climate change involves a wide range of distributional consequences, climate skepticism, a major political force in the U.S., is unlikely to be uniform. Instead, it should be understood as a complex and varied phenomenon. Disaggregating types of skepticism, particularly by levels of racial resentment, is crucial for understanding how different groups may respond to different climate policy framings. Future work can extend these findings by experimentally interrogating the extent to which the effect of racial resentment, and other attitudes linked to climate skepticism, vary by type of climate policy. Second, while the racial resentment index is specific to White Americans, future work should explore how racial identity influences climate policy attitudes among other racial and ethnic groups in the U.S. Finally, investigating the role of racial attitudes in climate policy preferences beyond the U.S., particularly in countries with different racial and political dynamics, would help determine the generalizability of these findings.

PAPER 3: INTERNATIONAL ECONOMIC COMPETITION AND PUBLIC SUPPORT FOR CLIMATE POLICY

The archetypal green industrial policy is the Inflation Reduction Act (IRA), which in 2022 ushered in the largest climate spending package in American history—estimated to be over $1 trillion.[53] The legislation famously nearly died at the hands of moderate Democrats; to escape that fate, the final package housed compromises to increase support from climate opponents, including measures such as spending indirectly through tax credits and targeting industries that would benefit Republican districts (Siegel, Tamborrino, and Blaser 2022). To maintain public backing for its unprecedented climate expenditures, the IRA's proponents have pitched green spending as good for both the environment and the economy, such as the Special Presidential Envoy for Climate averring that "clean energy jobs will be good jobs" (Young 2024). Still, despite these potential economic benefits, the IRA remains publicly controversial. Republican elites lined up to rail against the climate spending (e.g. Smith 2023) and the most conservative voters remain opposed to the IRA (Leiserowitz et al. 2023b). These debates over green industrial policy are not localized to the United States; green investment is a core pillar of the European Commission's recent report on inclusive economic growth (*EU Competitiveness* 2024), even though right-wing Europeans have lashed out at climate policies (Voeten 2024).

Industrial policy has become a popular climate approach (Meckling 2021), but much of the literature on its use focuses on relationships between governments and interest groups (e.g. Allan and Nahm 2024). However, the opinion of the public, especially on such massive expenditures, is also an essential element of sustainable climate coalitions. Individuals are receptive to climate policy frames (Brulle, Carmichael, and Jenkins 2012), but there are stark limits to how willing they are to change their opinions about green policy based on proposed economic benefits (Mildenberger and Leiserowitz 2017) and survey respondents

[53]This paper is co-authored with Tyler Ditmore.

consistently dislike policies with huge fiscal costs (Bechtel, Scheve, and van Lieshout 2020). Yet despite the prior inefficacy of economic frames, politicians are pitching green industrial policy based upon its potential economic benefits. This raises an important question: under what circumstances will the public, and especially climate skeptics, support green industrial policy?

We argue that policymakers can generate support for climate policy by framing it as internationally competitive. Individuals possess sociotropic mental models through which they evaluate the effect of large government spending upon national welfare (Mutz and Lee 2020b). However, individuals are also more likely to think of environmental policy as a global good (Prinzing 2023), leading to a perceived trade-off of national spending for global resources. Yet in practice, countries are competing to be the drivers of key supply chains in green production (Meckling and Nahm 2019). When individuals are cued to consider foreign economic competition, they will be more likely to consider the benefits that green spending can offer their national economy. Thus, politicians can frame their green spending as internationally competitive to generate mass support for climate policy.

Most importantly, the frame's effect is largest for the people most skeptical of climate policy, namely conservatives and nationalists. Both of these groups are subject to motivated reasoning when considering climate policy—conservatives are skeptical of major government interventions in the market and nationalists are virulently opposed to national spending on global goods. For both of these groups, however, anti-globalization attitudes and policies have become central to their ideology (Ballard-Rosa, Goldstein, and Rudra 2024). In particular, competition has become a central means of sustaining national self-sufficiency and buttressing national welfare against global forces. Framing climate policy as internationally competitive will be especially convincing for these climate skeptics.

We test this framing experimentally with a pair of pre-registered survey experiments fielded in the United States.[54] We first employ a vignette experiment with a two-arm factorial design. In the first treatment arm, we present respondents with information on a hypothetical tax credit designed to encourage the creation of new automobile manufacturing jobs, randomizing whether the jobs will be for either generic production or environmentally-friendly electric vehicles. In the second treatment arm, we randomly

[54]An anonymized version of our pre-registered analysis plan is located on OSF registries.

present some respondents with information framing the tax credits within the context of economic competition with China. This design allows us to test the effect of the green spending on the economy as a baseline, then examine the effect of competition upon approval for that same green policy. We can also compare the magnitude of the green competition effect against the baseline competition effect to determine if climate policy dilutes the efficacy of competition cues.

Respondents overall are more likely to support the electric vehicle climate spending when framed within the context of economic competition. They are not on average strongly supportive of the electric vehicle policy by itself, but the green element of the credits does not diminish the competition treatment's efficacy. Most importantly, the framing is particularly effective at moving respondents who were ex-ante opposed to climate action: Republicans and nationalists. These respondents punished green policy without a competition cue, but became much more supportive when climate spending was framed as economically competitive internationally. Mechanism tests suggests this is a result of sociotropic concern about the American economy, not about material or local considerations.

We follow the vignette with a conjoint experiment expanding the scope of possible climate policies to explore the generalizability of our vignette's treatment effects. We randomize across a variety of attributes relevant for green industrial policy. We find that while our overall pool of respondents prefer climate policy that provides climate tax credits directly to consumers and is primarily focused on addressing the effects of climate change (both domestically and internationally), there are key heterogeneous effects. Most pertinently, climate opponents were more likely to prefer climate policies that are framed as economically competitive. This suggests that the framing of climate as competitive travels well for climate skeptics, though its mileage may vary for climate supporters.

Our paper makes several contributions. First, we expand on and emphasize the role that international economic competition plays in determining climate preferences as a perceived co-benefit (Bain et al. 2016). Whereas most prior literature begins with climate as a public good (e.g., McGrath and Bernauer 2017) and demonstrates a public interest in multilateral climate cooperation (Bechtel, Scheve, and van Lieshout 2022b), we build on the political economy implications of climate change (Aklin and Mildenberger 2020). Given that there will be distributional consequences in any green transition, we demonstrate that

climate policies which are seen as economically competitive internationally will be popular, especially with economically nationalist climate opponents. As we discuss at the conclusion of the paper, we do not claim this is a normatively good finding.

Second, we contribute to the literature in international political economy about how competition changes individuals' political preferences. We find that the cued presence of a foreign competitor alters the climate preferences of even those who are ex-ante opposed climate action. This finding adds to a body of work supporting the effect of competition frames upon political economy preferences (Ashok and Gaikwad 2021; Mansfield and Mutz 2013), particularly by emphasizing the importance of individuals' perspectives on national economic security. Given the increasingly uncertain international system, in climate policy and other domains, it is especially important to analyze the effects of international competition upon voters' political desires.

Third, we contribute to the broader conversation in international relations about the future of the liberal order and international cooperation (Lake, Martin, and Risse 2021). Much of international trade is built on norms which disavow market intervention, which had led to an increasing number of disputes over green industrial policy, whether between the U.S. and Europe over the market distortions in the IRA or the burgeoning global competition around electric vehicles. If these policies and the competition they engender prove domestically popular, this suggests high levels of green spending will continue to degrade long-held norms of economic interaction.

Public Opinion and Green Industrial Policy

Climate change creates distributional conflict and is thus a problem of political economy (Aklin and Mildenberger 2020). As such, policymakers attempting to enact green policies must first wrestle with the conflict amongst interest groups. Unlike unorganized masses of voters, interest groups have both a concentrated stake in climate politics and a commensurately greater ability to influence policy design (Finnegan 2022). For instance, regardless of how popular a redistributive carbon tax might be, opposition from carbon-intensive industries has rendered such a punitive policy moot (Stokes 2020).

Governments have been resolving this problem of policy design by relying more on green industrial policy (Meckling 2021). Green industrial policy entails major fiscal expenditures on investments and incentives that bolster pro-climate interest groups, obviating the pushback from anti-climate organizations (Meckling et al. 2015). Rather than offering the broad regulatory stick of carbon taxation, green industrial policy proffers narrower carrots to foster sectoral investments that support renewable energy (Allan and Nahm 2024).

For policymakers who have opted for green industrial policy, the core problem becomes selling massive climate spending to the public. A grand majority of Americans believe that climate change is occurring and needs to be addressed; a much narrower majority believe that climate change should be a top priority for policymakers (Leiserowitz et al. 2023b). The bare numbers are encouraging for politicians interested in green industrial policy: there is a critical mass of people who are open to supporting green legislation. The numbers also suggest, however, significant disagreement over what that policy should look like. This rift between recognized problem and palatable solution undermines the stability of green agendas (Fairbrother 2022).

If climate policy is to genuinely address the problem of climate change, it must be politically sustainable across mass audiences. While targeted material compensation can work for some individuals directly affected by climate change, it is not necessarily supported on a broad scale (Gaikwad, Genovese, and Tingley 2022). Even when some individuals are materially compensated, the rest of the citizens still need to be convinced to support costly fiscal expenditures—something they are far from assured to do even before considering green preferences (Bansak, Bechtel, and Margalit 2021). Political cues are powerful tools to shift opinion on climate policy (Brulle, Carmichael, and Jenkins 2012), but there is mixed evidence about the best way to frame climate policy to generate support for spending through green industrial policy.

One avenue for policymakers is to frame climate policy as good for the economy. Transitioning away from carbon-based production will radically change the structure of the economy, leading to a perceived trade-off between environmental and economic well-being (Scruggs and Benegal 2012). Concern about the well-being of the economy has long been considered a central element of how the mass public determines its support of policies (Erikson, MacKuen, and Stimson 2002b). In theory, green industrial policy is

perfect for this framing. It is often described as spurring "green growth" and is perceived as less costly by the public than carbon taxation because it primes people to think of the benefits of investment and consumption (Allan and Meckling 2023).

However, research consistently shows that people are not moved by such economy-versus-environment frames. Although individuals are often asked in surveys to pick between one or the other, reifying the perceived trade-off, their answers are still motivated by climate beliefs (Kenny 2021). Furthermore, people do not respond to their individual economic circumstances by changing climate policy beliefs (Kachi, Bernauer, and Gampfer 2015). They also do not change opinions in the aggregate about green policy during economic downturns (Mildenberger and Leiserowitz 2017). Priming on green growth—as many American and European policymakers are attempting to do—may be seem appealing but has not been politically successful.

Economic Competition Changes Climate Policy Preferences

We argue that politicians can leverage an economic frame to generate support for green spending by cuing audiences to think about international economic competition. Climate change has distributional consequences for countries as well as for individuals (Kahn et al. 2021). Much of the focus of the international political economy of climate change has justifiably been on the countries who will be climatic losers, but there will also be economic winners who capture renewable energy markets and control vital links in green industry (Meckling and Nahm 2019). This creates potential for trade conflicts over where important production points will locate (Wu and Salzman 2014). Though the green transition does not need to be zero-sum, climate investment is nonetheless occurring in a context of fragmented trade norms (Ballard-Rosa, Goldstein, and Rudra 2024). The United States, European Union, and China are already gearing up for competition over green goods like electric vehicles (Mathiesen and Colman 2022; Thomas 2022).

Politicians can wield extant country-level competition to lean into individuals' demonstrated sociotropic concern for national economic well-being, which is especially active in the face of external threats. National sociotropic attitudes encompass mental models by which people evaluate the effects of govern-

ment policies upon the well-being of the country as a whole, not merely upon their narrow individual interest (Mutz and Lee 2020b). People are especially invested in how policy affects their home country's jobs (Hiscox 2006) and take a dismal view of policies that are perceived to cost their country's jobs to foreign competitors, in absolute or in relative terms (Mansfield and Mutz 2013). When these sociotropic anxieties over national job creation are cued by elites, people change their policy preferences drastically in order to make their country more competitive internationally (Ashok and Gaikwad 2021).

Foreign economic competition will shift individuals' mental models for climate policy. People are accustomed to thinking of the environment as a public, global good (Prinzing 2023). It is precisely the all-encompassing nature of climate politics that dilutes framing effects of economic benefits. When information about economic competition is included, however, respondents will consider less the global gains from climate policy and consider more the threat that green production poses to narrow, national well-being. Economic competition will activate sociotropic economic anxieties that are present when individuals' national unit is perceived to be under duress from international actors, and which have been demonstrated most acutely in trade politics (Mansfield and Mutz 2009b). Green industrial policy is at the core of modern trade conflicts and legitimately relates to the economic dislocations people fear from trade (Colgan, Green, and Hale 2021). People on average value the economic well-being of their national polity and perceive international competitors as potentially harmful to their country if they are not addressed. Thus, they will be more supportive of a competitively-framed climate policy.

This theory reflects how some elites involved in the creation of the IRA have framed its benefits. Former U.S. President Joe Biden has pitched green spending to potential voters as a bill about economic competition for work, declaring in a speech at a green manufacturing plant, "When I hear climate, I think jobs... all across of America, instead of exporting jobs, companies both foreign and domestic are creating jobs here in America and exporting American-made products" (Biden 2023). Treasury Secretary Janet Yellen has also taken up this tone, using a speech at a solar power plant in Georgia to explicitly argue that the IRA was "bolstering our country's economic security and creating economic opportunity" by "protect[ing] our industries from unfair competition" originating in Chinese excess capacity (Yellen 2024).

Thus, our first hypothesis reflects the effects of an international competition frame upon climate policy preferences:

Hypothesis 1 *Individuals will be more likely to support a climate policy that is framed within the context of international economic competition.*

We expect this to be true on average, yet the above discussion elides a major source of subgroup variation in climate beliefs—partisan ideology. Globally, public opinion concerning climate policy is polarized: right-wing groups and individuals are much more skeptical of both climate change and climate action (Egan and Mullin 2024). This divide is particularly strong in the United States, where overt cues from right-wing leaders have increased climate polarization (Brulle, Carmichael, and Jenkins 2012). Finding ways to convince right-wing partisans to support green spending is essential to durable climate policies.

There's good evidence to suggest that partisan ideology is another reason why framing climate spending as economically beneficial does not change individuals' opinions. One of the most important connections between right-wing politics and climate skepticism is motivated reasoning (Palm, Lewis, and Feng 2017). Climate policy obviously requires extensive government intervention in markets, and conservatives traditionally prefer limited government and free markets. Right-wing individuals are less likely to prioritize climate policies because they find the technical solutions antithetical to their core economic beliefs (Campbell and Kay 2014).

At first glance, conservatives' economic reasoning might appear to militate against their support for a competitive climate policy, but this overlooks the fact that the ideology of right-wing parties has been mutating rapidly for the past decade. Rather than espousing traditional neoliberal beliefs about free markets, they have become much more economically nationalist (Colantone and Stanig 2019). Global economic shocks producing local dislocations have contributed to the rise of right-wing populism, which endorses an interventionist state protecting the nation from the vagaries of the international economy (Broz, Frieden, and Weymouth 2021). The aversion of these right-wing groups to economic interdependence contributes to burgeoning economic conflict between sovereign states that threatens to destabilize the liberal international order (Lake, Martin, and Risse 2021).

We argue, then, that when a climate policy is framed as making their country more competitive economically, right-wing individuals will become more likely to support the policy precisely because they perceive it as beneficial for their national unit. Right-wing partisans' economic ideology has become more animated by feelings of national sociotropism; national well-being is defined less in terms of material wealth than by domestic control over production and insulation from global forces. Given this shift, economic competition becomes an important tool for promoting right-wing national interests. Framing a climate policy as internationally competitive should activate this core ideology of economic nationalism that will drive support for the policy, regardless of conservatives' pre-existing climate skepticism or demonstrated willingness to oppose green policy.

Our second hypothesis emphasizes that conservatives, who are more skeptical of climate policy on average, will be especially swayed by international competition frames.

Hypothesis 2 *The increase in support for environment policy will be more positive for conservative individuals.*

As noted above, there are also reasons for climate skepticism that exist outside of party affiliation and economic ideology (Fairbrother 2022). We also expect that the competition framing should function similarly for climate skeptics defined more broadly. In particular, although conservative parties have become more economically nationalist, it is not the case that all nationalists are right-wing (Ballard-Rosa and Ditmore 2024). We anticipate this framing to be especially effective for nationalists, regardless of partisanship.

Nationalism comes in several flavors, ranging from mild patriotic pride to acidic jingoism (Bonikowski and DiMaggio 2016). Across a variety of measurements and definitions, nationalists globally have long been shown to distrust climate policy because it is perceived to be a product of international coordination and an imposition from foreign elites (Kulin, Johansson Sevä, and Dunlap 2021). The most ardent nationalists are especially opposed to large-scale climate policy because is perceived to be a national contribution to a global good (Ruser and Machin 2019).

By definition, however, the most extreme nationalists have the deepest sociotropic attachment to their country. They are more willing to engage in national competition because they see international

relations as zero-sum games (Mansfield and Mutz 2013). These nationalists have also been found to punish basic economy activity like trade because it might benefit foreigners (Mutz and Lee 2020b). They may dislike climate policy relative to non-nationalists, but when primed to think of international economic competition, they will become more supportive of green spending because of the way it protects the country from a perceived foreign threat.

Therefore, our third hypothesis is that nationalist individuals will also be especially swayed by international competition frames.

Hypothesis 3 *The increase in support for environment policy will be more positive for nationalist individuals.*

There is a crucial implication from the three hypotheses: emphasizing economic competition may not lose support from left-wing and non-nationalist supporters. We do not make this an explicit hypothesis because there are theoretical reasons that push in both directions. On the one hand, although sociotropic feelings vary greatly in these groups, pure cosmpolitanism is rare. Pro-climate individuals still possess boundaries to their perceived in-groups and out-groups, which often contain some measure of interest for national well-being. It may be, then, that groups with high levels of climate support will continue to support climate policies framed as economically competitive. However, more pro-climate groups may more centrally perceive climate policy as a public good, and thus see the competition framing as less effective at addressing climate change. Their motivated reasoning then will push in the opposite direction of conservatives and nationalists. Ultimately, if it is the case that they do not waver in their support of competitively-framed climate policy, then from a public opinion perspective green industrial policy may be especially favorable, with upside to convince skeptics without the downside of losing supporters.

Research Design

To test the effect of economic competition cues upon support for climate policy, we designed a pre-registered online survey experiment. The survey was fielded on Lucid Theorem in early 2024 on a sample of 2,337 American adults, with quota sampling on age, gender, race, and region. As Lucid is an opt-in

online panel, our results should thus be understood as sample average treatment effects and may not necessarily generalize to the U.S. population (Franco et al. 2017).[55]

We focus on Americans because the United States is both a large emitter of carbon and plays an outsized role in the global economy. The IRA is perhaps the most important instance of green industrial policy. It was designed to attract climate opponents into its coalition, but has been politicized by right-wing politicians (Siegel, Tamborrino, and Blaser 2022). Understanding how Americans feel about green industrial policy without specifically cuing on this legislation should provide an important sense of how individuals perceive the policy approach. The U.S. is also one of the most polarized countries on climate politics, making it both politically important and practically difficult to convince American climate skeptics to support green investment.

We conducted two experiments in the same survey with all respondents responding to both. First, we presented respondents with a vignette experiment to narrowly test the effects of competition while holding other features constant. We use a realistic scenario with a salient topic—electric vehicle manufacturing—to maximize the fit of the vignette with existing elite cues. Second, we extend the results by fielding a conjoint that varied other relevant policy features, thus allowing us to generalize our treatment to broader green industrial policy designs. We discuss the vignette and its results first, and then turn to the conjoint.

Study 1: Vignette Experiment

In the primary experiment, we anchor potential policy features based on extant research and theoretical importance to create a realistic climate competition cue. Green industrial policy is vast and multitudinous, covering potential technical topics that respondents may not easily grasp. We provided a comprehensible vignette with multiple frames that were realistic, both to maximize respondent comprehension and to mirror existing policy debates. Thus, we anchor respondents on three attributes of green industrial policy that might affect respondents' beliefs: fiscal mechanism, industry target, and competitor country.

[55]See the appendix for discussion of the validity of social science research conducted via online samples like Lucid and additional information about Lucid.

First, we focus on green spending via corporate tax credits. Even if people do not know exactly how corporate tax incentives work, they still approve of them (Jensen and Malesky 2018). This suggests that individuals have a pre-existing mental model regarding corporate tax credits, whereas they may have more limited expectations about other green industrial policies such as loan guarantees and green national banks. Most importantly, green corporate tax incentives are important tools used widely by policymakers, as evidenced by them making up the grand majority of the Inflation Reduction Act's spending.

Second, we root the vignette in electric vehicle (EV) manufacturing. Industrial policy is narrowly targeted and automobile manufacturing is highly salient for respondents in the United States, both because of its traditional association with American economic prowess and because of the industry's power to influence policy. EV production is a prominent example of green industry and is highly divisive in the rhetoric of American elites, meaning it is important to experimentally explore individual opinions about EV production as part of climate policy. Thus, this should be a sector of relevance to individual beliefs and an important and realistic policy for which both climate and competition matter.

Third, we anchor our respondents to consider economic competition with China. Respondents racialize generic countries given in vignettes and thus should be provided with clear frames (Rathbun, Parker, and Pomeroy 2024b). Individuals are particularly likely to bring their external perceptions of Chinese climate policy to this experiment (Beiser-McGrath and Bernauer 2022). Additionally, Americans are steeped in rhetoric emanating from political elites across the spectrum about competition with China. We cue specifically on China to both set those expectations and to maintain the realism of the vignette. We will allow each of these elements—fiscal policy, industry, and competition—to vary later in the conjoint experiment in order to explore treatment generalizability.

We present this information in a 2x2 factorial experiment that independently varied both the greenness of tax credits and the presence of economic competition. Respondents first read a preamble about a hypothetical policy involving corporate tax credits to create manufacturing jobs in the United States and then were asked to evaluate the policy. Respondents then viewed one of four possible vignettes. In the *Tax Credit* arm, respondents were presented with either a generic business tax incentive to automobile manufacturers that would create jobs ("Generic Autos" treatment) or a clean energy tax incentive to electric

vehicle manufacturers that would create environmentally-friendly jobs ("Electric Vehicles" treatment). In the *Competition* arm, respondents were presented either with a neutral condition possessing no further information about the policy, thus making it purely domestic ("No Competition" condition) or were given additional information emphasizing the importance of the tax credits to strengthen the American business environment against Chinese competition ("Economic Competition" treatment).[56].

Prior to the vignette treatment, all respondents answered questions to measure their partisanship, nationalism, and climate preferences, along with a series of demographic questions and additional controls. After viewing the vignette, respondents were asked the extent to which they supported the proposed policy on a scale ranging from 1 (Strongly oppose) to 7 (Strongly support), along with comprehension checks designed to measure the effectiveness of the treatment.[57]

With a 2x2 factorial design, we have seven potential estimands: the two average treatment effects (ATEs) of Electric Vehicles and of Economic Competition for all respondents and five conditional average treatment effects (CATEs).[58] We can most effectively drill down on the cause of respondent outcomes by estimating the CATEs of one treatment holding the other treatment constant. For our analysis we are interested in the CATE of "Economic Competition | Electric Vehicles," meaning we exclude from the analysis any respondent not in the treatment arm with a climate policy. This estimand directly gives us the effect of competition upon approval for a green industrial policy, which is precisely what we have theorized.

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[56]An example of a single treatment (Electric Vehicles x Economic Competition) is shown in Figure A4; all four treatments are summarized in the Supplemental Material

[57]The wording of the dependent variable question is in the appendix and responses to the comprehension check are shown in the Supplemental Material. 88.4% of respondents sorted into the China competition condition correctly identified China from a list of countries in competition with the U.S. to attract investment. 79% of respondents randomized into the clean energy tax credit condition correctly identified the purpose of the proposed tax credits, and 64% of those in the business condition did the same.

[58]We will denote CATEs by signifying "*Treatment* | *Treatment*," meaning the treatment to the left of the pipe is being varied while the treatment to the right is being held constant.

The other estimands offer further validation of our theory and benchmarks against which to compare the magnitude of the main treatment effect. In particular, **H2** and **H3** specify that right-wing partisans and nationalists are climate skeptics. We offer evidence of this with the CATE of "Electric Vehicles | No Competition." This is vital, as we can demonstrate that even though these climate opponents punish pro-climate policy in general, they will change their views when cued to consider economic competition. We can also compare for all three hypotheses the main CATE of interest against the CATE of "Economic Competition | Generic Autos." This provides us a sense of whether or not competition policy is generically popular, as we've posited, and if attaching it to climate policy attenuates its approval.

Vignette Average Respondent Results (H1)

To investigate **H1** we ran an ordinary least squares (OLS) model regressing support for tax policy on the *Tax Credit* arm interacted with the *Competition* arm. If our theory is correct, we should find that "Economic Competition" increases the support for "Electric Vehicles" tax credits.

In Figure 19, we present the marginal effects with 95% confidence interval of the three CATEs of interest. First, we point out that presenting an EV corporate tax credit to individuals without a competition cue is not popular on average—we cannot reject a null of no effect. This fits with our intuitions that climate policy is not necessarily popular, even when framed as economically beneficial. Though this is not our central aim of the paper, this finding should not be ignored—despite this being a policy about the economic benefits of green investment, we do not see any additional support for it. Second, economic competition is quite popular for generic automobiles, as expected. This fits with extant literature on tax incentives and competition for investment.[59] By extending existing results, these estimates provide a robust baseline for us to examine the estimate of interest for **H1**.

Third, and most importantly, the effect of "Economic Competition | Electric Vehicles" is positive and both statistically and substantively significant (0.35, $p < 0.000$). The average effect is twice the size of the

[59]On average, support for all of the policies are relatively high. In all four treatment arms, the average support well above the outcome median of 4. Even given that high level of support, we observe positive and statistically significant treatment effects.

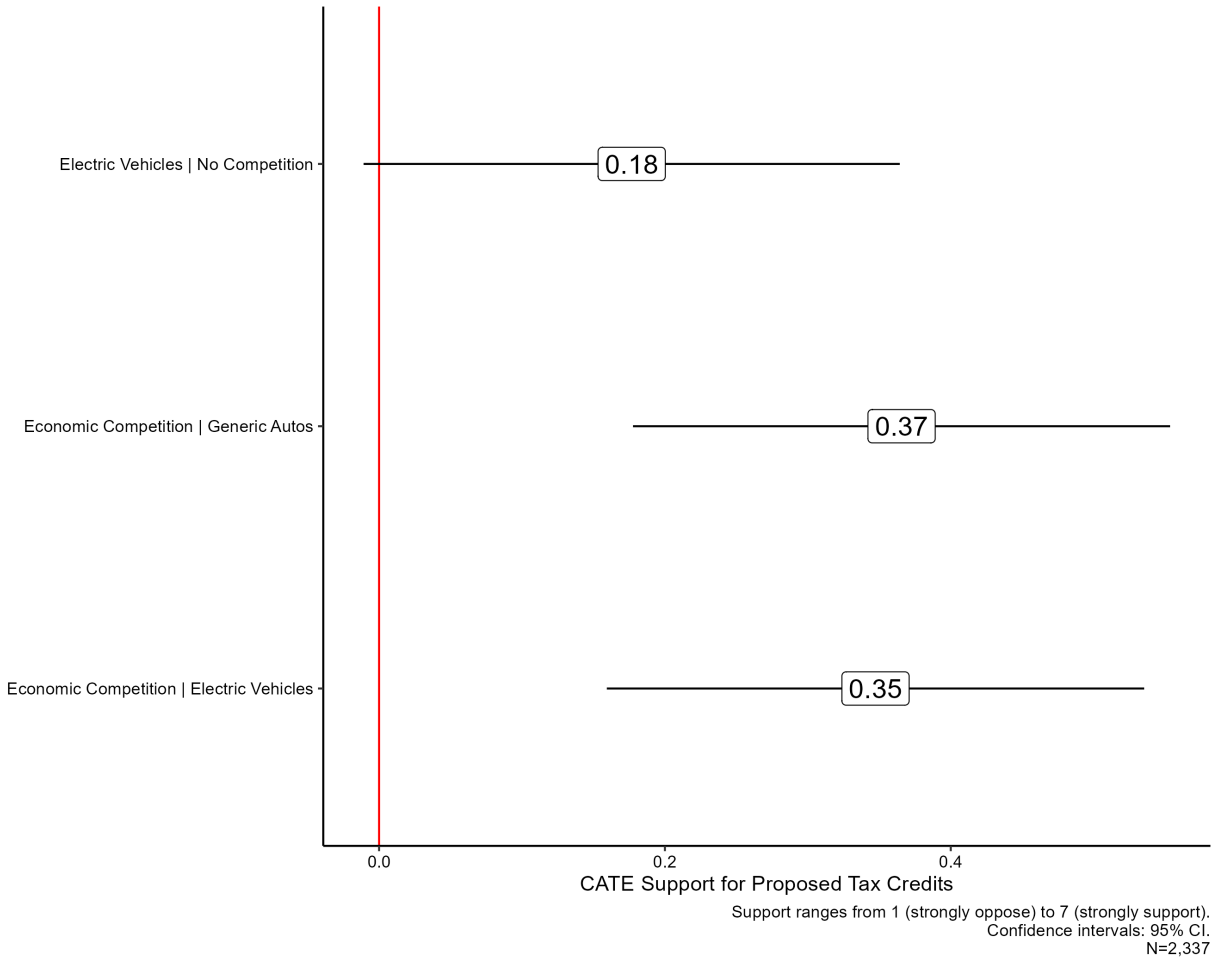


Figure 19: CATE of Economic Competition Framing on Policy Support

EV credit alone, and is indistinguishable in magnitude from the generic effect of economic competition (p=0.893), suggesting that competition drives support for the tax credit policy regardless of the stated social goal. Moreover, this increase in support is substantively large. "Economic Competition" increased the support for the "Electric Vehicles" policy by 10.14 percentage points (95% CI: 4.46, 15.81).[60] Similarly, "Economic Competition" increased support for the "Generic Autos" tax credit by 6.90 percentage points (95% CI: 1.23, 12.57). Overall, we find the "Economic Competition" treatment successfully cued respondents to increase their support for tax incentives, with no discrimination for green spending.

[60]To report percentage changes in level of support we collapse the primary measure of support into a binary, with responses "Slightly support," "Support," or "Strong support" coded as supporting the policy and all other responses as opposing.

Subgroup Analysis for Climate Skeptics (H2 and H3)

Next, we turn to exploring heterogeneous treatment effects for individuals who oppose climate policy. Recall that our expectations were that emphasizing economic competition would lead to a larger increase in support for climate policy among those who were *ex-ante* less likely to support climate action. Specifically, we expect that conservatives (**H2**) and nationalists (**H3**) to be opposed to climate policy generally but be especially moved by economic competition cues. We confirmed that both groups are less likely to support climate investments than their counterparts (see Table A32), but are not perfectly correlated with each other ($\rho = .29$; see Figure A8). We examine each in turn.

In Figure 20 we report marginal treatment effects for our three estimands, broken down by partisanship.[61] We also report mean treatment responses in a figure inset. Because respondent characteristics may be endogenous to both partisan affiliation and their support for the proposed policy, we include a standard set of demographic control variables (gender, race, education, income, employment status, age, and region) in the model.[62]

We find support for **H2**. For face validity of partisanship as a proxy for climate opposition, we find that Republicans heftily punish "Electric Vehicles | No Competition" while Democrats are highly approving.[63] Yet the effect of "Economic Competition | Electric Vehicles" is largest among Republicans (0.49, p=0.001). Comparing this to the effect of "Economic Competition | Generic Autos" for Republicans (0.49, p=0.001) suggests a similar effect size for competition regardless of the type of tax credit. Despite their pre-existing aversion to climate policy, Republicans are still moved by economic competition to support green spending. There is no attenuation of the effects of economic competition.

[61]Here and throughout, we analyze both self-identified partisans and leaners. Results are similar if we exclude leaners. We also analyze the results using conservative economic and social ideology scales; these results available upon request.

[62]All covariates were measured pre-treatment, per Sheagley and Clifford (2023). Note that we present point estimates with outer error bars at 95% CI as before, and inner bars that represent the 83.4% CI. This is in order to better facilitate visual comparison of statistically significant differences between groups.

[63]See also Table F1. Republicans (and nationalists) reported lower pre-treatment support for green investment to reduce the effects of climate change.

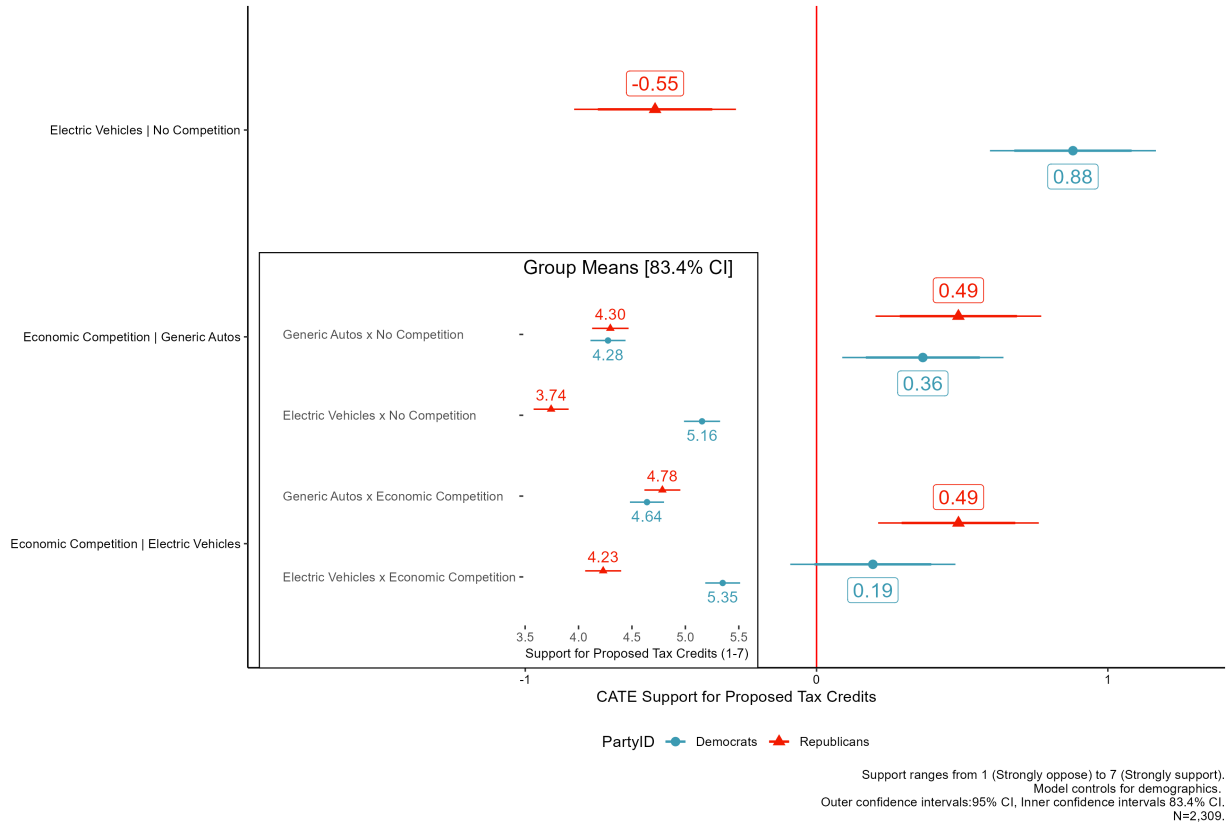


Figure 20: CATE of Economic Competition Framing: By Party Affiliation

Notes: In-set panel: Mean value of policy support in each condition in our experimental design.

Notably, framing green energy tax credits alongside economic competition serves to narrow the partisan preference gap without reducing support among Democratic respondents. As anticipated, while the estimated effect of "Economic Competition | Electric Vehicles" among Democratic respondents is positive, it is substantively smaller and statistically insignificant (0.19, p=0.18). Despite the large positive effect from the "Electric Vehicles | No Competition" for Democrats, it is unlikely that the null effect among Democratic respondents for climate competition is due to ceiling effects. Only 12.9% of Democratic respondents answered the max of "strongly agree" in the "Electric Vehicles | No Competition" condition. This percentage was 17.5% in the "Electric Vehicles | Economic Competition" condition, indicating there was room for approval to grow.

These effects are substantively large and meaningful. Crucially, among Republican respondents the mean support for climate tax incentives framed in terms of international competition was over the

midpoint of 4 (neither support nor oppose), meaning competition framing moved Republicans from opposing the climate policy (38.4% without the competition cue) to indifferent towards it (53.8% with economic competition). That marks a 15.5 percentage points increase in Republican support (95% CI: 7.18, 23.7). This increase, and the lack of corresponding decrease among Democrats (support for the climate tax policy was a statistically insignificant 3.16 percentage points higher among Democrats), results in a sizable 12.3 percentage point (p=0.04) narrowing of the partisan preference gap in approval for green energy tax incentives.

These effects are particularly visible in the inset Figure 20, which displays the mean value of policy support of each of the four possible treatments. Republicans and Democrats both start as highly approving of generic tax incentives and move somewhat more positively when they are framed in terms of economic competition. Yet a massive polarization occurs as soon as green cues are introduced. The gap narrows when international economic competition is introduced, to the point that Republicans are now indifferent between the green credits they would otherwise punish and the generic autos credits they would otherwise support.

Next, we consider the effects of treatment by nationalism. We measured nationalism pre-treatment using five questions listed in Table A33. There are several potential definitions of nationalism and thus many means of measuring it. We chose items meant to capture an individual's "hubristic nationalism," meaning their perception that their country is superior to others (Bonikowski and DiMaggio 2016). These people should be especially likely to view economic interactions as zero-sum, which has been found with a smaller subset of these items in previous research (Mansfield and Mutz 2013). As a reminder, in **H3** we anticipated that the effect of the competition framing would be larger among nationalists than non-nationalists.

We constructed a nationalism index score by coding each response to the questions from 1 to 7 in 1 point increments (where 4 is neutral) then summing and dividing the total by 5 (the number of questions) to make a scale with ranging from 1 (minimum nationalism) to 7 (maximum nationalism). The median

nationalism score across respondents was 4.4. We binarize nationalists as people above the median, but find similar results using alternative codings.[64]

We should first note that this measure of nationalism is weakly correlated with identifying as a Republican in our sample (Pearson correlation coefficient =0.29). 63.6% of Republicans are coded as nationalists, compared to 37% of Democrats, and 37.9% of those with no party preference. Overall, 55.3% of those coded as nationalists are Republicans (623 respondents) with 44.7% of Democrats and Independents (504 respondents) coded as nationalists.

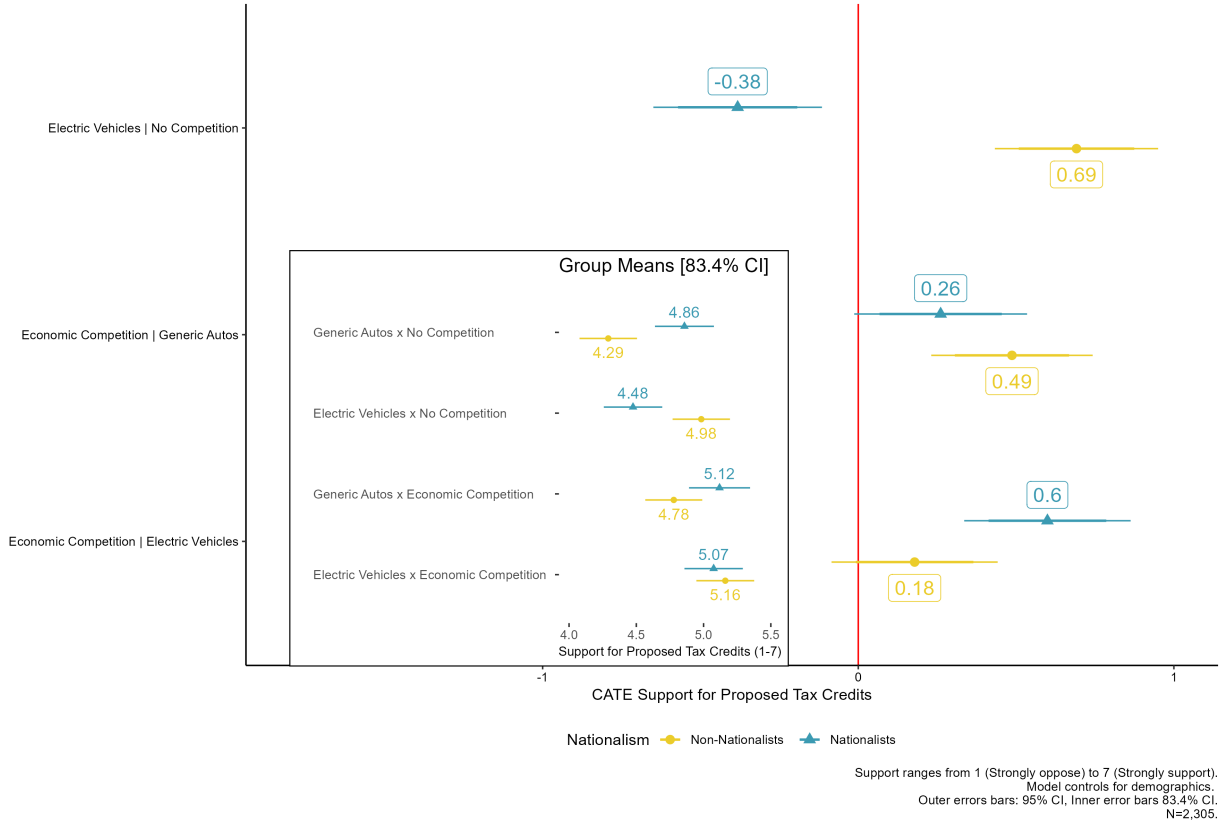


Figure 21: Effect of Cues on Policy Support: By Nationalism

Notes: In-set panel: Mean value of policy support in each condition in our experimental design.

[64]To investigate how the items performed, we use confirmatory factor analysis. Table A34 displays parameter estimates and model fit indicating that the items capture the underlying concept of nationalism well. Additionally the the Cronbach's α is 0.85 suggesting high internal consistency of the scale.

We interact our treatments with the binary variable for nationalism, along with standard demographic covariates. The resulting marginal effects and response averages displayed in Figure 21 provide evidence in favor of **H3**. For respondents who registered high levels of nationalism, "Electric Vehicles | No Competition" drives down support for the policy, as expected. Once "Economic Competition" is introduced, however, nationalists become dramatically more supportive of the proposed policy. Interestingly, nationalists' support for purely economic tax credits when primed to think of economic competition is not distinguishable from 0. However, nationalists are much more approving of the tax credits policy to begin with (see inset figure).

Most importantly, the "Economic Competition" cue significantly shifted their support for electric vehicle tax credits spending (0.60, $p < 0.000$). Again, in line with our expectations, respondents with an below-median level of nationalism did not respond to the "Economic Competition" cue by significantly changing their support for the green tax incentive (0.18, p.value=0.18). The difference between these two sub-group estimates is large (0.42) and statistically significant (p=0.03).

Additionally, the effect of the competition cue for climate policy is substantively meaningful. Among nationalists, the competition cue increased support from 4.48 on the 7-pt scale to 5.07. To put this increase another way, nationalists increased their support of the electric vehicle tax credits by 15.13%. These results both justify the splitting of partisanship and nationalism as different groups of climate skeptics and provide evidence in favor of **H3**. These effects are driven home further when considering group means reported in the Figure 21 inset. Nationalists punish green tax credits, but their support is indistinguishable from the support of non-nationalists for the treatment arm containing both "Economic Competition" and "Electric Vehicles."

Study 2: Conjoint Experiment

The vignette experiment establishes that the American public, regardless of ideological opposition to climate policy, broadly supports climate policy when framed in terms of economic competition. However, this first study anchors several policy features that are realistic but may not travel well to other climate policy designs.

To assess the treatment generalizability of economic competition, we turn to our second experiment. We implement a conjoint within the same survey that lets us vary other aspects of climate policy to reflect the broader suite of scenarios. Respondents were presented with two paired hypothetical climate policies six times; for each pair, respondents were asked which they would prefer to see passed into law.[65] Respondents were also asked whether they would support or oppose each individual policy on its own. Prior to viewing the comparisons all respondents saw the following preamble:

"As you may have heard, American policymakers are currently considering various policies to **address the effects of climate change**. We will now provide you with several hypothetical government policies which are intended to **accelerate the green energy transition**."

The dimensions for each attribute are displayed in Figure A5. The attributes were selected to both follow existing literature (*Partisan Support* and *Policy Cost*) and to introduce new elements distinct to green industrial policy (*Policy Tool* and *Industry Target*), which have been widely used but only studied in limited fashion. We also introduce two framing dimensions to change expectations about the purpose of the policy, *Domestic Effects* and *International Effects*. The former varies the effects of traditional climate policy against a green growth frame. The latter varies traditional international environmental behavior against economic nationalism.

Per our theory, we expect that economic competition will be preferred by respondents. We also use the conjoint to assess other elements of green industrial policy that are related to competition, particularly provision of clean energy jobs—often used in rhetoric, exemplified by quotes above—and use of corporate tax credits, which are a frequent tool of competition. We expect that clean energy jobs will be preferred by respondents, as will green growth tax credits.

Baseline Conjoint Results (H1)

The baseline results for the conjoint experiment are reported in Figure 22. Results from the dimensions drawn from existing literature confirm prior findings: people are far more likely to support bipartisan

[65]The six comparisons, asked to each respondent, gives us a total of 27,966 to analyze.

initiatives and are far less likely to support costly policies. There is also no variation of policy approval based on targeted industry.

Most importantly, compared to a pure climate policy, respondents opposed both policies that "advance U.S. national interest by prioritizing economic competition with other countries" (-3.15 percentage points p=<0.000) and "promote U.S. national interest by deepening collaboration and cooperation with other countries" (-2.33 percentage points p= 0.002). Compared to the vignette finding, the negative finding on this generic competition cue suggests that economic nationalism is less salient outside of great power competition. Additionally, here we are comparing the competition prime to information about the pro-climate effects of the policy, which may suggest the average respondent is more concerned with perceived effectiveness of a climate policy achieving the goal of reducing the effects of climate change. These results provide evidence against the treatment generalizability of **H1**.

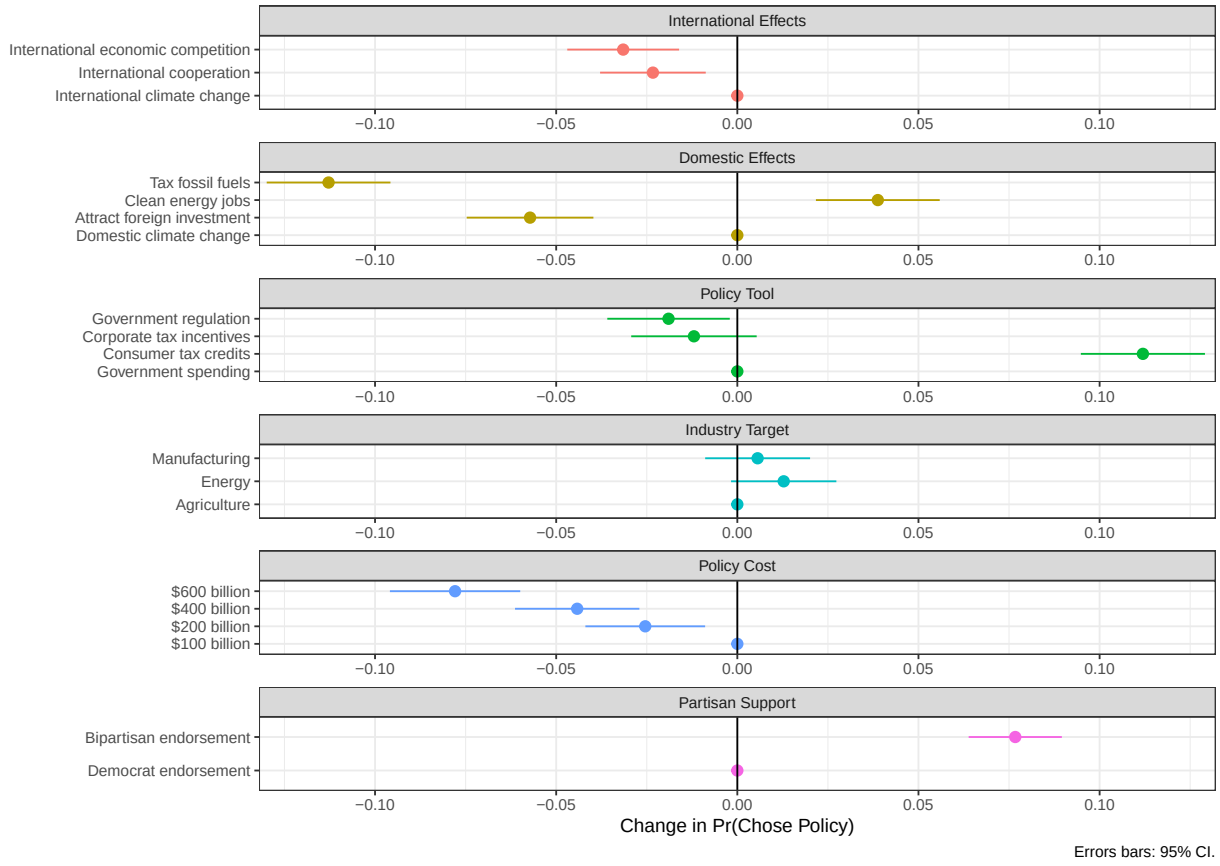


Figure 22: Baseline Conjoint Results on Climate Policy Preferences (AMCE).

The other competition-adjacent dimensions work more as expected, in both *Policy Tool* and *Domestic Effects*. Respondents were especially approving of tax credits for consumers. Relative to the baseline of direct government spending, tax credits for consumers increased the preference for the climate policy by 11.2 (p=<0.000) percentage points. Notably, tax credits for corporations, the policy described in our vignette, was less popular than direct government spending but the difference was not statistically significant (-1.20 percentage points, p=0.18).[66] For the framing of domestic effects, we find that compared to a pure-climate baseline, respondents preferred policies that had the domestic effect of creating clean energy jobs (3.88 percentage points increase p=<0.000). However, respondents preferred the baseline of slowing down climate change to policies that would either encourage foreign investment in the US (-5.72 percentage points p=<0.000) or increase the cost of fossil fuel compared to renewables (-11.28 percentage points p=<0.000).

On the whole, these results suggest that particular forms and frames for climate competition policies are popular. Traditional climate policies—such as increased government regulation and increasing the cost of fossil fuel—are significantly less popular than green industrial policies like offering individual tax credits and creating jobs. Though among the overall pool of respondents economic competition is not popular when cued directly, unlike our expectation in **H1**, it is notable that it is not distinguishable from cooperation, which has a long history of being valued in climate policy (Bechtel, Scheve, and van Lieshout 2022b).

Conjoint Subgroup Analysis (H2 and H3)

We now turn to analyzing the theorized heterogeneous effects of competition specifically: partisanship **H2** and nationalism **H3**. In Figure 23, we plot the heterogeneous results for three attributes, *International Effects*, *Domestic Effects* and *Policy Tool*. We visualize the differences between Republican/Democratic and

[66]Tax credits are obviously examples of government spending. However, one of the reasons they are popular is because they are associated with market behavior, despite inherently being governments distorting the market. We presented these dimensions expecting that "direct" government spending would signal a more overt activity, such as loans through a green bank or carbon tax redistribution. The fact that we find such a significant split, despite the fundamental similarity of these policies, validates this approach.

nationalist/non-nationalist respondents scaled 0-100. Positive values indicate Republicans/nationalists preferred the attribute and negative that Democratic/non-nationalists respondents did.[67]

Crucially, as suggested by our theory, the effect of competition framing is strongest among Republicans (**H2**) and Nationalists (**H3**). Among Republican respondents climate policies that "advance U.S. national interest by prioritizing economic competition with other countries" have an estimated marginal mean of 0.52 (95% CI:0.51 0.534). Thus, competition is viewed most positively by climate opponents which, given the AMCE without heterogeneous effects, puts them at odds with climate supporters.

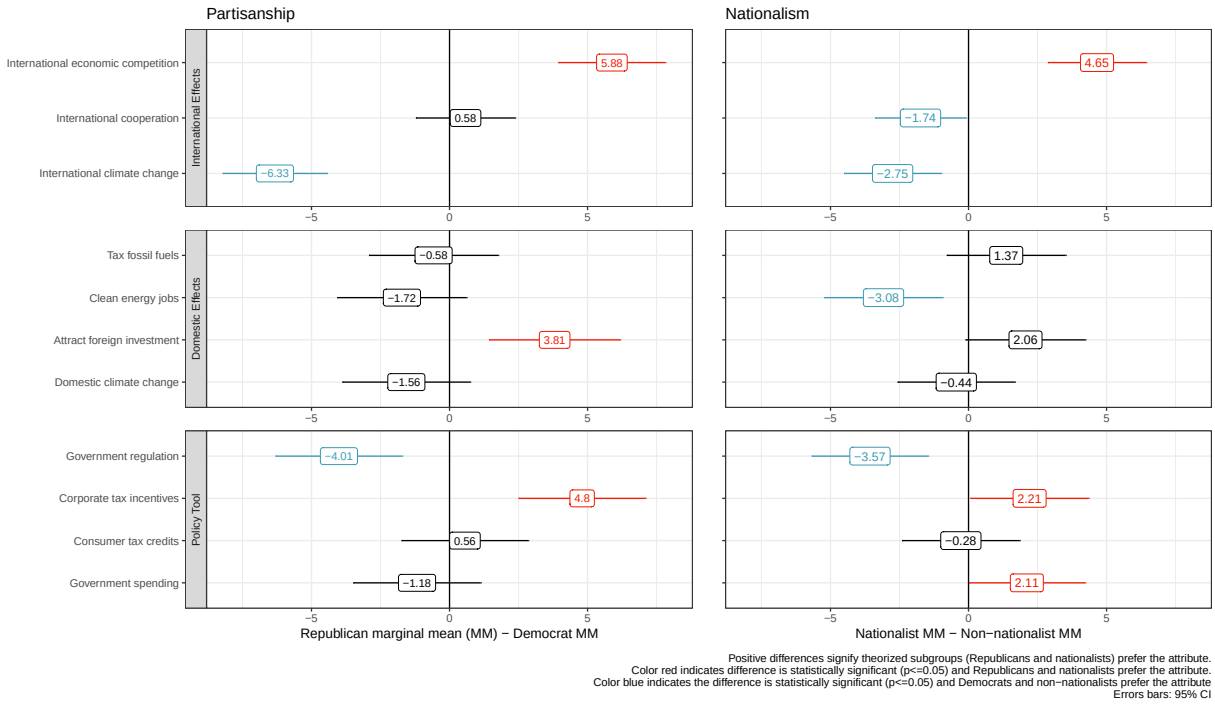


Figure 23: Differences in Marginal Means: Partisanship and Nationalism

There is a 5.88 percentage point difference between Republican and Democratic marginal means within the international competition level (p=<0.000). Again this result is in line with **H2** and is similar to the results in our vignette experiment. Republicans prefer climate policy that emphasizes international competition. On the other hand, we observe a 6.33 percentage point difference between Republican

[67]We follow Leeper, Hobolt, and Tilley (2020), who recommend plotting marginal means to demonstrate heterogeneous effects in conjoint experiments. See Figure A12 for a plot of overall marginal means by partisanship and Figure A13 for nationalism.

and Democratic support for a policy with the international effect of slowing down climate change, with Democratic respondents preferring this attribute.

This partisan divergence helps explain the negative result in Figure 22. Respondents from the two parties clearly diverge in terms of desired international effects. In fact, the distance between Republicans and Democratic respondents for international competition is the second largest, behind only the bipartisanship attribute for partisan support (7.79 percentage points p=<0.000).

We see similar, but less dramatic, results for *Domestic Effects*. There is a 3.81 percentage point distance between Republican and Democratic marginal means within the encourage foreign investment attribute. Otherwise, the partisans are broadly in agreement regarding their preferences for clean energy jobs and distaste for carbon taxation. Finally, Republicans preferred tax credits for corporations as a *Policy Tool* by 4.80 percentage points (p=<0.000) while Democrats were more likely to prefer increased government regulation (4.01, p=0.001).

The results by nationalism are similar and in support of **H3**. Nationalists preferred climate policy that emphasizes international competition by 4.65 percentage points more than non-nationalists. Additionally, non-nationalists preferred policies emphasizing cooperation and the the global effects of climate change. In terms of domestic effects, non-nationalists were 3.08 percentage points more likely to prefer climate policies that created clean energy jobs (p=0.01), although that effect largely seems to be driven by nationalists being more likely to want to attract investment into the country. Additionally, nationalists were more likely to prefer policies focused on tax credits for corporations (2.21 percentage points p= 0.043) and direct government spending (2.11 percentage points p= 0.05).

Reconciling Study 1 and Study 2

The conjoint extends the treatment effects from the vignette for **H2** and **H3**, while also demonstrating that green competitive policies are consistently popular across subgroups. While the entire respondent pool preferred climate policies emphasizing the pro-climate effects, contra **H1**, Republicans and nationalists were more supportive of American economic competition. These results provide context to our vignette findings and reinforce the potential for economic competition framing to increase support for climate

action among climate opponents, as well as for green industrial policy more broadly to be a base from which to build a sustainable climate coalition. Furthermore, the more generic conjoint suggests that there may be a cost to an economic nationalism framing for pro-climate groups. Given the hyper-specificity with which green industrial policy occurs, this suggests that more targeted and explicit frames, emphasizing particular competitors (e.g. China) or industries, may be more effective at retaining these groups' support.

Accounting for Alternative Explanations

Our theory explains the findings from Study 1 and Study 2 through sociotropic concern for national welfare. The fact that the pre-specified heterogeneity analyses select for the most economically nationalist individuals who are definitionally most concerned about the economic security of the country should lend credence to this mechanism. Still, we attempt to account for alternative mechanisms in a number of ways.

We directly asked respondents if the Study 1 policy they were shown "addresses the negative impact of climate change" and "improves the overall condition of the U.S. economy." Based on the theory, we expect that the competition frame would prompt respondents to think the policy would be more effective economically. We especially thought this would be the case for our key sub-groups, Republicans and nationalists. This is exactly what we find in (shown in the Supplemental Material). Republicans and nationalists think "Electric Vehicles | No Competition" is bad for the U.S. economy, but find "Economic Competition | Electric Vehicles" to be better for the economy. Most strikingly, these results hold even for people who pre-treatment reported that green investment would be bad for their profession. Thus, individuals report that the policy is better for the country economically—even those who believe they materially have more to lose from the policy.

We also conduct structural topic models of open-ended responses prompting respondents to explain why they rated the policy as they did. As shown in Figure A7, we also find that people are more likely to discuss topics of Economic Nationalism and American Jobs under the "Economic Competition | Electric Vehicles" condition. Together, these suggest that sociotropic concerns are driving our results.

We also check the statistical robustness of the main results in a variety of ways. We probe for treatment heterogeneity using data-driven generalized random forests (Figure A9 and Figure A10) and find

that nationalism and Republican partisanship are consistently the most important variables explaining treatment effects. We also include an alternative Study 1 dependent variable capturing voting preferences, varied specifications of our indicators of heterogeneity, and heterogeneity by a direct measure of climate skepticism (Table A37). Our results are consistent across these alternative specifications.

Discussion

Green industrial policy has become central to decarbonization, but remains a relatively new paradigm for political leaders. We know that it helps policymakers create interest group coalitions, but in order to make a genuine difference in the fight against climate change, it also has to be supported by electorates. Given the potential for future right-wing leaders to roll back climate initiatives, this will require winning over climate skeptics.

This is not an idle speculation — the American IRA is the largest green investment on record, but faces opposition from high-profile Republicans who view climate policy as politically profitable to attack. Democrats have responded by framing the IRA as good for the U.S. economy, but prior research demonstrates that pro-economy frames do not often move respondents on climate policy. Our study set out to examine if adding an international dimension to the economic framing, by emphasizing international economic competition, causes change in policy preferences.

Using a vignette experiment, we find that priming respondents on economic competition makes them more supportive of climate policy. The increase in support is most notable among respondents who ex-ante did not approve of climate action, including Republicans and nationalists. We generalize the majority of results with a conjoint experiment that randomizes more policy components. Here, although we find important partisan differences, we see broad support for climate policy that emphasizes job creation and consumer tax credits. Notably, we do see a penalty for climate policy emphasizing economic competition over purely positive climate effects, although the effect of economic competition for climate skeptics still persists. Thus, economic competition may be an effective frame to convince opponents but should be used carefully with climate supporters.

The finding in this survey experiment directly relates to consequential policymaking globally. In the United States, 18 Republican representatives wrote to House Speaker Mike Johnson urging him to maintain the green energy tax provisions, emphasizing the the tax incentives "have spurred innovation, incentivized investment, and created good jobs in many parts of the country... As Republicans, we support an all-of-the-above approach to energy development and tax credits that incentivize domestic production, innovation, and delivery" (Budryk 2024). In the European Union, the aforementioned European Commission report explicitly acknowledges the importance of harmonizing fiscal incentives for decarbonization across member states in the face of international competition, even as right-wing nationalist parties push for more disintegration (*EU Competitiveness* 2024). Taken together, our results have important implications for policymakers seeking to enact climate action that citizens will support.

However, this finding should not be confused with an enthusiastic endorsement of the competition framing. It is far from clear that inciting respondents to support climate policy by leaning on jingoistic economic nationalism is costless. Even if passing climate policy is a problem of domestic political economy, the climate itself remains a global public good. On the one hand, it may be the case that competition between economic powers spurs faster technological development which can enable quicker decarbonization. On the other hand, severing global supply chains and decimating international research networks could strangle innovation that feeds on collaborative partnerships.

It is also likely that economic competition for green technology will be linked with broader international competition. Most international rules of trade and finance explicitly disavow industrial policy. Pursuing green industrial policy at the expense of other countries could contribute to a beggar-thy-neighbor approach to international political economy more generally, and thus degrade long-held norms that have enabled much international cooperation. Indeed, the IRA has already generated fears about new forms of international competition between the United States, the European Union, and China.

Future research into public opinion of green industrial policy can build on this work and evaluate the overall benefits of government-driven green investment. Our results portend a tension between an increased support for competitive climate policy and the reality that to address the global impacts

of the climate crisis will truly take global cooperation. Studying this interplay is critical to more fully understanding how new international systems will build around domestic climate coalitions.

CONCLUSION

Dissertation Summary and Contributions

This dissertation investigates the drivers behind American public opinion on climate change, particularly how identity-based, non-material factors such as racial resentment, worldviews, and sociotropic perceptions shape attitudes toward both domestic and international climate policy. Climate change should be treated as a "super wicked problem" (Lazarus 2008) necessitating high levels of political will and public buy-in. Thus, a full understanding of public opinion is crucial for viable policy design and for framing efforts.

Theoretically throughout the dissertation, I bridge research in American politics (particularly research emphasizing the link between racial resentment and policy attitudes) with insights from international political economy focused on non-material determinants of foreign policy opinion. In doing so, I situate climate opinion within the broader framework of racialized policy preferences and sociotropic identity. Empirically, I leverage an array of original survey research to investigate the politics of domestic support for both national and international climate action among the American public, thus highlighting the importance of careful message framing and the potential for strategic appeals, whether to shared economic interests, national security, or collective vulnerability, to broaden public support for climate action.

In the first paper, "The Effect of Racial Resentment and Out-Group Cues on Support for Climate Policy," as a result of their electoral power and centrality in U.S. policymaking, I focus on the racial attitudes of White Americans and how these attitudes influence climate policy preferences. I build on previous work that has identified a correlational linkage between racial resentment and climate attitudes by proposing two key pathways through which racial attitudes could translate into climate policy preferences:

first, that resentment over perceived benefits to people of color, and second, indifference or hostility to the disproportionate harms climate change inflicts on those groups.

Using correlational data, I find that high racial resentment is associated with reduced support for both domestic and international climate policies (extending previous work in a valuable direction), irrespective of political affiliation. Using an original survey experiment, I demonstrate that providing White respondents with information about the racially distributive effects of climate policy reduces their support for climate action, with the largest negative impact among those with high levels of racial resentment.

This research highlights the role of race and racial attitudes in shaping foreign policy opinions. My findings show that understanding racial attitudes and the influence of racial cues is crucial for determining overall support for climate policy. Gaining insight into the range of racial attitudes among White Americans is useful for policymakers to effectively frame efforts to bolster support for climate policies that benefit all Americans, including communities of color.

In the second paper, "Principled Conservatism or Out-Group Animus? Disentangling the Linkage between Racial Resentment and Climate Opinions Among White Americans," I extend the above findings to further investigate the psychological mechanisms underpinning the relationship between racial resentment and climate attitudes and also investigate the possibility of omitted variable bias as a driver for the relationship. I argue that feelings of racial resentment represent a distinct pathway driving lower support for climate policy among White Americans.

I test this argument using an original survey experiment, investigating the role of traditionalism, personal responsibility attribution, and affect towards former President Obama. I find that racial resentment is not simply a proxy for cultural conservatism or personal responsibility mindsets; it exerts an independent and powerful effect on climate attitudes. Additionally, I find key differences in the effect of the above predictors based on the type of climate policy in question. As a result, policymakers should not assume opposition to climate action stems only from ideological conservatism; racial resentment plays a distinct and influential role. The results also demonstrate a tension between pursuing climate justice (for the most affected) and building viable political coalitions among voters with racially biased views.

In the final paper, "International Economic Competition and Public Support for Climate Policy" (co-authored with Tyler Ditmore) I shift from a focus on racial attitudes towards considering another key stumbling block to decisive climate action, the reluctance of Republicans in the U.S. to embrace climate action. The polarized political environment encourages Republicans in the electorate to closely follow Republican leader cues, which are mostly anti-climate policy. As a result, finding ways to frame climate policy in a manner that is palatable to ex-ante climate skeptics like Republicans is vital for expansive climate spending.

This paper introduces a new dimension to theories of climate preferences, one that policymakers have been leveraging for rhetorical frames: international economic competition. Competition generates support for green spending by activating deeper preferences for national economic security. This is especially true for the individuals most opposed to climate policy, namely conservatives and nationalists. In this paper, we examine how framing green industrial policy as part of international economic competition can convert climate skeptics by activating sociotropic anxieties about national economic security. We test this argument with both a vignette and conjoint experiment and find that when framing green spending as economically competitive against China, the climate policy becomes more popular, particularly among Republicans and nationalists, crucially without a backlash effect among Democrats. Our results suggest that effective climate messaging may require strategic re-framing, avoiding global-based appeals in some contexts, in favor of frames grounded in nationalism or economic pragmatism.

This dissertation investigates the complex, often overlooked role of identity-based considerations, particularly racial attitudes, in shaping American public support for climate policy. Across three distinct but related papers, I demonstrate that American climate attitudes are not only a function of material interests, partisan identity, or ideological orientation. Instead, they are profoundly influenced by how individuals perceive the beneficiaries of climate action and whether those beneficiaries are perceived as part of their in-group or as members of a racial or national out-group.

Together, the three papers make several key contributions to the study of climate politics and public opinion. First, they advance a more nuanced understanding of how racial resentment, an established driver of domestic policy attitudes, extends to climate policy preferences, including support for international

agreements. By providing both correlational and causal evidence through survey experiments, I demonstrate that among White Americans, exposure to information highlighting the racially disproportionate impacts or benefits of climate action reduces support, particularly among those with high levels of racial resentment.

Second, this dissertation helps clarify the mechanisms at play. The second paper provides evidence that racial resentment operates independently of conservative worldviews such as traditionalism or individualism. Rather than serving merely as a proxy for partisanship or ideology, racial resentment reflects a specific form of out-group animus with powerful implications for climate opinion formation. In doing so, I contribute to broader conversations in political science about how identity shapes public opinion and underscores racialized resistance to climate action in the United States.

Third, while much of the existing literature focuses on the constraints that identity-based resistance imposes on climate progress, the third paper provides an important counterpoint. It shows that public opinion is malleable, support for green industrial policy can be increased, even among ex-ante skeptics, when climate action is framed in terms of national economic competitiveness. This offers a potential strategic avenue for increasing public support, particularly among groups historically opposed to climate policy.

Normatively, these findings raise important questions about the trade-offs involved in climate messaging. Centering racial equity is necessary for climate justice and to better address the serious and disproportionate environmental harms faced by marginalized communities; however, this type of message may provoke backlash among racially resentful segments of the public, potentially weakening political support for the policies themselves. This tension underscores a key dilemma: how best to pursue equitable climate policy while maintaining a politically viable domestic coalition.

Furthermore, while framing climate policy in terms of economic nationalism may increase support among skeptics, it is not without risks. Climate change remains a global public good, and appeals to national competition may undermine the international collaboration essential for innovation and decarbonization efforts. Green industrial policy pursued in a zero-sum framework could strain global supply chains, erode research partnerships, and contribute to a broader unraveling of international norms around

trade and cooperation, as already evidenced by tensions surrounding the Inflation Reduction Act between the U.S., EU, and China.

This work also sets the foundation for my future research agenda. I aim to explore how these dynamics translate to other national contexts, investigate alternative framing strategies that emphasize shared identity and universal values, and to further unpack how racial and nationalist cues interact to shape support for international climate cooperation. These lines of inquiry are essential for building inclusive, effective, and politically sustainable policy to address the climate crisis.

Future Research Directions

Moving forward, I plan to build on the findings of this dissertation in several key ways. First, I aim to examine how these results translate across other countries and political contexts. Do race-based attitudes similarly shape climate opinions in multi-ethnic democracies or in states with legacies of racial stratification? Conducting comparative survey research in countries such as Brazil, Germany, or France, nations that play pivotal roles in the global climate response, would be especially valuable.

This line of research could also inform the development of alternative framing strategies aimed at increasing support for climate policies that benefit all Americans, including communities of color. National campaigns should test new communication approaches, such as (1) emphasizing the shared benefits of climate policy to foster a sense of common identity rooted in, for example, class and collective vulnerability, and (2) framing climate action around universal values such as national security, domestic prosperity, and climate resilience, rather than perceived climate redistribution.

A related question is whether similar dynamics between harm-based and benefit-based framing apply in international contexts. For example, does racial resentment toward foreign beneficiaries, particularly in the Global South, reduce support for international climate cooperation and climate finance? This line of inquiry is part of a broader research agenda focused on understanding the international dimensions of public support for climate policy. Given the global nature of climate change, it is crucial to examine how domestic attitudes toward international agreements and cooperation are formed. I plan to investigate how concerns about international economic competition and geopolitical rivalry shape public preferences for

global climate initiatives. In addition, I will explore which aspects of funding the global green transition are the most politically acceptable to the American public.

In my existing dissertation work, I find that exposing White Americans to information about the racial distributive effects of climate policy decreases their support for international climate action irrespective of the respondent's partisanship. However, the mechanisms that underlay this decrease in support for international climate action remain uncertain. For example, members of the public could be less supportive of climate agreements that they perceive as benefiting other countries at the expense of the United States (nationalism) or they could be less supportive of financial support going to benefit non-Whites (racial animus). In future work I aim to tease out the mechanisms underpinning public support for international climate agreements.

This directly contributes to one of the central goals of my research agenda: understanding the role of racial animus and in-group preference in shaping American attitudes toward climate policy. This research will also expand our understanding of fiscal politics in the era of environmental transformation. By gauging public opinion on different funding strategies, future studies can offer valuable insights into how to build public support for financing the green transition. These insights will help policymakers design climate strategies that are not only effective in addressing the global crisis but also politically viable and inclusive, particularly among groups historically resistant to climate policy. A better understanding of variation in American climate attitudes is essential for developing approaches that foster broad-based, equitable support for climate action.

SUPPLEMENTAL MATERIAL 1: THE EFFECT OF RACIAL RESENTMENT AND OUT-GROUP CUES ON SUPPORT FOR CLIMATE POLICY

Study 1: Correlational Results

CES information

Table A1: Survey Demographics: Question wording

Variable	Wording
Education	What is the highest level of education you have completed?
Gender	Are you...
Income	Thinking back over the last year, what was your family's annual income?
Party	Generally speaking, do you think of yourself as a ...?
Political Ideology	How would you rate each of the following individuals and groups? Yourself
Race	What racial or ethnic group best describes you?
Region	In which census region do you live?
Age	Year of birth?

Table A2: Survey Demographic Information

Variable	Value	n	Percentage
Education	Advanced Degree	6294	14.60
Education	Bachelor's degree	10097	23.40
Education	Associate degree	4320	10.00
Education	Some college	8913	20.70
Education	High school graduate	12214	28.30
Education	No high school	1274	3.00
Gender	Female	24168	56.10
Gender	Male	18944	43.90
Income	More than $150,000	3522	9.10
Income	$100,000–$149,999	5539	14.20
Income	$60,000–$99,999	13249	34.10
Income	$30,0000–$59,999	7520	19.30
Income	Up to $29,999	9053	23.30
Party	Independent	5912	14.10
Party	Democrat	18782	44.90
Party	Republican	17123	40.90
Political Ideology	Conservative	15642	38.30
Political Ideology	Middle of the Road	9947	24.30
Political Ideology	Liberal	15274	37.40
Race	White	43112	100.00
Region	Midwest	10972	25.40
Region	Northeast	8554	19.80
Region	South	15668	36.30
Region	West	7918	18.40
Age	Mean Value	50.4	

CES: additional results

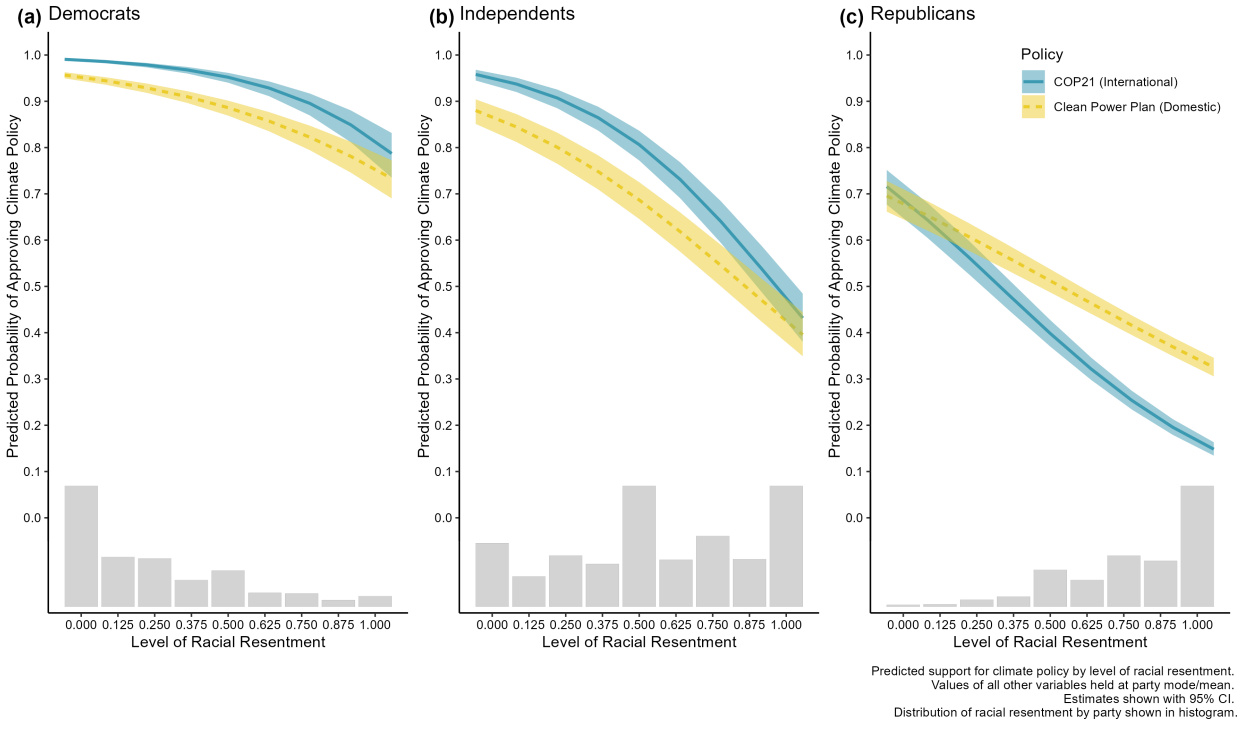


Figure A1: Effect of Racial Resentment on Climate Policy Approval By Party Affiliation

Table A3: Overall Effect of Racial Resentment on Climate Policy Approval: With Controls Shown

	COP21	CPP
Racial Resentment	−3.066***	−2.018***
	(0.068)	(0.056)
Education (reference= Associate degree)		
Advanced Degree	0.075	0.219***
	(0.076)	(0.059)
Bachelor's degree	0.035	0.202***
	(0.066)	(0.052)
Some college	−0.075	0.090*
	(0.066)	(0.052)
High school graduate	0.058	−0.126***
	(0.062)	(0.049)
No high school	0.200*	−0.264***
	(0.121)	(0.099)
Gender (reference= Female)		
Male	−0.494***	−0.098***
	(0.036)	(0.029)
Region (reference= Midwest)		
Northeast	−0.033	−0.067
	(0.052)	(0.041)
South	−0.044	−0.038
	(0.045)	(0.036)
West	−0.097*	−0.001
	(0.055)	(0.043)
Income	−0.018***	0.007
	(0.006)	(0.005)
Age	−0.007***	−0.0003
	(0.001)	(0.001)
Political Ideology (reference= Moderate)		
Liberal	0.493***	0.569***
	(0.061)	(0.047)
Conservative	−1.123***	−0.441***
	(0.043)	(0.039)
Political Party (leaners inc.) (reference= Independent)		
Democrat	1.238***	0.395***
	(0.058)	(0.049)
Republican	−0.688***	−0.341***
	(0.049)	(0.045)
Constant	3.305***	1.823***
	(0.107)	(0.086)
N	32,585	32,614
Log Likelihood	−10,700.500	−15,895.960
AIC	21,435.000	31,825.920

Coefficients reported from logit regression models. The dependent variables are coded 1 if the respondent indicated support for the climate policy option and 0 if they opposed the climate policy option. Significance codes: *p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

Table A4: Overall Effect of Racial Resentment on Climate Policy Approval (By Party leaners inc.): With Controls Shown

	Democrats		Independents		Republicans	
	COP21	CPP	COP21	CPP	COP21	CPP
Racial Resentment	−3.355***	−2.082***	−3.403***	−2.417***	−2.672***	−1.556***
	(0.138)	(0.097)	(0.148)	(0.133)	(0.097)	(0.082)
Education (reference= Associate degree)						
Advanced Degree	0.252	0.644***	0.145	0.192	−0.004	0.013
	(0.181)	(0.118)	(0.166)	(0.152)	(0.103)	(0.079)
Bachelor's degree	−0.056	0.430***	0.362**	0.372***	−0.025	0.077
	(0.153)	(0.102)	(0.149)	(0.137)	(0.087)	(0.068)
Some college	−0.025	0.156	0.052	0.189	−0.135	0.049
	(0.152)	(0.100)	(0.147)	(0.135)	(0.088)	(0.067)
High school graduate	−0.556***	−0.400***	0.295**	−0.112	0.217***	0.029
	(0.140)	(0.092)	(0.139)	(0.128)	(0.081)	(0.063)
No high school	−0.748***	−0.461**	0.550*	−0.444	0.380***	−0.118
	(0.256)	(0.183)	(0.307)	(0.271)	(0.146)	(0.124)
Gender (reference= Female)						
Male	−0.110	0.197***	−0.491***	−0.165**	−0.605***	−0.199***
	(0.080)	(0.056)	(0.081)	(0.076)	(0.049)	(0.038)
Region (reference= Midwest)						
Northeast	−0.113	−0.186**	−0.134	−0.127	0.032	0.018
	(0.108)	(0.075)	(0.116)	(0.107)	(0.071)	(0.057)
South	−0.082	−0.152**	−0.136	−0.117	−0.006	0.019
	(0.101)	(0.070)	(0.102)	(0.094)	(0.059)	(0.046)
West	0.002	0.062	−0.216*	−0.016	−0.092	−0.043
	(0.121)	(0.084)	(0.121)	(0.111)	(0.075)	(0.058)
Income	0.009	0.042***	−0.043***	0.018	−0.024***	−0.016***
	(0.013)	(0.009)	(0.013)	(0.012)	(0.008)	(0.006)
Age	0.037***	0.007***	−0.0003	0.005*	−0.023***	−0.005***
	(0.003)	(0.002)	(0.003)	(0.003)	(0.001)	(0.001)
Political Ideology (reference= Moderate)						
Liberal	0.747***	0.663***	0.583***	0.270**	−0.270**	−0.353***
	(0.090)	(0.061)	(0.141)	(0.122)	(0.125)	(0.118)
Conservative	−1.159***	−0.567***	−1.243***	−0.703***	−1.108***	−0.378***
	(0.112)	(0.098)	(0.093)	(0.085)	(0.056)	(0.051)
N	15,172	15,182	4,022	4,035	13,391	13,397

Coefficients reported from logistical regression models. Models include control variables for education, political ideology, partisanship, gender, age, region, income, and race. The dependent variables are coded 1 if the respondent indicated support for the climate policy option and 0 if they opposed the climate policy option. Significance codes:*p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

Table A5: Confirmatory Factor Analysis of Racial Resentment Index Items (CES)

Item	Loading	Std. Error
RR_nofavors	0.923	0.001
RR_slavery	0.923	0.001

NOTE: Confirmatory factor analysis of the questions used to create the index of racial resentment. The standardized factor loadings indicate that each of the racial resentment questions contributed to the scale.

Study 1: Robustness checks

In this section, I conduct a variety of robustness checks of the main results. First, I re-run the main models with an alternative specification of racial attitudes. While these two questions are not part of the traditional index of racial resentment questions, these questions provide an additional robustness check of the central results. More specifically, these "color-blind" questions created by Neville et al. (2000) do not explicitly refer to Black Americans and thus attempt to tap into other elements of racial resentment. DeSante and Smith (2020) refer to these questions as part of the FIRE index of racism noting "FIRE is an acronym for fear, acknowledgment of institutional racism, and racial empathy"(DeSante and Smith 2020, 643).

Respondents in the 2020 CES were also asked a series of questions about *potential* climate proposals. The hypothetical climate proposals are an additional check on the effect of racial resentment at reducing support for even hypothetical climate action. In Table A8, I display results from running models for each of the four proposals.

Table A6: Effect of FIRE Questions on Climate Policy Approval

	White people in the U.S. have advantages		Racial Problems are rare	
	COP21	CPP	COP21	CPP
White people in the U.S. have advantages	−0.633***	−0.397***		
	(0.014)	(0.012)		
Racial Problems are rare			−0.668***	−0.373***
			(0.015)	(0.012)
Education (reference= Associate degree)				
Advanced Degree	0.143*	0.272***	0.302***	0.356***
	(0.075)	(0.058)	(0.076)	(0.058)
Bachelor's degree	0.078	0.237***	0.201***	0.312***
	(0.066)	(0.051)	(0.067)	(0.052)
Some college	−0.038	0.108**	−0.060	0.112**
	(0.066)	(0.051)	(0.067)	(0.052)
High school graduate	0.031	−0.153***	0.047	−0.159***
	(0.062)	(0.049)	(0.063)	(0.049)
No high school	0.249**	−0.249**	0.126	−0.280***
	(0.122)	(0.099)	(0.124)	(0.100)
Gender (reference= Female)				
Male	−0.459***	−0.079***	−0.351***	−0.025
	(0.036)	(0.029)	(0.037)	(0.029)
Region (reference= Midwest)				
Northeast	−0.035	−0.065	−0.052	−0.053
	(0.052)	(0.041)	(0.053)	(0.042)
South	−0.020	−0.024	−0.061	−0.037
	(0.045)	(0.035)	(0.046)	(0.036)
West	−0.067	0.021	−0.046	0.034
	(0.055)	(0.043)	(0.056)	(0.043)
Income	−0.018***	0.008*	−0.003	0.014***
	(0.006)	(0.005)	(0.006)	(0.005)
Age	−0.012***	−0.004***	−0.018***	−0.007***
	(0.001)	(0.001)	(0.001)	(0.001)
Political Ideology (reference= Moderate)				
Liberal	0.654***	0.714***	0.709***	0.783***
	(0.060)	(0.046)	(0.061)	(0.047)
Conservative	−1.123***	−0.445***	−1.188***	−0.501***
	(0.043)	(0.039)	(0.044)	(0.040)
Political Party (leaners inc.) (reference= Independent)				
Democrat	1.245***	0.425***	1.354***	0.512***
	(0.058)	(0.049)	(0.059)	(0.049)
Republican	−0.761***	−0.387***	−0.754***	−0.378***
	(0.049)	(0.045)	(0.050)	(0.045)
N	32,614	32,643	31,822	31,850

Coefficients reported from logistical regression models. The dependent variables are coded 1 if the respondent indicated support for the climate policy option and 0 if they opposed the climate policy option. Significance codes: * p<0.1; ** p<0.05; *** p<0.01, two-tailed tests.

Table A7: Potential proposals DVs

Variable	Wording
regulate_CO2	Give the Environmental Protection Agency power to regulate Carbon Dioxide emissions
renewable_fuels	Require that each state use a minimum amount of renewable fuels (wind, solar, and hydroelectric) in the generation of electricity even if electricity prices increase a little
strengthen_EPA	Strengthen the Environmental Protection Agency enforcement of the Clean Air Act and Clean Water Act even if it costs U.S. jobs
raise_fuelefficiency	Raise the average fuel efficiency for all cars and trucks in the U.S. from 40 miles per gallon to 54.5 miles per gallon by 2025.

Table A8: Overall Effect of Racial Resentment on Climate Proposal Approval

	Regulate CO_2	Renewable Fuels	Strengthen EPA	Raise Fuel Efficiency
Racial Resentment	−2.298***	−2.117***	−2.687***	−1.740***
	(0.064)	(0.059)	(0.063)	(0.058)
Education (reference= Associate degree)				
Advanced Degree	−0.073	−0.227***	0.084	−0.029
	(0.066)	(0.063)	(0.068)	(0.059)
Bachelor's degree	−0.108*	−0.073	0.005	−0.070
	(0.058)	(0.055)	(0.060)	(0.053)
Some college	−0.128**	−0.110**	−0.062	−0.046
	(0.058)	(0.055)	(0.060)	(0.053)
High school graduate	0.228***	0.077	0.098*	0.128**
	(0.055)	(0.052)	(0.056)	(0.050)
No high school	0.106	−0.160	0.349***	0.041
	(0.109)	(0.105)	(0.111)	(0.103)
Gender (reference= Female)				
Male	−0.527***	−0.419***	−0.169***	−0.549***
	(0.032)	(0.030)	(0.033)	(0.029)
Region (reference= Midwest)				
Northeast	0.180***	0.027	0.056	0.205***
	(0.047)	(0.044)	(0.048)	(0.043)
South	0.106***	−0.056	0.026	0.125***
	(0.040)	(0.038)	(0.041)	(0.036)
West	−0.199***	−0.129***	−0.158***	−0.089**
	(0.049)	(0.046)	(0.050)	(0.044)
Income	−0.035***	−0.025***	−0.018***	−0.051***
	(0.005)	(0.005)	(0.005)	(0.005)
Age	0.001	0.001	−0.001	−0.006***
	(0.001)	(0.001)	(0.001)	(0.001)
Political Ideology (reference= Moderate)				
Liberal	0.675***	0.506***	0.740***	0.449***
	(0.062)	(0.053)	(0.056)	(0.051)
Conservative	−0.939***	−0.842***	−0.904***	−0.662***
	(0.042)	(0.040)	(0.041)	(0.040)
Political Party (leaners inc.) (reference= Independent)				
Democrat	1.154***	0.841***	1.011***	0.629***
	(0.058)	(0.053)	(0.053)	(0.052)
Republican	−0.206***	−0.258***	−0.364***	−0.191***
	(0.047)	(0.046)	(0.047)	(0.046)
N	32,746	32,750	32,749	32,747

Coefficients reported from logistical regression models. The dependent variables are coded 1 if the respondent indicated support for the climate policy option and 0 if they opposed the climate policy option. Significance codes: * p<0.1; ** p<0.05; *** p<0.01, two-tailed tests.

Table A9: Effect of Racial Resentment: Location-Based Analysis

	Employment quotient		Wage quotient	
	COP21		CPP	
Racial Resentment	−3.059***	−2.018***	−3.059***	−2.018***
	(0.069)	(0.056)	(0.069)	(0.056)
Employment quotient	−0.015*	−0.008		
	(0.008)	(0.006)		
Wage quotient			−0.014**	−0.008
			(0.007)	(0.005)
Education (reference= Associate degree)				
Advanced Degree	0.075	0.213***	0.074	0.212***
	(0.076)	(0.059)	(0.076)	(0.059)
Bachelor's degree	0.033	0.202***	0.033	0.201***
	(0.067)	(0.052)	(0.067)	(0.052)
Some college	−0.079	0.093*	−0.079	0.093*
	(0.067)	(0.052)	(0.067)	(0.052)
High school graduate	0.057	−0.127***	0.057	−0.127***
	(0.062)	(0.049)	(0.062)	(0.049)
No high school	0.193	−0.263***	0.194	−0.262***
	(0.122)	(0.100)	(0.122)	(0.100)
Gender (reference= Female)				
Male	−0.497***	−0.098***	−0.497***	−0.098***
	(0.037)	(0.029)	(0.037)	(0.029)
Region (reference= Midwest)				
Northeast	−0.041	−0.075*	−0.041	−0.075*
	(0.052)	(0.042)	(0.052)	(0.042)
South	−0.050	−0.044	−0.046	−0.042
	(0.045)	(0.036)	(0.045)	(0.036)
West	−0.081	0.006	−0.083	0.006
	(0.056)	(0.044)	(0.056)	(0.044)
Income	−0.020***	0.008*	−0.020***	0.008*
	(0.006)	(0.005)	(0.006)	(0.005)
Age	−0.007***	−0.0004	−0.007***	−0.0004
	(0.001)	(0.001)	(0.001)	(0.001)
Political Ideology (reference= Moderate)				
Liberal	0.490***	0.561***	0.490***	0.561***
	(0.061)	(0.048)	(0.061)	(0.048)
Conservative	−1.118***	−0.437***	−1.118***	−0.437***
	(0.044)	(0.039)	(0.044)	(0.039)
Political Party (leaners inc.) (reference= Independent)				
Democrat	1.249***	0.397***	1.249***	0.397***
	(0.058)	(0.049)	(0.058)	(0.049)
Republican	−0.689***	−0.344***	−0.689***	−0.344***
	(0.050)	(0.045)	(0.050)	(0.045)
N	32,137	32,166	32,137	32,166

Coefficients reported from logistical regression models. Models include control variables for education, political ideology, gender, age, region, income, and race. The dependent variables are coded 1 if the respondent indicated support for the climate policy option and 0 if they opposed the climate policy option. Significance codes: * p<0.1; ** p<0.05; *** p<0.01, two-tailed tests.

Table A10: Overall Effect of Racial Resentment on Climate Policy Approval (By Rural)

	Non-Rural		Rural	
	COP21	CPP	COP21	CPP
Racial Resentment	−3.229***	−2.118***	−2.568***	−1.693***
	(0.080)	(0.064)	(0.137)	(0.113)
Education (reference= Associate degree)				
Advanced Degree	−0.093	−0.069	0.159	−0.052
	(0.060)	(0.048)	(0.104)	(0.083)
Bachelor's degree	−0.093*	−0.044	0.078	−0.027
	(0.053)	(0.042)	(0.085)	(0.067)
Some college	−0.079	0.023	−0.282**	−0.117
	(0.062)	(0.049)	(0.125)	(0.095)
High school graduate	0.084	0.203***	0.049	0.286**
	(0.087)	(0.068)	(0.160)	(0.124)
No high school	0.059	0.210***	−0.078	0.158
	(0.077)	(0.060)	(0.135)	(0.104)
Gender (reference= Female)				
Male	−0.066	0.079	−0.096	0.130
	(0.079)	(0.061)	(0.123)	(0.096)
Region (reference= Midwest)				
Northeast	0.089	−0.119**	−0.011	−0.144
	(0.075)	(0.059)	(0.112)	(0.089)
South	0.125	−0.225*	0.271	−0.346**
	(0.157)	(0.126)	(0.193)	(0.163)
West	−0.442***	−0.085**	−0.671***	−0.146***
	(0.042)	(0.033)	(0.074)	(0.057)
Income	−0.021***	0.008	−0.014	0.002
	(0.007)	(0.005)	(0.012)	(0.009)
Age	−0.005***	−0.0003	−0.011***	0.001
	(0.001)	(0.001)	(0.002)	(0.002)
Political Ideology (reference= Moderate)				
Liberal	0.442***	0.591***	0.644***	0.451***
	(0.069)	(0.054)	(0.131)	(0.101)
Conservative	−1.159***	−0.464***	−1.041***	−0.390***
	(0.051)	(0.046)	(0.083)	(0.075)
Political Party (leaners inc.) (reference= Independent)				
Democrat	1.222***	0.374***	1.280***	0.442***
	(0.067)	(0.056)	(0.119)	(0.100)
Republican	−0.677***	−0.328***	−0.716***	−0.380***
	(0.057)	(0.052)	(0.096)	(0.086)
N	25,316	25,329	7,253	7,268

Coefficients reported from logistical regression models. Models include control variables for education, political ideology, gender, age, region, income, and race. The dependent variables are coded 1 if the respondent indicated support for the climate policy option and 0 if they opposed the climate policy option. Significance codes: *p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

Study 2: Experimental Results

Research ethics statement

The human subject research in this study was reviewed and determined to be exempt from further review by the [AUTHOR'S] institutional review board (23-0389) and adheres to the APSA's Principles and Guidance on Human Subject Research. Qualtrics recruited participants through an online opt-in model. Respondents were required to give their voluntary and informed consent after being provided with a description of the survey and prior to beginning the survey. Additionally, respondents were compensated by Qualtrics for the approximately 10 minute survey, at a level determined by Qualtrics to be commensurate with the standards of other survey providers. The study did not specifically target any vulnerable groups, represent any undo risk to respondents, or utilize deception.

Moderators

Table A11: Racial resentment and Nationalism Questions

Variable	Wording
RR_nofavors	Irish, Italians, Jewish and many other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors.
RR_slavery	Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class. [REVERSE CODED]
RR_deserve	Over the past few years, blacks have gotten less than they deserve. [REVERSE CODED]
RR_tryharder	It's really a matter of some people not trying hard enough; if blacks would only try harder they could be just as well off as White people.
NAT_Superior	"In the United States, our people are not perfect, but our culture is superior to others"
NAT_Ratherbe	"I would rather be a citizen of America than of any other country in the world."
NAT_BetterPlace	"The world would be a better place if people from other countries were more like Americans."

Treatment wording

Respondents viewed a common preamble reading "In the next section, we will present you with information about a hypothetical climate [agreement/policy]. This is a general scenario about a hypothetical [agreement/policy]. It is not about any specific [agreement/policy] that you may have heard about in the news. Please read the details of the scenario carefully, afterwards we will ask for your opinion regarding the [agreement/policy]."

After the preamble, respondents viewed one of six different treatment conditions concerning the hypothetical [agreement/policy]. Shown below

- **International X Benefit Frame**: The U.S. Congress is debating approving a new international climate agreement. The agreement is between the United States and a number of other countries around the world. The purpose of the agreement is to help the member countries slow down the global effects of climate change.

  The agreement is designed to reduce the negative impacts of the changing climate for non-White people.

- **International X Harm Frame**: The U.S. Congress is debating approving a new international climate agreement. The agreement is between the United States and a number of other countries around the world. The purpose of the agreement is to help the member countries slow down the global effects of climate change.

  Researchers studying the effects of climate change have found consistent evidence that non-White people are more negatively harmed by the changing climate than White people.

- **International X Control**: The U.S. Congress is debating approving a new international climate agreement. The agreement is between the United States and a number of other countries around the world. The purpose of the agreement is to help the member countries slow down the global effects of climate change.

- **Domestic X Benefit Frame**: The U.S. Congress is debating approving a new domestic climate policy. The purpose of the policy is to help the U.S. slow down the domestic effects of climate change.

  The policy is designed to reduce the negative impacts of the changing climate for non-White people.

- **Domestic X Harm Frame**: The U.S. Congress is debating approving a new domestic climate policy. The purpose of the policy is to help the U.S. slow down the domestic effects of climate change.

  Researchers studying the effects of climate change have found consistent evidence that non-White people are more negatively harmed by the changing climate than White people.

- **Domestic X Control**: The U.S. Congress is debating approving a new domestic climate policy. The purpose of the policy is to help the U.S. slow down the domestic effects of climate change.

Evaluations

After viewing information about the policy/agreement all respondents are asked the following questions:

- **DV**: Do you support or oppose the United States [approving the pending domestic climate policy/ joining the international climate agreement]?
  - Strongly support (4)
  - Somewhat support (3)
  - Neither support nor oppose (2)
  - Somewhat oppose (1)
  - Strongly oppose (0)

- **DV2**: To what extent do you believe the proposed [policy/agreement] will help or harm people like you?
  - Help a great deal (4)
  - Help a moderate amount (3)
  - Neither help nor harm (2)
  - Harm a moderate amount (1)
  - Harm a great deal (0)

- **Manipulation Check: benefit**: Which of the following groups of people is the proposed [policy/agreement] designed to benefit?
  - White people
  - Non-white people
  - Democrats
  - Republicans
  - Don't know
- **Manipulation Check: harm**: Researchers studying the effects of climate change have found consistent evidence that which of the following groups of people are most negatively impacted by climate change?
  - White people
  - Non-white people
  - Democrats
  - Republicans
  - Don't know

Demographics

Additional analysis

Table A12: Demographic Balance Table

		control (N=380)		benefit (N=406)		harm (N=371)	
		N	Pct.	N	Pct.	N	Pct.
Age	18 - 24	33	8.7	36	8.9	30	8.1
	25 - 34	52	13.7	57	14.0	53	14.3
	35 - 44	77	20.3	78	19.2	87	23.5
	45 - 54	50	13.2	62	15.3	36	9.7
	55 or older	168	44.2	173	42.6	165	44.5
Gender	Female	183	48.2	202	49.8	186	50.1
	Male	195	51.3	202	49.8	179	48.2
	Neither of the above	1	0.3	2	0.5	5	1.3
Income	Up to $29,999	69	18.2	68	16.7	78	21.0
	$30,0000–$59,999	89	23.4	90	22.2	76	20.5
	$60,000–$99,999	96	25.3	109	26.8	93	25.1
	$100,000–$149,999	84	22.1	87	21.4	79	21.3
	More than $150,000	35	9.2	46	11.3	42	11.3
	Prefer not to say	7	1.8	6	1.5	3	0.8
PartyID	Independent	99	26.1	95	23.4	98	26.4
	Democrat	125	32.9	140	34.5	119	32.1
	Republican	132	34.7	136	33.5	126	34.0
	Don't know/other	23	6.1	34	8.4	27	7.3
Poli_interest	Most of the time	170	44.7	184	45.3	162	43.7
	Some of the time	125	32.9	134	33.0	130	35.0
	Only now and then	50	13.2	54	13.3	48	12.9
	Hardly at all	34	8.9	34	8.4	30	8.1
Religiosity	More than once a week	39	10.3	31	7.6	35	9.4
	Once a week	75	19.7	91	22.4	70	18.9
	A few times a month	37	9.7	30	7.4	39	10.5
	A few times a year	53	13.9	57	14.0	70	18.9
	Never	126	33.2	120	29.6	103	27.8
Educ	Associate's Degree	37	9.7	26	6.4	41	11.1
	Less than high school	16	4.2	13	3.2	11	3.0
	High school graduate	82	21.6	88	21.7	99	26.7
	Some college	114	30.0	114	28.1	90	24.3
	Bachelor's Degree	73	19.2	105	25.9	73	19.7
	Advanced Degree	58	15.3	60	14.8	57	15.4
Racialresentment_catagory	Racial_moderate	69	18.2	87	21.4	72	19.4
	Racial_liberal	133	35.0	139	34.2	128	34.5
	Racial_conservative	174	45.8	179	44.1	169	45.6

Table A13: Confirmatory Factor Analysis of Racial Resentment Index Items

Item	Loading	Std. Error
RR_nofavors	0.770	0.015
RR_slavery	0.769	0.015
RR_deserve	0.729	0.015
RR_tryharder	0.743	0.015

NOTE: Confirmatory factor analysis of the questions used to create the index of racial resentment. The standardized factor loadings indicate that each of the racial resentment questions contributed to the scale.

Table A14: Confirmatory Factor Analysis of Nationalism Index Items

Item	Loading	Std. Error
NAT_Superior	0.875	0.022
NAT_Ratherbe	0.612	0.024
NAT_BetterPlace	0.777	0.021

NOTE: Confirmatory factor analysis of the questions used to create the index of nationalism. The standardized factor loadings indicate that each of the nationalism questions contributed to the scale.

Table A15: Heterogeneous Effects of Frame Treatment on Climate Policy Approval

	Racial Resentment	Nationalism
Frame (reference= control)		
Benefit * Racial Resentment	−0.316	
	(0.303)	
Harm * Racial Resentment	−0.660**	
	(0.311)	
Benefit * Nationalism		0.165
		(0.478)
Harm * Nationalism		−0.376
		(0.478)
Benefit	−0.176	−0.370
	(0.178)	(0.311)
Harm	0.060	−0.161
	(0.185)	(0.315)
Racial Resentment	−1.042***	
	(0.230)	
Nationalism		−0.141
		(0.357)
Age (reference= 18-24)		
25 - 34	0.209	−0.074
	(0.138)	(0.218)
35 - 44	0.320**	0.065
	(0.130)	(0.205)
45 - 54	0.217	0.088
	(0.141)	(0.223)
55 or older	0.148	−0.168
	(0.125)	(0.197)
Gender (reference= Female)		
Male	0.149**	0.112
	(0.066)	(0.102)
Other	0.240	−0.470
	(0.409)	(0.506)
Income (reference= Up to $29,999)		
$30,0000–$59,999	−0.191*	−0.222
	(0.102)	(0.154)
$60,000–$99,999	−0.078	−0.312**
	(0.103)	(0.154)
$100,000–$149,999	0.019	−0.123
	(0.116)	(0.176)
More than $150,000	0.219	0.135
	(0.138)	(0.211)
Prefer not to say	−0.457*	−0.846***
	(0.276)	(0.325)
Political Party (reference= Independent)		
Democrat	0.425***	0.646***
	(0.089)	(0.129)
Republican	−0.212**	−0.245*
	(0.091)	(0.134)
Don't know/Other	−0.302**	−0.107
	(0.139)	(0.213)
Political Ideology (reference= Moderate)		
Liberal	0.200**	0.416***
	(0.086)	(0.126)
Conservative	−0.560***	−0.592***
	(0.087)	(0.125)
Political interest	0.103***	0.102*
	(0.037)	(0.059)
Religiosity	0.019	−0.010
	(0.020)	(0.031)
Education (reference= Associate's Degree)		
Less than high school	−0.096	−0.043
	(0.204)	(0.328)
High school graduate	0.050	−0.026
	(0.126)	(0.188)
Some college	0.048	−0.038
	(0.122)	(0.181)
Bachelor's Degree	−0.108	−0.088
	(0.130)	(0.198)
Advanced Degree	0.015	0.112
	(0.143)	(0.211)
Constant	2.786***	2.756***
	(0.222)	(0.353)
N	1,137	561
R^2	0.369	0.360
Adjusted R^2	0.353	0.326
Residual Std. Error	1.049 (df = 1108)	1.080 (df = 532)
F Statistic	23.108*** (df = 28; 1108)	10.680*** (df = 28; 532)

Coefficients reported from OLS regression models. The dependent variable is coded on a five point scale, with four indicating support a great deal. Significance codes: *p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

Effect of scope on respondent support for climate action

I pre-registered three additional hypothesis concerning the scope of climate action. In contrast to my expectations, I find that respondents preferred the hypothetical *international* climate agreement over the domestic climate policy.

Table A16: Effects of Scope Treatment on Climate Policy Approval

	Main Effects	Racial Resentment	Nationalism
Scope (reference= Domestic)			
International * Racial Resentment		−0.050	
		(0.436)	
International * Nationalism			0.221
			(0.461)
International	0.275**	0.225	0.050
	(0.128)	(0.258)	(0.300)
Racial Resentment		−1.028***	
		(0.320)	
Nationalism			−0.302
			(0.327)
Age (reference= 18-24)			
25 - 34		−0.093	−0.201
		(0.244)	(0.248)
35 - 44		0.146	0.061
		(0.225)	(0.230)
45 - 54		0.038	−0.125
		(0.250)	(0.253)
55 or older		−0.042	−0.155
		(0.221)	(0.229)
Gender (reference= Female)			
Male		0.003	−0.060
		(0.118)	(0.122)
Other		−0.060	−0.200
		(1.096)	(1.127)
Income (reference= Up to $29,999)			
$30,0000–$59,999		−0.258	−0.262
		(0.179)	(0.182)
$60,000–$99,999		−0.179	−0.174
		(0.182)	(0.185)
$100,000–$149,999		0.038	0.053
		(0.204)	(0.207)
More than $150,000		−0.199	−0.169
		(0.264)	(0.264)
Prefer not to say		−0.579	−0.451
		(0.427)	(0.434)
Political Party (reference= Independent)			
Democrat		0.360**	0.389**
		(0.153)	(0.156)
Republican		−0.291*	−0.334**
		(0.157)	(0.160)
Don't know/Other		−0.803***	−0.827***
		(0.265)	(0.265)
Political Idcology (reference= Moderate)			
Liberal		0.321**	0.443***
		(0.150)	(0.149)
Conservative		−0.375**	−0.494***
		(0.155)	(0.155)
Political interest		0.160**	0.167**
		(0.063)	(0.065)
Religiosity		−0.013	−0.019
		(0.035)	(0.036)
Education (reference= Associate's Degree)			
Less than high school		0.529	0.421
		(0.337)	(0.339)
High school graduate		0.305	0.239
		(0.216)	(0.220)
Some college		0.279	0.278
		(0.208)	(0.212)
Bachelor's Degree		0.112	0.115
		(0.231)	(0.236)
Advanced Degree		0.314	0.376
		(0.251)	(0.255)
Constant	2.489***	2.701***	2.479***
	(0.091)	(0.349)	(0.360)
N	379	372	376
R^2	0.012	0.361	0.339
Adjusted R^2	0.009	0.313	0.290
Residual Std. Error	1.248 (df = 377)	1.039 (df = 345)	1.060 (df = 349)
F Statistic	4.600** (df = 1; 377)	7.488*** (df = 26; 345)	6.883*** (df = 26; 349)

Coefficients reported from OLS regression models. The dependent variable is coded on a five point scale, with four indicating support a great deal.
Significance codes: *p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

SUPPLEMENTAL MATERIAL 2: PRINCIPLED CONSERVATISM OR OUT-GROUP ANIMUS? DISENTANGLING THE LINKAGE BETWEEN RACIAL RESENTMENT AND CLIMATE OPINIONS AMONG WHITE AMERICANS

Question wording

For each of the batteries respondents were presented with pairs of questions and were asked: "Which statement comes closer to your own views, even if neither is exactly right?"

Below I display the batteries of interest, starting with Personal attribution.

The personal (vs. structural) attribution answer is shown in italics:

1. **Personal attribution**

   For each pair of questions, respondents were asked to choose which of two statements best represented their view, even if neither is exactly right. The personal (vs. structural) attribution answer is in italics:

   a. Addiction:

      - *Those with drug and alcohol addiction abuse substances because they lack self-control.*
      - Those with drug and alcohol addiction are raised in families and live in neighborhoods that cause them to abuse substances.

   b. Bankruptcy:

      - *Americans go bankrupt because they lack the personal responsibility and work ethic to pay their bills.*
      - Americans go bankrupt because they lack access to affordable healthcare and good jobs.

   c. Parents:

- Parents spend too little time with their kids because they must work multiple jobs and have no time.
- *Parents spend too little time with their kids because they don't make it a priority.*

d. Schooling:

- *When children fail at school, it is usually because the children aren't trying.*
- When children fail at school, it is usually because the schools are failing the children.

e. Depression:

- *Most people with depression would feel better if they could just be tougher and not give in so easily.*
- Most people with depression would feel better if they had better access to treatment and good healthcare.

2. **Traditionalism (connection to cultural conservatism)**

The traditional (vs. progressive) answer is in italics:

a. Established traditions:

- *Established traditions provide the wisdom necessary to understand the world.*
- To understand the world, people must free their minds from established traditions.

b. Wisdom in old ideas:

- If ideas have been around a long time, they probably need to be updated.
- *If ideas have been around for a long time, they probably have some wisdom in them.*

c. Morals:

- The world is always changing, so we should adjust our view of moral behavior.
- *Even though the world is changing, it would be a mistake to adjust our view of moral behavior.*

d. Old traditions worthy:

- *Old traditions are often worth following because they can connect us to our shared past.*
- Old traditions are often not worth following because they can discriminate against unique people.

Table A17: Racial resentment Questions

Variable	Wording
RR_nofavors	Irish, Italians, Jewish and many other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors.
RR_slavery	Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class. [REVERSE CODED]
RR_deserve	Over the past few years, blacks have gotten less than they deserve. [REVERSE CODED]
RR_tryharder	It's really a matter of some people not trying hard enough; if blacks would only try harder they could be just as well off as White people.

Confirmatory Factor Analysis

Table A18: Confirmatory Factor Analysis of Racial Resentment Index Items

Item	Loading	Std. Error
RR_nofavors	0.838	0.013
RR_slavery	0.767	0.016
RR_deserve	0.751	0.016
RR_tryharder	0.773	0.015

NOTE: Confirmatory factor analysis of the questions used to create the index of racial resentment. The standardized factor loadings indicate that each of the racial resentment questions contributed to the scale.

Table A19: Confirmatory Factor Analysis of Traditionalism Index Items

Item	Loading	Std. Error
Established traditions	0.647	0.041
Wisdom in old ideas	0.761	0.039
Morals	0.665	0.041
Old traditions worthy	0.775	0.038

NOTE: Confirmatory factor analysis of the questions used to create the index of traditionalism. The standardized factor loadings indicate that each of the traditionalism questions contributed to the scale.

Table A20: Confirmatory Factor Analysis of Personal Attribution Index Items

Item	Loading	Std. Error
Addiction	0.228	0.054
Bankruptcy	0.989	0.101
Parents	0.456	0.059
School	0.235	0.052
Depression	0.775	0.388

NOTE: Confirmatory factor analysis of the questions used to create the index of personal attribution. The standardized factor loadings indicate that each of the personal attribution questions contributed to the scale.

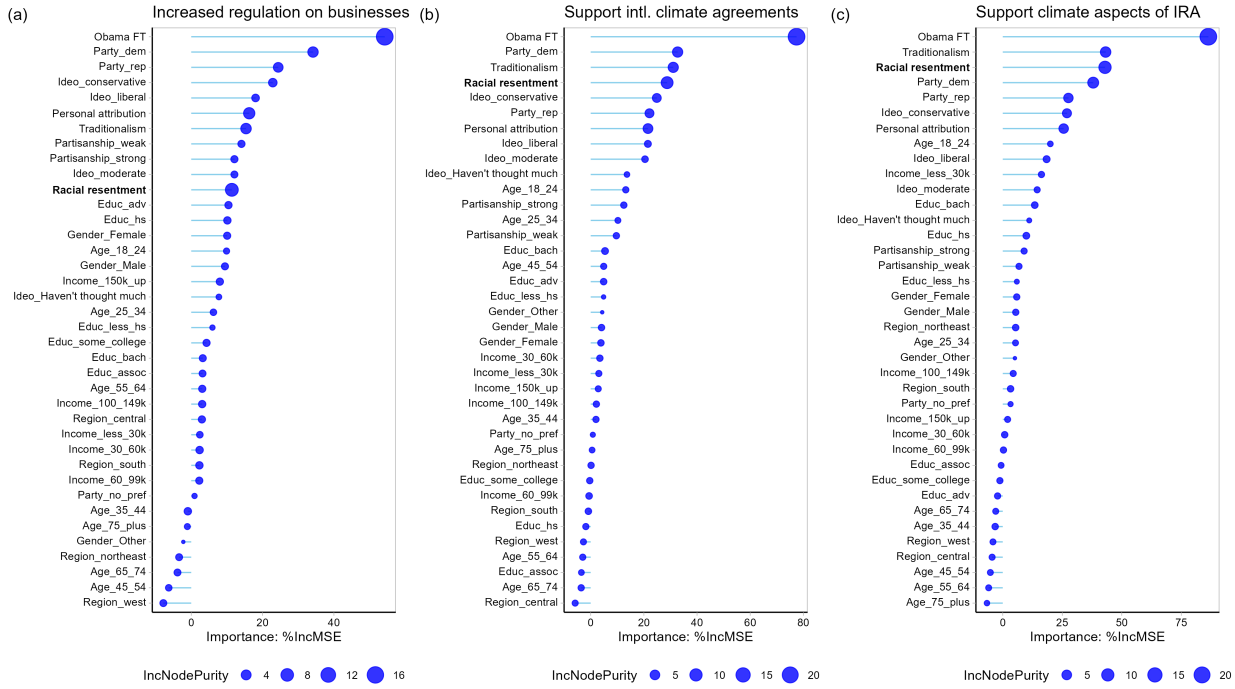


Figure A2: Random Forest: Variable Importance Continuous IVs

Table A21: Survey Demographics

Variable	Value	n	Percentage
Age	75 or older	86	9.00
Age	65 - 74	228	23.90
Age	55 - 64	210	22.00
Age	45 - 54	109	11.40
Age	35 - 44	187	19.60
Age	25-34	89	9.30
Age	18 - 24	44	4.60
Education	Advanced Degree	148	15.60
Education	Bachelor's Degree	171	18.00
Education	Associate's Degree	99	10.40
Education	Some college	274	28.80
Education	High school graduate	237	24.90
Education	Less than high school	22	2.30
Gender	Female	478	50.20
Gender	Male	472	49.50
Gender	Other	3	0.30
Income	More than $150,000	102	10.70
Income	$100,000–$149,999	229	24.00
Income	$60,000–$99,999	269	28.20
Income	$30,0000–$59,999	216	22.70
Income	Up to $29,999	137	14.40
PID_Strong	Not very strong	451	47.30
PID_Strong	Strong	502	52.70
Party	No preference	100	10.50
Party	Democrat	316	33.20
Party	Republican	537	56.30
Political Ideology	Conservative	430	45.10
Political Ideology	Moderate	246	25.80
Political Ideology	Liberal	241	25.30
Political Ideology	Haven't thought much	36	3.80
Region	North Central	196	20.60
Region	Northeast	185	19.50
Region	South	392	41.20
Region	West	178	18.70
Racial_resentment mean	0.56		

Table A22: Effect of Racial Resentment on Climate Opinions

	Increased reg on businesses	Support intl climate agreements	Support climate aspects of IRA
	(1)	(2)	(3)
Racial Resentment (0-1)	−0.146***	−0.260***	−0.325***
	(0.043)	(0.041)	(0.039)
Gender (reference= Female)			
Male	0.016	−0.011	−0.002
	(0.021)	(0.020)	(0.019)
Other	−0.212	−0.342**	−0.278*
	(0.170)	(0.163)	(0.156)
Education (reference= Associate degree)			
Advanced Degree	0.053	0.004	−0.006
	(0.041)	(0.039)	(0.037)
Bachelor's degree	0.014	−0.065*	−0.048
	(0.038)	(0.036)	(0.035)
Some college	0.028	0.012	0.007
	(0.034)	(0.033)	(0.031)
High school graduate	−0.024	−0.031	−0.053*
	(0.035)	(0.033)	(0.032)
No high school	−0.041	−0.049	−0.087
	(0.069)	(0.066)	(0.063)
Income (reference= Up to $29,999)			
$30,0000–$59,999	−0.070**	−0.047	−0.081***
	(0.033)	(0.031)	(0.030)
$60,000–$99,999	−0.038	−0.015	−0.053*
	(0.032)	(0.031)	(0.029)
$100,000–$149,999	−0.049	−0.011	−0.044
	(0.034)	(0.033)	(0.031)
More than $150,000	−0.033	−0.020	−0.046
	(0.041)	(0.040)	(0.038)
Age (reference= 18 - 24)			
25 - 34	−0.066	−0.018	−0.038
	(0.055)	(0.053)	(0.051)
35 - 44	−0.076*	0.020	−0.021
	(0.045)	(0.043)	(0.041)
45 - 54	−0.051	0.088**	0.017
	(0.040)	(0.038)	(0.036)
55 - 64	0.010	0.103**	0.025
	(0.042)	(0.040)	(0.039)
65 - 74	0.015	0.071**	0.010
	(0.037)	(0.036)	(0.034)
75 or older	−0.005	0.050	−0.001
	(0.037)	(0.035)	(0.034)
Region (reference= Northeast)			
South	0.006	−0.008	0.020
	(0.026)	(0.025)	(0.024)
North Central	−0.012	0.013	0.003
	(0.030)	(0.029)	(0.027)
West	−0.004	0.035	0.036
	(0.031)	(0.029)	(0.028)
Political Ideology (reference= Haven't thought much about)			
Moderate	0.048	0.075	−0.017
	(0.053)	(0.051)	(0.049)
Liberal	0.082	0.095*	−0.021
	(0.057)	(0.054)	(0.052)
Conservative	−0.034	−0.037	−0.134***
	(0.054)	(0.052)	(0.049)
Party ID w/leaners (reference= No preference)			
Democrat	0.109***	0.144***	0.167***
	(0.040)	(0.038)	(0.036)
Republican	−0.064*	−0.029	−0.033
	(0.037)	(0.035)	(0.033)
PID Strong (reference= Not strong)			
Strong	−0.031	−0.049**	−0.017
	(0.021)	(0.020)	(0.019)
N	948	948	948
R^2	0.210	0.312	0.362

Table entry is the OLS regression coefficient with standard error in parentheses. Significance codes: *p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

Table A23: Effect of Worldviews on Climate Opinions: Controls shown

	Increased reg on businesses	Support intl climate agreements	Support climate aspects of IRA
	(1)	(2)	(3)
Personal Attribution (0-1)	−0.140***	−0.141***	−0.124***
	(0.038)	(0.037)	(0.036)
Authoritarianism (0-1)	−0.128***	−0.222***	−0.209***
	(0.034)	(0.033)	(0.032)
Traditionalism (0-1)	0.015	−0.019	−0.014
	(0.021)	(0.020)	(0.019)
Gender (reference= Female)			
Male	−0.159	−0.274*	−0.218
	(0.169)	(0.161)	(0.157)
Other	0.058	0.017	0.009
	(0.041)	(0.039)	(0.038)
Education (reference= Associate degree)			
Advanced Degree	0.014	−0.068*	−0.049
	(0.038)	(0.036)	(0.035)
Bachelor's degree	0.028	0.012	0.011
	(0.034)	(0.032)	(0.031)
Some college	−0.025	−0.031	−0.053*
	(0.034)	(0.033)	(0.032)
High school graduate	−0.046	−0.062	−0.097
	(0.069)	(0.065)	(0.064)
No high school	−0.073**	−0.050	−0.084***
	(0.032)	(0.031)	(0.030)
Income (reference= Up to $29,999)			
$30,0000–$59,999	−0.041	−0.021	−0.062**
	(0.032)	(0.030)	(0.029)
$60,000–$99,999	−0.043	−0.010	−0.049
	(0.034)	(0.032)	(0.031)
$100,000–$149,999	−0.027	−0.009	−0.036
	(0.041)	(0.040)	(0.038)
More than $150,000	−0.104*	−0.073	−0.078
	(0.056)	(0.053)	(0.052)
Age (reference= 18 - 24)			
25 - 34	−0.103**	−0.015	−0.043
	(0.045)	(0.043)	(0.042)
35 - 44	−0.085**	0.041	−0.024
	(0.040)	(0.038)	(0.037)
45 - 54	−0.016	0.067*	−0.006
	(0.042)	(0.040)	(0.039)
55 - 64	−0.008	0.039	−0.017
	(0.037)	(0.036)	(0.035)
65 - 74	−0.012	0.042	−0.005
	(0.037)	(0.035)	(0.034)
75 or older	0.004	−0.008	0.022
	(0.026)	(0.025)	(0.024)
Region (reference= Northeast)			
South	−0.014	0.012	0.002
	(0.030)	(0.028)	(0.027)
North Central	0.001	0.043	0.046
	(0.030)	(0.029)	(0.028)
West	0.050	0.087*	−0.005
	(0.053)	(0.050)	(0.049)
Political Ideology (reference= Haven't thought much about)			
Moderate	0.079	0.099*	−0.009
	(0.056)	(0.054)	(0.052)
Liberal	−0.027	−0.024	−0.130***
	(0.054)	(0.051)	(0.050)
Conservative	0.106***	0.145***	0.177***
	(0.039)	(0.038)	(0.036)
Party ID w/leaners (reference= No preference)			
Democrat	−0.051	−0.013	−0.020
	(0.036)	(0.035)	(0.034)
Republican	−0.033	−0.051**	−0.022
	(0.021)	(0.020)	(0.019)
N	946	946	946
R^2	0.226	0.331	0.358

Table entry is the OLS regression coefficient with standard error in parentheses. Significance codes: *p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

Table A24: Effect of Racial Resentment on Climate Opinions Controlling for Psychological Factors: Controls shown

	Increased reg on businesses	Support intl climate agreements	Support climate aspects of IRA
	(1)	(2)	(3)
Racial Resentment (0-1)	−0.060	−0.162***	−0.257***
	(0.047)	(0.044)	(0.043)
Personal Attribution (0-1)	−0.124***	−0.091**	−0.040
	(0.041)	(0.039)	(0.038)
Traditionalism (0-1)	−0.116***	−0.193***	−0.164***
	(0.035)	(0.033)	(0.032)
Gender (reference= Female)			
Male	0.015	−0.017	−0.011
	(0.021)	(0.020)	(0.019)
Other	−0.165	−0.292*	−0.247
	(0.169)	(0.160)	(0.154)
Education (reference= Associate degree)			
Advanced Degree	0.056	0.010	−0.004
	(0.041)	(0.038)	(0.037)
Bachelor's degree	0.011	−0.073**	−0.054
	(0.038)	(0.036)	(0.034)
Some college	0.026	0.008	0.004
	(0.034)	(0.032)	(0.031)
High school graduate	−0.025	−0.031	−0.053*
	(0.034)	(0.033)	(0.031)
No high school	−0.047	−0.065	−0.102
	(0.069)	(0.065)	(0.062)
Income (reference= Up to $29,999)			
$30,0000–$59,999	−0.072**	−0.048	−0.081***
	(0.032)	(0.031)	(0.029)
$60,000–$99,999	−0.039	−0.015	−0.053*
	(0.032)	(0.030)	(0.029)
$100,000–$149,999	−0.042	−0.007	−0.042
	(0.034)	(0.032)	(0.031)
More than $150,000	−0.027	−0.010	−0.039
	(0.041)	(0.039)	(0.038)
Age (reference= 18 - 24)			
25 - 34	−0.106*	−0.079	−0.089*
	(0.056)	(0.053)	(0.051)
35 - 44	−0.105**	−0.022	−0.055
	(0.045)	(0.043)	(0.041)
45 - 54	−0.086**	0.041	−0.022
	(0.040)	(0.038)	(0.037)
55 - 64	−0.016	0.070*	−0.0003
	(0.042)	(0.040)	(0.038)
65 - 74	−0.007	0.042	−0.012
	(0.037)	(0.035)	(0.034)
75 or older	−0.012	0.042	−0.004
	(0.037)	(0.035)	(0.033)
Region (reference= Northeast)			
South	0.002	−0.011	0.016
	(0.026)	(0.024)	(0.024)
North Central	−0.014	0.012	0.002
	(0.030)	(0.028)	(0.027)
West	−0.004	0.033	0.033
	(0.031)	(0.029)	(0.028)
Political Ideology (reference= Haven't thought much about)			
Moderate	0.050	0.086*	−0.007
	(0.053)	(0.050)	(0.048)
Liberal	0.076	0.092*	−0.019
	(0.056)	(0.053)	(0.051)
Conservative	−0.023	−0.015	−0.115**
	(0.054)	(0.051)	(0.049)
Party ID w/leaners (reference= No preference)			
Democrat	0.101**	0.130***	0.154***
	(0.040)	(0.037)	(0.036)
Republican	−0.050	−0.012	−0.020
	(0.036)	(0.034)	(0.033)
PID Strong (reference= Not strong)			
Strong	−0.033	−0.051**	−0.021
	(0.021)	(0.020)	(0.019)
N	945	945	945
R^2	0.227	0.340	0.383

Table entry is the OLS regression coefficient with standard error in parentheses. Significance codes: * p<0.1; ** p<0.05; *** p<0.01, two-tailed tests.

Table A25: Effect of Obama FT on Climate Opinions: Controls Shown

	Increased reg on businesses	Support intl climate agreements	Support climate aspects of IRA
	(1)	(2)	(3)
Obama FT (0-1)	0.242***	0.340***	0.341***
	(0.035)	(0.033)	(0.032)
Gender (reference= Female)			
Male	0.007	−0.023	−0.017
	(0.020)	(0.019)	(0.018)
Other	−0.217	−0.348**	−0.284*
	(0.167)	(0.158)	(0.153)
Education (reference= Associate degree)			
Advanced Degree	0.038	−0.014	−0.021
	(0.040)	(0.038)	(0.037)
Bachelor's degree	0.004	−0.077**	−0.060*
	(0.037)	(0.035)	(0.034)
Some college	0.014	−0.007	−0.010
	(0.034)	(0.032)	(0.031)
High school graduate	−0.039	−0.048	−0.071**
	(0.034)	(0.032)	(0.031)
No high school	−0.067	−0.084	−0.117*
	(0.070)	(0.065)	(0.063)
Income (reference= Up to $29,999)			
$30,0000–$59,999	−0.070**	−0.050*	−0.084***
	(0.032)	(0.031)	(0.030)
$60,000–$99,999	−0.045	−0.030	−0.070**
	(0.032)	(0.030)	(0.029)
$100,000–$149,999	−0.068**	−0.045	−0.082***
	(0.034)	(0.032)	(0.031)
More than $150,000	−0.055	−0.055	−0.082**
	(0.041)	(0.039)	(0.037)
Age (reference= 18 - 24)			
25 - 34	−0.079	−0.030	−0.042
	(0.054)	(0.051)	(0.049)
35 - 44	−0.087**	0.011	−0.021
	(0.044)	(0.042)	(0.040)
45 - 54	−0.060	0.079**	0.010
	(0.039)	(0.037)	(0.036)
55 - 64	0.014	0.110***	0.034
	(0.041)	(0.039)	(0.038)
65 - 74	0.012	0.070**	0.011
	(0.037)	(0.035)	(0.034)
75 or older	−0.011	0.044	−0.006
	(0.036)	(0.034)	(0.033)
Region (reference= Northeast)			
South	0.011	0.002	0.031
	(0.026)	(0.024)	(0.023)
North Central	−0.006	0.022	0.012
	(0.029)	(0.028)	(0.027)
West	−0.002	0.041	0.044
	(0.030)	(0.028)	(0.027)
Political Ideology (reference= Haven't thought much about)			
Moderate	0.038	0.061	−0.032
	(0.053)	(0.050)	(0.048)
Liberal	0.065	0.079	−0.035
	(0.056)	(0.053)	(0.051)
Conservative	−0.018	−0.020	−0.123**
	(0.054)	(0.050)	(0.049)
Party ID w/leaners (reference= No preference)			
Democrat	0.067*	0.090**	0.120***
	(0.040)	(0.038)	(0.036)
Republican	−0.040	0.005	−0.001
	(0.036)	(0.034)	(0.033)
PID Strong (reference= Not strong)			
Strong	−0.023	−0.040**	−0.009
	(0.021)	(0.020)	(0.019)
N	947	947	947
R^2	0.239	0.355	0.388

Table entry is the OLS regression coefficient with standard error in parentheses. Significance codes: * p<0.1; ** p<0.05; *** p<0.01, two-tailed tests.

Table A26: Effect of Obama FT on Climate Opinions w/ RR Controls Shown

	Increased reg on businesses	Support intl climate agreements	Support climate aspects of IRA
	(1)	(2)	(3)
Racial Resentment (0-1)	−0.082*	−0.172***	−0.241***
	(0.043)	(0.040)	(0.039)
Obama FT (0-1)	0.002***	0.003***	0.003***
	(0.0004)	(0.0003)	(0.0003)
Gender (reference= Female)			
Male	0.009	−0.019	−0.010
	(0.020)	(0.019)	(0.018)
Other	−0.217	−0.348**	−0.284*
	(0.167)	(0.156)	(0.150)
Education (reference= Associate degree)			
Advanced Degree	0.036	−0.018	−0.028
	(0.040)	(0.038)	(0.036)
Bachelor's degree	0.001	−0.082**	−0.064*
	(0.037)	(0.035)	(0.033)
Some college	0.012	−0.011	−0.015
	(0.034)	(0.031)	(0.030)
High school graduate	−0.038	−0.047	−0.069**
	(0.034)	(0.032)	(0.031)
No high school	−0.068	−0.085	−0.119*
	(0.069)	(0.065)	(0.062)
Income (reference= Up to $29,999)			
$30,0000–$59,999	−0.069**	−0.049	−0.082***
	(0.032)	(0.030)	(0.029)
$60,000–$99,999	−0.041	−0.023	−0.060**
	(0.032)	(0.030)	(0.028)
$100,000–$149,999	−0.064*	−0.035	−0.067**
	(0.034)	(0.031)	(0.030)
More than $150,000	−0.051	−0.048	−0.072**
	(0.041)	(0.038)	(0.037)
Age (reference= 18 - 24)			
25 - 34	−0.088	−0.048	−0.067
	(0.054)	(0.051)	(0.049)
35 - 44	−0.095**	−0.005	−0.045
	(0.044)	(0.042)	(0.040)
45 - 54	−0.065*	0.069*	−0.002
	(0.039)	(0.037)	(0.035)
55 - 64	0.011	0.103***	0.025
	(0.041)	(0.039)	(0.037)
65 - 74	0.010	0.066*	0.006
	(0.037)	(0.034)	(0.033)
75 or older	−0.012	0.042	−0.009
	(0.036)	(0.034)	(0.032)
Region (reference= Northeast)			
South	0.009	−0.003	0.025
	(0.026)	(0.024)	(0.023)
North Central	−0.007	0.019	0.009
	(0.029)	(0.027)	(0.026)
West	−0.008	0.030	0.032
	(0.030)	(0.028)	(0.027)
Political Ideology (reference= Haven't thought much about)			
Moderate	0.038	0.062	−0.031
	(0.053)	(0.049)	(0.047)
Liberal	0.060	0.070	−0.047
	(0.056)	(0.053)	(0.050)
Conservative	−0.013	−0.008	−0.107**
	(0.054)	(0.050)	(0.048)
Party ID w/leaners (reference= No preference)			
Democrat	0.061	0.078**	0.104***
	(0.040)	(0.037)	(0.036)
Republican	−0.038	0.008	0.002
	(0.036)	(0.034)	(0.032)
PID Strong (reference= Not strong)			
Strong	−0.024	−0.041**	−0.009
	(0.021)	(0.019)	(0.019)
N	946	946	946
R^2	0.242	0.367	0.413

Table entry is the OLS regression coefficient with standard error in parentheses. Significance codes: * p<0.1; ** p<0.05; *** p<0.01, two-tailed tests.

Table A27: Effect of Racial Resentment on Climate Opinions Controlling for Psychological Factors and Obama FT

	Increased reg on businesses	Support intl climate agreements	Support climate aspects of IRA
	(1)	(2)	(3)
Racial Resentment (0-1)	−0.007	−0.089**	−0.187***
	(0.047)	(0.044)	(0.042)
Obama FT (0-1)	0.212***	0.286***	0.274***
	(0.037)	(0.034)	(0.033)
Personal Attribution (0-1)	−0.125***	−0.094**	−0.042
	(0.041)	(0.038)	(0.036)
Traditionalism (0-1)	−0.092***	−0.159***	−0.132***
	(0.035)	(0.032)	(0.031)
Gender (reference= Female)			
Male	0.010	−0.022	−0.016
	(0.020)	(0.019)	(0.018)
Other	−0.173	−0.301*	−0.256*
	(0.166)	(0.154)	(0.148)
Education (reference= Associate degree)			
Advanced Degree	0.040	−0.011	−0.024
	(0.040)	(0.037)	(0.036)
Bachelor's degree	−0.0005	−0.088**	−0.069**
	(0.037)	(0.034)	(0.033)
Some college	0.011	−0.012	−0.015
	(0.033)	(0.031)	(0.030)
High school graduate	−0.038	−0.047	−0.068**
	(0.034)	(0.031)	(0.030)
No high school	−0.070	−0.096	−0.129**
	(0.069)	(0.064)	(0.062)
Income (reference= Up to $29,999)			
$30,0000–$59,999	−0.071**	−0.050*	−0.083***
	(0.032)	(0.030)	(0.029)
$60,000–$99,999	−0.042	−0.022	−0.059**
	(0.031)	(0.029)	(0.028)
$100,000–$149,999	−0.057*	−0.030	−0.063**
	(0.033)	(0.031)	(0.030)
More than $150,000	−0.044	−0.036	−0.063*
	(0.041)	(0.038)	(0.037)
Age (reference= 18 - 24)			
25 - 34	−0.120**	−0.098*	−0.106**
	(0.055)	(0.051)	(0.049)
35 - 44	−0.118***	−0.039	−0.071*
	(0.045)	(0.041)	(0.040)
45 - 54	−0.094**	0.030	−0.033
	(0.040)	(0.037)	(0.035)
55 - 64	−0.012	0.074*	0.004
	(0.041)	(0.039)	(0.037)
65 - 74	−0.009	0.041	−0.013
	(0.037)	(0.034)	(0.033)
75 or older	−0.018	0.035	−0.012
	(0.036)	(0.033)	(0.032)
Region (reference= Northeast)			
South	0.006	−0.006	0.022
	(0.025)	(0.024)	(0.023)
North Central	−0.010	0.017	0.008
	(0.029)	(0.027)	(0.026)
West	−0.007	0.029	0.030
	(0.030)	(0.028)	(0.027)
Political Ideology (reference= Haven't thought much about)			
Moderate	0.039	0.072	−0.021
	(0.053)	(0.049)	(0.047)
Liberal	0.054	0.068	−0.043
	(0.056)	(0.052)	(0.050)
Conservative	−0.007	0.008	−0.094**
	(0.053)	(0.049)	(0.048)
Party ID w/leaners (reference= No preference)			
Democrat	0.058	0.071*	0.097***
	(0.040)	(0.037)	(0.035)
Republican	−0.027	0.021	0.012
	(0.036)	(0.033)	(0.032)
PID Strong (reference= Not strong)			
Strong	−0.025	−0.043**	−0.013
	(0.021)	(0.019)	(0.019)
N	943	943	943
R^2	0.255	0.388	0.427

Table entry is the OLS regression coefficient with standard error in parentheses. Significance codes: * p<0.1; ** p<0.05; *** p<0.01, two-tailed tests.

	Business		Intl		IRA	
	Importance	Variable	Importance	Variable	Importance	Variable
1	41.53	Party_dem FT	46.13	Party_dem	42.92	Ideo_conservative
2	33.32	Ideo_conservative	41.73	Ideo_conservative	38.10	Party_dem
3	31.00	Party_rep	36.57	Obama FT Above Median	34.49	Obama FT Below Median
4	19.71	Income_150k_up	31.29	Obama FT Below Median	29.99	Obama FT Above Median
5	19.38	Gender_Female	28.60	Party_rep	28.60	Traditionalism Above Median
6	18.61	Obama FT Below Median	28.21	Racial resentment Below Median	26.88	Racial resentment Above Median
7	18.61	Ideo_liberal	26.17	Traditionalism Below Median	25.84	Traditionalism Below Median
8	17.98	Gender_Male	24.18	Racial resentment Above Median	24.94	Party_rep
9	17.53	Obama FT Above Median	23.88	Traditionalism Above Median	21.50	Racial resentment Below Median
10	16.27	Racial resentment Below Median	18.78	Ideo_liberal	21.16	Ideo_moderate

Table A28: Most Important Variables for GRFs (top 10)

SUPPLEMENTAL MATERIAL 3: INTERNATIONAL ECONOMIC COMPETITION AND PUBLIC SUPPORT FOR CLIMATE POLICY

Survey Information

Research Ethics Statement

The human subject research in this study was reviewed and determined to be exempt from further review by the [AUTHOR'S] institutional review board (23-3117) and adheres to the APSA's Principles and Guidance on Human Subject Research. Lucid recruited participants through an online opt-in model. Respondents were required to give their voluntary and informed consent after being provided with a description of the survey and prior to beginning the survey. Additionally, respondents were compensated by Lucid for the approximately 10 minute survey, at a level determined by Lucid to be commensurate with the standards of other survey providers. The study did not specifically target any vulnerable groups, represent any undo risk to respondents, or utilize deception.

Use of Online Convenience Samples in Social Science Research

We rely on an online convenience sample provided by Lucid in this paper. The Lucid Theorem sample includes quotas on age, gender, race, ethnicity, and geographic region.[68] Lucid has been widely used in political science and the social sciences in general. Recent work in, for example, *Nature Human behavior* the *American Journal of Political Science*, *American Political Science Review*, relies on samples drawn from Lucid Theorem (Clayton et al. 2023; Fouka and Tabellini 2022; Zhang 2023).

[68] Coppock and McClellan (2019) find that lucid samples match the American National Election Study on a number of key demographic benchmarks.

Quality Checks

We began our survey with a captcha designed to remove bot responses and screened out respondents with two simple attention checks designed to remove respondents who are clearly not paying attention to the survey. This is in keeping with best practices for surveys relying on Lucid samples (Clayton et al. 2023; Peyton, Huber, and Coppock 2022; Ternovski and Orr 2022). The wording of the captcha and the attention check questions is below:

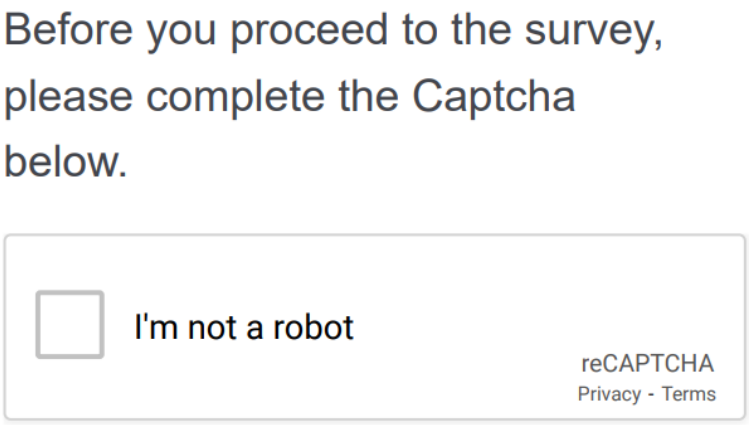


Figure A3: Pre-Survey Captcha

Instructive attention check (1): Please choose "somewhat agree" for this question. (Strongly disagree / Somewhat disagree / Neither agree nor disagree / Somewhat agree / Strongly agree)

87.72% of respondents correctly answered "somewhat agree" and continued with the survey.

Instructive attention check (2): People are very busy these days and many do not have time to follow what goes on in the government. **We are testing whether people read questions**. To show that you've read this much, answer "Very interested". (Extremely interested / Very interested / Moderately interested / Slightly interested / Not interested at all)

96.05% of respondents correctly answered "Very interested" and continued on with the survey.

Survey instrument

Treatment Wording

Respondents viewed a common preamble reading:

> In the next section, we will present you with information about a hypothetical policy debate. These are general scenarios about policies the United States may consider enacting in the future. They are not about any specific policies you may have heard about in the news. Please read the details of the policy carefully, afterwards we will ask for your opinion regarding the policy.

After the preamble, respondents viewed one of four different treatment conditions concerning the hypothetical policy before evaluating the policy

- **Electric Vehicles X Economic Competition**: U.S. policymakers are debating ways of encouraging the creation of new manufacturing jobs in the United States.

  To help create new manufacturing jobs that are also environmentally-friendly, some American policymakers have proposed providing clean energy tax credits to automobile manufacturers. The green tax credits would make it cheaper for those businesses to produce electric vehicles in the U.S. and would support the clean energy transition.

  Additionally, the Chinese government is competing with the United States to attract environmentally-friendly investments. The proposed clean energy tax credits would make it more attractive for companies to invest in the United States rather than China.

- **Electric Vehicles X No Competition**: U.S. policymakers are debating ways of encouraging the creation of new manufacturing jobs in the United States.

  To help create new manufacturing jobs that are also environmentally-friendly, some American policymakers have proposed providing clean energy tax credits to automobile manufacturers. The green tax credits would make it cheaper for those businesses to produce electric vehicles in the U.S. and would support the clean energy transition.

- **Generic Autos X Economic Competition**: U.S. policymakers are debating ways of encouraging the creation of new manufacturing jobs in the United States.

  To help create new manufacturing jobs, some American policymakers have proposed providing tax credits to automobile manufacturers. The tax credits would make it cheaper for these businesses to produce vehicles in the U.S. and would support American innovation.

  Additionally, the Chinese government is competing with the United States to attract investments. The proposed tax credits would make it more attractive for companies to invest in the United States rather than China.

- **Generic Autos X No Competition**: U.S. policymakers are debating ways of encouraging the creation of new manufacturing jobs in the United States.

  To help create new manufacturing jobs, some American policymakers have proposed providing tax credits to automobile manufacturers. The tax credits would make it cheaper for these businesses to produce vehicles in the U.S. and would support American innovation.

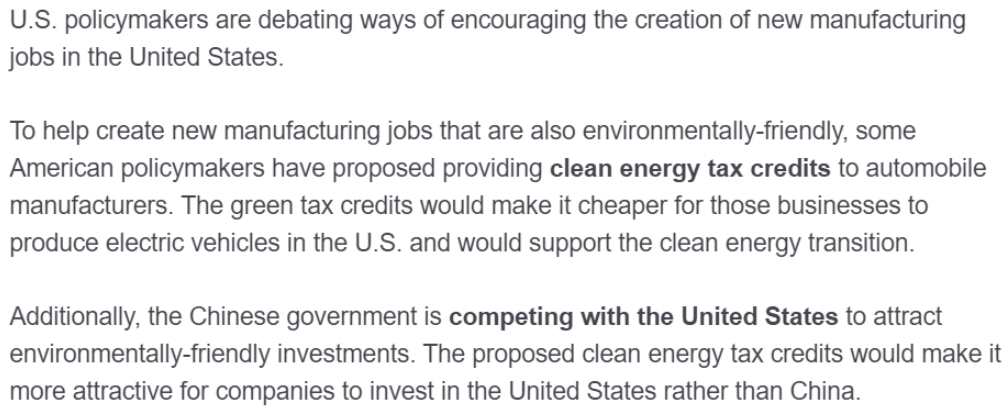


Figure A4: Example Vignette Treatment

Notes: An example of how respondents learned about the fictional policy, in the Electric Vehicles x Economic Competition treatment.

Evaluation Wording

- **DV**: To what extent would you support [providing clean energy tax credits to automobile manufacturers] \[providing tax credits to automobile manufacturers]?
  - Strongly support (7)
  - Support (6)
  - Slightly support (5)
  - Neither support nor oppose (4)
  - Slightly oppose (3)
  - Oppose (2)
  - Strongly oppose (1)
- **Open**: Briefly, could you tell us why you feel the way you do about [providing clean energy tax credits to automobile manufacturers] \[providing tax credits to automobile manufacturers]?
- **DV:Econ**: To what extent do you think the proposed policy of [providing clean energy tax credits to automobile manufacturers] \[providing tax credits to automobile manufacturers] improves the overall condition of the U.S. economy?
  - Significantly improves (7)
  - Improves (6)
  - Slightly improves (5)
  - No change (4)
  - Slightly worsens (3)
  - Worsens (2)
  - Significantly worsens (1)

- **DV:Climate**: To what extent do you believe the proposed policy of [providing clean energy tax credits to automobile manufacturers] \[providing tax credits to automobile manufacturers] addresses the negative impacts of climate change?
  - Very effectively (7)
  - Effectively (6)
  - Somewhat effectively (5)
  - Neutral (4)
  - Somewhat ineffectively (3)
  - Ineffectively (2)
  - Very ineffectively (1)
- **Compcheck1**: In the scenario you read above, the government of which country is competing with the United States to attract investments?
  - Japan (0)
  - China (1)
  - Germany (0)
  - Australia (0)
- **Compcheck2**: In the policy shown above, what was the primary reason why American policymakers were considering providing tax credits to automobile manufacturers?
  - To support American innovation (1)
  - To support the clean energy transition (1)
  - To help workers with children (0)

Conjoint Design

Attribute	Dimensions
International Effects	Promote U.S. national interest by deepening collaboration and cooperation with other countries Advance U.S. national interest by prioritizing economic competition with other countries Help slow down the global effects of climate change
Domestic Effects	Create a substantial number of clean energy jobs Increase the cost of fossil fuel compared to renewable energy Encourage foreign investment into the country Help slow down the domestic effects of climate change
Policy Tool	Tax credits for corporations Tax credits for consumers Direct government spending Increased government regulation
Industry Target	Manufacturing Energy Agriculture
Government Spending	$100 billion $200 billion $400 billion $600 billion
Partisan Support	Endorsed by Democrats and some Republicans Endorsed by Democrats

Figure A5: Conjoint Attributes and Dimensions

Table A29: Demographic Balance Table

		Generic Autos (N=1169)		Electric Vehicles (N=1168)	
		Mean	Std. Dev.	Mean	Std. Dev.
White		0.7	0.4	0.7	0.5
Nationalism		4.3	1.4	4.4	1.3
		N	Pct.	N	Pct.
Competition	control	582	49.8	591	50.6
	treatment	587	50.2	577	49.4
Gender	Female	588	50.3	601	51.5
	Male	563	48.2	558	47.8
Educ	Associate's Degree	171	14.6	141	12.1
	Advanced Degree	129	11.0	138	11.8
	Bachelor's Degree	292	25.0	287	24.6
	Some college	261	22.3	282	24.1
	High school graduate	286	24.5	288	24.7
	Less than high school	30	2.6	31	2.7
Employment	Disabled	78	6.7	74	6.3
	Employed full time	509	43.5	533	45.6
	Employed part time	152	13.0	144	12.3
	Retired	221	18.9	226	19.3
	Student	41	3.5	37	3.2
	Unemployed looking for work	118	10.1	105	9.0
	Unemployed not looking for work	50	4.3	49	4.2
Age_bins	18 - 24	119	10.2	136	11.6
	25 - 34	222	19.0	214	18.3
	35 - 44	236	20.2	218	18.7
	45 - 54	184	15.7	195	16.7
	55 - 64	215	18.4	202	17.3
	65 - 74	151	12.9	151	12.9
	75 or older	42	3.6	52	4.5
Party ID	Independent	304	26.0	273	23.4
	Democrat	398	34.0	397	34.0
	Republican	379	32.4	411	35.2
	No preference	82	7.0	67	5.7
	Other	6	0.5	20	1.7
Social Ideology	Haven't thought much	63	5.4	64	5.5
	Moderate	347	29.7	304	26.0
	Liberal	386	33.0	386	33.0
	Conservative	373	31.9	414	35.4
Economic Ideology	Haven't thought much	61	5.2	65	5.6
	Moderate	319	27.3	296	25.3
	Liberal	350	29.9	338	28.9
	Conservative	439	37.6	469	40.2
Region	Midwest	216	18.5	225	19.3
	Northeast	247	21.1	226	19.3
	South	438	37.5	466	39.9
	West	250	21.4	242	20.7
Climate skepticism	Climate_high	548	46.9	504	43.2
	Climate_low	620	53.0	664	56.8

Mechanism Analysis

The effect of the competition cue upon approval for the climate policy is clear: telling respondents about international competition for green investments increases their approval of climate policy. It is still feasible that the framing generates the response through a mechanism other than concern for national economic welfare, which our theory specified. Most simply, but least likely, it might be the case that individuals think that competition makes the climate policy more effective at addressing global warming. More likely, it may be that respondents are considering material self-interest (Naoi 2020). We anticipate this might happen in two ways. First, it may be that respondents see competition as especially beneficial for their job, either because they perceive that they benefit from green investment or because they benefit from automobile manufacturing. Second, it may be that individuals are more narrowly considering the benefits to their more circumscribed local economy, not the broader nation (Flaherty and Rogowski 2021). We provide evidence in favor of the theorized mechanism, concern for national welfare, in two ways: examination of alternative dependent variables and exploring variation by perceived self-interest and local economic effects.

Alternative Dependent Variables

First, we used alternative dependent variables to explore what respondents thought the policy would do. They were asked the extent to which the proposed tax policy "addresses the negative impact of climate change" and "improves the overall condition of the U.S. economy." Based on the theory, we expect that the competition frame would prompt respondents to think the policy would be more effective economically. We especially thought this would be the case for our key sub-groups, Republicans and nationalists.

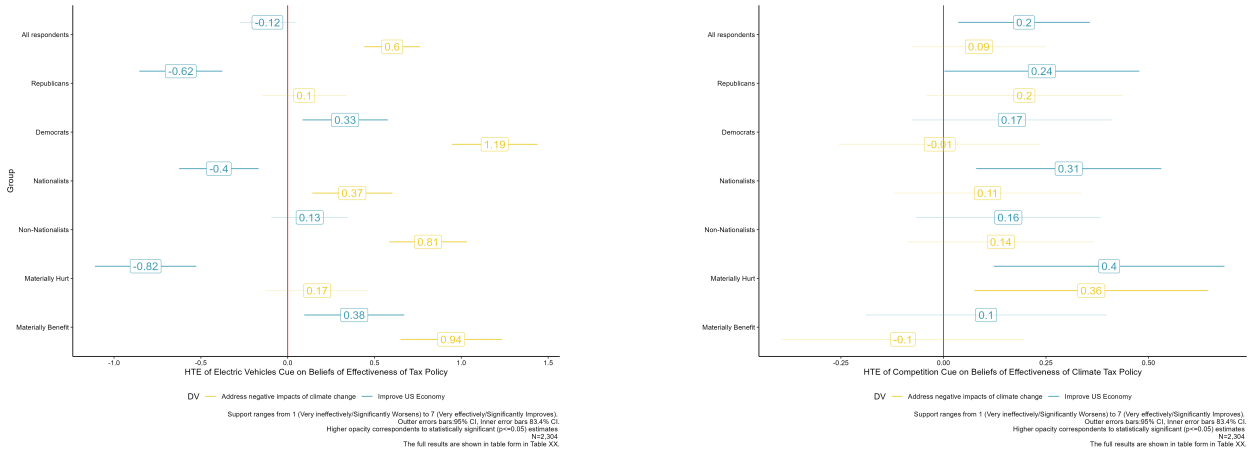
If those ex-ante opposed to climate action view climate tax policy framed as competition with China as improving the U.S. economy, but not explicitly helping address the impact of climate change climate, tax policy may reach an audience of those who were predisposed to oppose climate action. This is exactly what we find.

Figure A6 displays the results for these alternative outcomes, grouped by treatment and separated by heterogeneous subgroup (see Table A30 for results in table form). The left-hand figure displays the results

Table A30: Alternative DVs

	All Respondents		PID		Nationalism	
	Climate	Economy	Climate	Economy	Climate	Economy
Tax Credit Treatment (reference= Generic Autos)						
Electric Vehicles	0.602***	−0.117	1.192***	0.331***	0.372***	−0.396***
	(0.082)	(0.082)	(0.126)	(0.125)	(0.118)	(0.117)
Competition Treatment (reference= Control)						
Economic Competition	0.169**	0.131	0.160	0.098	0.277**	0.217*
	(0.082)	(0.082)	(0.123)	(0.122)	(0.121)	(0.120)
PID (inc. leaners) (reference= Democrat)						
Republican			−0.039	−0.068		
			(0.126)	(0.125)		
No preference			−0.058	−0.296*		
			(0.163)	(0.162)		
Nationalism (reference= Nationalist)						
Non-nationalist					−0.389***	−0.309***
					(0.117)	(0.116)
Gender (reference= Female)						
Male			−0.082	−0.200***	−0.118**	−0.230***
			(0.058)	(0.058)	(0.059)	(0.059)
White (reference= Non-White)			−0.116*	−0.023	−0.251***	−0.145**
			(0.069)	(0.069)	(0.069)	(0.068)
Education (reference= Associate degree)						
Advanced Degree			0.103	0.321***	0.228*	0.432***
			(0.119)	(0.118)	(0.121)	(0.120)
Bachelor's degree			−0.078	0.096	−0.011	0.152
			(0.099)	(0.098)	(0.100)	(0.100)
Some college			−0.197**	−0.067	−0.192*	−0.064
			(0.098)	(0.098)	(0.100)	(0.100)
High school graduate			−0.094	0.002	−0.091	0.009
			(0.099)	(0.098)	(0.101)	(0.100)
No high school			0.020	0.142	−0.089	0.044
			(0.196)	(0.194)	(0.199)	(0.198)
Income (reference= Up to $29,999)						
$30,0000–$59,999			−0.033	−0.049	−0.050	−0.072
			(0.081)	(0.080)	(0.083)	(0.082)
$60,000–$99,999			−0.046	−0.051	−0.092	−0.099
			(0.089)	(0.088)	(0.090)	(0.090)
$100,000–$149,999			−0.077	0.007	−0.165	−0.076
			(0.112)	(0.111)	(0.113)	(0.112)
More than $150,000			−0.086	0.095	−0.142	0.049
			(0.129)	(0.128)	(0.132)	(0.131)
Employment (reference= Disabled)						
Full time			0.006	−0.216*	−0.031	−0.252*
			(0.131)	(0.130)	(0.134)	(0.133)
Part time			−0.027	−0.306**	−0.012	−0.298**
			(0.143)	(0.142)	(0.146)	(0.145)
Retired			−0.092	−0.206	−0.147	−0.259*
			(0.153)	(0.152)	(0.156)	(0.155)
Student			−0.178	−0.347*	−0.227	−0.392*
			(0.206)	(0.204)	(0.210)	(0.209)
Unemployed-looking			−0.126	−0.282*	−0.190	−0.357**
			(0.148)	(0.147)	(0.151)	(0.150)
Unemployed-not looking			−0.248	−0.406**	−0.244	−0.411**
			(0.181)	(0.180)	(0.186)	(0.185)
Age (reference= 18 - 24)						
25 - 34			−0.116	0.095	−0.146	0.068
			(0.115)	(0.114)	(0.117)	(0.116)
35 - 44			0.039	0.207*	−0.015	0.164
			(0.116)	(0.115)	(0.119)	(0.118)
45 - 54			−0.133	0.144	−0.199	0.099
			(0.121)	(0.121)	(0.125)	(0.124)
55 - 64			−0.182	0.243**	−0.260**	0.185
			(0.123)	(0.122)	(0.127)	(0.126)
65 - 74			−0.267*	0.217	−0.284*	0.222
			(0.153)	(0.152)	(0.156)	(0.155)
75 or older			−0.526***	−0.181	−0.617***	−0.254
			(0.202)	(0.201)	(0.207)	(0.206)
Region (reference= Midwest)						
Northeast			0.199**	0.059	0.221**	0.086
			(0.091)	(0.090)	(0.092)	(0.092)
South			0.079	−0.040	0.023	−0.084
			(0.080)	(0.079)	(0.082)	(0.081)
West			0.030	−0.007	0.042	0.015
			(0.091)	(0.090)	(0.092)	(0.092)
Interaction (reference= Control—Generic Autos)						
Green—Economic Competition	−0.082	0.066	−0.169	0.069	−0.169	0.088
	(0.116)	(0.116)	(0.176)	(0.174)	(0.167)	(0.166)
Interaction (reference= Generic Autos, Democrat, Control)						
Green X Republican			−1.097***	−0.947***		
			(0.177)	(0.175)		
Green X No preference			−0.652***	−0.211		
			(0.232)	(0.230)		
Competition X Republican			0.115	0.097		
			(0.176)	(0.174)		
Competition X No preference			−0.220	−0.074		
			(0.236)	(0.234)		
Green X Competition X Republican			0.091	−0.023		
			(0.248)	(0.246)		
Green X Competition X No preference			0.300	0.104		
			(0.336)	(0.333)		
Interactions (reference= Generic Autos, Nationalist, Control)						
Green X Non-nationalist					0.436***	0.523***
					(0.164)	(0.162)
Competition X Non-nationalist					−0.160	−0.131
					(0.165)	(0.164)
Green X Competition X Non-nationalist					0.192	−0.016
					(0.232)	(0.231)
N	2,337	2,337	2,309	2,309	2,305	2,305
R^2	0.040	0.004	0.125	0.088	0.085	0.048

*p < .1; **p < .05; ***p < .01



(a) Electric Vehicles | No Competition

(b) Economic Competition | Electric Vehicles

Figure A6: Treatment Effects Upon Mechanism Outcomes

of "Electric Vehicles" given no competition—the pure green framing. The results match our expectations: nearly every single subgroup thinks the policy is better for the climate, but Republicans and Nationalists stand out in that they do not think it is better for the economy. Note that this is true for a policy which is a corporate tax subsidy explicitly framed as a way to create manufacturing jobs—all cues we think would heavily influence people's perception of economic well-being.

We also add a new subgroup to these results. We asked respondents pre-treatment if they thought green investment was good for their profession. We split the answers at the median and coded respondents as "Materially Benefit" and "Materially Hurt." Self-reports of material benefit are notoriously difficult to connect with economic interest. Still, as expected, the group that expects to be harmed by green investment is highly likely to think that this policy is bad for the economy of the United States.

Figure A6b displays the same outcomes, now for the treatment effect of "Economic Competition" conditional upon "Electric Vehicles". Notably, no group thinks international competition makes for a worse climate policy. More importantly, our key subgroups all think it is better for the U.S. economy. Tax incentives for electric vehicles becomes palatable when respondents are primed to consider international competition. This is especially notable for people who perceive themselves to be Materially Hurt by green investment. Nothing materially changed about the policy except for the inclusion of international economic competition, and yet respondents consider it more beneficial for the U.S. economy. We find

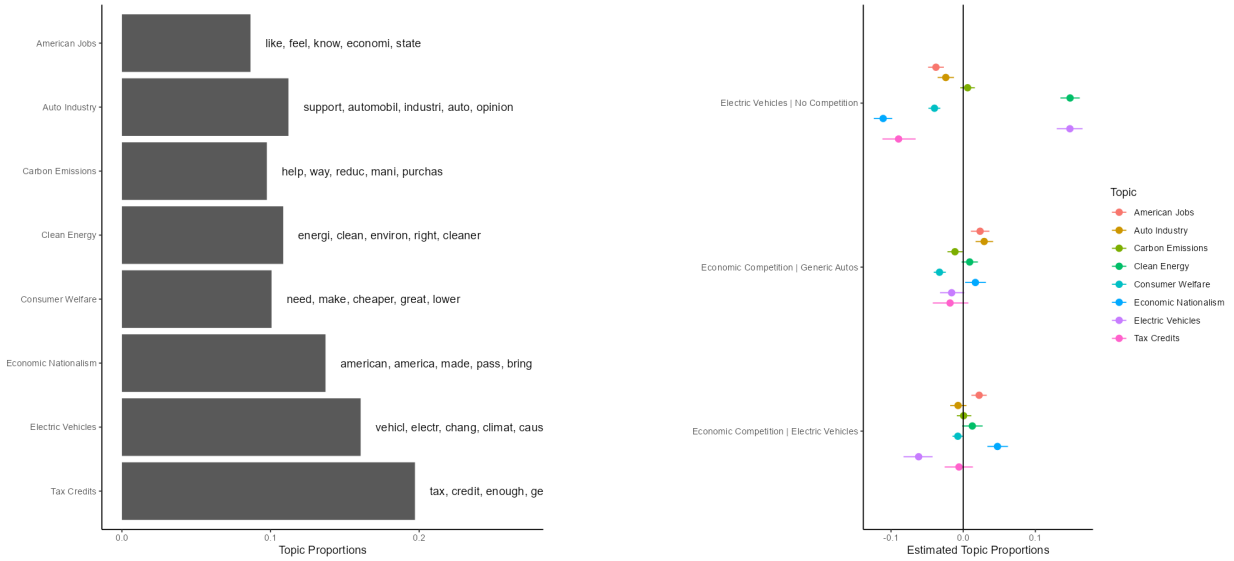
it hard to explain this inversion as a result of how they think competition improves their jobs, instead it seems likely that the competition framing improves perceptions of the overall economic standing of the United States.

In summary, these additional tests provide further grounding that international competition as a cue primes people to consider economic welfare of the national unit. They clearly do not consider it to be a more effective climate policy. Republicans, nationalists, and the people most likely to report as being harmed by green investment think climate policy is a negative for the national economy, but all three consider climate competition to be economically better.

Structural Topic Models

To supplement our primary outcome item from Study 1, we asked respondents to provide us with an explanation for why they gave us their answer on our main dependent variable. We analyzed these open-ended responses using structural topic models (STMs) to explain variation in topic frequency by our treatments. STMs split a corpus of text documents into a pre-determined number of topics using covariates of interest in the prior distributions for document-topic proportions and proportion-word distributions. They are particularly useful in causal inference using survey data, as they allow us to determine the effect of treatments on the content and distribution of open-ended responses (Roberts et al. 2014). Based on model diagnostics, we run models with eight topics (diagnostics available upon request): American Jobs, Auto Industry, Carbon Emissions, Clean Energy, Consumer Welfare, Economic Nationalism, Electric Vehicles, and Tax Credits.

Figure A7 displays the main results of these models. On the left, we display the overall proportions of the topics, along with top word stems for each topic. Unsurprisingly, Electric Vehicles and Tax Credits are the most discussed, given that they are the core of the vignette. The next most discussed was Economic Nationalism, which emphasized precisely what we expected: the importance of the American economy, especially compared with the potential for jobs to relocate elsewhere. Representative responses for this topic included explanations such as, "Because I would rather see American automobile manufacturers getting credits so that American workers can have jobs than to see those jobs go overseas to other countries"



(a) Topic Proportions

(b) Treatment Effect Upon Topic Proportions

Figure A7: Results of Structural Topic Models on Open-Ended Responses

and "Tax credits would allow more American founded companies to stay in America instead of outsourcing plants to countries like China. Having manufacturing facilities in America also helps provide more jobs for Americans helping the economy." The other topic most closely associated with national economic well-being, American Jobs, had similar answers, but not framed in terms of international threat.

On the right of Figure A7, we display changes in proportions across all eight topics in response to the treatments, mirroring our results presentation in Figure 19. These coefficients are the results of linear regressions of treatments upon the topic proportion in each document; the underlying regressions are reported in the below table.

The underlying regression models for each topic show that discussion of several climate topics increases dramatically under the EV cue with no competition, whereas Economic Nationalism and Auto Industry increase under the plain competition treatment. When the competition treatment is conditioned upon the EVs treatment, we see the pattern continue—Economic Nationalism and American Jobs become more likely to be discussed, while discussion of climate topics (and particularly Electric Vehicles) decreases. This suggests that respondents are indeed concerned about the effect of globalization upon national welfare and see the climate competition cue as addressing that economic threat, while their focus on the climate dimension decreases.

These results provide further validation of the main findings in the paper. In particular, we find that when people are told about climate competition, they become less likely compared to those in the control to consider climate and more likely to consider economic security. They are especially likely to consider security from a context of Economic Nationalism, in which they view relative gains by economic competitors as losses for their country. This suggests further that when respondents are cued to consider economic competition as part of climate policy, they support the climate policy more because of the potential economic well-being it offers to their national unit.

	Carbon Emissions	American Jobs	Tax Credits	Clean Energy	Electric Vehicles	Auto Industry	Consumer Welfare	Economic Nationalism
Electric Vehicles	0.01^{***}	-0.04^{***}	-0.10^{***}	0.15^{***}	0.16^{***}	-0.03^{***}	-0.04^{***}	-0.12^{***}
	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)
Economic Competition	-0.01^{***}	0.02^{***}	-0.02^{**}	0.01^{*}	-0.02^{**}	0.03^{***}	-0.04^{***}	0.02^{***}
	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)
EVs x Competition	0.01^{***}	-0.00	0.02	0.00	-0.05^{***}	-0.04^{***}	0.03^{***}	0.03^{***}
	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)
R^2	0.05	0.20	0.14	0.60	0.41	0.23	0.34	0.45
Adj. R^2	0.05	0.20	0.14	0.60	0.41	0.23	0.34	0.45
Num. obs.	2219	2219	2219	2219	2219	2219	2219	2219

$^{***}p < 0.001; ^{**}p < 0.01; ^{*}p < 0.05$

Table A31: Treatment Effects Upon Topic Proportions

Heterogeneous Effects

	Group	mean(1-7)	lower95CI	upper95CI	n
1	Democrat	5.56	5.48	5.64	987
2	Republican	3.86	3.75	3.97	978
3	Nationalist	4.48	4.37	4.58	1126
4	Non-Nationalist	4.91	4.82	5.00	1206

Table A32: Mean Support for Climate Investment by Group (Pre-treatment)

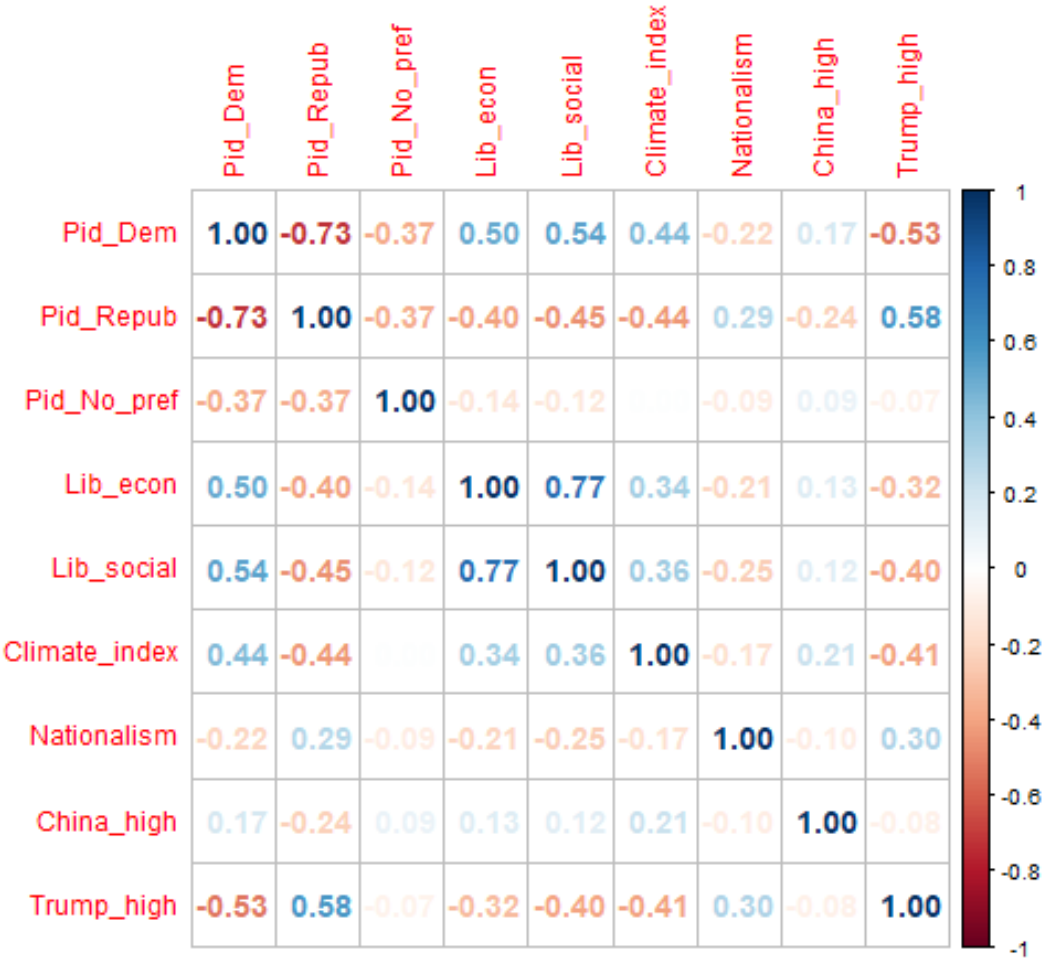


Figure A8: Correlation (-1,1) between Relevant Variables

Table A33: Nationalism Index Questions

How much do you agree or disagree with the following statements?
1. The world would be a better place if people from other countries were more like Americans.
2. In the United States our people are not perfect, but our culture is superior to others.
3. People should support their country even if their country is in the wrong.
4. Generally speaking, America is a better country than most other countries.
5. I would rather be a citizen of American than of any other country in the world.

Table A34: Confirmatory Factor Analysis of Nationalism Index Items

Item	Loading	Std. Error
America is better country	0.862	0.007
American culture superior	0.823	0.009
World would be better if people more like Americans	0.803	0.009
Rather be American citizen	0.793	0.010
People should support their country even if wrong	0.561	0.014
Comparative Fit Index	0.980	
SRMR	0.039	

NOTE: Confirmatory factor analysis of the questions used to create our index of nationalism. The standardized factor loadings indicate that each of the nationalism questions contributed to the scale. The fit indices demonstrate that our conceptualizing of the scale as a single latent dimension fits the data well (Comparative Fit Index (CFI) >0.95; standardized root mean square residual (SRMR) <0.08.

Generalized Random Forests

We probe the robustness of our findings using generalized random forests (GRFs) in a causal setting (Athey, Tibshirani, and Wager 2019). Machine learning methods allow us to relax modeling assumptions—such as linearity of effects—and random forests in particular allow us to explore heterogeneity of treatment effects from a data driven approach. GRFs, as stipulated by the above authors, split data by covariates that maximize the squared difference in subgroup treatment effects, then use forest weights to estimate the treatment effect by covariates.

We present two CATEs from our Study 1: Electric Vehicles | No Competition and Economic Competition | Electric Vehicles. The first model gives us a sense of the bifurcation in approval of green policy by our heterogeneous covariates, and thus if we are correctly identifying Republicans and nationalists as likely to punish climate policy. The second model tests all three of our hypotheses, providing an average treatment effect of competition as well as estimates of the importance of heterogeneity. We conduct the GRFs with all of our relevant demographic covariates to allow for the maximum possible information to be told to us by the data: gender, race, education, income, employment, age, partisanship, social ideology, economic ideology, geographical region, climate skepticism, and nationalism.

Table A35 displays the top ten covariates from each of the models, ranked by importance in explaining treatment effects. As can be seen from the lefthand side of the table, the demographic characteristics we expected to explain climate opposition are profoundly important. Climate skepticism, Republican partisanship, and nationalism are the three most important hetergeneous variables. However, when we move to the right-hand side, we see these variables are also the most important in explaining shift in opinion from economic competition, particularly nationalism and partisanship. The relative importance to these models is much lower, which is not surprising, but it is still vitally important that it is these climate skeptics who are moving to approve a policy because of the competition cue. This not only confirms our main results using linear models, it demonstrates that these are the most important variables in explaining climate skepticism. The atheoretical, data-driven approach validates our pre-registered hypotheses.

We present respondent-level predictions and "honest" confidence intervals for each model in Figure A9 and Figure A10. We have colored respondents in each figure according to their partisan identification (on

	Electric Vehicles | No Competition		Economic Competition | Electric Vehicles	
	Importance	Variable	Importance	Variable
1	0.29	Climate Skepticism	0.05	Nationalism
2	0.20	Republican	0.04	Republican
3	0.10	Nationalism	0.04	Income up to $29,999
4	0.08	Democrat	0.04	Climate Skepticism
5	0.04	Economic Conservative	0.04	Age 45 - 54
6	0.03	Social Conservative	0.04	Social "Haven't thought much"
7	0.03	Economic Liberal	0.04	Midwest
8	0.02	Northeast	0.04	Democrat
9	0.01	Social Liberal	0.04	Northeast
10	0.01	South	0.04	Economic "Haven't though much"

Table A35: Most Important Variables for GRFs

the left) or nationalism (right). The average treatment effect for the whole sample is included as a vertical bar. These treatment effects closely align with those found from our parametric linear models.

For Figure A9, it is obvious how polarized the approval of the EVs tax credits are. The strongest supporters are universally Democrats and the strongest opponents are universally Republicans. The split is less extreme for nationalism but is still quite present. In fact, despite a positive ATE, both Republicans and nationalists are clearly predicted to disapprove of the policy. This reflects the problematic climate preferences divide in the United States, even in a vignette framing that focuses on green job growth.

However, as predicted by our theory, that polarization flips dramatically under the economic competition framing, as shown in Figure A10. The ATE is much larger and is almost entirely driven by these climate opponents, Republicans and nationalists. Nearly all of the individuals with the predicted largest treatment effect are these climate skeptics. Moreover, although Democrats and non-nationalists tend to gather toward the bottom, they do not start to punish the policy—there is no negative treatment effect. This confirms that there is no predicted loss of climate supporters in the economic competition frame.

These GRFs validate our main results in two ways. First, they demonstrate that even in an atheoretical, data-driven approach, the main heterogeneity in results is driven by demographic characteristics that we pre-specified, namely Republican partisanship and nationalism. This confirms that not only are treatment effects statistically significant, that are of practical importance in explaining how to frame climate policy to

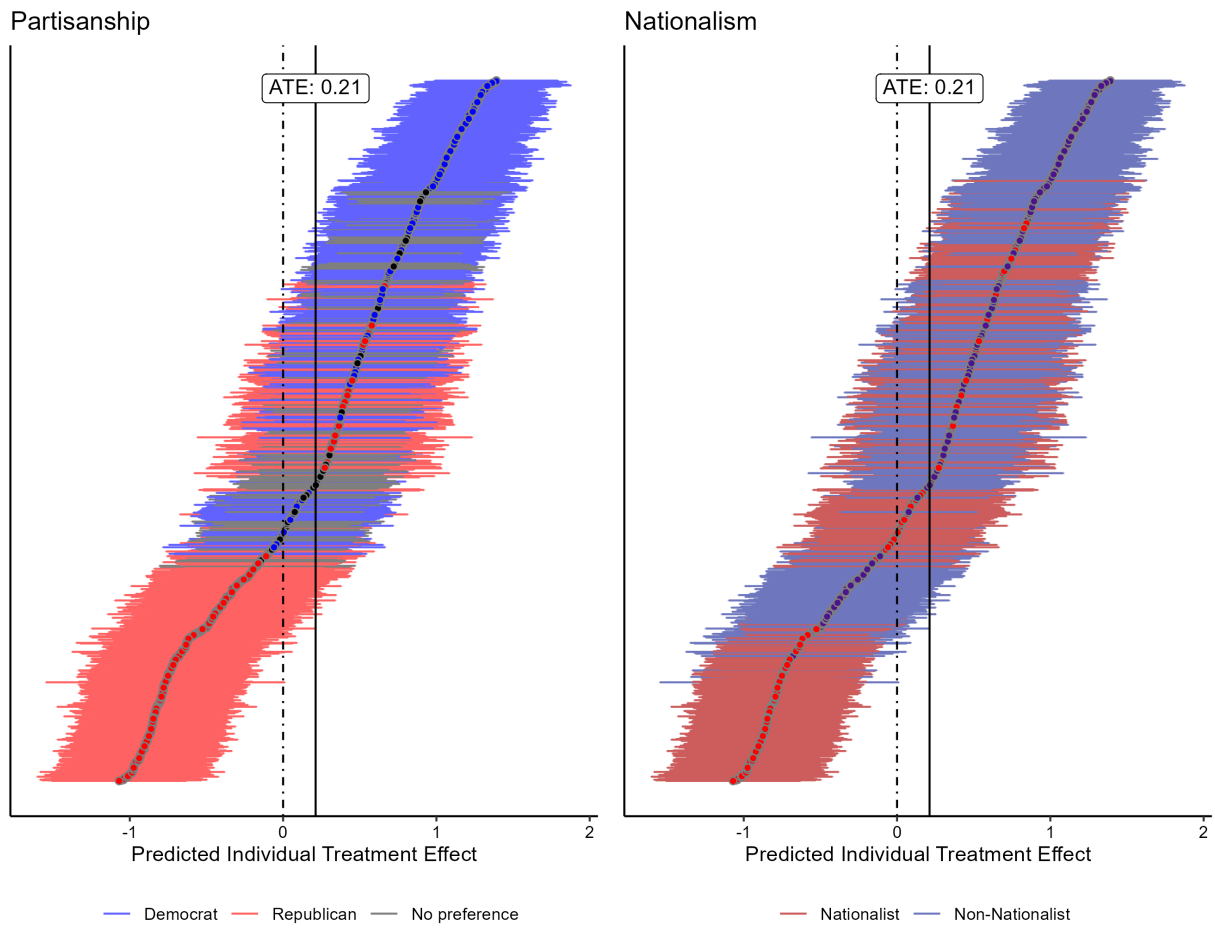


Figure A9: Generalized Random Forests: Electric Vehicles | No Competition

generate durable coalitions. Second, they provide granular, individual-level predictions of treatment effects that viscerally demonstrate the polarization of climate policy. Even in a framing that emphasizes green growth and economic benefits of climate investment, Republicans and nationalists are at the opposite ends of the spectrum from Democrats and non-nationalists. Yet these poles reverse when we introduce economic competition, without punishment from climate supporters, demonstrating that this frame is effective at winning over climate opponents without losing the original pro-climate base.

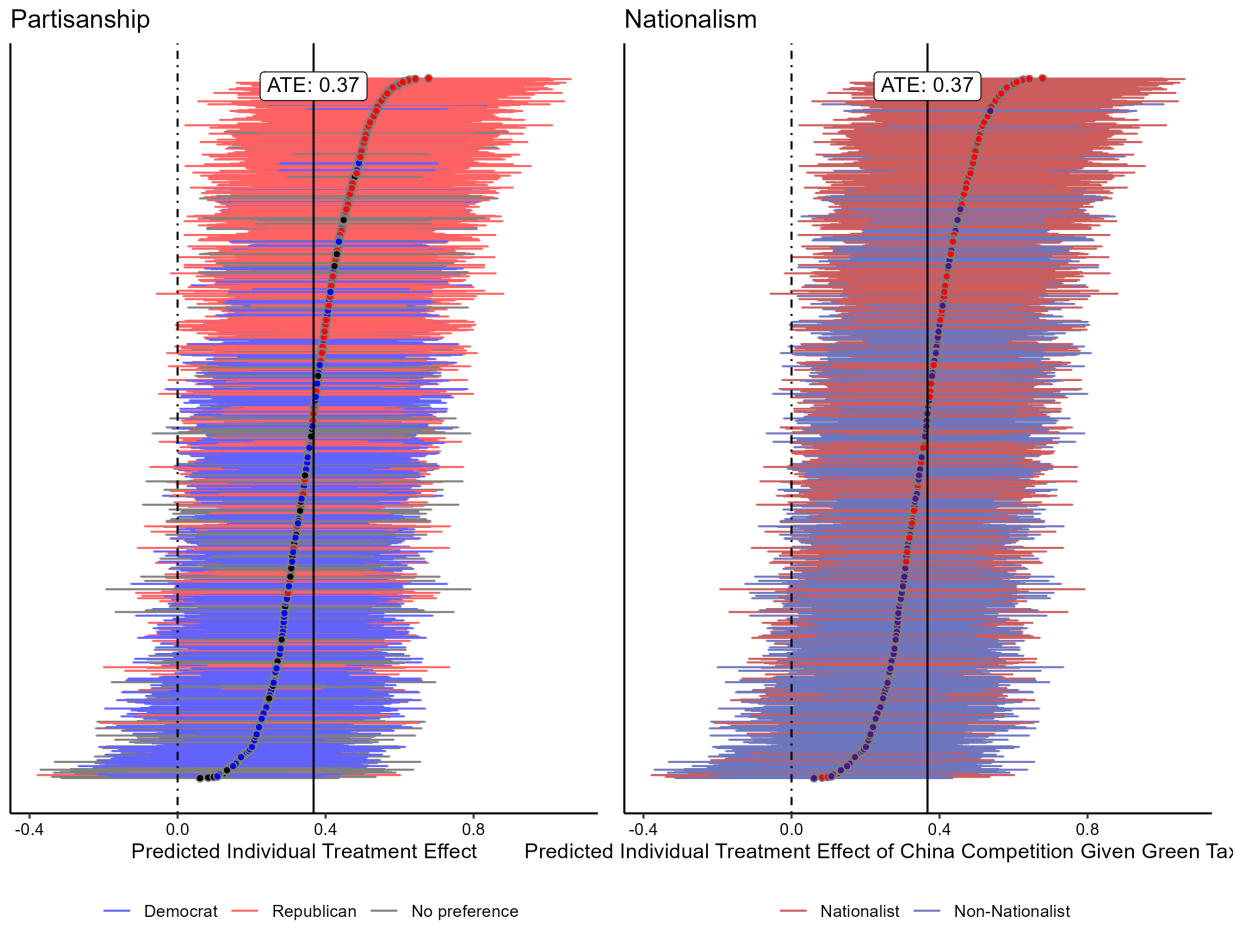


Figure A10: Generalized Random Forests: Economic Competition | Electric Vehicles

Additional Conjoint Analysis

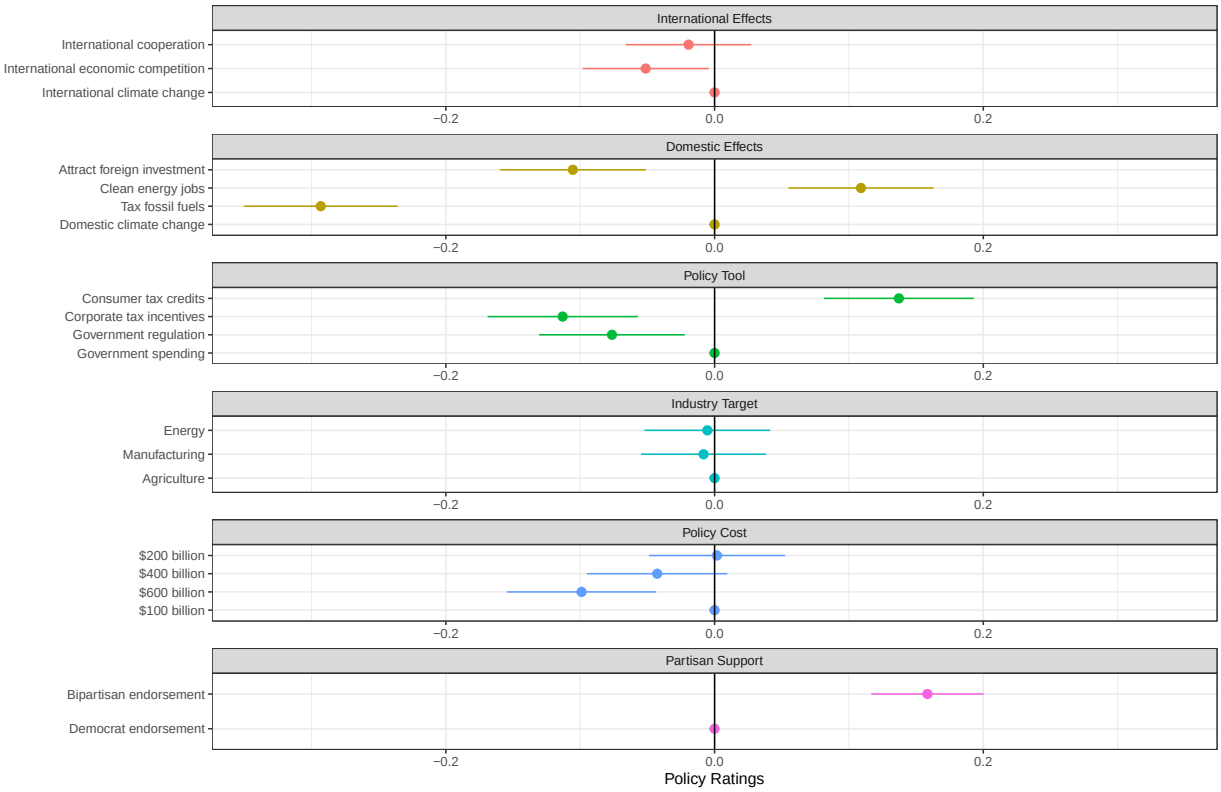
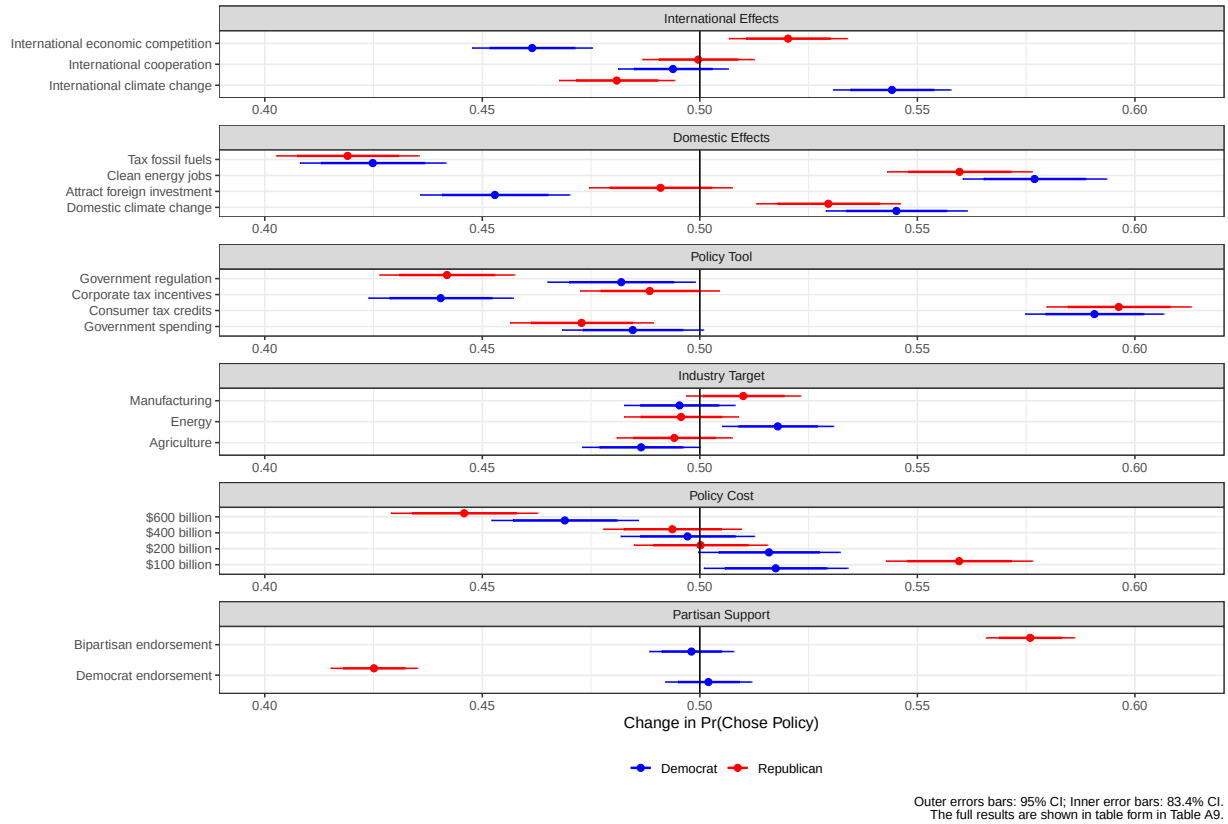


Figure A11: Policy Ratings



Outer errors bars: 95% CI; Inner error bars: 83.4% CI.
The full results are shown in table form in Table A9.

Figure A12: Marginal Means: Partisanship

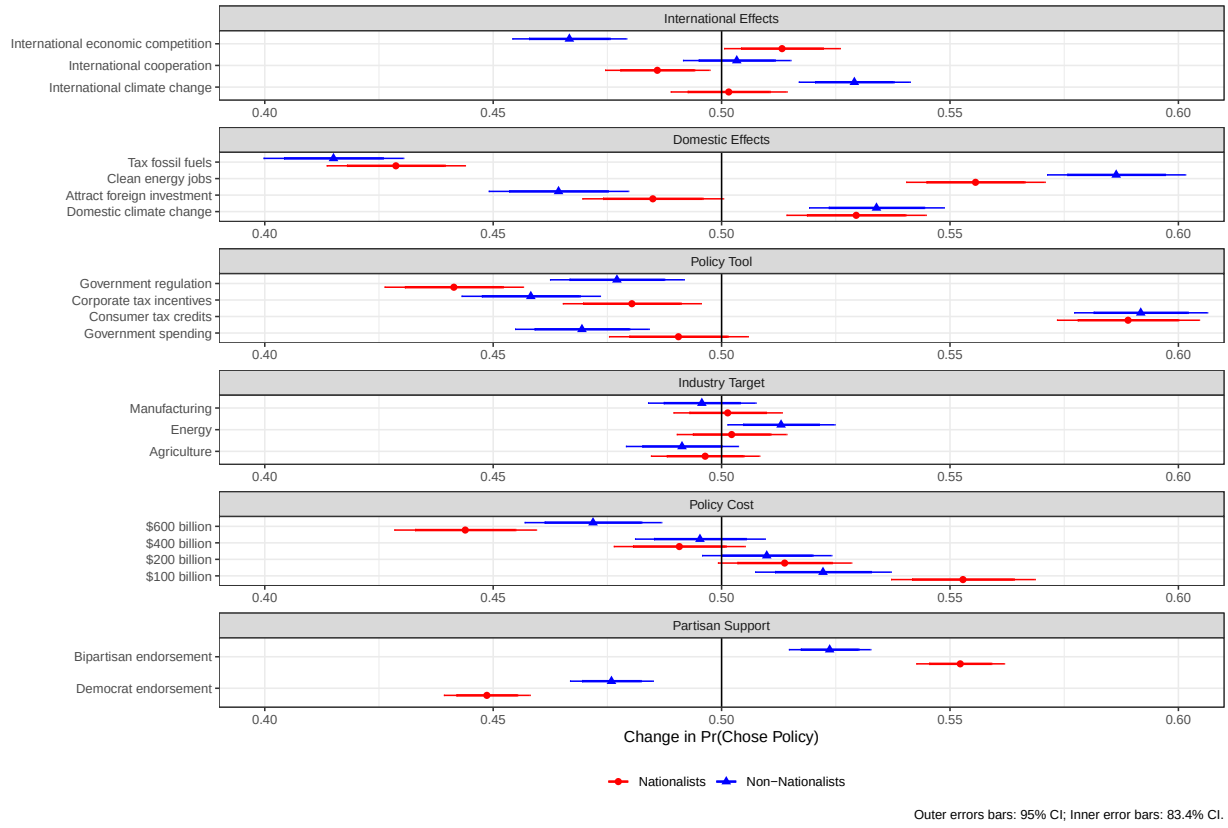


Figure A13: Marginal Means: Nationalism

Robustness Checks

We probe our results for robustness in a variety of ways. First, we use an alternative outcome measure regarding willingness to vote for a politician who supported the proposed policy. This outcome is in line with extant work on corporate tax credits, namely Jensen and Malesky (2018), and allows us to ensure these results are not purely a result of question framing. We find substantively and statistically similar results, reported in A36. On average, then, we find support for **H1**: individuals much prefer climate policies when they are primed to think of them as in economic competition with China. The effect is essentially the same as for purely economic competition, suggesting there is no punishment from respondents for the social goal for the corporate tax credits.

Next, as subgroup analysis means our treatment is no longer purely randomly assigned, we also measure our main indicators of heterogeneity in alternative ways. We evaluate partisanship excluding leaners and find similar patterns as our main results. We test nationalism using non-compensatory binary coding, continuous measures of the sub-indicators, and continuous measure from factor analysis, and continue to find that nationalists are more responsive to economic competition priming for the climate policy.

Perhaps most compellingly, we also measure climate skepticism directly and test our theory using a binary measure for climate skeptics. Our theory specifically relates to other demographic features that are correlated with climate skepticism, making a direct measure a more difficult test. We continue to find that climate skeptics, even directly measured, are much more supportive of climate policy when it is framed as making the country more economically competitive. These results are available in Table A37.

Table A36: Effect of Cues on Vote Choice

	Baseline	Controls included
	(1)	(2)
Tax Credit Treatment (reference= Generic Autos)		
Electric Vehicles	0.272***	0.298***
	(0.085)	(0.079)
Competition Treatment (reference= Control)		
Economic Competition	0.228***	0.235***
	(0.086)	(0.080)
Interaction (reference= Control—Generic Autos)		
Green—Economic Competition	−0.043	−0.007
	(0.121)	(0.112)
Gender (reference= Female)		
Male		−0.164***
		(0.058)
White (reference= Non-White)		−0.016
		(0.069)
Education (reference= Associate degree)		
Advanced Degree		0.265**
		(0.118)
Bachelor's degree		0.115
		(0.098)
Some college		−0.011
		(0.098)
High school graduate		0.035
		(0.099)
No high school		−0.178
		(0.195)
Income (reference= Up to $29,999)		
$30,0000–$59,999		−0.040
		(0.080)
$60,000–$99,999		−0.027
		(0.088)
$100,000–$149,999		−0.082
		(0.110)
More than $150,000		0.077
		(0.128)
Employment (reference= Disabled)		
Full time		−0.268**
		(0.130)
Part time		−0.329**
		(0.141)
Retired		−0.152
		(0.151)
Student		−0.559***
		(0.204)
Unemployed-looking		−0.241
		(0.147)
Unemployed-not looking		−0.333*
		(0.180)
Age (reference= 18 - 24)		
25 - 34		0.001
		(0.114)
35 - 44		0.031
		(0.115)
45 - 54		−0.074
		(0.122)
55 - 64		0.004
		(0.124)
65 - 74		−0.022
		(0.153)
75 or older		−0.494**
		(0.202)
PID (inc. leaners) (reference= Democrat)		
Republican		−0.124
		(0.090)
No preference		−0.243***
		(0.093)
Social Ideology (reference= Haven't thought much about)		
Moderate		0.345*
		(0.195)
Liberal		0.392*
		(0.204)
Conservative		0.144
		(0.205)
Economic Ideology (reference= Haven't thought much about)		
Moderate		−0.297
		(0.195)
Liberal		−0.341*
		(0.204)
Conservative		−0.218
		(0.202)
Region (reference= Midwest)		
Northeast		−0.023
		(0.090)
South		−0.072
		(0.079)
West		−0.055
		(0.090)
Climate concern index (1-7)		0.337***
		(0.022)
Nationalism index (1-7)		0.150***
		(0.023)
N	2,337	2,304
R^2	0.012	0.181

Table entry is the OLS regression coefficient with standard error in parentheses.
Significance codes: *p<0.1; **p<0.05; ***p<0.01, two-tailed tests.

Table A37: Effect of Cues on Support for Tax Policy: Climate Index

Type Treatment (reference= Business)	
Green	1.007***
	(0.135)
Competition Treatment (reference= Control)	
China Competition	0.469***
	(0.133)
Climate Index (reference= Above Median)	
Below Median	−0.140
	(0.129)
Gender (reference= Female)	
Male	−0.194***
	(0.066)
White (reference= Non-White)	−0.089
	(0.076)
Education (reference= Associate degree)	
Advanced Degree	0.245*
	(0.134)
Bachelor's degree	0.186*
	(0.111)
Some college	−0.077
	(0.111)
High school graduate	−0.007
	(0.112)
No high school	−0.005
	(0.221)
Income (reference= Up to $29,999)	
$30,0000–$59,999	0.072
	(0.092)
$60,000–$99,999	−0.031
	(0.100)
$100,000–$149,999	0.040
	(0.126)
More than $150,000	0.159
	(0.146)
Employment (reference= Disabled)	
Full time	−0.321**
	(0.148)
Part time	−0.235
	(0.161)
Retired	−0.140
	(0.173)
Student	−0.495**
	(0.233)
Unemployed-looking	−0.355**
	(0.168)
Unemployed-not looking	−0.460**
	(0.205)
Age (reference= 18 - 24)	
25 - 34	0.247*
	(0.130)
35 - 44	0.400***
	(0.131)
45 - 54	0.394***
	(0.138)
55 - 64	0.495***
	(0.139)
65 - 74	0.287*
	(0.173)
75 or older	−0.019
	(0.229)
Region (reference= Midwest)	
Northeast	0.029
	(0.102)
South	−0.080
	(0.090)
West	−0.049
	(0.102)
Interactions (reference= Control X Business X Above Climate Median)	
Green X Competition	−0.237
	(0.191)
Green X Below Climate Median	−1.459***
	(0.183)
Competition X Below Climate Median	−0.180
	(0.182)
Green X Competition X Below Climate Median	0.454*
	(0.259)
N	2,308
R^2	0.148

Table entry is the OLS regression coefficient with standard error in parentheses.
Significance codes: * p<0.1; ** p<0.05; *** p<0.01, two-tailed tests.

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