A critical feminist system justification analysis of climate obstructionism on the part of conservative white men

Nicolette M. Dakin1 | Flávio Azevedo2 | John T. Jost3

Abstract
In the U.S. and other Western nations, one demographic group is most likely to downplay anthropogenic climate change and its consequences, to embrace the “discourse of delay,” and to resist pro-environmental policies: conservative white men. In this article, we bring together critical, feminist perspectives on masculinity and environmental dominance and social psychological insights from system justification theory to hypothesize that identity-protective cognition, material interests, and ideological legitimation processes combine and reinforce one another to motivate obstructionism when it comes to taking climate action. Our hope is that by integrating critical and empirical approaches to social science—and illuminating individual and group psychological factors that are embedded in specific historical and political settings—it will be possible to increase solidarity among environmental scholars and activists and forge a shared vision of climate justice across disciplines.

KEYWORDS
climate change, climate skepticism, critical social science, masculinity, political ideology, social identity, system justification

1 INTRODUCTION
There's a direct association between machismo and the refusal to recognize and respond appropriately to the climate catastrophe. (Rebecca Solnit, 2022)
Feminist scholars and social scientists have long argued that the exploitation and abuse of the natural environment is linked to the subjugation of girls and women (e.g., Gaard, 2011; Rocheleu et al., 1996; Warren, 1990). However, ecological feminism (or “eco-feminism”) has been marginalized in many areas of social science and has not had the degree of influence it merits (Banerjee & Bell, 2007). Consequently, social psychology is one of many fields that have been slow to recognize that ideas about masculinity contribute both to environmental problems, such as industrial pollution, and political problems, such as inaction about climate change. There are also social psychologists who doubt that conservative ideology plays a major role in skepticism and denial about anthropogenic climate change (e.g., Duarte et al., 2015). And, as far as we can tell, the role of race is not even on the research agenda for social psychologists.

To be clear, there is a rich and voluminous social psychological literature on attitudes and behaviors pertaining to environmental issues (e.g., Clayton et al., 2015; Reser & Swim, 2011; Swim et al., 2009). However, for the most part, social scientific research brushes past the 6.2 gigatonne¹ elephant in the room. Although people who are wealthy, white, and male generate higher per capita emissions (Carlsson et al., 2021; Goldstein et al., 2022; Oswald et al., 2020), conservative white men are more likely than any other demographic to downplay concerns about anthropogenic climate change (McCright & Dunlap, 2011; see also Benegal et al., 2022; Feygina et al., 2010; Jylhä et al., 2016; Krange et al., 2019; Liu et al., 2014). Given their outsize impact on the climate—and their disproportionate degree of social, economic, and political capital—addressing and overcoming climate skepticism among conservative white men is crucial to obtaining a more sustainable future (Jacquet et al., 2014).²

In this article, we begin by tracing critical feminist scholarship on the intersection of hegemonic masculinity and environmental dominance (see also Kaul & Buchanan, 2023). Next, we bring in system justification theory as a uniquely valuable framework for analyzing social psychological aspects of climate inaction (e.g., Jost, 2020). We then highlight several areas of alignment between these heretofore disconnected perspectives and seek an integration of critical, feminist perspectives and system justification theory. The overall aim is to achieve a more holistic social psychological understanding of climate denial and skepticism among conservative white men in the U.S. and other WEIRD (Western, Educated, Industrial, Rich, Democratic) nations, so that appropriate interventions may be designed (see Vlaseanu et al., 2023).

We begin with a point of conceptual clarification. The terms “climate denial” and “climate skepticism” are often used interchangeably and typically refer to the outright questioning of whether climate change is occurring. However, such rigid definitions fail to capture the more nuanced manifestations of climate denial (e.g., see Duarte et al., 2015). We embrace a somewhat broader conceptualization of “climate denial” that also accounts for minimization and delay (see also Feygina et al., 2010; Lamb et al., 2020). Drawing on Rahmstorf’s (2004) taxonomy, we understand climate denial as encompassing trend skepticism (i.e., the belief that there is no true trend of temperature change), attribution skepticism (i.e., the belief that climate change may be occurring but is not caused by human activity), and impact skepticism (i.e., the belief that climate change is relatively harmless or even beneficial). While trend skepticism is declining, the claim that climate change is the result of “natural” temperature fluctuations is quite prevalent (Leviston & Walker, 2012) and has become one of the dominant frames adopted by climate-denying think tanks (Almiron et al., 2020). A broader conceptualization of climate denial is useful for capturing how motivated skepticism continues to evolve in the face of accumulating, increasingly tangible evidence of a warming planet. At the same time, terms such as denial and skepticism focus specifically on cognitive (or epistemic) aspects of the phenomenon and do not sufficiently address problems of motivation and especially (in)action. Therefore, we prefer to use an even more comprehensive term, namely climate obstructionism, which include all contrarian or impeding social practices that are motivated by climate denial (in the broad sense).
1.1 | Environmental masculinities

Over the past decade, critical feminist scholarship has increasingly explored what might be termed "environmental masculinities," that is ways in which masculine identities are shaped by environmental politics (e.g., Daggett, 2018; In MacGregor & Seymour, 2017; Pulé & Hultman, 2021). Examples include the degree to which climate-harming practices—such as driving gas-guzzling SUVs—are considered part of the "performance" of masculinity, or as essential to maintaining the hegemony of white men (e.g., see Willer et al., 2013). For men who view fossil fuel technologies as essential to their economic success, images of industrial modernity, and/or expressions of masculinity, demands to alter current practices of consumption could be experienced as profoundly threatening (see also Brough et al., 2016; Heiliger, 2021).

According to Martin Hultman (2013, 2017), climate skeptics frequently draw on themes of industrial masculinity, including the fact that men, especially white men in the Western world, have historically utilized resource extraction as a means of acquiring wealth. This discourse idealizes masculinity and emphasizes an entitlement to extract natural resources, including both human and non-human animal resources. It is used to justify the activities of upper- and middle-class men who control the means of production and the workings of corporate capitalism as well as working class men "at the ‘coal-face’ of extractive practices" (Pulé & Hultman, 2019, p. 4). Nature is seen as existing to be "conquered" by man and used to generate wealth. Value is placed on industrial modernization, large-scale centralized energy technology, and the preservation of the traditional division of labor within families. Industrial masculinity is theorized to be one of the cornerstones of climate denial, insofar as it leads environmentalism to be experienced as an affront to masculine identity and a direct threat to the social and capitalist economic systems in which many men acquire resources and power (Heiliger, 2021; Hultman, 2013, 2017; Krange et al., 2019).

Anshelm and Hultman (2014) content-analyzed Swedish publications and observed that climate denial narratives were indeed driven by a small group of older men with prestigious academic and corporate positions who claimed to be operating out of concern for global welfare. Their major message was that progressive climate policies would "pull the carpet from under modern industrial society" (Nordin, as quoted in Anshelm & Hultman, 2014, p. 90). A similar stance is taken in The Moral Case for Fossil Fuels, a popular conservative text in the U.S. that claims the use of fossil fuels is morally justified, even compelled, because access to cheap energy has been essential to improving the quality of life all over the world. The author, Alex Epstein (2014), writes: "Mankind’s use of fossil fuels is supremely virtuous—because the human life is the standard of value, and because using fossil fuels transforms our environment to make it wonderful for human life" (p. 209). These messages contribute to what Lamb et al. (2020, p. 1) refer to as the "discourse of delay," that is, rhetorical strategies that seek to justify inaction or the dedication of minimal effort and resources to address climate change.

Because of increasing public recognition of environmental harms, industrial masculinity has gradually morphed into a kind of "eco-modern masculinity" in which "toughness, determination, and hardness [are] mixed with appropriate moments of compassion and care" (Hultman, 2017, p. 8). Here there is some recognition of the need to protect the environment, but, at the same time, a commitment to maintaining social and economic systems that contribute to environmental destruction. The focus, for instance, is on technological, market-friendly solutions that enable capitalists to continue extracting natural resources for profit.

As the tangible effects of climate change become more obvious, those who identify with eco-modern masculinity increasingly acknowledge the existence of climate change and the importance of caring for the planet, while continuing to downplay its severity or anthropogenic character. The result is a pro-business, "greenwashing" approach that rules out the possibility that sustainability requires any major societal-level forms of sacrifice or change. Public opinion polls document this pattern. In one report, Republicans ranked "increasing jobs and economic growth" and "keeping consumer costs low" as the highest priorities in climate policy (Tyson, 2021). Additionally, most people who identified as Republican favored tree-planting efforts (90% favored) and corporate tax cuts to incentivize the development of carbon capture technology (76%). However, they were much less likely to support taxing corporate
emissions (52%) or enacting tougher fuel efficiency standards (53%). Conservative white men were especially likely to oppose these latter measures, as shown in Table 1.

In the same survey, which was conducted as part of Pew Research Center's American Trends Panel (2021), a nationally representative sample of U.S. adults were asked, “How much do you think human activity, such as burning of fossil fuels, contributes to climate change?” Responses were provided on a 4-point scale (reverse-coded) ranging from 1 (Not at all) to 4 (A great deal). Conservative white men were significantly less likely to acknowledge the role of human activity in climate change (M = 2.43, SD = 0.89, n = 2177), compared to conservative white women (M = 2.68, SD = 0.85, n = 2173; difference = 0.25, 95% CI [0.20, 0.30]. Welch two-sample t (4342.06) = 9.51, p < 0.001; Cohen's d = 0.29, 95% CI [0.23, −0.35]) and conservative non-white men (M = 2.77, SD = 0.95, n = 503; difference = 0.34, 95% CI [0.25, 0.44], Welch two-sample t (662.90) = 7.23, p < 0.001; Cohen's d = 0.37, 95% CI [0.27, 0.47]).

Closely related to themes of eco-modern and industrial masculinity is Cara Daggett’s (2018) concept of “petro-masculinity.” She argues that recent right-wing authoritarian movements in the West involve a mix of climate denial, racism, and misogyny (defined as a set of coercive practices that enforce patriarchal arrangements). Daggett writes that: “fossil fuels matter to new authoritarian movements in the West because of profits and consumer lifestyles, but also because privileged subjectivities are oil-soaked and coal-dusted” (p. 3). She notes that the American lifestyle has long focused on the white, patriarchal, middle-class suburban home, with intense fossil fuel consumption in a car-centric culture in which many archetypal “breadwinning” jobs are heavily reliant on fossil fuels. In this way, male hegemony and the fossil fuel industry have become intertwined “both technically and affectively, ideationally and materially” (p. 4).

In the 21st century, well-paying middle-class jobs in the U.S. have declined substantially, but access to an unending supply of cheap energy remains part of the “American dream” and essential to the country’s future as a global economic power. According to Daggett (2018), conspicuous pollution—that is, purposefully engaging in unnecessary or dangerous fuel consumption—is one way in which angry white men respond defensively to threats to the legitimacy or stability of fossil fuel systems and, relatedly, their hegemonic masculinity in the context of those systems.3

Wasteful practices, in this view, do not just reflect a passive ignorance of environmental science, but an active, enraged refusal to acknowledge the problem of climate change, that is, obstructionism. One vivid example is “rolling coal,” which, according to Wikipedia, is an anti-environmentalist gesture that refers to “the practice of modifying a diesel engine to emit large amounts of black or grey sooty exhaust fumes.” Another example was the sudden appearance in 2020 of long caravans of cars, motorcycles, and trucks in which supporters of former President Donald Trump in at least five states drove around for hours waving flags, hurling epithets against onlookers, and, in some cases, firing guns (Rose, 2020). Petro-masculinity, it seems, is more reactionary and violent itself than other environmental masculinities (Heiliger, 2021).

### Table 1: Opposition to pro-environmental policies among conservative white men compared to other demographic/ideological groups.

<table>
<thead>
<tr>
<th>Policy</th>
<th>Liberal</th>
<th>Conservative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-white</td>
<td>White</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Taxing corporations based on the amount of carbon emissions they produce</td>
<td>In favor</td>
<td>89%</td>
</tr>
<tr>
<td></td>
<td>Oppose</td>
<td>11%</td>
</tr>
<tr>
<td>Tougher fuel-efficiency standards for automobiles and trucks</td>
<td>In favor</td>
<td>86%</td>
</tr>
<tr>
<td></td>
<td>Oppose</td>
<td>14%</td>
</tr>
</tbody>
</table>

Note: A majority of conservative white men (between 61% and 65%) opposed these two policies aimed at mitigating the effects of anthropogenic climate change. For all other respondent groups, the majority was in favor of the policies. The bolded values indicate the opinion endorsed by the majority of individuals within a given demographic group. 

We submit that critical-feminist perspectives on industrial, ecomodern, and "petro" forms of masculinity are extremely insightful and valuable and that other social scientists would benefit from incorporating them. At the same time, these perspectives would benefit from more direct and systematic forms of empirical inquiry. Daggett's (2018) work, for instance, is purely theoretical, drawing on current events and media interviews. Anshelm and Hultman (2014) conducted qualitative analysis of public discourse, but they did not directly engage with research participants or probe underlying motives.

Fortunately, there have been recent efforts to integrate critical theory on environmental masculinities with more rigorous empirical testing. Kaul and Buchanan (2023), for instance, sought to explicate patterned relations among misogyny, authoritarianism, and climate attitudes by drawing on critical social science and social psychological constructs as theoretical foundations. They observed that climate skeptics scored higher on misogyny and authoritarianism than those who believed in climate change. In this research, authoritarianism, gender, and misogynistic attitudes accounted for roughly 20% of the total variance in concern for environmental protection.

Misogyny—defined as the devaluation of that which is perceived as "feminine" (Kaul, 2021)—is more common, but not exclusive to men (Kaul & Buchanan, 2023). The "gender gap" in environmental attitudes may be attributable to the (generally) increased acceptance of sexist attitudes among men (vs. women) rather than gender identification per se. Consistent with this idea, Benegal and Holman (2021) observed that liberals, women, and individuals with higher levels of education expressed less sexist attitudes, but even in these subgroups sexist attitudes were positively correlated with climate denial.

We believe that the important work of critical psychologists and other social theorists in analyzing why conservative white men are especially likely to embrace climate skepticism, denial, and obstructionism can be usefully supplemented by the work of quantitative and qualitative social scientists, including the examples we have already introduced. Empirical social psychology, which makes use of experimental as well as non-experimental survey methods, among other techniques, should prove especially helpful when it comes to understanding the intersection of race, gender, and political ideology. We believe that one social psychological theory in particular, system justification theory, is especially well-suited to tackle these issues (Jost, 2020).

1.2 System justification theory

Because critical theorists and system justification researchers share common influences from philosophy and social theory (e.g., Marx, Gramsci, Adorno, contemporary feminism, decolonial and anti-racist approaches, etc.) they lend themselves to theoretical and practical synthesis (e.g., see Fine, 2006; Hepburn, 2003; Jost, 2020). Moreover, system justification theory is uniquely well-situated to address climate denial as a multiply determined problem with top-down, institutional, and bottom-up, psychological causes and consequences (see Jacquet et al., 2014). According to the theory, "people are motivated (to varying degrees, depending upon situational and dispositional factors) to defend, bolster, and justify aspects of existing social, economic, and political systems" (Jost, 2020, p. 276). This is because ideological commitment to the status quo—that which is traditional, familiar, established, and part of mainstream society—serves epistemic, existential, and relational motives to reduce uncertainty, insecurity, and social deviance or discord.

Economic system justification—the belief that capitalist institutions and practices are legitimate and desirable, and perhaps even necessary and inevitable—is an especially strong predictor of climate skepticism in the U.S. (Feygina et al., 2010; Hennes et al., 2012, 2016). As illustrated in Figure 1, an online survey found that economic system justification scores were negatively associated with belief in global warming and that economic system justification scores were themselves predicted by high levels of death anxiety and the desire to share reality with like-minded others as well as low levels of the personal need for cognition (interest and willingness engage in effortful thinking). The full model explained 34.3% of the statistical variance in beliefs about global warming (Hennes et al., 2012; see also Milfont et al., 2021; Panno et al., 2018).
There is by now heavy accumulation of evidence from social psychology that conservative ideology plays a major role in facilitating climate denial (e.g., see Azevedo & Jost, 2021; Hornsey et al., 2016; van der Linden et al., 2021). For instance, a meta-analytic review by Biddlestone et al. (2022) showed that conservatism was a robust predictor of belief in climate conspiracies ($N_{\text{participants}} = 20,765, r = 0.45, p < 0.001$). Other system-justifying belief systems, such as right-wing authoritarianism (RWA) and social dominance orientation (SDO), also predict climate skepticism (e.g., Carrus et al., 2018; Clarke et al., 2019; Häkkinen & Akrami, 2014; Jylhä et al., 2016; Meleady et al., 2020; Stanley et al., 2019; Stanley & Wilson, 2019).

System justification motivation was activated in an experimental study in which people were made to feel especially dependent upon the American system. Results revealed that participants assigned to this high system dependence condition were more likely to misremember information they were presented with earlier about climate change in a manner that downplayed the severity of the problem, compared to a control condition (Hennes et al., 2016, Study 1). Relatedly, Knight (2018) observed that people living in countries in which the economic system was highly dependent on fossil fuel production scored lower in public awareness, perceived risk, and perceived human cause of climate change. Thus, system justification tendencies, which are notably stronger in political conservatives than liberals (Jost, 2020), appear to play a significant role in climate skepticism and denial.

In two large surveys of U.S. adults, Azevedo and Jost (2021) administered a large number of demographic and ideological items, along with a 5-item measure of climate skepticism ($\alpha = 0.88$) comprised of the following items: “Climate scientists and their political allies are deliberately misleading the public about global warming”; “Selfish interests are scheming to convince the public that global warming is a major threat”; “Claims about environmental threats are exaggerated”; “Humans are harmfully exploiting the environment” (reverse-scored); and “If things continue on their present course, we will soon experience a major ecological catastrophe” (reverse-scored). The results of a multiple regression indicated that political conservatism and SDO were significant, unique predictors of climate skepticism. However, Azevedo and Jost did not directly investigate whether climate skepticism was higher among white male conservatives compared to other demographic groups and, if so, whether system-justifying beliefs help to explain why.

To explore these questions, we re-analyzed the data from Azevedo and Jost (2021), combining the two studies to maximize statistical power (Total $N = 3619$). As shown in Figure 2, conservative white men were indeed the single most distrusting group of respondents with respect to climate science. That is, conservative white men expressed significantly more climate skepticism ($M = 5.765, SD = 1.850, n = 1251$) than conservative white women...
DAKIN et al., (M = 5.159, SD = 1.587, n = 391), according to a Welch two sample t-test (difference = -0.61, 95% CI [-0.79, -0.42], t(749.17) = -6.33, p < 0.001; Cohen's d = -0.34, 95% CI [-0.45, -0.22]). Likewise, conservative white men expressed significantly more climate skepticism than conservative non-white men (M = 5.348, SD = 1.743, n = 97; difference = -0.42, 95% CI [-0.78, -0.05], t(113.44) = -2.26, p = 0.026; Cohen's d = -0.23, 95% CI [-0.43, -0.02]). Conservative white men also scored higher than all other respondent groups on economic system justification—but not RWA, SDO, or gender-specific system justification (see Table 2).

Is it possible, then, that the high level of climate skepticism among conservative white men is attributable, at least in part, to their endorsement of system-justifying beliefs about the economy? To shed light on this question we conducted a multiple linear regression predicting climate skepticism on the basis of gender, race, ideological self-placement, and economic system justification. This resulted in a significant model, F (4, 3614) = 824.8, p < 0.001), explaining a substantial share of the variance (adjusted R² = 0.477). The individual predictors were examined further and indicated that in this multivariate model conservatism (B = 0.40; t = 31.34, p < 0.001), economic system justification (B = 0.59; t = 19.87, p < 0.001), and race (B = -0.27; t = -3.92, p < 0.001) were significant predictors, whereas gender was not (B = 0.01; t = 0.26, p = 0.797). In this model, conservatism explained 58% of the variance in climate skepticism, and economic system justification explained 40%.

These findings are consistent with previous observations that political ideology and economic system justification are among the strongest predictors of climate skepticism (e.g., Azevedo & Jost, 2021; Hennes et al., 2012, 2016; Hornsey et al., 2016). It would appear that the demographic effects of race and gender are attributable, at least in part, to ideological differences in system justification tendencies. That is, white males may be more skeptical about climate change than other demographic groups because they tend to be more conservative and system-justifying. If this is true, system justification theory is especially useful for understanding the phenomenon of climate obstructionism among conservative white men. In a word, white conservative males feel justified (or entitled) to exploit the natural environment for personal, social, and economic gain.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Liberal</th>
<th>Conservaive</th>
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<tbody>
<tr>
<td></td>
<td>Non-white</td>
<td>White</td>
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<tr>
<td>Economic system justification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female (n = 216)</td>
<td>4.307 (SD = 0.925)</td>
<td>4.503 (SD = 1.000)</td>
</tr>
<tr>
<td>Male (n = 201)</td>
<td>4.16 (SD = 0.873)</td>
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</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
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<tr>
<td>Female (n = 560)</td>
<td>4.277 (SD = 1.055)</td>
<td>4.503 (SD = 1.000)</td>
</tr>
<tr>
<td>Male (n = 855)</td>
<td>4.503 (SD = 1.000)</td>
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<tr>
<td>Non-white</td>
<td></td>
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</tr>
<tr>
<td>Female (n = 48)</td>
<td>4.849 (SD = 0.564)</td>
<td>5.151 (SD = 0.836)</td>
</tr>
<tr>
<td>Male (n = 97)</td>
<td>5.392 (SD = 0.868)</td>
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<td>White</td>
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<tr>
<td>Female (n = 391)</td>
<td>5.11 (SD = 0.836)</td>
<td>5.600 (SD = 0.789)</td>
</tr>
<tr>
<td>Male (n = 1251)</td>
<td>5.600 (SD = 0.789)</td>
<td></td>
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<tr>
<td>Gender system justification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female (n = 17519004)</td>
<td>4.554 (SD = 1.335)</td>
<td>5.044 (SD = 1.605)</td>
</tr>
<tr>
<td>Male (n = 2024)</td>
<td>5.178 (SD = 1.393)</td>
<td>6.204 (SD = 1.187)</td>
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<tr>
<td>White</td>
<td></td>
<td></td>
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<tr>
<td>Female (n = 2, Downloaded from <a href="https://compass.onlinelibrary.wiley.com/doi/10.1111/spc3.12913">https://compass.onlinelibrary.wiley.com/doi/10.1111/spc3.12913</a> by ... on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License)</td>
<td>4.629 (SD = 0.937)</td>
<td>5.672 (SD = 1.215)</td>
</tr>
<tr>
<td>Male (n = 9, 2024)</td>
<td>4.688 (SD = 1.376)</td>
<td>6.305 (SD = 1.178)</td>
</tr>
<tr>
<td>Right-wing authoritarianism</td>
<td></td>
<td></td>
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<tr>
<td>Female (n = 3, Downloaded from <a href="https://compass.onlinelibrary.wiley.com/doi/10.1111/spc3.12913">https://compass.onlinelibrary.wiley.com/doi/10.1111/spc3.12913</a> by ... on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License)</td>
<td>4.629 (SD = 1.376)</td>
<td>6.091 (SD = 1.060)</td>
</tr>
<tr>
<td>Male (n = 4, 2024)</td>
<td>4.688 (SD = 1.376)</td>
<td></td>
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<tr>
<td>Social dominance orientation</td>
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<td>Female (n = 3, Downloaded from <a href="https://compass.onlinelibrary.wiley.com/doi/10.1111/spc3.12913">https://compass.onlinelibrary.wiley.com/doi/10.1111/spc3.12913</a> by ... on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License)</td>
<td>3.070 (SD = 1.436)</td>
<td>3.629 (SD = 1.210)</td>
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<tr>
<td>Male (n = 4, 2024)</td>
<td>3.439 (SD = 1.419)</td>
<td></td>
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</tbody>
</table>

Note: Responses were provided on Likert-type scales ranging from 1 (RWA and SDO = very strongly disagree, Climate Skepticism, Economic System Justification, and Gender System Justification = strongly disagree) to 9 (RWA and SDO = very strongly agree, Climate Skepticism, Economic System Justification, and Gender System Justification = strongly agree). See Azevedo and Jost (2021) for a full review of the scales.

Source: Azevedo and Jost (2021).
TABLE 3 Independent samples t-tests comparing conservative white men to conservative white women and non-white conservative men on the endorsement of system-justifying beliefs.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>df</th>
<th>Means</th>
<th>Standard deviations</th>
<th>Mean difference</th>
<th>t-test statistic</th>
<th>Significance level</th>
<th>95% confidence interval</th>
<th>Cohen's d</th>
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</tr>
<tr>
<td>Economic system justification</td>
<td>White men</td>
<td>622.19</td>
<td>5.60</td>
<td>0.79</td>
<td>-0.45</td>
<td>-9.41</td>
<td>p &lt; 0.001*</td>
<td>-0.54 - 0.36</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>White women</td>
<td></td>
<td>5.15</td>
<td>0.84</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>White men</td>
<td>108.65</td>
<td>5.60</td>
<td>0.79</td>
<td>-0.21</td>
<td>-2.30</td>
<td>p = 0.023*</td>
<td>-0.39 - 0.03</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td>Non-white men</td>
<td></td>
<td>5.39</td>
<td>0.87</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender system justification</td>
<td>White men</td>
<td>568.86</td>
<td>6.30</td>
<td>1.18</td>
<td>-0.63</td>
<td>-8.57</td>
<td>p &lt; 0.001*</td>
<td>-0.78 - 0.49</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>White women</td>
<td></td>
<td>5.67</td>
<td>1.22</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>White men</td>
<td>109.69</td>
<td>6.30</td>
<td>1.18</td>
<td>-0.10</td>
<td>-0.83</td>
<td>p = 0.41</td>
<td>-0.34 0.14</td>
<td>0.16</td>
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<tr>
<td></td>
<td>Non-white men</td>
<td></td>
<td>6.20</td>
<td>1.19</td>
<td></td>
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<tr>
<td>Right-wing authoritarianism</td>
<td>White men</td>
<td>624.69</td>
<td>6.09</td>
<td>1.06</td>
<td>0.01</td>
<td>0.21</td>
<td>p = 0.83</td>
<td>-0.11 0.14</td>
<td>-0.02</td>
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<tr>
<td></td>
<td>White women</td>
<td></td>
<td>6.10</td>
<td>1.12</td>
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<td></td>
<td>White men</td>
<td>112.30</td>
<td>6.09</td>
<td>1.06</td>
<td>-0.34</td>
<td>-3.08</td>
<td>p = 0.003*</td>
<td>-0.55 - 0.12</td>
<td>0.58</td>
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<td></td>
<td>Non-white men</td>
<td></td>
<td>5.76</td>
<td>1.03</td>
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<tr>
<td>Social dominance orientation</td>
<td>White men</td>
<td>635.78</td>
<td>4.45</td>
<td>1.17</td>
<td>-0.24</td>
<td>-3.42</td>
<td>p &lt; 0.001*</td>
<td>-0.37 - 0.10</td>
<td>0.27</td>
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<td></td>
<td>White women</td>
<td></td>
<td>4.21</td>
<td>1.2</td>
<td></td>
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<tr>
<td></td>
<td>White men</td>
<td>115.03</td>
<td>4.45</td>
<td>1.17</td>
<td>0.07</td>
<td>0.60</td>
<td>p = 0.552</td>
<td>-0.16 0.29</td>
<td>-0.11</td>
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<tr>
<td></td>
<td>Non-white men</td>
<td></td>
<td>4.52</td>
<td>1.06</td>
<td></td>
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Source: Data are taken from Azevedo and Jost (2021), with both samples combined.
We propose that explicitly bringing together critical theory and social psychological research will foster a more holistic approach to the problems of climate skepticism and denial. Although they come from different fields and use different methods, critical theorists and social psychologists have arrived at very similar conclusions about the links between industrial masculinity and climate obstructionism. From critical theory we see the ways in which the environmental movement poses a threat to white men’s identities as, among other things, “breadwinners,” and to system justification theory we see the ways in which it poses a threat to the legitimacy and stability of existing gender relations and the capitalist economic system that is especially prized by political conservatives. All of this can help to explain why conservative white men would respond defensively, even aggressively, to concerns about climate change, and why they might compensate for these threats by “rolling coal” and celebrating other acts of conspicuous consumption and even pollution. As McCright and Dunlap (2011) observed, climate denial is, among other things, a joint product of identity-protective cognition and system-justifying belief systems.

At the same time, there are clear differences between perspectives emphasizing group justification versus system justification motives (Rubin et al., 2023). One limitation of group justification approaches is that they typically assume that ideology arises largely or exclusively from considerations of self-interest or social position, when in fact many cases of ideological activity violate assumptions of self-interest (Jost et al., 2023; Railton, 2003). By distinguishing the system justification motive from self and group justification motives, system justification theory helps to explain why people hold beliefs that contradict their own objective social interests (as in the phenomenon of false consciousness)—and also why people who benefit from the status quo do not invariably justify it. The explanation is that individuals and groups differ—both chronically, that is dispositionally, and temporarily, as a function of the situation—in terms of the strength of their system justification motives (Jost, 2020).

Another advantage of system justification theory is that it identifies underlying epistemic, existential, and relational needs that lead certain people—in this case, white male conservatives—to resist social change and cling to the status quo. Critical theorists of industrial masculinity have informally discussed epistemic dimensions of climate skepticism (Anshelm & Hultman, 2014) as well as relational aspects of gender relations in far-right groups (Daggett, 2018), but these motivational terms are rarely named explicitly or studied systematically. Thus, the incorporation of individual differences in system justification and its motivational underpinnings fills some gaps in the literature on critical theory.

For example, work on environmental masculinities clearly articulates the role of white masculinity in climate denial, but it does not adequately address the ideological gap among white men: it is the specific intersection of white, conservative, and male that is especially relevant when it comes to climate change (e.g., McCright & Dunlap, 2011). Daggett (2018) acknowledges that not all white men benefit from the continued use of fossil fuels and that “fossil fuels have become a dead end both for the planet and for the goal of middle-class jobs” (p. 10). Given these realities, more work is needed to explain why fossil fuels retain symbolic value for men who are actively harmed by them through pollution, industrial practices, and like. Such deviations from self-interest may be understood in terms of situational and dispositional variability in the motivation to defend the societal status quo, including the capitalist system (Jost, 2020).

Hultman (2013, 2017) and Daggett (2018) do not differentiate among self, group, and system justification motives the way that system justification theorists do. The desires to maintain a favorable self-image (as a man) and a favorable group-image (of men) and to legitimize the status quo are treated as inextricably linked, if not identical. White masculinity is simultaneously the lens through which the self is seen and understood as well as the standard by which the in-group is defined and evaluated; and, of course, the hegemony of white masculinity is what is assumed to represent the status quo. Failing to differentiate among self, group, and system justification motives risks conceptual confusion, but the lack of differentiation in critical theory may accurately reflect the blurriness of boundaries between self-concept, group membership, and the hegemonic social system in the phenomenological experience of white conservative men (see also Jost et al., 2001).
CONCLUDING REMARKS

In this article we have sought to integrate heretofore disparate insights drawn from critical theory and social psychology to understand the roles of race, gender, and ideology in climate obstructionism in the U.S. and other Western countries. We propose that self and group justification motives to defend masculine identity and system justification motivation to defend industrial capitalism and patriarchal institutions operate in conjunction and are mutually reinforcing. These three psychological processes, we submit, help to explain why motivated climate skepticism is especially prevalent among conservative white men. It is important to keep in mind that these processes are shaped by top-down, situational forces (such as exposure to media narratives that favor Big Business and deny anthropogenic climate change) as well as bottom-up, dispositional factors (such as chronic needs to reduce uncertainty, threat, and social deviance). All of the above themes—including gender, race, and ideology, as well as their concomitants and causes—come together in the context of public discourse about climate change because it is a problem that (a) debunks the capitalist logic of infinite growth on a finite planet as fundamentally flawed, (b) raises the specter of social and economic insecurity and therefore the inability to provide for one's family, and (c) poses a material threat to the industrial capitalist system itself by requiring the abandonment of fossil fuels.

Because climate obstructionism is multiply determined, flexibly wielded, and rapidly evolving, research on the phenomenon must incorporate social and psychological dynamics in the context of specific group and institutional settings. If the goal is to facilitate social change, it is necessary to attend to the micro-, meso-, and macro-level processes that perpetuate climate obstructionism (see also Jacquet et al., 2014). To this end, environmental psychology would benefit enormously from incorporating the insights of sociologists, anthropologists, and critical theorists, as we have sought to do here. Our approach is also aligned with recent calls to link critical-feminist theory and empirical social science (Kaul & Buchanan, 2023) and to address the ways in which racial identity affects climate attitudes and refrain from making population-level generalizations from findings that apply only to white Americans (Benegal et al., 2022).

Our goal has been to understand how and why conservative white men in the U.S. (and some other Western countries) are more resistant than other demographic groups to acknowledging problems associated with anthropogenic climate change and doing something about them. At this point, we can only speculate about whether hegemonic masculinity and economic system justification play similar roles in polluting the environment and obstructing progress on issues of climate change in non-Western settings, given that the research we have reviewed comes almost exclusively from “WEIRD” nations. We know that problems of industrial pollution are not unique to the West, nor are they unique to capitalist economies. Command economies, such as those linked to socialism and Communism, have clearly contributed to the environmental crisis, and it is reasonable to assume that ideological justifications of those economic systems are also used to excuse or rationalize pollution. It would be useful to conduct parallel investigations in China and other non-WEIRD countries to better understand the antecedents of climate obstructionism around the world.

Our approach, in any case, charts an ambitious way forward by synthesizing critical and empirical insights from the multi-disciplinary literature on climate obstructionism, considering the distinctive but interrelated roles played by social-structural, ideological, and psychological forces. This approach lends itself naturally to cross-disciplinary collaboration and the pragmatic use of mixed methods designs, which will enable us to address scientific questions of causality and nomothetic population-level trends while obtaining rich idiographic detail and texture through the application of qualitative methods of ethnography and discourse analysis. Above all, we need intervention research that recognizes and tackles climate obstructionism, working to undo the potentially treacherous intersection of sexism, racism, and the impulse to maintain—rather than improve upon—the socioeconomic status quo.
ACKNOWLEDGMENTS
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CONFLICT OF INTEREST STATEMENT
The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT
The data from Azevedo and Jost (2021) are openly available via online repository at the Open Science Framework (https://osf.io/d5vf3/). Data from American Trends Panel is publicly accessible from Pew Foundation (https://www.pewresearch.org/science/dataset/american-trends-panel-wave-89/).

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ENDNOTES
1 In 2022, the US was the second largest emitter of GHG at 6.2 gigatonnes. China produced substantially greater cumulative emissions (14.8 gigatonnes), but their per capita emissions were still much lower than the US (10.4–18.4 tons, respectively). World Emissions Clock available at https://worldemissions.io/.
2 Hornsey et al. (2016) concluded on the basis of cross-national research that “the ‘conservative’ part of (McCright and Dunlap 2011) equation would seem to be more diagnostic than the ‘white male’ part” (p. 622). In this article, we focus primarily on the US context but suspect that some of the gender and racial dynamics we highlight would operate in other regions as well.
3 In “Lament for the Pickup Truck” one contributor to the American Conservative wrote: “These big boy toys make you feel safe and strong as the world slips out of control” (Davis, 2021; see also Schmitt, 2021).
4 Rubin et al. (2023) claimed that system justification processes can be explained purely in terms of group-based self-interest and social identification processes, but Jost et al. (2023) disagreed with this assessment and highlighted conceptual, methodological, and empirical problems with the so-called “Social Identity Model of System Attitudes” (SIMSA), which has been proposed as an alternative to system justification theory.
5 It may be that conservative white men are more psychologically attached to the capitalist system than other disadvantaged groups (see Jost, 2017, for an analysis of working-class conservatism from the perspective of system justification theory). Conservative white women scored just as highly on RWA as conservative white men, and conservative non-white men scored slightly higher on SDO than conservative white men. The fact that non-white conservative men score as high or higher on RWA and SDO as white conservative men may be consistent with Henry’s (2009) theory of low-status compensation. Non-white conservative men scored lower than conservative white men on gender-specific system justification, but the difference was not statistically significant (see Table 3).

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AUTHOR BIOGRAPHIES

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