ORIGINAL ARTICLE

Misogyny, authoritarianism, and climate change

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Abstract

Globally, democratic politics are under attack from Electorally Legitimated Misogynist Authoritarian (ELMA) leaders who successfully use misogyny as a political strategy and present environmental concern in feminine and inferior terms. The ascendancy of such projects raise questions involving socioeconomic structures, political communication, and the psychological underpinnings of people's attitudes. We offer misogyny, conceptualized in a specific way – not simply as hatred or disgust for women, but as a way of accessing a gendered hierarchy whereby that which is labeled "feminine" is perceived as inferior, devalued, and amenable to be attacked – as a relevant transmission mechanism in how ELMAs like Trump may connect with public opinion by systematically investigating the interplay between misogyny, authoritarianism, and climate change in the context of the United States. Using a survey methodology ($N = 314$) and up-to-date questionnaires, we provide a concrete empirical underpinning for recent analytical and theoretical work on the complexity of misogyny. We analyze how misogynist and authoritarian attitudes correlate with climate change, adding to the literature on opposition to climate change policy. An additional exploratory aspect of our study concerning US voter preferences clearly

indicates that Trump supporters are more misogynist, more authoritarian, and less concerned with the environment.

And so, it is 100% clear that there is this toxic package or bundle of right-wing ideology, nationalism, exceptionalism, racism, sexism, anti-immigrantism, and anti-climate-change that goes with it. That is what drives many of them.

[Katharine Hayhoe, interviewed by Bjork-James & Barla, 2021, p. 389]

Gender is a game-changer, like the Archimedean fulcrum, with the potential to shift economic logics from profit-exploiting systems of injustice to functional praxes of life-affirming care for ecosystems, human others, and planetary co-habitants.

[Glazebrook, 2015, p. 126]

Sustainability is considered to be a 'feminine' project.

[in Cavaliere & Ingram, 2021, p. 13]

Climate change is a man-made problem and must have a feminist solution.

[Mary Robinson, in Allen et al., 2019]

INTRODUCTION

Many contemporary democracies are under severe strain from right-wing majoritarian political projects, and these are headed by electorally legitimated misogynist authoritarians (henceforth, ELMAs) who continue to command significant public support in spite of their many contradictions and policy failures. As Kaul (2021) argued, ELMAs come to power claiming a monopoly on nationalism denouncing their critics as anti-national, and claim to challenge neoliberalism, while benefitting from crony capitalism. Their exclusivist majoritarian nationalisms are both neoliberal and nationalist, and result in perverse outcomes for human security. Even so, these projects continue to draw upon support from the public in multiple democracies; the ELMA project examples are many and range the gamut from Bolsonarismo in Brazil, Modification in India, Dutertismo in Philippines, Erdoganism in Turkey, and Trumpism in the United States. Especially, Trump exemplifies such leadership and hence here we focus on the United States, but we expect that the main arguments that we lay out here may also be salient in several other countries that are the focus of our continuing work.

For social scientists, the ascendancy of such projects raises confounding questions involving socioeconomic structures, political communication, and the psychological underpinnings of people's attitudes. The purpose of this article is to offer misogyny, conceptualized in a specific way, as a relevant transmission mechanism in how ELMAs like Trump may connect with public opinion by systematically investigating the interplay between misogyny, authoritarianism, and climate

change. As a prelude to presenting our own survey findings, we bring together the conceptual and empirical research on the subject so far, bridging literatures across disciplines, particularly psychology and politics. The extant psychology research informs us of the extent and existence of beliefs, the conceptual political work offers clues as to why such beliefs might be held. Bridging these subsets of work that have generally proceeded in parallel with little interconnect is important for developing a more comprehensive account of the contemporary political transformations in democracies, and their implications for policy. The particular policy area that we target relates to climate change, an urgent domain of collective human security.

The structure of the article is as follows. In the first section, we briefly introduce the relevant conceptual backdrop for intersections of masculinity, nationalism, and climate change. Then, we detail the salient findings from existing empirical studies that focus on correlations between prejudices and climate beliefs. This creates the rationale for why we chose the design of our research. We explain the importance of misogyny understood in a specific way: gender *as* power and feminization as devaluation as opposed to simply hatred toward women. In the next section, we present our hypotheses and details of methodology, followed by the results of our study. We provide a summary of our findings and discuss how and why these insights matter. We conclude by pointing out the implications of our research and indicate directions for further enquiry.

Conceptualizations of masculinity, nationalism, climate change

Gender is deeply imbricated in any discussions of climate change. As Allen et al. (2019, p. 1) point out, gender roles are socially constructed and shape climate change vulnerabilities and how society responds to climate change. The most upfront manifestation of this is the ways in which outspoken female advocates of addressing climate change in substantive ways are targeted. Gelin (2019) referred to the "gender reactionaries to climate-denialism" with reference to the attack on figures such as Alexandra Ocasio-Cortez and Greta Thunberg. Cavaliere and Ingram (2021) raise wider questions of knowledge infrastructures and policy directions, pointing out how the patriarchy of late modernity and the role of the industrial movement in it requires a human versus nature binary, and attempts by women to challenge this as individual activists or as part of male dominated environmental organizations means confronting entrenched gender biases. They quote research on a gender gap in media reporting on climate change (Guo, 2015) for the United States according to which in 2014 less than15% of the individuals quoted in print or broadcast or cable media were women, the percentage being even worse for low-income areas, and male sources or anonymous sources are preferred over female sources (in Cavaliere & Ingram, 2021, p. 7). While women tend to be seen as more pro-environment, the same emotions are perceived differently for women and men; anger by women is stereotyped as negative and anger against outspoken women including those who speak on climate change is validated (in Cavaliere & Ingram, 2021, p. 8).

The link between far-right nationalism and "industrial breadwinner masculinities" has been under scrutiny in different countries (see Hultman & Pulé, 2018; Pulé & Hultman, 2021). In much empirical work, the focus has been on the production and circulation of digital media or online campaigns. Studies such as Vowles and Hultman (2021) detail how previously silent Swedish digital media attacked Greta Thunberg. The far-right digital ecosystem was constructing hostility toward a female environmental campaigner using historical tropes of "irrational femininity." Likewise, Pettersson et al. (2022) refer to the ways in which Finnish far-right political campaigns used humorous misogynist messaging in a campaign film that drew upon polarized political

communication on climate change – pitting the "rational males" who opposed stronger measures to tackle climate change against "irrational females" who propose such measures. It is important to note the reach of such media; 6%–12% of the online population in Sweden was reached by just four websites in 2020 (in Vowles & Hultman, p. 415). The polarization of online climate change communication and the overlap of climate change denialism with antifeminism and anti-immigrantism has been seen as a kind of "alliance of antagonisms" (Kaiser & Puschmann, 2017).

Climate change denialism has received focus in connexion with masculinity, for example through the probing of climate denial amongst right-wing white males in the United States (see Daggett, 2018; Nelson, 2020), or work on reactionary and eco-modern masculinities, or in relation to anti-immigration in multiple countries (see Agius et al., 2020; Keskinen, 2013; MacGregor & Seymour, 2017; McCright & Dunlap, 2011; Vowles & Hultman, 2021). Hateful reactions to women and to care for the environment that are visible in right-wing views are sometimes simply accepted as beleaguered and victimized reactions of a racialized idea of an impoverished working class in late capitalism. Yet, there is significant theoretical and empirical evidence that identity factors, political rhetoric, and the complex interlinkages between neoliberalism and nationalism are much more relevant than arguments about economic deprivation of the white working class in making sense of why ELMA leaders receive support (see Schaffner et al., 2018). Vengeful masculinity-reclaiming reactions to climate care can actually include deliberately polluting as a form of "petro-masculine rebellion and revenge" (see Daggett, 2018; Nelson, 2020). The act of "coal-rolling" requires alterations to vehicle engines to attract attention so that it can produce blacker smoke more loudly, a form of "pollution porn" (Kulze & Eyges, 2014, in Nelson, 2020, p. 287); "It's just a testosterone thing. It's manhood. It's who can blow the most smoke, whose is blacker" (Weigel, 2014). This aspect of climate change denial and destructiveness is linked to an idea of "petro-vitality" for subsets of white conservative American males where the macho coal-rolling is about testosterone, an idea of masculinity which feeds into how these rugged individualist outdoor men see themselves.

Sexist, authoritarian, and climate change beliefs and correlations

In relation to the present topic, the well-established research on prejudice in psychology has typically sought to uncover the cross-sectional correlations, usually between a pair from among the following – social dominance orientation, right-wing authoritarianism, climate change denial, and hostile or benevolent sexism.

The explanation for various kinds of prejudice in individuals is often found either in social dominance orientation (SDO), or in right-wing authoritarianism (RWA) (see, for instance, Altemeyer, 1998; McFarland, 2010). SDO connects with the need to maintain dominance over subordinate others, such as preserving socioeconomic privilege, and RWA connects with the need to protect oneself from those who might pose threats to order (Altemeyer, 1981, 1998; Pratto et al., 1994; Stanley & Wilson, 2019). Making sense of human domination of the environment and of non-humans in terms of SDO was the focus of some studies (Dhont et al., 2014; Milfont et al., 2013), and a subliterature grew to look at the links between SDO and climate change denial specifically. In earlier work, the link between SDO and climate change denial was found to be strong in cross-sectional studies (Häkkinen & Akrami, 2014), but later longitudinal studies find a stronger link between RWA and climate change denial (Stanley et al., 2019; Stanley et al., 2017).

Centers (1963) found a correlation between authoritarianism and misogynistic attitudes, and argued that this reflected authoritarians' desire to maintain a status quo in which women were restricted to traditionally "feminine" roles. This hypothesized anti-feminist agenda was also reflected in the finding of Sarup (1976) that more authoritarian people had more anti-feminist attitudes. Duncan et al. (1997) also reported that authoritarianism was associated with anti-feminist attitudes, and a belief that both men and women should adhere to "traditional" gender roles. While right-wing populism and climate change denial tend to be linked (Lockwood, 2018), the investigation of this has often focused on anti-establishment attitudes. However, studies such as by Jylhä and Hellmer (2020) reported that RWA is indirectly predictive of climate change denial and the endorsement of traditional values explained some unique part of climate change denial. They find the strongest link between exclusionism and anti-egalitarianism on the one hand and climate change denial on the other.

We focus on the RWA since it is strongly correlated with anti-feminist dispositions and because RWA predicts an increase in climate change denial in longitudinal work, and was found to be a stronger predictor when directly compared to SDO (Stanley et al., 2017). Clarke et al. (2019) find that the aspect of RWA concerned with adherence to tradition and social norms is most important (conventionalism, RWA-C) in predicting all forms of climate denial. In meta-surveys that do not consider established scales, Hornsey et al. (2016) found the link of political affiliation and political ideology to be the strongest with environment beliefs. In a meta-analytic overview of 25 polls and 171 academic studies across 56 nations, examining 27 variables (table on p. 625), they found that the largest demographic correlate of climate change belief is political affiliation with an effect roughly double the size of any other demographic variable (p. 622). They found that the traditional societal faultlines of gender, age, sex, race, and income, while intuitively appealing, were far less relevant to climate change beliefs than values, ideologies, and political affiliation. Thus, "findings showed the benefit of moving beyond the question of 'who' disbelieves that climate change is real… to the psychological factors that explain 'why' people hold their views about climate change… climate change beliefs are influenced by distal psychological and political beliefs that shape people's assimilation of 'the facts'" (p. 624–625).

Stanley and Wilson (2019) build upon existing literature that shows that scales like the RWA are conceptually and empirically linked to political affiliation and ideology, while also relating to environmentalism (p. 47). They adopted a broader approach to meta-analyze the correlations between SDO, RWA and six indices of environmentalism in a total of 33 studies from 53 independent samples of work (table on p. 48–51), finding that both SDO and RWA predict independently predict environmentalism, but surprisingly given that these two ideological variables are intended to explain intergroup attitudes, the two explain up to half the variance in prejudice, and are less strongly related to environmentalism (p. 54). Moreover, referring to environmental messaging for authoritarians, they conclude that "it is as yet unclear why they [authoritarians] endorse anti-environmental attitudes – likely a combination of authoritarian aggression and traditionalism" (p. 55).

In a similar vein, Stanley et al. (2019), in their 5-year cross-lagged analysis of the influence of SDO and RWA on environmentalism conclude that, "the relationship between ideology and environmentalism across time could be explained by a third variable. Specifically, it is possible that something related both to ideological and environmental attitudes could drive changes in each variable independently, hence explaining the apparent causal relations" (p. 7). They invite future research to explore the potentially causal nature of the ideology-environmentalism association. We surmise that misogyny could be that third variable.

Akrami et al. (2011) suggest that it is necessary to integrate individual and social psychological approaches to explain prejudice, finding that a combined model of personality-only and social-psychology-only models was superior in explaining sexism. Sexism, as a specific kind of prejudice, has generally been studied by dividing it into benevolent sexism (BS) and hostile sexism (HS), stemming from dominative paternalism and protective paternalism; ambivalent sexism is an aggregate (Glick & Fiske, 1996, 2001). Sibley et al. (2007) in their examination of the associations and causal pathways between men's SDO, RWA, HS, and BS conclude that "it is in conditions where ideologies derived from these dual motivational goals form an integrated series of rewards and punishments that such systems of societal control may be most compelling but also most insidious" (p. 171). Further, modern sexism does not see women as threatening or fragile or incompetent, but denies the existence of discrimination against women and dismisses or resents efforts to address gender inequity (see Benegal & Holman 2021, p.4). Sexism has consistently been connected with RWA and SDO; sexism is also strongly correlated with other forms of prejudice, and further, hostile sexist attitudes are strongly correlated with low empathetic concern so that sexist attitudes may be dependent upon a general indifference to others (Hellmer et al., 2018). Women are often perceived more closely connected to nature (Salmen & Dhont, 2021). Attitudes toward the domination of women and subjugation of the environment have been found to be linked (Wang, 1999). Such an ecofeminist approach also asserts that power systems in society or cultural hegemonic values, lead to domination over women and over the environment (Bloodhart & Swim, 2010). Nicol et al. (2022) in their survey studies with US participants found support for a strong correlation between HS and climate change denial, so that HS explained unique variance in climate change denial over and above SDO and RWA. Referring to the third largest country in the world that is also one of the largest environmental polluters, they suggest that given their results, reducing HS might be important to create a greater acceptance of climate change. Jylhä et al. (2020) in their study of the Swedish radical right (as opposed to the mainstream right) also found that anti-feminism had a unique effect on climate change denial.

Data from nationally representative surveys in the United States were used by Benegal and Holman (2021) to show that sexism was correlated with climate denial and opposition to climate policy within a wide variety of subgroups across conventional divides in the period 2016–2018. They write that, "sexist values may not only help explain climate denialism and delay through these associations, but can also explain the prevalence of these views across multiple demographics given that sexism cuts across different identities" (p. 48). The authors found similar effects in data from 2012 but it is worth noting that the magnitude was much larger in the period from 2016 onwards, suggesting that the actions of political elite can affect these relationships (Carmichael & Brulle, 2017). It is vital to attend to the role of "anti-environmental elite communication engaging in status quo defense and gendered language" (Benegal & Holman, 2021, p.5).

They mention their surprise at a finding: there is little gender gap in climate denialism or belief that it is human caused. This is contrary to a significant amount of previous scholarship that they cite (in ibid.). The authors focus on high levels of sexism in relation to views on climate change and climate policy as opposed to the traditional factors such as partisan identity, ideology, and education. This suggests that this sexism existed over time as a system-justifying attitude in defense of an inequitable and gender hierarchical status quo against threats. They mention that "it is likely that the political climate of 2016 (and since) that featured a woman nominee for president increased attention to gender identities, misogynist rhetoric, and high-profile women as climate activists may have amplified this relationship" (p. 15). In their conclusion, they call for "increased attention and further scholarship on the dynamics of gendered attitudes and rhetoric in elite cues and media coverage to better understand possible causal mechanisms that may further explain these

correlations" (p. 16). As we will later discuss, we believe that our particular conceptualization of misogyny assists in an understanding of some of these dynamics. We will turn to this after a quick summary of this section.

Climate change is a politically polarized issue, especially in the US, with denial common amongst right-wing politicians and adherents (Clarke et al., 2019; Hornsey et al., 2018; McCright & Dunlap, 2011). Longitudinal studies find strong relations between RWA and climate change beliefs. Climate change denialism is also on the increase in the US. Sexism is consistent across measures of climate change beliefs and policies in the US. The effects of sexism on climate views in the US were significantly larger in 2016 than in 2012. Concurrently, the gender gap between denialists (more men denying climate change than women) narrowed over the same period. The literature in general makes it clear that it is both necessary and desirable to integrate approaches in the explanation of prejudice, to bring together an individual and system level factors, and to pay attention to the links between different kinds of prejudices. The literature also has little to say about causality, but provides a plethora of measurements and correlations.

Linking back to the empirical correlations, the fact that conventionalism subtype of RWA, referring to the necessity of upholding society and traditions and social norms, is found to be empirically most significant in climate denial studies is often tentatively suggested as being indicative of adherence to a pro-growth approach (see Clarke et al., 2019, p. 356; Milfont et al., 2013 Stanley & Wilson, 2019). However, in light of our discussion here, it is perhaps more likely that gender *as* power plays a crucial role. To explain the idea of gender functioning as power in relation to individual beliefs and wider sociocultural and political contexts, we turn now to an account of misogyny that seems useful.

Misogyny, authoritarianism, and climate change

Having introduced conceptual intersections of masculinity, right-wing nationalist politics, and climate change denial, and the empirical research on sexist, authoritarian, and climate change beliefs and correlations, in this section, we present work on the analytic centrality of misogyny to the exercise of political power by a certain kind of leader in contemporary democracies. We distinguish this from sexism, the standard term used in empirical work in psychology.

Misogyny is globally prevalent and politically salient (Kaul, 2021). Various successful ELMA leaders (Bolsonaro, Modi, Duterte, Erdogan, and Trump) – notwithstanding all other differences of their personal identity in terms of religion or ethnicity, as they target their political opponents, sexual minorities, human rights activists, environmentalists, and others – have exhibited misogyny as a *common denominator* in their hate speech. And yet, there is much more work investigating the dynamics of masculinity than on the ways in which misogyny specifically functions as a psychological and as a political concept, both at individual and the macro political level. We depart from the typical understanding of misogyny as hatred and disgust toward women by men, it is far from straightforward in how it functions as part of psycho-political processes. Manne (2017) provided an account that disentangled misogyny from sexism, so that while both of these preserve patriarchal social orders, misogyny functions specifically as the law enforcement branch of patriarchy, that is, it is levelled against women who threaten dominant men.

Kaul (2021, p. 1624) has postulated that beyond attitudes held by men or women, and by men toward men, gender must be understood *as a relationship of power* in right-wing political projects in contemporary democracies. In this sense, misogyny (rather than femininity) is the polar

opposite of masculinity, since masculinity is preserved and upheld by the use of misogyny. Misogyny acts as a substrate upon which various different issues can be mapped by feminizing and devaluing them in order to oppose or attack them. As powerful prejudice-entrepreneurs, ELMA leaders specifically use misogyny as a political strategy to garner support and create consent, they delegitimize their opponents and also the issues they disagree with by labelling them as "feminine" or feminist, and thus inferior, threatening, or antinational (ibid.). This feminization works with both men and women who identify with the rhetoric to delegitimize and undermine a range of othered views, behaviors, and identities that are constructed as inferior. While hostile and benevolent sexism focus on attitudes held toward women, misogyny as conceptualized here, centers the idea of feminization (a dynamic process) as a prelude to devaluation. ELMA use of political rhetoric provides abundant examples of this, and their statements are also correlated to their policy positions on women's rights, environment, human rights, and so on (ibid). Misogynist speech by such leaders in the political domain is not mere words or a dispositional characteristic of particular individuals, it is a way the ELMAs "assert their superiority, build support, entrench their policies, intimidate or silence their critics, and regulate political perception" (ibid., p. 1625). As Tirrell (2019) has demonstrated, toxic misogyny in speech is a systemic act, a kind of coding, a normalization of hierarchies, an intimation of who can speak, when, and how, and who can be targeted for what.

Misogyny has, thus, been conceptualized as a handle to understand such right-wing projects that threaten democracy. The maintenance of a hierarchical order of masculinity and femininity, and the activities and policies associated with each of these two, can be internalized by both embodied men and embodied women, and this creates and sustains support for ELMA leaders. Misogyny, it has been argued, functions not simply as hatred or disgust for women, but as a way of accessing a gendered hierarchy whereby that which is labelled "feminine" is perceived as inferior, devalued, and is amenable to be attacked. In is in this sense that policies that involve "care" – for example, care for the environment through taking climate change seriously – are constructed and perceived as feminine. As the above work illustrates, an intertwining of the political and psychological dynamics is available in the ways in which misogyny enables the existence, coalescence, and activation of an authoritarian politics in contemporary democracies, which creates the support for anti-environment, anti-human rights, militarized, masculinist policies. Climate change denial is one point where these dynamics are available to be illuminated.

The fact that in national data in the US, both men and women increasingly hold similar beliefs on denial, alongside an increase in sexism in both men and women, would tie in well with the conceptual overview that we presented above whereby both men and women can be enrolled into the ELMA use of misogyny as political strategy by feminizing and devaluing concern for environment and other issues presented as threats that weaken the nation. We want to suggest that these prejudices are not only mobile, and therefore demand an understanding in terms of their dynamics, and also that they are exacerbated by political elites such as Trump. ELMAs like Trump can create support by using misogyny as the transmission link between different types of threats and thus benefit from the resultant "prejudice mobility" across the spectrum when concerns on environment, immigration, and more can be linked.

In the next part of this article, using a survey methodology and up-to-date questionnaires, we provide a concrete empirical underpinning to the recent analytical and theoretical work on the complexity of misogyny. Previous work has interrogated some aspects of these relationships with specific demographics. We add to such work in two ways. First, it has a bearing upon the link between the political rhetoric of ELMAs and the general public as understood in the United

States' context. Since the ELMAs have been electorally legitimated, and even when out of power, they marshal significant support amongst the electorate, it seems reasonable to infer that their tactic must be effective and must hold out some degree of appeal to the electorate. Here, we test whether the attitudes expressed in such political rhetoric reflect attitudes that are held by the general populace. Second, it provides a proof of concept for the resonance between misogynist and authoritarian beliefs, and the perception of issues such as care for the environment in gendered terms as feminine. In line with analytical accounts of misogyny, we find that climate change is seen as a less important concern by those who devalue women and support authoritarians.

Research aims and hypotheses

Here, we investigate whether the associations seen in analyses of political rhetoric are reflected in the attitudes of the wider population, focusing on links between misogyny, authoritarianism, and climate change denial. There is evidence that these three attitudes are closely interlinked. Yet, little research has considered the three simultaneously, in order to understand the overlap between them. In particular, we will examine the relative contributions of misogyny and authoritarianism to climate change denial and to more general concern for protecting the natural environment.

We hypothesize that climate change deniers will have higher authoritarianism scores than those who believe in climate change (Hypothesis 1) and also that climate change deniers will have higher misogynistic attitude scores than those who believe in climate change (Hypothesis 2). We predict that scores on a measure of right-wing authoritarianism will be positively correlated with scores on a measure of misogynistic attitudes (Hypothesis 3). We further predict that authoritarianism scores will be negatively associated with environmental concern (Hypothesis 4) and similarly that misogynistic attitude scores will be negatively associated with environmental concern (Hypothesis 5). All of these hypotheses were pre-registered.

We will also ask participants a number of additional questions about their political, gender, and environmental attitudes, and combinations thereof (for example, do these US participants support Donald Trump, indicating support for an ELMA leader; do they see care for the environment as a gendered issue; do they perceive environmental concern as related to other social justice issues). We advance no hypotheses about answers to these questions. They are exploratory in nature, and are intended to help interpret or contextualize the findings of our main analyses.

METHOD

This study was conducted online using the Qualtrics research platform, with paid participants drawn from the Prolific research panel. Ethical approval came from the University of Westminster Liberal Arts and Sciences College Research and Knowledge Exchange Ethics Committee. Hypotheses and primary analyses were preregistered.[1] Analysis was conducted using SPSS 25 for

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[1] The work reported here was pre-registered. The preregistration document can be seen at https://doi.org/10.17605/OSF.IO/PJB86. All data, analysis syntax, and materials can be seen at https://osf.io/ycnmh/.

Mac. We have reported all measures, conditions, and data exclusions. Determination of sample size is described in the Participants section below.

Design

The study adopted a between-groups design, with grouping variables of "belief in climate change" and self-reported gender. For belief in climate change, the comparison was between individuals who self-reported as believing in climate change (believers), and those who did not (deniers). Participants in the "believer" condition were sampled from individuals who answered "yes" to the question "Do you believe in climate change?" when signing up for the Prolific research panel. Participants in the "denier" condition were sampled from Individuals who answered "no" to the question "Do you believe in climate change?" when registering on the Prolific platform.

Materials

Misogynistic attitudes were measured using the Misogyny Scale (Rottweiler & Gill, 2021). This is a 10-item questionnaire which requires participants to respond to statements such as "Women seek to gain power by getting control over men" on a 7-point scale anchored at "Strongly Disagree" and "Strongly Agree." The scale is conceptualized as measuring misogynistic attitudes related to the manipulative and exploitative nature of women, distrust of women, and devaluation of women. The total score on the scale was used as an overall measure of misogynistic attitudes. Higher scores indicate a higher level of misogyny. Men and older age groups report more misogynistic attitudes than women and younger groups (Rottweiler & Gill, 2021).

Authoritarian attitudes were measured using the Very Short Authoritarianism (VSA) Scale (Bizumic & Duckitt, 2018). This is a six-item measure that addresses the same core constructs of right-wing authoritarianism as established scales, but with fewer items and clearer question wording. It requires participants to respond to statements such as "What our country needs most is discipline, with everyone following our leaders in unity" on a 9-point scale anchored at "Very strongly disagree" and "Very strongly agree." Higher total scores indicate higher levels of authoritarian attitudes.

Environmental concern[2] was measured using the EIA-24-P, the Preservation subscale of the Environmental Attitudes Inventory-24 (Milfont & Duckitt, 2010). This measures attitudes toward protecting the natural environment using 14 items such as "I would like to join and actively participate in an environmentalist group" and "Whenever possible I try to save natural resources." Participants respond on a 7-point scale anchored at "Disagree strongly" and "Agree strongly." Milfont and Duckitt (2010, p.81) describe the Preservation subscale as reflecting a "general belief that priority should be given to preserving nature and the diversity of natural species in its original natural state, and protecting it from human use and alteration." The constructs that make up this subscale encompass enjoyment of nature; support for interventionist conservation policies; readiness to support environmental movement activism; belief in environmental fragility as a result of human activity; higher interest in personal conservation behavior, ecocentric concern (concern over environmental damage) and support for population growth policies. We reasoned that people with higher scores on this measure would have higher levels of concern for protecting the natural

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[2] Throughout, we use the term "environmental concern" to mean care for the environment, rather than "concern" specifically in the sense of "worrying about it."

environment, which is clearly threatened by climate change. Therefore, we used the total score on this subscale as an index of overall concern with protecting the environment, with higher scores indicating higher levels of care for the environment.

Participants also responded to several demographic items (summarized in Table 1) and a number of additional questions included for exploratory purposes. These were intended to help us contextualize any findings in terms of broader political and gender-related attitudes (or example, probing beliefs about gender differences in environmental concern). All were posed as statements with "yes" or "no" response options. The full text of each question is shown in Table 4.

Procedure

Participants first saw a page with information about the study and indicated their consent to proceed. They then answered demographic questions: gender, country in which they were located; highest education level completed; age, and occupation. They were also asked "Do you believe in climate change? (no/yes)" to check whether views might have changed since they answered this question when registering with Prolific. Participants then completed the EIA-24-P, the VSA scale, and the Misogyny Scale, before being asked a selection of exploratory questions. Finally, they were asked to re-confirm consent before proceeding to a debriefing page.

Data screening and processing

As pre-registered, several checks were conducted to assure data quality, with problematic responses being deleted. Of the initial 400 data submissions, three declined consent. Eighty-three cases[3] were deleted due to zero inter-item variance on one of the three questionnaire measures (potentially indicating an inauthentic response strategy known as "straightlining"). Following these exclusions, 314 participants remained.

Participants

Participants drawn from the Prolific research panel were paid the US equivalent of £1.10 GBP each. All participants were required to be located in the US. Data were collected in two waves using Prolific's custom screening criteria, one sampling from individuals who had indicated in the background information they provided to Prolific that they believed in climate change, and one sampling from individuals who had indicated they did not.

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[3] 80 participants had zero-variance responses on the Misogyny Scale. Rather than inauthentic responding, this could actually indicate strong disagreement with all of the misogynistic statements, which might well be expected to elicit strong views. Indeed, the great majority – 69 - of these zero-variance cases had responded with a "1" to all items, indicating strong disagreement. Notably the majority of these (41) were women. Only 11 had responded with score patterns more typical of "straightlining" (e.g. "5" for each response). Based on our pre-registered criteria, all these 80 participants were excluded. This is a conservative approach that will have excluded a number of genuine participants. As a precautionary check, we re-ran the main analysis with these 80 participants included. The pattern of results was unchanged, with the conclusions from all the hypothesis tests remaining the same.

TABLE 1 Demographic data.

Do you believe in climate change? (asked at prolific signup)	
No	172 (54.8%)
Yes	142 (45.2%)
Sex	
Men	164 (52.2%)
Women	133 (45.9%)
Other	4 (1.3%)
Prefer not to say	2 (.6%)
Highest level of education completed	
Less than high school	3 (1.0%)
High school/secondary school	45 (14.3%)
Some post-school College or University education	84 (26.8%)
College or University undergraduate degree	132 (42.0%)
Master's degree	44 (14.0%)
Doctoral degree or higher	6 (1.9%)
Main current occupational status	
Employed for wages	192 (61.1%)
Self-employed	42 (13.4%)
Unemployed but looking for work	20 (6.4%)
Home-maker	13 (4.1%)
Student	10 (3.2%)
Retired	28 (8.9%)
Unable to work for health or other reasons	9 (2.9%)

Note: Percentages may not sum exactly to 100% due to rounding errors. $N = 314$.

The sample size was planned using G Power 3.1 (Faul et al., 2007). Independent power calculations were run for each of the planned analyses, each determining the sample size required to detect the minimum "Recommended Minimum Practical Effect Size" suggested by Ferguson (2009) in a two-tailed test with 80% power and alpha = .05. The largest sample size was required for the multiple regression testing hypotheses 4 and 5 ($N = 266$ to detect $R^2 = .04$). In order to exceed this sample size, the target for recruitment was set at $N = 400$, equally balanced across gender and climate change believer/denier conditions. Following exclusion of problematic data, the remaining sample size (314) exceeded the required threshold. Participant demographics are shown in Table 1. Overall, sample members are typically middle-aged, well-educated and in employment. Table 2

RESULTS

Tests of pre-registered hypotheses

The pre-registered analysis for Hypothesis 1, that climate change deniers would have higher authoritarianism scores than those who believe in climate change, was an independent-samples *t*-test. This showed that individuals who had reported to Prolific they did not believe in climate

TABLE 2 Descriptive statistics

	N	M	SD	α[a]	Range Potential	Actual	Skew	Kurtosis
Age	314	43.10	14.29		18+	19–76	.31	−1.04
Misogyny scale	314	29.88	14.52	.94	10–70	11–69	.58	−.60
VSA authoritarianism	312[b]	28.21	11.24	.80	6–54	6–54	.13	−.77
EIA-24-P								
Environmental concern	314	60.99	16.31	.89	14–98	14–98	−.16	−.38

[a]Cronbach's alpha, internal consistency.
[b]Two participants did not answer all items on the VSA.

change ($M = 32.77$, SD = 10.66) had statistically significantly higher authoritarianism scores ($t(310) = 8.81$, $p<.001$, Cohen's $d = 1.01$) than those who did ($M = 22.67$, SD = 9.30) with a large effect size.

The pre-registered analysis for Hypothesis 2, that climate change deniers will have higher misogynistic attitude scores than those who believe in climate change, was a two-way ANCOVA evaluating the effect of climate change belief and gender on misogyny scores while controlling for age (both age and gender are known to influence scores on the scale). There was a statistically significant effect of climate change belief ($F(1303) = 48.58$, $p < .001$, partial $\eta^2 = .14$) with those who denied climate change having higher misogyny scores (estimated marginal mean = 35.18) than those who believed in it (estimated marginal mean = 23.69). There was also a smaller but statistically significant effect of gender ($F(1303) = 5.10$, $p = .025$, partial $\eta^2 = .017$) with men having higher misogyny scores (estimated marginal mean = 31.19) than women (estimated marginal mean = 27.68). Age as a covariate was not statistically significant ($F(1303) = 3.31$, $p = .07$, partial $\eta^2 = .011$), nor was the interaction between condition and gender ($F(1303) = .001$, $p = .98$, partial $\eta^2 = .00$).

Hypothesis 3, that scores on a measure of right-wing authoritarianism will be positively correlated with scores on a measure of misogynistic attitudes, was tested with a Pearson's correlation. This showed that there was a statistically significant relationship between authoritarianism and misogyny scores, with higher levels of authoritarianism being associated with greater endorsement of misogynistic attitudes ($r = .24$, $p < .001$, $N = 312$).

Hypotheses 4 and 5, that authoritarianism scores and misogynistic attitude scores respectively would be negatively associated with environmental concern, were jointly tested using a standard multiple regression with simultaneous entry of all predictors. Gender was also included as a predictor as it is known to be associated with both Misogyny Scale and EIA-24-P scores (Milfont & Duckitt, 2010; Rottweiler & Gill, 2021). The analysis, summarized in Table 3, indicated that this set of variables predicted around 20% of variance in concern for protecting the environment (adjusted $R^2 = .20$). As hypothesized, higher levels of both misogyny and authoritarianism were associated with lower levels of environmental concern. Collinearity statistics (Tolerance and VIF) did not indicate any issues with multicollinearity, and the Durbin-Watson statistic (2.11) did not indicate a problem with independence of residuals.

Methodological checks

A series of further pre-registered statistical tests were also performed as methodological checks. First, as a check on construct validity, the EIA-24-P scores of climate change deniers and

TABLE 3 Effects of authoritarianism, misogyny, and gender on environmental protection attitudes.

	B	SE	b*	t	p	Tolerance	VIF
Constant	83.95	3.58		23.46	<.001		
VSA authoritarianism	−.33	.08	−.22	−4.20	<.001	.93	1.07
Misogyny scale	−.39	.06	−.35	−6.56	<.001	.93	1.07
Gender ($M = 1$, F-2)	−1.43	1.69	−.04	−.84	.40	.97	1.03
R^2			.21				
Adjusted R^2			.20				
F			26.30		<.001		

believers were compared using an independent samples t-test. This confirmed ($t(312) = 13.96$, $p < .001$, Cohen's $d = 1.59$) that people who had indicated when registering on Prolific that they believed in climate change had statistically significantly higher levels of concern for protecting the environment ($M = 72.11$, SD $= 12.00$) than those who did not believe in climate change ($M = 51.82$, SD $= 13.45$).

Next, participants' current belief in climate change was considered. Because their views might have changed since registering on Prolific, they were also asked in the questionnaire whether they believed in climate change (yes/no). While there was a strong association between beliefs at sign-up and currently reported belief, $\chi^2(1) = 170.90$, $p < .001$, 44/172 people in the "Denier" condition now said that they believed in climate change, while 2/142 people in the "Believer" condition now said they did not. Accordingly, the tests of hypotheses 1 and 2 were repeated using current belief as the independent variable rather than belief at the point of registration on Prolific. The pattern of results was the same as in the previous analysis.

Given that there are gender differences in levels of misogynistic attitudes, and links between gender and environmental attitudes, a valid question is whether the effects observed here occur within as well as between genders. Accordingly, the main analyses that did not already control for gender (testing hypotheses 1 and 3) were repeated for men only and for women only. These analyses indicated that climate change deniers had statistically significantly higher authoritarianism scores, irrespective of whether they were men ($t(161) = 5.30$, $p < .001$, Cohen's $d = .83$) or women ($t(141) = 7.04$, $p < .001$, Cohen's $d = 1.21$). Furthermore, misogyny scores were positively correlated with authoritarian attitudes for both men ($r = .25$, $N = 163$, $p = .001$) and for women ($r = .23$, $N = 143$, $p = .006$).

Exploratory analyses

We conducted some exploratory analyses using several additional forced-choice questions included in the questionnaire. Table 4 shows the text of each question, and the numbers of participants answering "yes" or "no" to each.

The χ^2 tests of independence summarized in Table 4 essentially tell us whether the pattern of yes/no responses to each question are the same for climate change deniers as for believers. To control for the likelihood of false positive (Type 1) errors, a Bonferroni correction was used to adjust the alpha level for these multiple exploratory analyses. Given that 11 comparisons were made, an alpha level of .0045 was used as the threshold for statistical significance.

The item "Environmental concerns are connected to other social justice concerns" was of particular interest. This was endorsed much more strongly by climate change believers (70% agreeing) than deniers (34% agreeing). To explore this further, a logistic regression was performed examining the effect of misogyny and authoritarianism scores on this item. As summarized in Table 5, this indicated that both higher misogyny and higher authoritarianism increased the likelihood of disagreeing that environmental concerns were connected to other social justice issues.

Finally, we compared the environmental protection, authoritarianism and misogyny scores of individuals who expressed support for Trump winning in the 2024 election with those who did not (Table 6). This showed that Trump supporters had statistically significantly higher misogyny and authoritarianism scores, and were statistically significantly less concerned with environmental protection, with large effect sizes.

TABLE 4 Breakdown of exploratory questions across climate change deniers and believers

Question text	Full sample (N = 314)		Deniers (n = 172)		Believers (n = 142)		$\chi^2(1)$	p
	Yes	No	Yes	No	Yes	No		
People of my gender have a greater responsibility to care for the environment and to teach the next generation to care for the environment	126 (40.1%)	188 (58.9%)	59 (34%)	113 (66%)	67 (47%)	75 (53%)	5.37	.020
There are many other environmental concerns more important than climate change	184 (58.6%)	130 (41.4%)	155 (90%)	17 (10%)	29 (20%)	113 (80%)	155.73*	<.001
Environmental concerns are connected to other social justice concerns	138 (50.3%)	156 (49.7%)	58 (34%)	114 (66%)	100 (70%)	42 (30%)	41.91*	<.001
Climate change is not as much of a risk for my country as it is for developing countries	119 (37.9%)	195 (62.1%)	91 (53%)	81 (47%)	28 (20%)	114 (80%)	36.40*	<.001
Women care more for environmental preservation than men	119 (37.9%)	195 (62.1%)	56 (33%)	116 (67%)	63 (44%)	79 (56%)	4.61	.032
Women naturally care more for environmental preservation (or for the environment) than men	118 (37.6%)	196 (62.4%)	57 (33%)	115 (67%)	61 (43%)	81 (57%)	3.20	.074
Women are naturally more caring	208 (66.2%)	106 (33.8%)	105 (61%)	67 (39%)	103 (73%)	39 (37%)	4.59	.032
Those who care for the environment are generally more feminine	98 (31.2%)	216 (68.8%)	58 (34%)	114 (66%)	40 (28%)	102 (72%)	1.11	.291
We need strong leaders to care for the problem of climate change even if they are authoritarian	92 (29.3%)	222 (70.7%)	24 (14%)	148 (86%)	68 (48%)	74 (52%)	43.24*	<.001
I would like Trump to win in 2024	152 (48.4%)	162 (51.6%)	134 (78%)	38 (22%)	18 (13%)	124 (87%)	132.52*	<.001
Female leaders care for environmental concerns but they cannot solve complex problems like global climate change as well as a strong male leader can	44 (14.0%)	270 (86.0%)	33 (19%)	139 (81%)	11 (8%)	131 (92%)	8.45*	.004

*$p < .0045$ (Bonferroni-adjusted alpha).

TABLE 5 Logistic regression: Effects of misogyny an authoritarianism on agreement that environmental concerns are connected to other social justice concerns

	B	S.E.	Wald	df	p	Exp(B)	95% C.I. for EXP(B)
Misogyny scale	.03	.01	9.15	1	.002	1.03	[1.01, 1.04]
VSA authoritarianism	.06	.01	23.57	1	<.001	1.06	[1.03, 1.08]
Constant	−2.41	.41	34.93	1	<.001	.09	

Note: N = 312. "Yes" coded as 1, "No" coded as 2.

TABLE 6 Misogyny, authoritarianism, and environmental protection scores of participants who did and did not support Trump

| | I would like Trump to win in 2024 | | | | | | | | | |
| | Yes | | | No | | | | | | |
	N	*M*	SD	*N*	*M*	SD	*t*	*df*	*p*	Cohen's *d*
VSA authoritarianism	151	33.34	10.71	161	23.39	9.48	8.7	310	<.001	.98
EIA-24-P environmental concern	152	52.01	14.01	162	69.43	13.61	−11.18	312	<.001	1.26
Misogyny scale	152	35.76	13.46	162	24.34	13.29	7.55	312	<.001	.85

DISCUSSION

Our hypotheses suggested that climate change deniers are also believers in authoritarianism and misogyny, that right-wing authoritarianism and misogyny are correlated, and that authoritarianism and misogyny are opposed to environmental concerns. Climate change beliefs are, thus, associated with both authoritarianism and misogyny. While more authoritarian people are more misogynistic, the findings of the regression analysis (Table 3) indicate that both authoritarianism and misogyny make an independent contribution to environmental attitudes. As noted previously, there is both empirical evidence and a popular stereotype that women are more concerned with environmental protection than men. The analysis summarized in Table 3 suggests that it is not actually biological sex that is the key variable here, but rather misogyny. From this perspective, past findings that women are more pro-environmental than men can be explained by the fact that men are higher on misogyny. In terms of mechanisms, one potential explanation is the fact that environmental concern is seen as a feminine preoccupation, and thus disdained by misogynists. Alternately, misogyny may simply be a good marker for a bundle of related attitudes which include dismissal of environmental concerns. In either scenario, if gender functions as a hierarchy so that attributes associated with femininity are perceived as inferior, and misogyny and authoritarianism are positively correlated, and misogyny helps authoritarianism as a political strategy, then any policy on greater environmental justice would be linked to caring for the environment and being concerned about climate change, and therefore be seen as less important by those who support ELMA style authoritarians.

Our findings replicate and extend work that demonstrates links between sexist beliefs and climate skepticism. For example, Benegal and Holman (2021) considered the relationship between sexism and climate change denial in nationally-representative datasets from 2012 to 2018, and report similar findings to our own, albeit with less focus on authoritarianism. Beyond just belief in anthropogenic climate change, we surveyed participants about attitudes toward protecting the natural environment in general. We also included a range of exploratory questions to probe beliefs about whether women are seen to be more caring and whether perceptions of caring for the environment are feminine. We specifically included a question about the support for Trump in forthcoming U.S. elections in 2024 to confirm that the right-wing authoritarians in the survey also identify themselves clearly as Trumpists, since Trump is an archetypal ELMA leader. Our analysis (Table 6) clearly indicated that *Trump supporters were more misogynist, more authoritarian, and less concerned with the environment*. For this ELMA leader at least, support is clearly associated with these attitudes. Finally, we also enquired into the perception of female leaders. It is salient that the deniers overwhelmingly support Trump for 2024, that both deniers and believers think that women are naturally more caring, that the believers are able to see the interconnexions between environment and other social justice concerns, and also that the deniers specifically see climate change as an unimportant environmental concern in contrast to the believers.

An interesting set of findings from the exploratory questions that merits further research is as follows. In view of existing work associating women with care, we might see how a majority of climate change deniers and climate change believers both agreed with the view that "women are naturally more caring," but both groups also disagreed that "those who care for the environment are generally more feminine." Further, a majority of climate change deniers (but not the climate change believers) also disagreed with the views that "women care more for environmental preservation than men," or that "women naturally care more for environmental preservation or for the environment than men" (cf. Brough et al., 2016; Desrochers et al., 2019).

Since a majority of climate deniers held that "many other environmental concerns more important than climate change" and that "environmental concerns are not connected to other social justice concerns" (as opposed to the majority of climate change believers who held that climate change is important and is connected to other social justice concerns), it is likely that the relationship between gender and environmental attitude for climate change believers is not entirely identical to the relationship between gender and climate change for climate deniers. Climate change is a polarizing issue that deniers view as socially unimportant and irrelevant. We also suggest further work on how "women," "caring," "femininity," and "being feminine" function in the public discourse on environment and whether this differs in the specific environmental context of climate change. As mentioned above, misogyny may function not through the understanding of attitudes of biological men and women but via associations of "strong" and "weak" attributes via the functioning of gender as power. Therefore, for climate deniers specifically, women may naturally be caring but in their view do not necessarily care more for the environment than men, and those who care for the environment may not necessarily be more feminine. This may be because the association of feminine here for those who abide by traditional gendered structures is not a negative one. This feminine is different from femini*zation* as part of a political rhetoric that associates it with weak or threatening, and thus is a prelude to devaluation and opposition.

Even as we outline areas of further enquiry, we would like to acknowledge a few specificities of the current study. For instance, we scrutinize right-wing (and not left-wing) authoritarian beliefs. As a consequence of the methodology used to obtain data, we rely upon the individuals to self-report their beliefs through answering the survey questions. Moreover, while the general arguments in the theoretical literature cover various countries, our results have been obtained specifically from the United States. In countries where ELMA leaders are prominent, we would expect to find similar dynamics and we are currently engaged in developing extensions of the work across different countries.

We do see the same patterns in everyday people's attitudes as seen in political rhetoric. An interesting question that our study does not fully answer relates to the direction of causality from the political rhetoric of the ELMA politicians and the attitudes of their followers. We surmise that the answer is more dynamic than linear here, since gender hierarchies are persistent and ingrained, yet at the same time, gender norms do change across time periods and national contexts. Because different issues are seen as feminine at different times, there is a clear role of the constructedness of such associations. It is noteworthy that ELMA leaders, despite their claims to masculinist hyper-nationalism, are not necessarily the ones who go to "war with the enemy" (think of the position of Trump on Russia at times of heightened crisis); they choose to use preexisting misogyny as a tool in a politically strategic manner to construct support for the policies they wish to promote, labelling them as right, strong, and necessary, while castigating the alternatives (whether typically masculinist or not) as "feminine," weak, and unwarranted. This illustrates both the prejudice-mobility and the dynamic nature of the interplay between the cross-sectional correlations of opinions and the longitudinal changes over time.

The rhetoric has a purpose and the purpose is to persuade. The success of specific ELMA leaders and their political projects in specific contexts testifies to this. This is also borne out by the literature on public policy more widely. For example, Koch (1998) found that citizens' preferences on government supplied health insurance changed in the early 1990s in line with elite attempts to shape public opinion to their advantage, and that these changes were most dramatic amongst those whose political awareness was low or medium. The role of rhetoric and political communication has been attended to in psychology (see Pettersson et al., 2022), and there are long-standing

arguments for political science o take into account the significance of political rhetoric as a way of understanding political and policy change, and the role of ideas in this (see Finlayson, 2004).

Focusing on Trump in particular, a recent study offered evidence of Trump's antidemocratic rhetoric in his tweets as undermining confidence in democratic process for his supporters (Clayton et al., 2021). Specific studies concerning sexism and political behavior from the United States also find the links between sexist attitudes and internalized misogyny with political affiliation and voting behavior. Dehlin and Galliher (2019) reported that young female participants who voted for Clinton/Kane reported lower levels of internalized misogyny when compared to those voted for Trump/Pence. The reason that political leaders contest in the public sphere is to win the argument and the power, and it is reasonable to imagine that they both construct and reflect public attitudes. In this sense, misogyny is a valuable political strategy to create strong beliefs on other issues (such as the environment) by feminizing as a prelude to devaluation.

The fact that there is a coherent set of beliefs in an established Western democracy such as the United States about a consonance between women being unimportant, climate change being unimportant, and right-wing authoritarianism being acceptable, should be cause for grave concern to say the least. In this sense, our findings that canvass the psychological beliefs of the general public tie in very well with multiple ongoing media, policy, and political concerns about the immense strain on democracy in the contemporary United States. These range from attacks on women's rights (for instance, the removal of Roe versus Wade protections which significantly increase the health and social costs for women in the United States) to the erosion of basic democratic values by an ELMA like Trump in his words and actions. Environmental attitudes, and climate change denial, appear to be linked to these other strains: as we report above, climate change believers were much more likely to agree that environmental concerns were connected to other social justice issues than were deniers. As shown in Table 5, both authoritarianism and misogyny separately contribute to denial that environmental and other social justice concerns are related: authoritarians and misogynists may be more likely to compartmentalize these matters.

The clearly partisan nature of federal policy action on environment – specifically the reversal of any policies to protect or care for the environment or climate change – is remarkably evident. The Trump administration revoked Obama term policies and executive orders (see Shi & Moser, 2021, p. 3) such as *Preparing the United States for the Impacts of Climate Change* (2013), *Climate Action Plan* (2013), *Planning for Federal Sustainability in the Next Decade* (2015), *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input* (2015), *FEMA's Climate Change Adaptation Policy* requiring federal and state programs and policies to account for climate impacts (2012, 2015). These were all revoked or amended in the period from 2017 to 2020 under Trump. What is also evident is that this political program is approved by climate change deniers, who we found were strikingly more likely to indicate they would like Trump to win in 2024 than were climate change believers (Table 4).

CONCLUSION

Connecting the political rhetoric of ELMA leaders with the opinions of the general public, this article joins the theoretical and analytical literature with an empirical methodology to provide support for a preliminary understanding of the specific ways in which public understanding on social issues (such as views on climate change, in relation to the environment) is the key

to the transmission between misogyny in action and authoritarians in power in contemporary democracies.

Misogyny allows a coherent thread of support on policy issues across demographics for right-wing authoritarian leaders in democracies. The gender hierarchy of values allows a mapping of other concerns on it. The links between misogyny, authoritarianism, and climate change denial are not straightforward and are generally only partially illuminated, but need to be seen as salient and more comprehensively understood. Our investigation is the first to bring misogyny, authoritarianism, and climate beliefs together. We draw upon existing arguments that misogyny is not just about a hatred of women, but about the functioning of gender as power. This is crucial because it allows for the understanding that women can also support misogyny and play important roles in the political projects of ELMA strongmen even as these projects negatively impact women (for example through effects such as prolonged recession or environmental disasters, which disproportionately disadvantage women). The environmental policies of leaders like Trump, including on climate change, create present and intergenerational insecurity including for their supporters, and yet they manufacture consent for such policies from these very people, women and men both. Misogyny in the sense of feminization as devaluation is part of the dynamic through which they obtain and sustain support for anti-environmental (and other militarized masculinist anti-indigenous and anti-human rights) policies.

In our conclusion, we would like to briefly highlight specific implications of this work, as they relate to security and policy. First, there are growing concerns about the future of democracy in the United States, and the threats to it from violent right-wing extremists who support Trump and abide by his political rhetoric. These people are not just partisan political actors in a functioning democracy but prepared to mount direct insurrections against democratic institutions. Quite importantly, these men and women subscribe to a coherent set of beliefs on a range of issues that map well onto support for authoritarianism and anti-feminism; they support electoral legitimation for misogynist authoritarians like Trump, and a conceptualization of misogyny as political strategy that includes feminization as devaluation works for them. We expect that other concerns that are linked to care, and therefore available to be feminized in the same way as concern for the environment, will elicit similar responses from them. This adds up to a systematic effect at the very macro level whereby democratic principles are threatened and a range of security concerns are synergistically aggravated; the increasing insecurities relates to direct violence but also increased insecurity in human terms through support for policies leading to removal of protections for women, marginalized and minority Americans, and environmental protections.

Tackling climate change is thus part of a portfolio that includes seriously attending to the working of misogyny and gender hierarchies on the one hand and the authoritarian challenge to democracy on the other. We might emphasize this with a simple question – Why should misogynists not care for the environment? The environment, for instance through the impact of climate change, affects everyone and yet we can see that climate change denialists are also misogynists. Misogyny is not merely about a hatred for women; it functions usefully for authoritarians through feminization as devaluation to undermine opposition. Environmental messaging and climate change thus also requires subverting of structures of misogyny. It is paradoxical how the ELMA leaders promise security yet make for ever greater multidimensional insecurity. Urgent political and planetary concerns are at stake in how we confront the threats to democracy and to the environment. Our research reveals that there are interlocking insecurity generating mechanisms that are embedded in the analytical links between misogyny and authoritarianism that deserve greater recognition and action.

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