




# The psychological causes and societal consequences of authoritarianism

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## Abstract

Over the past two decades, citizens' political rights and civil liberties have declined globally. Psychological science can play an instrumental role in both explaining and combating the authoritarian impulses that underlie these attacks on personal autonomy. In this Review, we describe the psychological processes and situational factors that foster authoritarianism, as well as the societal consequences of its apparent resurgence within the general population. First, we summarize the dual process motivational model of ideology and prejudice, which suggests that viewing the world as a dangerous, but not necessarily competitive, place plants the psychological seeds of authoritarianism. Next, we discuss the evolutionary, genetic, personality and developmental antecedents to authoritarianism and explain how contextual threats to safety and security activate authoritarian predispositions. After examining the harmful consequences of authoritarianism for intergroup relations and broader societal attitudes, we discuss the need to expand the ideological boundaries of authoritarianism and encourage future research to investigate both right-wing and left-wing variants of authoritarianism.

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## Introduction

At the end of 2021, just 20.3% of humanity lived in a 'free' nation, marking the 16th consecutive annual global decline in citizens' political rights and civil liberties<sup>1</sup>. The resurgence of authoritarianism implicated in this worrying trend also underlies some of the most divisive moments in recent history, including Donald Trump's successful 2016 US presidential election bid<sup>2–5</sup>, the UK's withdrawal from the European Union<sup>6</sup> and the rebirth of far-right political parties in Western Europe<sup>7</sup>. In addition to motivating these – and other – events, the re-emergence of authoritarianism in the general public weakens democratic institutions<sup>8,9</sup> and sows societal division by fostering out-group hostility<sup>10,11</sup>, anti-immigration sentiment<sup>12,13</sup> and a general intolerance of out-groups<sup>14–16</sup>. Thus, authoritarian impulses threaten people's personal freedoms, as well as the democratic foundations upon which these rights are enshrined.

In this Review, we synthesize the ever-growing literature on authoritarianism. First, we introduce the dual process motivational model of ideology and prejudice (hereafter referred to as the dual process motivational model), which suggests that only certain types of worldviews and corresponding threats foster authoritarianism. We then discuss the evolutionary foundations of authoritarianism, as well as its biological, cognitive, personality and situational antecedents. Next, we highlight the impact of authoritarianism on intergroup attitudes (for example, prejudices towards distinct groups), socio-political violence, support for illiberal policies and conspiracy ideation. We then discuss the need to expand the conceptual boundaries of authoritarianism by developing a descriptive taxonomy that generalizes across time, political contexts and ideological proclivities. We conclude with suggestions for future research directions.

Debate exists over the core psychological components of authoritarianism. Some conceptualize authoritarianism as the combined tendency to obey authorities (authoritarian submission), punish rule breakers (authoritarian aggression) and conform to tradition (conventionalism)<sup>17–19</sup>. Others view the desire for conformity over personal autonomy as the core feature of authoritarianism<sup>15,20</sup>. Despite these differences in focus, most agree that authoritarianism involves obeying high-status leaders from advantaged groups with the power to punish marginalized groups who threaten the unanimity of in-group values. Consequently, research typically consigns authoritarianism to the political right<sup>17,18,21</sup>. Nevertheless, work in the past 20 years demonstrates that left-wing values can also be incorporated into the operationalization of authoritarianism<sup>22–26</sup>. Here, we take an integrative approach and argue that, at its core, authoritarianism entails the desire for group conformity at the expense of personal autonomy, accompanied by a deference to in-group authority figures and a desire to punish those who violate cherished in-group norms – regardless of whether these in-group norms reflect traditional or progressive values. We thereby acknowledge that authoritarianism can exist on both the political right and left, but recognize that it is especially prevalent among adherents of right-wing ideologies. Because we are necessarily limited by extant work in the field, our Review focuses predominately (but not exclusively) on right-wing authoritarianism.

## The dual process motivational model

To appreciate the complexity and far-reaching consequences of right-wing authoritarianism, one must first examine its origins and distinguish it from related drivers of anti-democratic views. Accordingly, the dual process motivational model was developed inductively to explain the psychological processes underlying two related, albeit

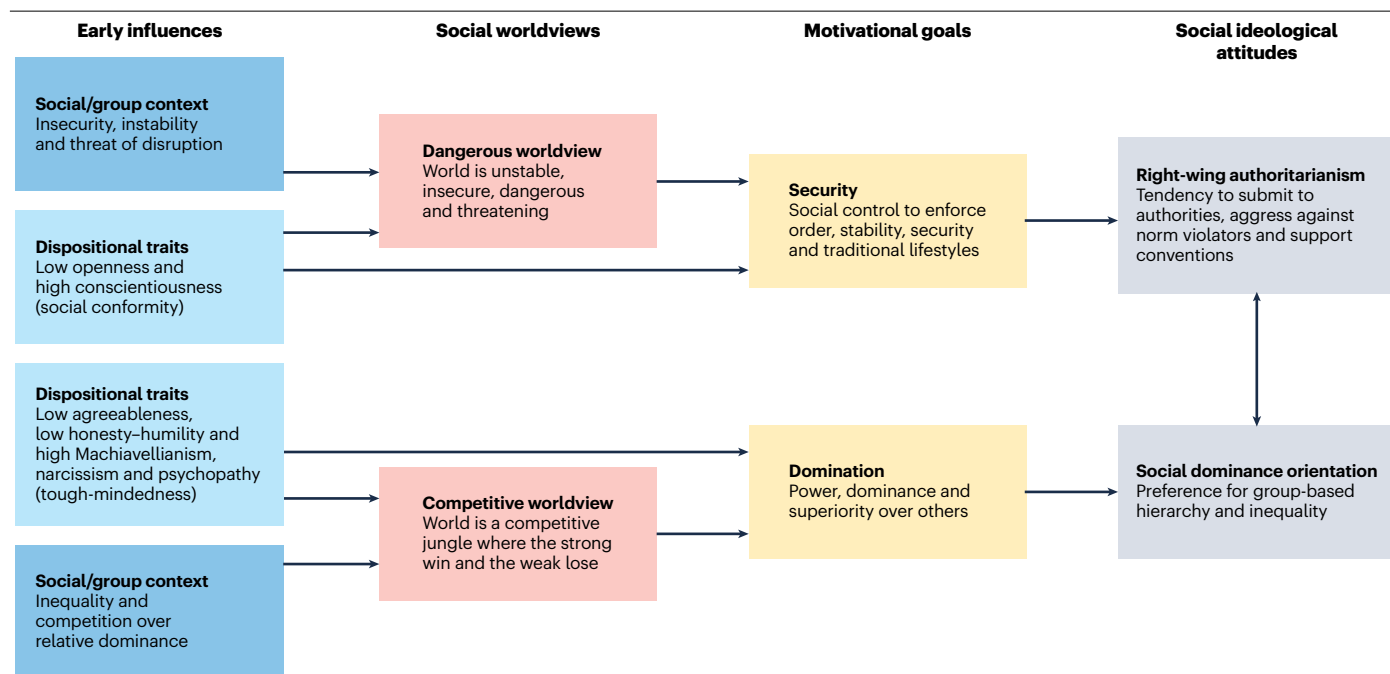
fundamentally distinct, social ideological attitudes that predict myriad societal outcomes<sup>27</sup>: right-wing authoritarianism and social dominance orientation. Right-wing authoritarianism captures a desire for conformity over personal autonomy through the combined tendency to submit to authorities (authoritarian submission), aggress against norm violators (authoritarian aggression) and support conventions (traditionalism)<sup>18</sup>. By contrast, social dominance orientation indexes one's preference for group-based hierarchy<sup>28</sup>. Although both right-wing authoritarianism and social dominance orientation predict anti-democratic outcomes (such as support for persecuting immigrants<sup>29</sup> and restricting people's civil rights during war<sup>30</sup>), these two social ideological attitudes arise from distinct dispositional traits that foster two different sets of schema-based social worldviews and ensuing motivational values (Fig. 1).

According to the dual process motivational model<sup>31</sup>, right-wing authoritarianism originates from the belief that the social world is an inherently dangerous, unstable, unpredictable and threatening place. This dangerous worldview activates the motivational goal of ensuring collective security and stability through the coercive maintenance of the traditional social order. A dangerous worldview is acquired through early experience and socialization, and is influenced by personality traits that predispose an individual to social conformity<sup>31</sup>, such as low openness to experience and high conscientiousness<sup>32</sup>. The predisposition towards social conformity leads people to identify with the existing social order and to focus on threats to the status quo. In addition to the indirect effects these personality traits have on right-wing authoritarianism through increased threat sensitivity, traits that foster social conformity directly influence right-wing authoritarianism by predisposing people to prefer order, structure, stability and security<sup>31</sup>.

Whereas right-wing authoritarianism is thought to arise from a dangerous worldview, social dominance orientation stems from the belief that the social world is a competitive jungle where the strong and able win, and the weak and feeble lose<sup>31</sup>. This competitive worldview makes the motivational goals of power, dominance and superiority over others chronically salient. Critically, a competitive worldview originates from exposure to, and socialization in, environments perceived as high in inequality and in-group dominance, as these contexts foster competition over both resources and relative dominance within the broader social hierarchy. Dispositional tough-mindedness<sup>31</sup> – a multifaceted trait comprising low honesty–humility/agreeableness<sup>32</sup>, as well as the 'dark triad' of high narcissism, Machiavellianism and psychopathy<sup>33</sup> – also directly fosters a competitive worldview.

The dual process motivational model proposes that dangerous and competitive worldviews operate as focal heuristics that shape how people perceive, interpret and respond to their environments<sup>31</sup>. These two worldviews are also crucial in transforming social value preferences (such as conventional social and economic conservatism) into more explicitly coercive and extreme attitudes. Given their origins in personality and long-term socialization processes<sup>31</sup>, dangerous and competitive worldviews are relatively stable (but are more malleable than traits). Moreover, similar to personality traits, these social worldviews can change markedly in response to relevant situational cues and generate corresponding changes in right-wing authoritarianism and social dominance orientation. Specifically, perceived threats to the social order should activate right-wing authoritarianism, whereas competitive threats should increase social dominance orientation<sup>34</sup>.

Correlational, experimental, longitudinal and causal modelling research corroborates the dual process motivational model's main



**Fig. 1 | The dual process motivational model.** According to the dual process motivational model, right-wing authoritarianism and social dominance orientation have unique psychological bases.

predictions that right-wing authoritarianism and social dominance orientation emerge from separate developmental trajectories involving different dispositional traits and social worldviews<sup>27,31</sup>. For example, a meta-analysis of 46 studies with a total of ~13,000 participants found that endorsement of a dangerous worldview has a moderate-sized positive correlation with right-wing authoritarianism ( $r = 0.37$ ) and only correlates weakly with social dominance orientation ( $r = 0.08$ )<sup>35</sup>. Conversely, endorsement of a competitive worldview has a moderate-to-strong positive correlation with social dominance orientation ( $r = 0.55$ ) and only correlates weakly with right-wing authoritarianism ( $r = 0.11$ )<sup>35</sup>. Longitudinal data support the assumed temporal ordering of these variables: a dangerous worldview predicts increases in right-wing authoritarianism over time and a competitive worldview predicts increases in social dominance orientation over time<sup>36–38</sup>. Some longitudinal studies also identify reciprocal effects in which ideological attitudes influence social worldviews, threat perceptions and personality<sup>37–41</sup>. It is, however, unclear whether the assumed causal effects of personality on right-wing authoritarianism and social dominance orientation are direct or whether these associations merely reflect shared genetic influences on both personality and ideological attitudes<sup>42–44</sup>. Indeed, models of human variation that synthesize across myriad developmental processes and motivational forces highlight pathways through which values and attitudes might arise via the same genetic and environmental mechanisms as personality traits<sup>45,46</sup>. This work demonstrates the profound complexities at play in the aetiology of behavioural phenotypes and highlights the need to further examine the genetic underpinnings of right-wing authoritarianism and social dominance orientation. Nevertheless, extant theorizing and empirical work corroborates the dual process motivational model's thesis that right-wing authoritarianism and social dominance orientation have separate psychological antecedents.

In sum, the psychological roots to right-wing authoritarianism are distinct from other harmful social ideological attitudes. Accordingly, only specific situational factors (namely, perceived threats to the social order) should elicit right-wing authoritarianism.

## Antecedents to authoritarianism

In this section, we describe the evolutionary, biological, cognitive, personality and situational antecedents of authoritarianism.

### Evolutionary and biological antecedents

The dual process motivational model identifies the unique psychological processes that underlie right-wing authoritarianism. Contemporary work builds upon this literature and posits that right-wing authoritarianism has deeper evolutionary<sup>47,48</sup> and biological<sup>49–51</sup> roots. For example, traits that foster cooperation likely developed in response to evolutionary challenges that required hominids in the Pleistocene period to cooperate to obtain high-calorie foods (such as large game)<sup>52</sup>. This transition to large-scale group living also evoked selection pressures on group members who could coordinate with each other to outperform out-groups competing with the in-group for scarce resources<sup>52</sup>. Accordingly, early hominids developed the psychological mechanisms identified by the dual process motivational model to enhance coordination with others from their in-group, including in-group identification and a motivation for conformity (for example, the desire to punish norm violators who weaken in-group coordination efforts)<sup>47,48</sup>. Remnants of the evolved psychological mechanisms that separately facilitate coordination and cooperation manifest today as (high) right-wing authoritarianism and (low) social dominance orientation, respectively.

Early theorizing in evolutionary psychology argued that natural selection would winnow away individual differences to produce

species-typical features<sup>53,54</sup>. By contrast, contemporary work<sup>55–58</sup> illustrates how evolutionary forces can promote between-person differences such as those seen in right-wing authoritarianism and social dominance orientation. For example, the evolutionary challenges of living in a dangerous environment can be solved with myriad strategies, each with unique fitness costs and benefits<sup>57,58</sup> – avoiding novel situations reduces exposure to danger, but limits resource acquisition. Because these fitness trade-offs also vary over time, no single optimal solution exists and within-species variability can persist<sup>58</sup>.

Right-wing authoritarianism and social dominance orientation have numerous potential fitness costs and benefits (Table 1). Although right-wing authoritarianism can endear one to the in-group by fostering conformity and deference to in-group authorities, it increases susceptibility to exploitation by discouraging dissent. Likewise, social dominance orientation might yield a stable social system by averting leadership contests<sup>58–60</sup>, but can incur reputational damage by decreasing cooperation. These fitness trade-offs provide an evolutionary explanation for individual differences in right-wing authoritarianism and social dominance orientation.

Between-person differences can also emerge through negative frequency-dependent selection in which the fitness benefits of a given strategy decrease as its prevalence within the population increases<sup>56,61</sup>. For example, male bluegill sunfish display two distinct reproduction strategies: a delayed strategy that involves high parental investment, and a rapid strategy that entails early maturation and cuckolding<sup>62</sup>. Sunfish that cuckold can fertilize eggs with great success when their numbers are few, but quickly lose their competitive advantage when their frequencies reach a threshold. Analogously, right-wing authoritarianism might increase fitness if a few follow conventions, but ultimately stifles innovation if the strategy becomes too prevalent. Consistent with this thesis, only a small proportion of the population are uniquely high on right-wing authoritarianism<sup>63</sup>.

Finally, niche selection<sup>64</sup>, or the tendency to seek environments that maximize fitness potential, coupled with behavioural plasticity<sup>65</sup> can produce individual differences such as those seen in right-wing authoritarianism and social dominance orientation. For example, whereas intelligence is canalized early in development, personality traits remain fluid up until early-to-mid adulthood<sup>66</sup>. The extended

period of malleability for personality traits might have been selected for so that individuals could search for, and adapt to, environments with diverse selection pressures<sup>65</sup>. Consistent with this perspective, longitudinal evidence demonstrates that right-wing authoritarianism is relatively malleable across the adult life span<sup>67</sup>. Moreover, people both seek out, and are shaped by, environments that meet their preference for group-based hierarchy<sup>68,69</sup>. These various lines of evidence suggest that humans evolved both the social cognitive mechanisms that foster right-wing authoritarianism and social dominance orientation, and individual differences in the expression of these evolved tendencies.

In addition to ostensibly arising from the evolutionary history of humans, right-wing authoritarianism covaries with physiological processes, including increased autonomic reactivity to stress<sup>70</sup>, heightened disgust sensitivity<sup>71</sup> and stronger disease avoidance<sup>72</sup>. These findings corroborate the dual process motivational model's assertion that right-wing authoritarianism increases people's sensitivity to dangerous and threatening stimuli. Moreover, twin studies, which leverage the differential genetic similarities between monozygotic twins and dizygotic twins to identify the amount of phenotypic variability attributable to genes versus the environment, identify a sizable genetic component to right-wing authoritarianism<sup>49–51</sup>. Some twin studies even demonstrate that genes explain as much as 50% of the variance in right-wing authoritarianism<sup>73</sup>. Yet contrary to meta-analytic work showing that the variance in many personality traits is mostly explained by genes<sup>74</sup>, emerging evidence indicates that shared environments have a moderate impact on constructs related to right-wing authoritarianism including social conservatism<sup>75</sup> and religiosity<sup>76</sup>. These latter findings corroborate initial theorizing that features of the home environment, including exposure to harsh and punitive parenting, foster right-wing authoritarianism<sup>77</sup>. Nevertheless, the broader literature identifies myriad sociobiological markers of right-wing authoritarianism.

## Cognitive, personality and situational antecedents

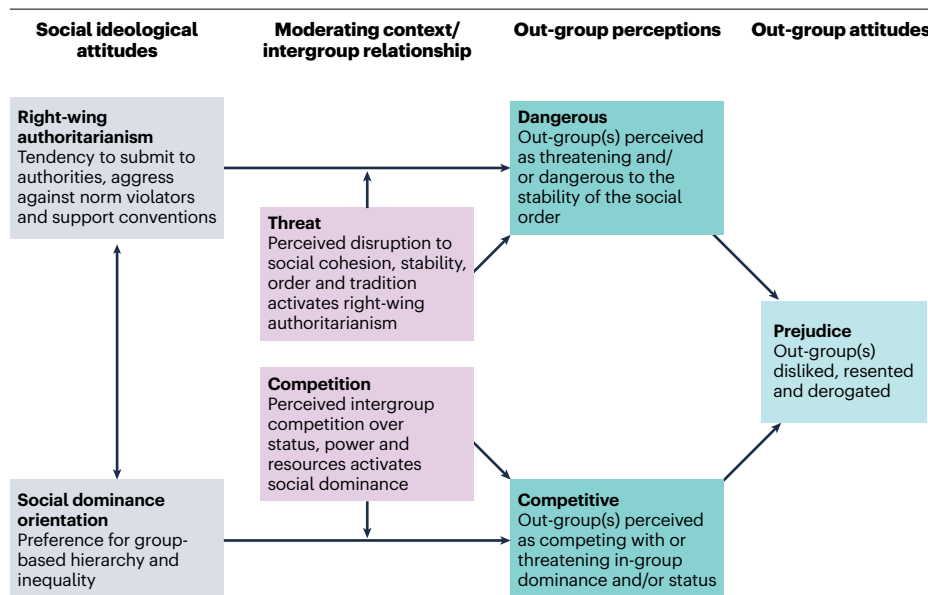
Complementing the assertion that right-wing authoritarianism has roots in evolution and biology, a growing literature reveals the cognitive and personality correlates of authoritarianism. Given that the propensity to follow others and conform to in-group mores is a core feature of right-wing authoritarianism<sup>15,17,20</sup>, low cognitive engagement and the tendency to uncritically take information at face value should foster authoritarianism. Indeed, numerous indicators of a high need for epistemic certainty, such as the need for closure<sup>78</sup>, closed-mindedness<sup>79</sup> and cognitive inflexibility<sup>80</sup>, correlate positively with authoritarianism<sup>81</sup>. Correspondingly, performance on behavioural measures of flexible thinking and executive functioning, such as abstract reasoning tests<sup>82</sup> and neurocognitive assessments of strategic information processing<sup>83</sup>, correlates negatively with authoritarianism. Related work demonstrates that openness to experience (a trait capturing interest in novelty and intellectual curiosity) correlates negatively with right-wing authoritarianism<sup>84,85</sup>. Notably, the personality traits that elicit right-wing authoritarianism differ from those that foster the preference for group-based hierarchy. Specifically, agreeableness<sup>84,85</sup> (the tendency to cooperate with others) and honesty–humility<sup>42,86</sup> (an orientation towards fairness and low entitlement) both correlate negatively with social dominance orientation, but display weaker<sup>42,86</sup> or non-significant<sup>84,85</sup> associations with right-wing authoritarianism. Thus, basic cognitive and personality differences underlying the general tendency to conform uniquely foster right-wing authoritarianism. These results corroborate the dual process motivational model's thesis that right-wing authoritarianism originates from distinct early

**Table 1 | Examples of the predicted evolutionary benefits and costs to high levels of right-wing authoritarianism and social dominance orientation**

Social ideological attitude	Benefits	Costs
Right-wing authoritarianism	<p>Fosters in-group cohesion when the group is under threat<sup>a</sup></p> <p>Develops a positive reputation within the in-group<sup>b</sup></p> <p>Avoids danger when there is a threat in the environment<sup>b</sup></p>	<p>Increases susceptibility to exploitation from in-group authorities<sup>b</sup></p> <p>Less likely to innovate and learn via individual exploration when the environment is safe<sup>b</sup></p>
Social dominance orientation	<p>Increases in-group competitiveness when resources are scarce<sup>a,b</sup></p> <p>Fosters stability in the social hierarchy<sup>b</sup></p> <p>Reduces the likelihood of exploitation<sup>b</sup></p>	<p>Increases exposure to intergroup conflict and associated losses<sup>b</sup></p> <p>Incurs reputational damage for being disagreeable<sup>b</sup></p>

<sup>a</sup>Operates via kinship selection. <sup>b</sup>Operates via natural selection.





**Fig. 2 | How social ideological attitudes give rise to prejudice.** Intergroup or contextual dynamics activate the dual motivational goals underlying right-wing authoritarianism and social dominance orientation to generate out-group perceptions that mediate prejudices.

influences that encourage social conformity, whereas the preference for group-based hierarchy indexed by social dominance orientation arises from experiences that elicit tough-mindedness.

Right-wing authoritarianism also increases in response to situational threats<sup>20,87</sup>. For example, perceptions of external threat correlate positively with right-wing authoritarianism<sup>88</sup>. Indeed, cross-national research examining objective indicators of threat (for example, nationwide unemployment and homicide rates) across 91 countries found a positive correlation between threat and right-wing authoritarianism<sup>89</sup>. Longitudinal studies further show that perceptions of threat precede increases in right-wing authoritarianism<sup>40,90</sup>. For example, a naturalistic experiment using data collected before and after the 11 March 2004 terrorist attack in Madrid found that right-wing authoritarianism increased significantly after the attack<sup>91</sup>. Experimental studies corroborate these findings by showing that increasing the salience of threats from climate change<sup>92</sup> and terrorism<sup>93</sup> increases right-wing authoritarianism, and that right-wing authoritarianism increased following the onset of the COVID-19 pandemic<sup>94</sup>. Yet consistent with the dual process motivational model<sup>31</sup>, the type of threat matters: whereas threats originating from the perceived competition over scarce resources increase social dominance orientation<sup>95</sup>, threats to personal safety and security increase right-wing authoritarianism<sup>90</sup>. Notwithstanding the degree to which authoritarianism shapes people's focus on, and exposure to, certain environmental stimuli (threats), these studies illustrate the crucial role of both perceived and actual threat in fomenting right-wing authoritarianism.

## Consequences of authoritarianism

In this section, we review the literature on the negative impacts of authoritarianism on perceptions of out-groups and other beliefs and behaviours.

### Perceptions of out-groups

The preference for conformity over personal autonomy has various societal implications. However, the literature on right-wing authoritarianism has focused most on one particular outcome: prejudice. Only two

decades ago, the consensus was that people either accepted out-groups or were generally prejudiced towards them<sup>96,97</sup>. Scholars also assumed that generalized prejudice was mostly confined to the political right and correlated positively with both right-wing authoritarianism and social dominance orientation<sup>98</sup>. Longitudinal studies using cross-lagged panel designs, often with large community samples, supported the assumed causal effects of right-wing authoritarianism (and social dominance orientation) on generalized prejudice<sup>14,99–101</sup>. However, several key assumptions underlying this generalized prejudice thesis have been challenged.

First, the assumption that prejudices are mostly confined to the political right conflicts with evidence that individuals who self-identify as conservative or liberal dislike out-groups perceived to threaten their respective values<sup>102–104</sup>. However, it is important to recognize the power and status differences that characterize out-groups targeted by the political right versus left<sup>105–107</sup>. Whereas prejudices more prevalent among those who endorse a conservative ideology or who self-identify as conservative mirror extant social inequalities by focusing on historically disadvantaged groups, those who endorse a liberal ideology or who self-identify as liberal might dislike historically powerful and/or structurally advantaged groups<sup>105–107</sup>. These critical differences have led some to conclude that prejudice is distinct from in-group favouritism/out-group derogation given that only prejudices reinforce structural inequities for historically marginalized groups<sup>105–108</sup>. With this important caveat in mind, this work challenges the field's understanding of prejudice as a generalized phenomenon that is confined mostly to those who endorse conservative views.

The dual process motivational model mounts a second challenge to the generalized prejudice thesis by asserting that right-wing authoritarianism only elicits prejudices towards specific groups. Moreover, right-wing authoritarianism should generate a different pattern of prejudices from social dominance orientation because of differences in their underlying motivational goals<sup>27</sup> (Fig. 2). Whereas those high in right-wing authoritarianism should be prejudiced against groups perceived to undermine social cohesion and to threaten the social order (that is, social stability, security and traditions), those

high in social dominance orientation should be prejudiced against groups perceived to threaten the social hierarchy<sup>29</sup>. In other words, the prejudices elicited by right-wing authoritarianism should be directed towards specific groups (rather than all out-groups).

Consistent with this thesis, attitudes towards traditionally stigmatized groups do not load onto a single generalized prejudice dimension, as previously assumed. Rather, these attitudes form three distinct dimensions reflecting attitudes towards groups that are seen as dangerous (for example, violent criminals and drug dealers), derogated (for example, the unemployed and those with physical disabilities) or dissident (for example, feminists and protestors)<sup>109</sup>. Notably, attitudes towards dangerous groups correlate more strongly with right-wing authoritarianism than with social dominance orientation, whereas attitudes towards derogated groups correlate more strongly with social dominance orientation than with right-wing authoritarianism; attitudes towards dissident groups who both threaten traditional social conventions and challenge the extant social hierarchy correlate comparably with right-wing authoritarianism and social dominance orientation<sup>99,109,110</sup>. Other studies similarly demonstrate that right-wing authoritarianism and social dominance orientation predict different patterns of prejudice. For example, right-wing authoritarianism predicts men's benevolent sexism (subjectively positive attitudes towards women who conform to traditional gender roles that reinforce their disadvantaged status) better than social dominance orientation, whereas social dominance orientation predicts hostile sexism (overtly hostile and domineering attitudes towards women) better than right-wing authoritarianism<sup>111,112</sup>. These findings challenge the long-standing generalized prejudice thesis by showing that prejudices towards various groups load onto unique subdimensions and that right-wing authoritarianism specifically elicits prejudices towards groups perceived as threatening.

Research also supports two further predictions from the dual process motivational model that call into question the generalized prejudice thesis. First, the dual process motivational model predicts that distinct features of the intergroup relationship will moderate the positive association between right-wing authoritarianism and prejudice (Fig. 2). Whereas perceived competition strengthens the effect of social dominance orientation on out-group prejudice, threats to social cohesion strengthen the effect of right-wing authoritarianism on out-group prejudice<sup>113,114</sup>. Second, the dual process motivational model argues that the effects of right-wing authoritarianism and social dominance orientation on out-group prejudice should be differentially mediated (Fig. 2). Consistent with this thesis, perceptions of threat mediate the relationship between right-wing authoritarianism and out-group prejudice, whereas perceptions of competition mediate the relationship between social dominance orientation and out-group prejudice<sup>115–117</sup>. Collectively, this work illustrates the complex ways in which certain contextual threats activate right-wing authoritarianism, which, in turn, uniquely predicts prejudices towards specific out-groups via distinct psychological mechanisms.

## Beliefs and behaviour

In addition to identifying the distinct out-groups targeted by authoritarianism, the dual process motivational model illustrates how right-wing authoritarianism impacts broader beliefs and behaviours. Given that punishment can be used to foster conformity<sup>48,118</sup>, right-wing authoritarianism should promote aggressive behaviour towards others. Consistent with this thesis, authoritarianism predicts aggressive attitudes and behaviours including support for corporal punishment<sup>119</sup>, interpersonal aggression<sup>120</sup> and the persecution of immigrants who are hesitant

to assimilate<sup>29</sup>. A meta-analysis confirms that there is a robust positive correlation between right-wing authoritarianism and aggression ( $r = 0.31$ ), particularly in response to context-specific threat<sup>121</sup>. Thus, the motivational need to enforce in-group values through conformity leaves those who are high on right-wing authoritarianism particularly prone to aggress against those who are perceived to undermine social cohesion by threatening the status quo.

A related literature examines the socio-political implications of authoritarians' increased propensity towards aggression. Consistent with its motivational goal to mitigate and extinguish societal threat<sup>23,31</sup>, right-wing authoritarianism predicts support for military interventions<sup>122–124</sup> and the use of torture<sup>125,126</sup>, as well as opposition to human rights<sup>127–129</sup>. Right-wing authoritarianism also correlates positively with the justification of political violence against groups perceived to threaten in-group values<sup>130</sup>. Importantly, this association is independent of, and larger than, the relationship between the propensity for radicalism and the justification of political violence. Collectively, these studies demonstrate that right-wing authoritarianism can undermine core democratic ideals and incite violence.

Authoritarianism can also inspire violence by fostering uncritical views of the in-group to maintain or enhance cohesion. Indeed, consistent with the dual process motivational model's thesis that right-wing authoritarianism is motivated by the goal to maintain social order and protect traditional values<sup>27,31</sup>, right-wing authoritarianism correlates positively with the binding moral foundations of in-group loyalty, obedience to authority and purity<sup>131–133</sup>. These findings demonstrate that right-wing authoritarianism fosters a desire for a strong and obedient in-group and that these goals are considered moral imperatives. Accordingly, right-wing authoritarianism predicts national identification, particularly in countries where civil liberties are restricted and, therefore, threats to safety are hyper-salient<sup>134</sup>. Likewise, authoritarianism fosters nationalism (an uncritical belief in the superiority of one's nation)<sup>12,17,80</sup>, with longitudinal work demonstrating that right-wing authoritarianism precedes increases in both conservative party identification<sup>135</sup> and nationalism<sup>136</sup>. These results suggest that the rise in nationalistic sentiment seen in movements such as Brexit and Make America Great Again are the outcomes of, rather than the precursors to, the global resurgence of authoritarianism.

Related to the desire for a strong and cohesive national in-group, authoritarianism predicts support for myriad illiberal policies and candidates. The dual process motivational model argues that these outcomes are motivated by the desire to both enforce traditional values and establish dominance over others<sup>27,31</sup>. Accordingly, right-wing authoritarianism predicts opposition to same-sex marriage<sup>63</sup>, support for repealing abortion access for rape victims<sup>137</sup> and support for anti-democratic policies that privilege the in-group at the expense of out-groups' rights<sup>9</sup>. Notably, these relationships are robust to myriad demographic and ideological covariates such as age, education, gender, partisanship and religiosity. Authoritarianism<sup>2,3</sup>, and in particular authoritarian aggression<sup>4</sup>, also predicted support for Donald Trump in the 2016 US presidential election – a campaign that was openly predicated on a return to traditional values. Likewise, right-wing authoritarianism is implicated in the pro-Brexit vote<sup>6</sup> which led to the United Kingdom leaving the European Union to pursue a nationalist agenda. Thus, right-wing authoritarianism underlies some of the most divisive and politically consequential events of the past decade.

The resurgence of right-wing authoritarianism also has implications for how information is used – and misused – in society. Given authoritarians' general willingness to submit to traditional

authorities<sup>17,23</sup>, combined with their intolerance of ambiguity<sup>138</sup> and need for closure<sup>81,139</sup>, it is perhaps unsurprising that right-wing authoritarianism predicts tolerance for<sup>140</sup>, and susceptibility to<sup>141</sup>, misinformation. Authoritarianism also fosters conspiratorial thinking about politics<sup>142</sup>, especially if the conspiracy supports the status quo<sup>143</sup>. Thus, consistent with the dual process motivational model, those who are high in right-wing authoritarianism will go to great lengths to protect the in-group — including believing the unbelievable and other ‘alternative facts’ propagated by in-group authorities. The implications of right-wing authoritarianism thereby extend beyond out-group perceptions and into areas that impact public health and safety.

Finally, right-wing authoritarianism influences people’s views on the environment and science, especially when these topics are perceived to conflict with long-standing conventions and traditional authorities. For example, right-wing authoritarianism predicts anti-climate change beliefs<sup>144</sup>, resistance to plant-based diets<sup>145</sup> and science scepticism in general<sup>146,147</sup>. Longitudinal analyses further reveal that right-wing authoritarianism precedes both increases in climate change denial<sup>148</sup> and decreases in environmentalism<sup>149</sup>.

Although some work has begun to investigate ways of leveraging right-wing authoritarianism’s intense focus on social norms for the social good (Box 1), the extant literature reviewed above illustrates

## Box 1

### Leveraging authoritarianism for good

The preference for conformity over personal autonomy that embodies the core feature of authoritarianism is thought to be an evolved tendency that is neither intrinsically good nor bad<sup>47,48</sup>. Although the psychological mechanisms that foster right-wing authoritarianism might have been adaptive for early hominids during the transition to large-scale group living, they are generally ill-suited for modern contexts where group sizes often number in the millions. However, emerging work demonstrates the potential to channel the harmful impulses of right-wing authoritarianism into societally beneficial outcomes<sup>164</sup>. For example, right-wing authoritarianism correlates negatively with attitudes towards corrupt people<sup>165</sup>, perhaps because cheating undermines social cohesion<sup>52</sup>. Likewise, given its assumed evolutionary purpose of fostering conformity to facilitate large-scale group living<sup>47,48</sup>, right-wing authoritarianism can yield positive outcomes if they are perceived to be normative. For example, right-wing authoritarianism correlates positively with out-group warmth<sup>166</sup> and support for prohibiting hate speech<sup>167</sup> in contexts where these views are widespread. Believing that diversity is accepted in the broader community also weakens — and can sometimes even reverse — the robust positive correlation between right-wing authoritarianism and out-group hostility<sup>168</sup>. Thus, the tendency for those who are high on right-wing authoritarianism to follow group norms can, under certain conditions, be used to improve intergroup relations.

The titular reverence for authorities inherent to right-wing authoritarianism can also promote beneficial environmental and public health outcomes. Although it is often associated with anti-environmental attitudes<sup>144,148</sup>, right-wing authoritarianism — and the proclivity to obey authorities in particular — might foster support for pro-environmental causes promoted by in-group authorities. Indeed, analyses that distinguish between the three components of right-wing authoritarianism reveal that authoritarian submission correlates positively with pro-environmentalism<sup>169</sup>. The tendency to submit to authorities can also elicit compliance with public health initiatives<sup>170</sup>, such as those that reduce the transmission of COVID-19 (refs. <sup>171,172</sup>). Collectively, these studies demonstrate that at least some aspects of right-wing authoritarianism can be leveraged to mitigate its otherwise destructive impacts on society.

Despite these potentially beneficial effects, there are at least three reasons to be wary of interventions that try to co-opt aspects

of authoritarianism to improve society. First, channelling right-wing authoritarianism’s rigid adherence to social conventions to improve intergroup relations assumes that societal norms promote, rather than impede, inclusivity. Thus, the use of norms and conventions to reduce expressions of bias amongst those who are high on right-wing authoritarianism could backfire in places where prejudices are normative — contexts where interventions to reduce prejudice are most needed. Indeed, the positive relationship between right-wing authoritarianism and prejudice is stronger in areas where intolerance is widely endorsed<sup>168</sup>. Optimism that the proclivity to follow conventions fostered by right-wing authoritarianism could be used to improve intergroup relations must therefore be tempered by the actual normative climate.

Second, harnessing authoritarian impulses for the social good requires those who are high on authoritarianism to identify with broader society (versus a smaller group). Yet right-wing authoritarianism might encourage people to prefer small and insular ingroups over large superordinate groups. Indeed, despite a rise in egalitarianism<sup>173</sup> and normative prescriptions to abstain from expressing prejudice<sup>174</sup>, voters found it more acceptable to voice their prejudices towards groups targeted by Donald Trump after his divisive 2016 US presidential election win<sup>175</sup>. Rather than attending to broader societal norms, those who are high on right-wing authoritarianism might selectively follow an exclusive in-group norm. It might therefore be difficult to change the views of those in insular communities where prejudice and anti-science scepticism is normative.

Finally, redirecting authoritarianism to promote socially beneficial outcomes assumes that those who are channelling these dangerous impulses act in good faith. Yet history is rife with examples of seemingly benevolent leaders who transformed into ruthless dictators after seizing power, such as Joseph Stalin, Pol Pot, Muammar Gaddafi, Kwame Nkrumah and Mao Zedong. These — and many other — violent leaders throughout history highlight the dangers of assuming that an ostensibly ‘benevolent’ dictator will rule with compassion. Thus, although there might be cautious optimism that authoritarianism can be harnessed to promote socially beneficial outcomes under specific circumstances, arguably the best defence against authoritarian assaults to democracy is to ensure that democratic institutions can withstand these threats in the first place.

the myriad detrimental consequences of authoritarianism for both intergroup relations and society at large.

## The question of left-wing authoritarianism

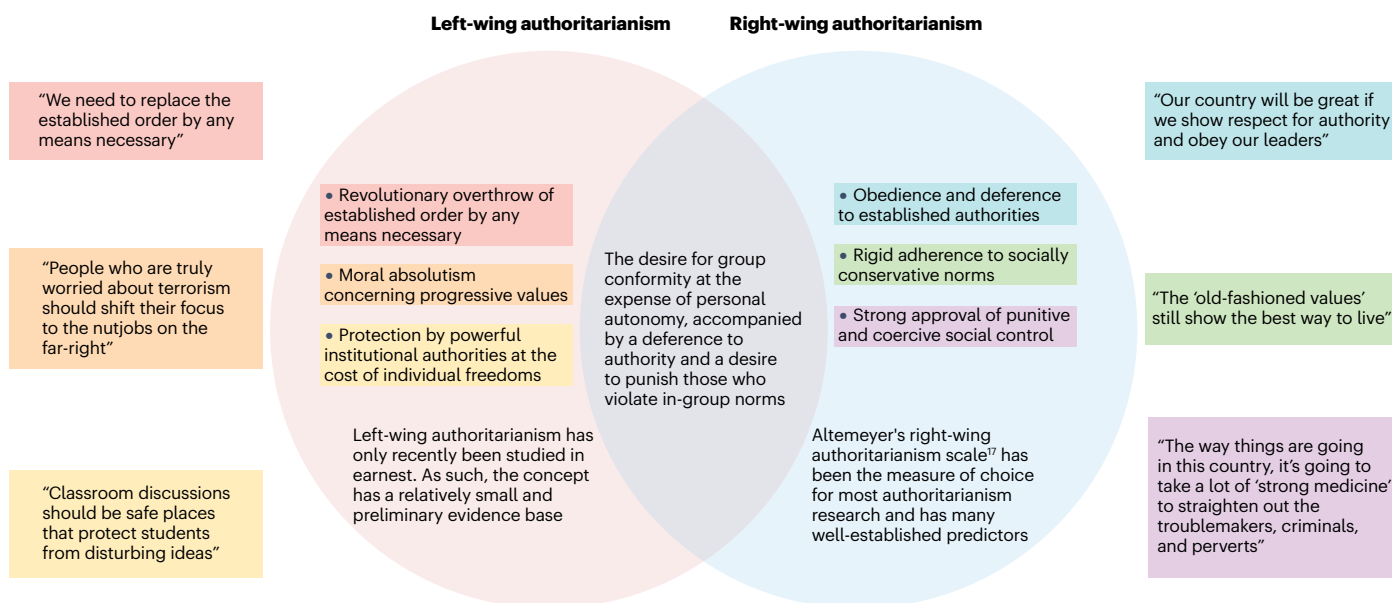
Authoritarian regimes and political movements with ostensibly left-wing goals decorate the pages of history<sup>150</sup>. Yet save for a few notable exceptions<sup>17,26,151,152</sup>, the literature in psychology has almost exclusively focused on right-wing authoritarianism. Some of the hesitancy to examine left-leaning manifestations of authoritarianism might reflect inherent power and status differences between right-wing and left-wing authoritarianism. Whereas right-wing authoritarianism entails submitting to structurally advantaged authorities with the institutional means to impose their values onto disadvantaged groups, examples of left-wing authoritarianism typically involve aggression in the service of, and the tendency to conform to, progressive values that aim to eradicate social inequities. This distinction has led some to argue that left-wing authoritarianism is largely illusory and inconsequential<sup>17</sup> because left-wing ideology and authoritarianism are assumed to be psychologically discordant<sup>81</sup>.

The reality is arguably more nuanced. To be clear, people who endorse left-wing ideals rarely score high on canonical measures of authoritarianism<sup>21</sup> in the western, educated, industrialized, rich and democratic (WEIRD) countries where most authoritarianism research has been conducted. But positive correlations between left-wing ideology and authoritarianism routinely emerge in countries with a history of communism<sup>152–154</sup>. Complicating this picture, many who are sceptical of left-wing authoritarianism view these findings as evidence of the construct's spuriousness: if authoritarianism on the left only emerges in small pockets of the world where communism is the status quo, then left-wing authoritarianism might merely be right-wing authoritarianism in communist dress (insofar as both right-wing and left-wing authoritarianism entail deference to authorities, aversion to change and an inclination to conform to in-group norms). Accordingly, those who question the existence of left-wing authoritarianism argue that

those who defer to – and weaponize – the dominant sociocultural hierarchy are authoritarians; in other words, authoritarians are reactionaries even when they adopt nominally left-wing attitudes<sup>155</sup>. Thus, some argue that studying so-called 'left-wing authoritarians' who are ostensibly interchangeable with right-wing authoritarians in WEIRD nations does little to advance understanding of authoritarianism writ large.

Despite the field's reticence to expand the focus of authoritarianism beyond its right-wing variants, evidence of left-wing authoritarianism in WEIRD nations has emerged over the past 20 years<sup>22–26</sup>. One approach in particular is based on a data-driven conceptualization and measure of left-wing authoritarianism derived from a systematic, iterative empirical exploration of the construct's scope and constituent domains<sup>22</sup>. This bidirectional methodology allowed data to shape theory (and vice versa) and yielded a 39-item measure of left-wing authoritarianism. The resultant left-wing authoritarianism index comprises three correlated factors – anti-hierarchical aggression, support for top-down censorship and anti-conventionalism – that roughly capture left-wing manifestations of authoritarian aggression, authoritarian submission and conformity to traditional in-group values, respectively (Fig. 3). Although the three subdimensions of right-wing and left-wing authoritarianism crudely parallel one another and are unified by a central desire for conformity to in-group norms over personal autonomy, these two ideological variants of authoritarianism differ in their uncompromising goals to promote conservative and progressive values, respectively.

The three dimensions of left-wing authoritarianism covary with scores on theoretically relevant external criteria (such as trait antagonism, low openness to experience, support for censorship, cognitive inflexibility, retrospective reports of participation in political violence and partisan *schadenfreude*), and predict willingness to punish political opponents<sup>22,156</sup>. Emerging work also demonstrates that left-wing authoritarianism correlates positively with perceived vulnerability to disease<sup>157</sup> and support for policies that punish those who violate



**Fig. 3 | Right-wing versus left-wing authoritarianism.** Overview of the similarities and differences between right-wing and left-wing authoritarianism. Prototypical statements for each subdimension are shown in the corresponding coloured box.



COVID-19 pandemic mitigation measures<sup>158,159</sup>. Thus, similar to right-wing authoritarianism, left-wing authoritarianism entails hostility towards 'different' others, a willingness to wield in-group authority to coerce behaviour, cognitive rigidity, aggression and punitiveness towards out-groups, a focus on status hierarchies and moral absolutism<sup>22</sup>.

Despite these similarities, the precise arrangement of these features, as well as their prominence and interaction, might vary across the political right and left (Fig. 3). Unlike right-wing authoritarianism, left-wing authoritarianism involves the belief that those currently in power should be harshly punished, that the established order should be overthrown and that extreme actions – including political violence – are justifiable to achieve progressive aims<sup>22</sup>. Yet the violent incursion at the US Capital on 6 January 2021 demonstrates that right-wing movements can also use extreme violence to overthrow both the results of a free and fair election and the broader establishment, albeit to advance conservative ends. Likewise, fervent calls to ban the teaching of progressive topics including critical race theory and the fluidity of gender identity in schools illustrate that at least some on the political right are unsupportive of free speech when it conflicts with traditional values. Accordingly, future work is needed to clarify distinctions between left-wing and right-wing authoritarianism, and to separate these contemporary manifestations of authoritarianism from a general anti-establishment sentiment. Despite the apparent similarities in the violent and censorial means used to achieve their mutually exclusive goals, the extant literature reveals discernible differences in the correlates of right-wing and left-wing authoritarianism: whereas right-wing authoritarianism correlates positively with the need for order<sup>160</sup> and negatively with both openness to new experiences<sup>81</sup> and belief in science<sup>146</sup>, left-wing authoritarianism correlates positively with the need for chaos<sup>156</sup> and belief in science<sup>22</sup> and negatively with institutional trust<sup>156</sup>.

In short, emerging research collectively challenges scholars to expand the purview of authoritarianism beyond the presently narrow focus on its right-wing variants by identifying authoritarianism on the political left. Although this nascent literature is rapidly developing, it remains to be seen whether a common psychological 'core' that fosters the desire to impose in-group values onto others underlies both right-wing and left-wing authoritarianism.

## Summary and future directions

The global resurgence of authoritarian regimes requires a renewed focus on the causes and consequences of authoritarianism, as well as an examination of all its manifestations. According to the dual process motivational model, often-discussed consequences of authoritarianism (such as prejudice and intergroup conflict) originate from two positively correlated, albeit distinct, social ideological attitudes: right-wing authoritarianism and social dominance orientation. Whereas traits that foster a competitive worldview elicit social dominance orientation, traits that foster a dangerous worldview and, in turn, a preference for social control and conformity elicit right-wing authoritarianism. Notably, the deep-seated nature of authoritarianism is evident in its evolutionary roots<sup>48</sup> and heritability<sup>49–51,73</sup>, as well as its physiological<sup>70</sup> and personality<sup>81,138</sup> correlates. Importantly, social – but not economic – threats activate right-wing authoritarianism, which, in turn, has implications for intergroup relations (for example, prejudices are directed towards specific groups instead of out-groups in general) and broader societal attitudes such as anti-environmentalism<sup>148</sup>, science scepticism<sup>146</sup> and conspiratorial thinking<sup>142,143</sup>.

Although most research has examined right-wing authoritarianism, three subdimensions of left-wing authoritarianism have been identified: anti-hierarchical aggression, support for top-down censorship and anti-conventionalism<sup>23</sup>. However, lingering questions about left-wing authoritarianism remain. For example, despite important advances in understanding both how and why right-wing authoritarianism influences prejudice, the extent to which similar dynamics characterize left-wing animus is unknown. Future research should therefore examine how the salience of threats important to those who endorse progressive values (such as inequalities and injustices) activate left-wing authoritarianism and elicit hostile attitudes. However, researchers must avoid making false equivalences between the targets of right-wing authoritarianism (for example, disadvantaged groups) and the targets of left-wing authoritarianism (for example, the wealthy). Overlooking the status and power differences that separate the targets of those on the political right and left could reinforce structural inequities and place psychology on the wrong side of history<sup>105</sup>. Nevertheless, work that illustrates the existence and explanatory utility of left-wing authoritarianism<sup>22</sup> provides the impetus to further investigate these important questions.

Researchers should also examine the unique ways in which right-wing and left-wing ideologies shape authoritarianism (and vice versa). Indeed, the distinct subdimensions of right-wing and left-wing authoritarianism seem to have countervailing associations with social and economic ideologies. Whereas the anti-hierarchical aggression of left-wing authoritarianism aims to achieve economic equality<sup>22,26</sup>, the aggression of those who endorse right-wing authoritarianism is reserved for authority-sanctioned targets who challenge social conservatism<sup>23</sup>. Conversely, the top-down censorship supported by left-wing authoritarianism promotes socially liberal values<sup>22</sup>, whereas the tendency to submit to authorities among those who endorse right-wing authoritarianism could advance either economically<sup>161</sup> or socially<sup>162</sup> conservative values. Future research should thus examine how the distinct subdimensions of right-wing and left-wing authoritarianism uniquely impact social and economic ideologies.

As research in this area grows, further differences between right-wing and left-wing authoritarianism will undoubtedly emerge. Accordingly, future work should compare right-wing and left-wing authoritarianism's relations with myriad variables, such as support for free speech (or, conversely, opposition to hate speech), support for climate change mitigation measures, and views on corporate leadership and/or workplace diversity practices. Such work will increase understanding of both the shared and the unique aspects of right-wing and left-wing authoritarianism, while also illustrating how authoritarian leaders can direct the public's ire towards targets who are perceived to violate ideological decrees. Given their distinct goals (namely, to reinforce versus overthrow traditional authority figures), those who are high on right-wing and left-wing authoritarianism will likely follow different types of authoritarian leaders who promise mutually exclusive outcomes. Future research must therefore identify the characteristics of these authoritarian leaders to protect democratic institutions from their destructive onslaught.

Comparing right-wing and left-wing authoritarianism can also advance broader questions about the nature of authoritarianism. For example, it remains unclear whether a shared psychological core underlies both right-wing and left-wing authoritarianism, or whether they are analogous, but distinct, phenomena. Person-centred analyses<sup>163</sup> that identify unique response patterns to right-wing and left-wing authoritarianism measures could address this question.

If authoritarianism has a common psychological core that captures a general preference for conformity over personal autonomy, then a presumably small segment of the population should score high on both right-wing and left-wing authoritarianism – these individuals would prefer society to follow rules regardless of their ideological content. Alternatively, researchers could utilize an authoritarianism scale that omits overtly political content, such as the often-used child-rearing values measure that assesses one's preference for an obedient, well-mannered child over a free-thinking, independent child<sup>15,87</sup>, and examine differences in the manifestation of authoritarianism across those who identify with the political right and those who identify with the political left. Finally, one could integrate traditional measures of authoritarianism in political science and psychology (such as child-rearing values and right-wing authoritarianism) with other models of authoritarianism and related political attitudes (such as left-wing authoritarianism, social dominance orientation and autocratic orientation) into a framework that generalizes across time and place. The resultant generalized authoritarianism measure would improve the means of describing, modelling and understanding the psychology of authoritarianism. Regardless of the approach taken, investigating both the differences and the similarities between right-wing and left-wing authoritarianism will refine understanding of the central elements of authoritarianism.

Advancing an expanded conceptualization of authoritarianism also raises questions about the perpetuity of social change. For example, future work could examine whether successful left-wing authoritarian movements obsequiously defend the new status quo, ironically mirroring the right-wing authoritarians against whom they rebelled, or whether they continue to press for change. Understanding the variegated manifestations of authoritarianism, including its left-wing variants, will help clarify the fundamental psychological nature of authoritarianism and, in turn, identify ways to mitigate its harmful impact on society.

The global resurgence of authoritarianism affords a rare opportunity to advance the science of authoritarianism. Indeed, we are at a unique moment in history where threats to both conservative and progressive values are highly salient, providing fertile ground to investigate the psychological roots to authoritarianism. By integrating these perspectives and revealing the critical psychological and contextual antecedents to, as well as the societal consequences of, its various manifestations, we can better understand how the general motive underlying authoritarianism impacts society.

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The authors contributed equally to all aspects of the article.

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The authors declare no competing interests.

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