

**Pathways to Authoritarianism: Metacognitive Influences on Extremist Attitudes and  
Behaviours**

by

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A thesis

presented to the University of Waterloo

in the fulfilment of the

thesis requirement for the degree of

Master of Arts

in

Psychology

Waterloo, Ontario, Canada, 2024

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### **Author's Declaration**

This thesis consists of material all of which I authored or co-authored: see Statement of Contributions included in the thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

## Statement of Contributions

**Neil Wegenschimmel** was the author of the manuscript, conceived the experimental design, collected and analyzed the data.

**Dr. Samuel G. B. Johnson** guided the research process, including the experimental design, data analysis, and the writing of the manuscript.

**Dr. Igor Grossmann** assisted in the development of an early version of the research design and experimental manipulation for Study 2.

**Josh Rafe Campbell Budge** did background research and helped to produce the stimuli for Study 2 as well as assisted in programming and running the study.

## **Abstract**

This paper investigates the relationship between perceptions of societal extremism and the rise of authoritarian attitudes across the political spectrum. Across two studies, involving American adults, we examined how perceptions of increasing radicalism, media consumption, and existential nihilism contribute to both right-wing and left-wing authoritarian tendencies. Study 1 identified significant correlations between perceptions of societal extremism and right-wing authoritarianism (RWA) and its associations with conspiracy mentality and media use. Left-wing authoritarianism (LWA), on the other hand, was primarily predicted by existential nihilism. Study 2 made use of an experimental manipulation with historical data on political violence to assess the impact of accurate information about rates of political violence on authoritarian attitudes. Results revealed that presenting accurate historical data did not significantly alter perceptions of societal extremism; however, existential nihilism positively moderated the endorsement of authoritarian behaviors, particularly in the experimental condition. These findings suggest that authoritarian attitudes are influenced by complex interactions between individual psychological factors and broader informational environments, with parallel pathways leading to RWA and LWA. The implications for understanding the psychological underpinnings of political extremism are discussed.

## Acknowledgements

I would like to express my sincere thanks to my supervisor, Dr. Samuel Johnson, for his guidance and support throughout this project. His experience and ceaseless enthusiasm for the material have been instrumental to my development as a researcher, and the project would not be as interesting without his influence. I would also like to thank my thesis readers, Dr. Clara Colombatto and Dr. Ian McGregor. Their efforts and expertise are much appreciated.

I am grateful to Dr. Igor Grossmann for bringing me into UW and for his contributions during the early stages of this project. I also want to thank my research assistant, Joshua Budge, and my DICE lab intern, Megan Doyle, for their hard work and supporting roles, without which this project would not have been possible. I would also like to thank the DICE lab managers, Berke Aydas and Adrienne Richter Powell, without whom the lab wouldn't run as well as it does.

I'd also like to thank the Social Area for their support. My fellow grad students, Krista Quinn, Katie Bain, Pamela Campos-Ordóñez, Jessica Tricky, Grace Denny, Jessica Ross, Shawn Yee, Niyati Kachhiyapatel, Connery Knox, and Brigitta Munds have all been a source of inspiration and moral support. I would like to thank the area postdoc, Dr. Maksim Rudnev, for his statistical expertise and cultural lens. The social area faculty as well: Dr. Hilary Bergsieker for her frequent support and advice; Dr. Neil Hester for his enthusiasm and endless availability, and Dr. Ian McGregor for his mentorship and always lending an ear. I also want to acknowledge those who've left and are dearly missed, including my former big sib, Dr. Abdo Elnakouri, and Dr. Abigail Scholer, both of whom were great sources of support and made a large impact on me during my first year.

Finally, I want to acknowledge my friends and family, especially my first academic mentor, Dr. Neil McLaughlin, who remains a stalwart collaborator and tremendous figure of integrity, kindness, and support, without whom I would not be here—thank you.

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## Introduction

We appear to be living through an age of polarization in the liberal-democratic West. Social media has become a political outrage machine and populism is ascendent in many nations; in the United States, cross-partisan political cooperation has declined since the 1980s (Wilson et al., 2020) and polarization in the legislative branches of government are higher than ever before (Kleinfeld, 2023). Worse, we appear to be experiencing a growing normalization of political violence. Most notably in the January 6<sup>th</sup> attack on the United States Capitol in an effort to overturn the 2020 election results, but also in the regular convulsions of left-wing violence in Portland and beyond, as well as in places like France and Ireland. Less violent manifestations of political unrest also appear to be gaining traction, as in the month-long “Freedom Convoy” occupation of downtown Ottawa by groups protesting Canadian vaccine mandates and pandemic policy, and, more recently, the encampments on university campuses in North America protesting the Israel-Hamas war. While there has been limited violence in these latter examples, the rhetoric central to both movements is concerning. Elements in the Freedom Convoy advocated for government overthrow and political trials (in some cases, executions), and a not insignificant number of Israel-Hamas conflict protesters displayed antisemitic attitudes and aplogia for the atrocities committed by Hamas on October 7th, 2023.

Research in political science has noted that tolerance of political violence is on the rise with a growing number of political partisans in the United States on both sides believing that political violence is sometimes justified to advance their political goals (Kleinfeld, 2021), and an approximately equal number of Democrats and Republicans believing that the opposing party “a serious threat to the United states and its people” (approximately 60%), are not just bad for politics but “downright evil” (approximately 40%), and “lack the traits to be considered fully human—they behave like animals” (approximately 20% for Republicans and 15% for democrats) (Kalmoe & Mason, 2022). These survey results suggest a disturbing connection with historical implications of

dehumanization (Haslam, 2013; Luna, 2018). Indeed, political campaigns of the last eight years have taken on a politics of threat; one need only think of Donald Trump’s reference to “American carnage” in his 2017 inauguration speech (Pilkington, 2017), and notions on the part of Democrats about the end of democracy if certain policy changes they oppose came to pass (Marantz, 2023), or should they lose elections (Pilkington, 2024). This apocalyptic attitude toward political events is dangerous when threats from the opposition are viewed as potentially world ending, excesses in the other direction can too easily be justified.

There remains a real question, however, as to whether things are as bad as they seem. There’s no debate that many concerning trends abound, but research into the “perception gap” indicates that the actual proportion of Democrats and Republicans that hold extreme views is 25% lower than what is estimated, and that affiliates of both parties believe that nearly twice the number of their political opponents hold extreme views than actually do (Yudkin, Hawkin, & Dixon, 2019). This perception gap is widest at the political extremes, where progressive activists and devoted conservatives have a more distorted view of their opponents’ beliefs, leading to a situation where “the people who are most involved in civic and political life hold the least accurate views of the other side’s beliefs” (Kleinfeld, 2023, p. 2). Beyond perception, while there has been a recent spike in political violence in recent years and its aforementioned normalization, real trends in violence are down, and political violence is itself much reduced from previous peaks—most notably in the 1970s (Global Terrorism Database, 2023).

From where might this difference between perception and reality come? Feedback loops are a well-established mechanism framework in psychological research, from clinical work on depression—whereby environmental stressors lead to depression which in turn leads to impaired building of psychological resources for resilience and then to increased susceptibility to environmental stress—to research on cognition and decision making (Volzhanin, 2019; Wittenborn

et al., 2015). They also exert influence in social and emotional life (Carver & Scheier, 1981; Hollenstein, 2015), our motivation (Kraus, 1982), as well as on our digital networks, which are built upon nested loops of monetized information that rely on emotional reaction-driven attention (Auerbach, 2023; Miroshnichenko, 2014).

With regards to the issues of politics and polarization mentioned above, a similar dynamic may apply: information inputs filtered through individual differences in belief and metacognitive styles become magnified by institutional behaviours which then inform the next set of informational inputs. To this point, Anne Wilson and colleagues (2020) posited a theoretical model whereby false polarization, affective polarization, and ideological polarization form a mutually reinforcing relationship that runs through institutional and elite polarization, particularly in politics and the media. In their example, institutional and elite polarization inform misapprehensions on the part of electorate as to how far apart people are in their political positions. The false polarization that results among the population leads to rising acrimony towards perceived outgroup opponents, informing affective polarization—the extent to which political party members harbor animosity and suspicion towards their opponents. This in turn leads to ideological polarization, perhaps best viewed as “real polarization” in which a large divide forms between the political and policy preferences of opposing sides. Under a political and media regime where elites essentially “give the people what they want” in order to win elections and maintain audiences (Gurri, 2018; Stephens-Davidowitz, 2017), and perhaps project authority, ideological polarization among the electorate feeds a growing polarization in elite circles that informs a deeper false polarization that nudges the electorate “toward justifying more and more extreme own-party attitudes through processes of cognitive dissonance and motivated reasoning” (Wilson et al., 2020, p. 226).

The polarization feedback model by Wilson and colleagues is compelling, particularly at a group-ideological level. However, an additional question arises as to what individual mechanisms

and attitudes might be at play that drive these forces of division beyond mere partisan sorting. If individuals feel that their political opponents hold more extreme views than they in fact do, it stands to reason this may be extended to an overall view of society itself, rather than simple partisanship. And if society is viewed having become more extreme, the potential sense of threat and risk, and resulting change in political attitudes and perceptions, may encourage hardened and extreme attitudes much in the same way as the elite/media-centered polarization feedback model does.

This research probes this possibility: that an inaccurate view of general levels of societal extremism may inform the uptake of more radical political attitudes in the form of bipartisan authoritarianism. It also posits that these attitudes are associated with conspiracy thinking and feelings of existential nihilism, metacognitive styles that are linked to certain affective states and which cause epistemological interference, leading to an increased tendency to hold authoritarian ideas. Further, it tests whether authoritarian attitudes, as well as perceptions of societal extremism, can be mitigated when individuals are presented with accurate historical information on rates of political violence that perhaps contradict held views that things are worse than ever before.

### **Theoretical background**

This research examines the emergence of pan-political authoritarianism from multiple perspectives. The first is rooted in traditional understandings of authoritarianism, and its emergence from fragmented social structures, uncertainty, and fear, along with inclinations towards rigidity, dominance, and aggression. It probes the relationship between the isolated, uncertain individual and rising extremist beliefs, asking if the latter result from a palliative need to repair broken historical narratives and nihilistic disillusionment. Lastly, it considers unique environmental factors that may influence current manifestations of authoritarianism: the impact of new technologies of communication on the social fabric and epistemology itself; how information overabundance that

leads to torqued perceptions of the current historical moment and results in increased political polarization.

The study of authoritarianism has a long tradition in social science literature. The early foundations of contemporary research emerge from the sociological work of Max Weber and Emile Durkheim in the late 19<sup>th</sup> and early 20<sup>th</sup> century. Weber created an early typology of authority with three categories—traditional, charismatic, legal-rational—and created a framework for understanding the structure of bureaucracy through which different types of authority could operate (Beetham, 1985). He also described how the rationalization of social organization and authority had an alienating effect on formerly traditional societies (Etzrodt, 2024). In *The Division of Labour in Society* (1893/2014) and *Suicide* (1897/2010), Durkheim outlined how social cohesion and regulation are essential aspects of social stability, coining the term “anomie” to describe a state of normlessness brought about by rapid social change and the breakdown of traditional structures and modes of being—the shared beliefs and common values that bind societies together (Durkheim, 1912/2008). These theoretical developments set the stage for understanding much of what followed in the 20<sup>th</sup> century: the nationalist, blood-and-soil authoritarianism of Nazi Germany, and the alternately regimented, hyper-rationalized, "scientific" authoritarianism of the Soviet Union. They also offered a basis to later understand the impacts of technology, social fracture and breakdown, consumerism, and the human tendency to oscillate between a desire for order and structure, and the need for affective connection and meaning that can at times run counter to it.

Mid 20<sup>th</sup> century research on authoritarianism was informed by the events of the Second World War. In large part, this was taken up by the Frankfurt School philosophers and cultural theorists, i.e., Theodor Adorno (1950/2019), Erich Fromm (1941/1990), and Max Horkheimer (1973), among others. Adorno and colleagues (1950/2019) developed a notable early personality measure for authoritarianism, the California F-Scale, in 1947 (the “F” stands for fascist). Much of

what was included in this scale structured later psychological research on authoritarianism: a focus on religiosity, overconcern with sex, power, submission to authority, conventionalism, and aggression (Kelman & Barclay, 1963). Horkheimer (1973), a pivotal figure in the development of critical theory, described the authoritarian state as an outgrowth of capitalism and, using a psychoanalytic basis, traced the emergence of authoritarianism to the family, which he described as a political institution (Marasco, 2018). Fromm rooted his own work in emergent social psychology, sociology, and psychoanalysis. As a German Jew who fled Germany for the United States after the Nazis took power, he became interested in the individual and collective forces that lay behind the rise of radical political movements. Not unlike Durkheim, Fromm took a humanistic perspective on psychology and society to describe how the frustration of fundamental needs can lead to negative affective states that, when experienced by enough people, transform whole societies (1941/1990). His work in *Escape from Freedom* focused on how experiences of uncertainty, anxiety, and a desire for security that result from unstructured, unbounded freedom can drive individuals to submit to authoritarian leaders and ideologies in a palliative manner. While in *The Sane Society* (1955/1990), he argued against societal causes of alienation that lead to feelings of emptiness, powerlessness, and eventually to conformity of a type that can undermine one's individuality and critical faculties, leaving people susceptible to authoritarian rule. Throughout his work, he argued for a responsible, autonomous individual development focused on creativity, independence, and love as essential for well-being and as a bulwark against authoritarianism. This contrasted with various "social character orientations:" personality types that Fromm thought of as the combined function of individual character traits as they relate to particular social structures that they interact with.

The historian and political theorist Hannah Arendt combined aspects of the above thinkers with a historical perspective. Like Fromm, her work relied heavily on firsthand knowledge and experience of living in Nazi Germany (she was arrested by the Gestapo in 1933 for researching

antisemitism), and she went on to study Stalinism and the Soviet Union (Hill, 2021). Though her focus was ostensibly on the political and social structure of totalitarianism, it also provided a framework from which to understand authoritarian behaviours that can be said to be the expression of all-encompassing totalitarian structures (Arendt, 1951/2017). Most relevant to the present work was Arendt's examination of social and psychological conditions that make totalitarianism possible: loneliness, isolation, and the fragmentary aspects of mass society and culture that can engender these affective experiences in the individual. Further, Arendt noted how important an understanding of history could be for structuring a society that is comprehensible through knowing where it has been, where it is going, and where its presuppositions, judgements, and overall self-narrative come from. When societal or individual narration falters, the processes of knowing and understanding can disintegrate, giving rise to a reconstituted narrative that severs ties with the past and redefines human action, existence, and the trajectory of entire societies (Arendt, 1961/2006). Arendt's work in this regard prefigures contemporary research on conspiracy thinking styles (Bowes et al., 2023).

The contemporary psychological study of authoritarianism that was informed by the frameworks established by the scholars above, emerged in its own right from around the 1960s onward. Most relevant to the research at hand is Robert Altemeyer's development of authoritarian personality measures that have continued to be influential in social and political psychology (1981). Using the prior work of Adorno and others as a basis, Altemeyer developed the right-wing authoritarianism scale (RWA), which has been periodically validated since its development (Meloan, 1996), and continues to be widely used despite some criticism of its cultural specificity (Gray & Durrheim, 2006). Altemeyer's RWA measure focuses on many of the core concerns of previous research on authoritarianism, e.g., aggression, conventionalism, submission to authority, opposition to social change, and fear of uncertainty (Altemeyer, 1988). He then went on to apply the insights from the RWA measures and subsequent research to broader social and democratic concerns, such

as threats to democratic institutions, intergroup conflict, and prejudice (Altemeyer, 1996). There remains some debate about whether Altemeyer's scale measures personality traits or political beliefs, but versions of his scale remain in use, including in the present research. Social dominance orientation (SDO) is considered to be a more personality-oriented measure that focuses on domination, aggression, and support for hierarchies (Pratto et al., 1994), views commonly associated with far-right beliefs (Ekehammar et al., 2004). There appears to be significant covariance between the two measures (Bilewicz et al., 2017; Sibley et al., 2006), though with some debate around the specific political contexts of social dominance and the relative strength of its political associations (Mirisola et al., 2007; Roccato & Ricofli, 2005). Contemporary research into authoritarianism has recently moved beyond its consideration as a purview of the political right to consider left-wing authoritarianism in more detail—something Altemeyer had considered vague (Satel, 2021), and which has been understudied until recently with the development of a psychometric measure of left-wing authoritarianism (LWA) (Costello et al., 2022).

An additional line of contemporary research that is relevant to issues of authoritarianism/extremism involves nihilism: a belief that nothing meaningful exists (Gertz, 2019). Displaced, anomic individuals in the sense described above by Durkheim and Arendt may fall into traps of internalized depressive affect, finding it difficult to believe in anything at all. The sociologist Marteen Borg (1988) posited an association between nihilism and skepticism towards tradition, suggesting grounding, established truths can withstand only so much probing before they collapse, leading to not merely the kind of normlessness that Durkheim described, but a lack of authentic values altogether. This kind of nihilism has been linked to the postmodern tradition (Baudrillard, 1981; Carr, 1992), and theorized to be a reaction to the great historical crimes of modernity, particularly the holocaust (Alexander, 2013). Indeed, Arendt also suggested that events of the first half of the 20<sup>th</sup> century represented a radical break with historical continuity (1961/2006). Nihilism,

then, can be thought of as a reaction to a particular set of circumstances, which can in turn become the basis for the development of beliefs about the world and even resulting ideologies. In fact, believing them to be too insubstantial, Fromm described the radical left-wing views of fellow Frankfurt School theorist, Herbert Marcuse (an influential figure in '60s counterculture considered to be “the father” of the New Left (Rothman, 2017)), as fundamentally nihilistic in their character (Fromm, 1955). More recently, psychological research has traced the nomological network of existential nihilism (Forsythe & Mongrain, 2023), revealing relationships between nihilism and other constructs such as depression, negative affect, and meaning in life. This work has led to development of the Existential Nihilism Scale (ENS), which provides strong psychometric evidence for existential nihilism as a meaningful construct.

The idea that things are worse than ever—a preoccupation arguably rooted in nihilism—appears to be a common concern among human beings, as evidenced by a wealth of writing both in and out of scientific literature suggesting that some segment of every generation views their epoch as the final days (Brooks, 2020), with an attendant sense of apocalypticism (Strozier & Boyd, 2010). There are legitimate enough reasons for people to feel this way: the traumatic experience of the world wars (Alexander, 2013), the possibility of nuclear holocaust during the cold war, and now the looming threat of climate change—all of these presented real risks for the future of humanity, and in the latter cases, still do. However, as Steven Pinker (2011; 2018) has famously argued, there is much data to suggest on many important metrics (e.g., violence, poverty, health outcomes), the world is actually better than it has ever been. Pinker’s analysis is not without its legitimate criticisms (Golden, 2018), but the data he presents is compelling. Indeed, while we may disagree, any valid argument that the world is in manifest decline requires squaring some of the data points he gestures towards in making his case. Much has changed, though, since the book was published in 2018. At the time Pinker used the widespread cultural sensibility that “2016 was the worst year ever” as a jumping off

point to give people pause about how bad things really were, but since 2018 the world has convulsed under multiple crises: the global COVID-19 pandemic and the resulting social and inflationary shocks; the 2020 racial reckoning in the United States following the murder of George Floyd that ratcheted up justifications of political violence; the January 6<sup>th</sup> 2021 insurrectionary attack on the United States capitol building in an effort to overturn the 2020 election results; the neo-imperialist Russian invasion of Ukraine and the threat of wider conflict with NATO; the Hamas-led massacre of Israeli civilians that is the largest mass killing of Jews since the holocaust, and the resultant crushing war in Gaza that has killed and displaced a large number of civilians; and, most recently, the assassination attempt on former President Donald Trump during a campaign rally. There have also been spikes in violent crime, increasing wealth inequality (and in some places, such as Canada and Australia, acute housing crises), a protracted decline in American life-expectancy due to deaths of despair, racial rioting in the United Kingdom, and threats of civil war that appear against a backdrop of rising populist and far-right movements in the West.

Despite these myriad crises, it remains difficult to argue that the world is worse than ever before. We face unique challenges, but can these truly be compared to the likes of true global warfare, the mass genocide of whole populations (at times on an industrial scale), indentured servitude and the widespread acceptance of slavery and subsistence poverty? We have recently been forced to confront the optimistic hubris of the 1990s due to a return of existential-feeling challenges to liberal democracy following the oft-misunderstood “end of history” (Fukuyama, 1992), but many have rightly noted that the world has pulled through before, and it is more than possible it will again. However, it is also important to consider what is most different about the current moment: novel developments in technology, particularly those around communication, information, and interaction.

The rise of the internet, and more particularly social media and the portable technology of smart phones, has caused massive social and informational changes. The former Microsoft and

Google software engineer David Auerbach (2023) attributes many of these changes to the rise of what he calls “meganets:” assemblages of broadcast channels that feedback on one another with increasing speed. These meganets are defined by their volume, velocity, and virality according to Auerbach, the latter of which has a strong affective dimension (Miroshnichenko, 2014). These networks are so vast, and ever growing, that we have lost any meaningful sense of scale about them. Indeed, Auerbach contends that their immensity is even beyond the understanding of their creators and managers, who are limited in their ability to exert control, or even meaningfully manage, these networks. And that as a result, it is not possible to exert any globalized or local control over them, nor is possible to fully understand them.

Under this situation, it is unsurprising that individuals would be left overwhelmed, confused, and threatened by the sheer volume of information they are surrounded by. Selection of information for negativity bias, overfitted pattern prediction, and social identity makes only too much sense (Hill, 2019), as information experienced otherwise in this way is merely cumulative and has no temporal extension (Han, 2024). It is disorienting and lacks narration. Without narration, a comprehensible temporal dimension cannot be felt to exist, and history itself becomes unmoored (Arendt, 1961/2006). The past no longer affects the present, the present feels devoid of meaning, and the future appears absent altogether (Arendt, 1961/2006; Han, 2024). This “freedom” of endless information needs escaped from (Fromm, 1941/1990), but into what?

Psychological research into nihilism suggests that it is popular across online platforms (Forsythe & Mongrain, 2023), offering compelling reasons to examine relationships between informational environments and its development. Similarly, previous research has noted the relationships between social media and conspiracy theories (Pennycook et al., 2020; Enders et al., 2021, Cinelli et al., 2022) but the function of conspiratorial thinking as a metacognitive style in an online informational environment remains somewhat mysterious. If, in an information age where

the circulation of information is decoupled from traditional forms of knowledge generation and reality formation (Cornwell et al., 2017), nihilism “emerges when we lose faith in truth itself” (Han, 2022, p. 44), it is no surprise then that conspiracy thinking travels alongside this phenomenon; it becomes a source of identity and meaning (Han, 2022). A real question then looms about what about what follows. Hannah Arendt suggested that the lies of Adolf Hitler were of such scope and enormity that they were able to produce a new reality (Arendt, 1951/2017), presumably out of a situation where the “the distinction between fact and fiction (i.e., the reality of experience) and the distinction between true and false (i.e., the standards of thought) no longer exist[ed]” (Arendt, 1951/2017, p. 622). If such a political figure could emerge from some combination of, social fragmentation, individual disenfranchisement, and uncertainty that generates nihilistic and conspiratorial oriented states, then there are serious questions to be asked about where these forces meet in the current moment. The following research attempts to trace these links, exploring whether and how authoritarianism, and thus preponderance toward political extremism, may manifest as diverse and dependent on context (Costello et al., 2022).

### **The Present Research**

The current studies test the question as to whether the perception of an increase in societal extremism is connected with shifts in social norms toward more authoritarian beliefs. This is considered in terms of a feedback loop, whereby metacognitive styles and social judgements of false consensus regarding the view of an increasingly extreme society inform a kind of “self-fulfilling prophecy” in which views in society shift because of this misperception. While “extremism” and “radicalism” do not have firmly agreed upon definitions across the psychological and political science literature (Bötticher, 2017), for the purposes of this research, they will at times be used

interchangeably to describe an overall movement towards more extreme political beliefs, attitudes, and behaviours. In more specific usage in the studies conducted, precise definitions will be provided.

Study 1 is primarily concerned with examining the correlation between perceptions of societal extremism and authoritarian attitudes. This study hypothesizes that (i) the perception of society having grown more radical than in the past is correlated with bipartisan authoritarian attitudes: right- and left-wing authoritarianism, and that (ii) individuals who score higher on measures of authoritarianism will be more likely to hold conspiratorial and nihilistic world views, and display greater media use; (iii) the perception of increased societal extremism will be associated with greater media use, social dominance orientation, uncertainty, and loneliness; and (iv) that media use will interact with conspiracy mentality and existential nihilism as metacognitive styles to positively influence measures of authoritarianism. Exploratory path analysis was also used to trace relationships between these variables in order to model how causal relationships might look, though due to the correlational nature of this research, causality cannot be implied.

Study 2 expands upon Study 1 by introducing an experimental condition in which participants were shown accurate historical data regarding rates of political violence in the United States since 1970. The aim of this study was to see if the feedback loop of perception of extremism leading into authoritarian attitudes could be interrupted if individuals were presented with information indicating that levels of societal extremism are much reduced than from the past, even if they have fluctuated somewhat over the last decade. We additionally sought to replicate findings from Study 1 regarding the relationship between perception of societal extremism and authoritarian attitudes, as well as that between authoritarian attitudes and conspiratorial and nihilistic metacognitive styles. We hypothesized that (i) individuals who perceive society as having grown more extreme when compared with the past are more likely to endorse bipartisan authoritarian behaviours; (ii) Participants who perceive society as having grown more extreme will score higher on

measures of right- and left-wing authoritarianism; (iii) when presented with historical data on rates of political violence over time, participants who indicated society as having grown more extreme than in the past will display reduced authoritarian tendencies when evaluating behavioural scenarios in comparison with those in a control condition; (iv) participants in the experimental condition who do not show evidence of moderation on authoritarian behavioural scenarios will score high on measures of existential nihilism and conspiracy mentality; (v) participants who score high on measures of authoritarianism will also score high on measures of existential nihilism and conspiracy mentality; (vi) media use will correlate with the perception of societal growth in extremism, and lower level of behavioural moderation in the experimental condition; and (vii), that participants who score higher on measures of authoritarianism, and who do not display moderation in authoritarian behavioural inclinations, will display low levels of uncertainty tolerance. Study 2 was preregistered in accordance with the Open Science Framework; all hypotheses, data, and R code can be found in the project's online repository.

## **Study 1**

### ***Methodology***

Study 1 recruited 400 participants from Amazon's Mechanical Turk crowdworking platform. After excluding those who failed attention checks (where they were asked to select a specific answer bubble), or who provided incomplete answers, the result was a total sample size of  $n = 401$  American adults. The sample was 78% white, 10% black, 7% Asian, and 4% Latino or Hispanic. The average age was 42.3 years, and participants were 58% men, 39% women, and 1.8% non-binary/other. Political orientation of the sample leaned toward moderately liberal ( $M = 3.6$ ,  $SD = 1.7$ ), but reflected a normal distribution and did not violate skewness and kurtosis thresholds.

First, participants were asked a series of questions about the degree to which they felt views of people in society had become more extreme (*Do you think that people's views in the society you live in have grown **more extreme** in recent years than ever before?*), radical (*Do you think that people's views in the society you live in have grown **more radical** in recent years than ever before?*), or seen large shifts in social norms (*In recent years, do you think that people's views have **shifted away from what is considered the norm** (i.e., moved away from values that you consider to be the standard for your society) more than ever before?*) than in the past. Response options were on a seven-point Likert-type scale ranging from “strongly disagree” to “strongly agree.”

Next, participants completed a series of randomized measures, including left-wing authoritarianism (LWA; 13 items), right-wing authoritarianism (RWA; 15 items), social dominance orientation (SDO; 12 items), conspiracy mentality (CMS; 11 items), existential nihilism (ENS; 8 items), uncertainty (3 items), and loneliness (2 items) (Costello et al., 2022; Forsythe & Mongrain, 2023; Ho et al., 2015; Lewis & Bates, 2013; Manganelli Rattazzi, et al., 2007; Stojanov & Halberstadt, 2019). These measures were seven-point Likert-type scales ranging from 1, “strongly disagree,” to 7, “strongly agree,” with some items reverse coded.

Participants were also asked about their media use (8 items) and were presented with a list of items ranging from print media to podcasts and requested to indicate how often they got their news and information from each source on a five-point scale ranging from 1, “never,” to 5, “always.” This was followed by a three-question measure of political orientation, asking how strongly participants identified as a republican or democrat, as well as how liberal or conservative they considered themselves to be on social and economic issues. Responses were on a seven-point scale ranging from strongly democrat/liberal to strongly republican/conservative. The study concluded with standard measures of demographics (i.e., age, gender, ethnicity, education, income).

## ***Analysis***

All analysis was conducted in R Studio using primarily hierarchical linear regression models. All data was screened for violation of regression before analysis began. Participants who failed either of two attention checks were excluded from the analysis, as were those who had incomplete responses on any of the measures of interest. This left a final total sample size of  $n = 386$  for analysis.

Measures were averaged into a single overall score, including the three questions regarding change in societal extremism, which yielded an overall “perception score.”

Upon further discussion and investigation, the previously validated psychometric measures were subject to latent factor analysis using the *lavaan* package (Rosseel, 2012). Latent factor analysis accounts for measurement error by modeling the latent constructs (unobserved variables) that are presumed to underlie observed item scores resulting in more accurate and reliable estimates (Hu & Bentler, 1999; MacCallum & Austin, 2000). Average scores do not account for measurement error as robustly, resulting in potentially biased estimates (Flake & Fried, 2020; Sass, 2011). As psychometric constructs are not, by nature, “flat” (i.e., all items in a measure are equally predictive of the overall construct) latent factor analysis can better model the underlying dimensionality and structure of measurement constructs as opposed to average scores that treat every measurement item equally and possibly obscuring important subtleties in the data (Putnick & Bornstein, 2016). Averaging scores also does not consider construct validity of the measure in use and may include extraneous variance that muddies the intended measurement. By ensuring that the observed variables measure the intended latent constructs, latent factor analysis enhances measurement validity and provides estimates of latent variables that are free from idiosyncratic errors of the individual items in the measure and more precise estimates than averaging (Rhemtulla et al., 2012). In sum, latent factor analysis offers a robust approach to predicting latent constructs for analysis that provides greater

accuracy and validity than averaging scores which do not model relationships between observed variables (measurement items) and the latent constructs they comprise.

Each of the psychometric measures included in the study (LWA, RWA, SDO, ENS, CMS, uncertainty, and loneliness) were input into fitted *lavaan* models that measure the latent construct from all of the observed individual items in each scale. These fitted models were then used to generate predicted latent factor estimates for the above measures to be used in the subsequent linear regression analysis. For ease of interpretation, all of the predicted latent factor estimates were then centered ( $M = 0$ ) and scaled ( $SD = 1$ ) for standardization. Scales that were not previously validated psychometric measures (perception score and political orientation) were not fitted to *lavaan* models, and were instead averaged across items, and centered ( $M = 0$ ), but maintained their original scaling.

The resulting latent factor scores and averages were analysed using hierarchical linear regression models with political orientation, age, gender, education, and ethnicity included as covariates. Following the null model, to address the first hypothesis (that the perception of society having grown more radical than in the past is correlated with bipartisan authoritarian attitudes: right- and left-wing authoritarianism), only LWA and RWA were included in the model, before adding SDO—the strong relationship between RWA and SDO that has been noted in prior literature recommended looking at the effects of these measures separately. CMS and ENS were included in a third model, and then a fourth model included uncertainty and loneliness. Interactions were assessed in the derived models that were indicated to have the best fit. A final model included media use.

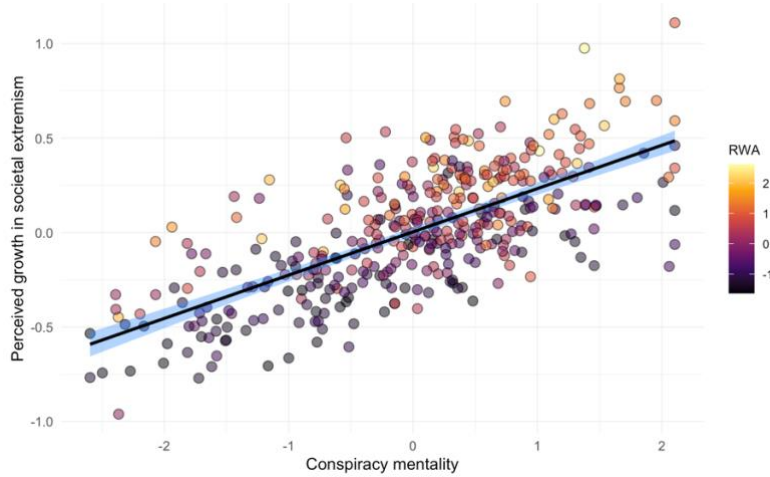
To test the second hypothesis that individuals who score higher on measures of authoritarianism will be more likely to hold conspiratorial and nihilistic world views, a series of simultaneous linear regression models were created with RWA, LWA, and SDO as the dependent variables. Following null models with the above-mentioned covariates, these were assessed with LWA, and/or RWA and SDO, CMS, ENS, uncertainty, loneliness, and media use as predictors. In

the case of the models where RWA was the dependent variable, the removal of SDO as a predictor was tested due to its high correlation with RWA ( $r = .64$ ) thereby monopolizing the model's variance.

To further test study hypotheses, an exploratory path analysis was conducted using a recursive path model constructed in accordance with the theoretical bases that informed the hypotheses. This path model posited that there are parallel paths to left- and right-wing authoritarianism that run through existential nihilism and conspiracy mentality, respectively. The model further examined if ENS and CMS are themselves responses to a mixture of experiences of uncertainty and loneliness under the influence of a dense informational environment. The path models were fitted using full information maximum likelihood estimation, and model fit was assessed by examining the comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). These were assessed according to commonly used threshold criteria, whereby  $RMSEA \leq .066$ ,  $SRMR \leq .040$ , and  $CFI \geq .953$  (McNeish & Wolf, 2023). Model fit was assessed, and the path model was respecified with minor adjustments according to modification indices that were theoretically informed (Bauer & Curran, 2023).

## ***Results***

Hierarchical linear regression models showed that right-wing authoritarianism and conspiracy mentality both predicted the perception of growth in extremism (see Figure 1). The final model was significant,  $R^2 = .06$ ,  $F(12, 370) = 2.46$ ,  $p = .004$  (see Table 1), with RWA demonstrating the largest main effect,  $\beta = 0.23$ ,  $p = .010$ , 95% CI [0.05, 0.40], followed by CMS,  $\beta = 0.19$ ,  $p = .004$ , 95% CI [0.06, 0.32] (see Figure 1). There was no significant effect of LWA, SDO, ENS, uncertainty,



**Figure 1.** Predicted conspiracy mentality and RWA on perception of growth in societal extremism

**Table 1.** Regression Models for Perception of Societal Growth in Extremism

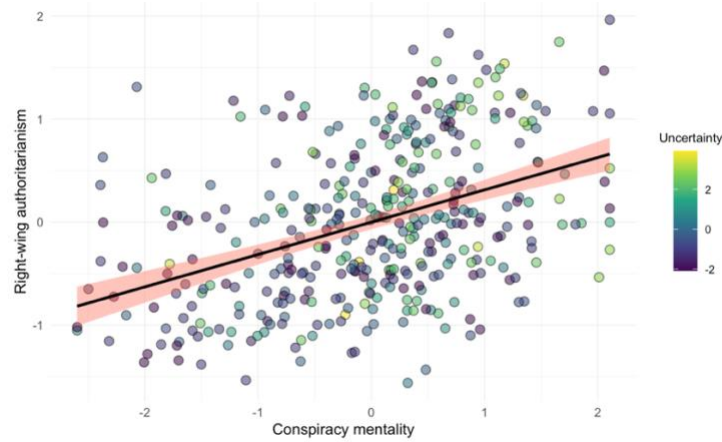
| Predictor             | Models                  |                         |                        |                        |                        |
|-----------------------|-------------------------|-------------------------|------------------------|------------------------|------------------------|
|                       | 1                       | 2                       | 3                      | 4                      | 5                      |
|                       | $\beta$ [95% CI]        | $\beta$ [95% CI]        | $\beta$ [95% CI]       | $\beta$ [95% CI]       | $\beta$ [95% CI]       |
| (Intercept)           | -0.30                   | -0.04                   | -0.13                  | -0.12                  | -0.10                  |
| LWA                   | 0.01<br>[-0.14, 0.17]   | 0.01<br>[-0.14, 0.16]   | -0.03<br>[-0.19, 0.14] | -0.03<br>[-0.20, 0.13] | -0.05<br>[-0.20, 0.13] |
| RWA                   | 0.28***<br>[0.12, 0.45] | 0.31***<br>[0.14, 0.48] | 0.25**<br>[0.08, 0.43] | 0.23*<br>[0.05, 0.41]  | 0.22*<br>[0.04, 0.40]  |
| SDO                   | -                       | -0.07<br>[-0.24, 0.10]  | -0.10<br>[-0.27, 0.08] | -0.10<br>[-0.28, 0.07] | -0.10<br>[-0.28, 0.08] |
| ENS                   | -                       | -                       | -0.01<br>[-0.14, 0.13] | -0.08<br>[-0.23, 0.08] | -0.08<br>[-0.23, 0.07] |
| CMS                   | -                       | -                       | 0.20**<br>[0.07, 0.33] | 0.19**<br>[0.06, 0.32] | 0.18**<br>[0.06, 0.31] |
| Uncertainty           | -                       | -                       | -                      | 0.09<br>[-0.07, 0.22]  | 0.07<br>[-0.07, 0.22]  |
| Loneliness            | -                       | -                       | -                      | 0.08<br>[-0.05, 0.24]  | 0.10<br>[-0.05, 0.24]  |
| Media use             | -                       | -                       | -                      | -                      | 0.06<br>[-0.18, 0.31]  |
| Political orientation | -0.06<br>[-0.18, 0.05]  | -0.05<br>[-0.17, 0.07]  | -0.05<br>[-0.17, 0.07] | -0.03<br>[-0.17, 0.07] | -0.03<br>[-0.17, 0.07] |
| Age                   | 0.01<br>[-0.00, 0.02]   | 0.01<br>[-0.00, 0.02]   | 0.01<br>[-0.00, 0.02]  | 0.01<br>[-0.00, 0.02]  | 0.01<br>[-0.00, 0.02]  |
| Gender                | -0.08<br>[-0.29, 0.13]  | -0.08<br>[-0.29, 0.13]  | -0.09<br>[-0.30, 0.12] | -0.10<br>[-0.30, 0.12] | -0.10<br>[-0.30, 0.12] |
| Education             | -0.03<br>[0.12, 0.05]   | -0.03<br>[-0.12, 0.05]  | -0.01<br>[-0.09, 0.07] | -0.01<br>[-0.09, 0.07] | -0.01<br>[-0.09, 0.07] |
| Ethnicity             | -0.00<br>[-0.00, 0.05]  | -0.01<br>[-0.10, 0.08]  | -0.00<br>[-0.09, 0.09] | 0.01<br>[-0.09, 0.09]  | 0.01<br>[-0.09, 0.09]  |
| $R^2$                 | .04                     | .04                     | .06                    | .07                    | .07                    |
| $F$                   | 2.12*                   | 1.94                    | 2.53**                 | 2.46**                 | 2.28**                 |

$n = 386$

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

or loneliness on perception of societal growth in extremism, and no significant interaction between CMS and RWA. There was no significant main effect for media use when it was included in the model, and no significant interactions between media use and CMS or RWA in predicting increased perception of societal extremism.

Simultaneous linear regression with right-wing authoritarianism as an outcome was significant,  $R^2 = .52$ ,  $F(11, 371) = 36.18$ ,  $p < .001$  (see Table 2). RWA was significantly predicted by conspiracy mentality,  $\beta = 0.16$ ,  $p < .001$ , 95% CI [0.07, 0.22], uncertainty (see Figure 2),  $\beta = 0.10$ ,  $p = .022$ , 95% CI [0.01, 0.19] (see Figure 2), and media use,  $B = 0.21$ ,  $p = .004$ , 95% CI [0.07, 0.36]. Existential nihilism was nearing significance in negatively predicting RWA,  $\beta = -0.08$ ,  $p = .07$ , 95% CI [-0.17, 0.01]. When social dominance orientation is added to the model, RWA is positively predicted by CMS,  $\beta = 0.10$ ,  $p = .005$ , 95% CI [0.03, 0.18], uncertainty,  $\beta = 0.11$ ,  $p < .010$ , 95% CI [0.02, 0.20], and media use,  $B = 0.20$ ,  $p = .007$ , 95% CI [0.06, 0.33], as well as SDO,  $\beta = 0.30$ ,  $p < .001$ , 95% CI [0.21, 0.40], and LWA  $\beta = 0.11$ ,  $p = .021$ , 95% CI [0.02, 0.21]. RWA was also negatively predicted by existential nihilism in this model,  $\beta = -0.13$ ,  $p = .002$ , 95% CI [-0.21, -0.05]. ANOVA indicated that the model that included SDO as a predictor performed better in predicting perception of growth in societal extremism,  $F(2, 372) = 21.18$ ,  $p < .001$ . No significant interaction effects involving media use were detected in the follow up tests. RWA, then, was consistently predicted by CMS, uncertainty, and media use regardless of whether SDO or not was included in the model as a covariate.



**Figure 2.** Predicted conspiracy mentality and uncertainty on right-wing authoritarianism

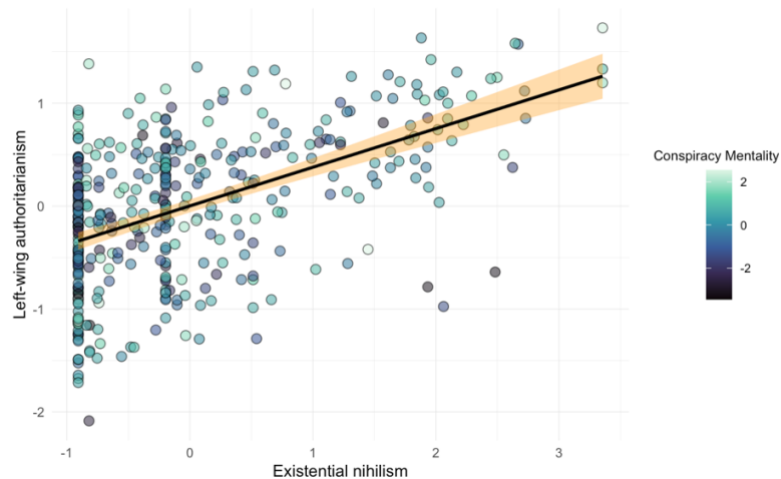
**Table 2.** Linear Regression Models with Authoritarianism Measures as Outcome

| Predictor             | Criterion Variable      |                         |                         |                         |                         |                         |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|                       | LWA<br>$\beta$ [95% CI] | LWA<br>$\beta$ [95% CI] | RWA<br>$\beta$ [95% CI] | RWA<br>$\beta$ [95% CI] | SDO<br>$\beta$ [95% CI] | SDO<br>$\beta$ [95% CI] |
| (Intercept)           | 0.21                    | 0.21                    | 0.03                    | 0.03                    | -0.22                   | -0.21                   |
| LWA                   | -                       | -                       | 0.11*                   | 0.12*                   | -0.17***                | -0.19***                |
| RWA                   | 0.13*                   | 0.13*                   | [0.02, 0.21]            | [0.02, 0.22]            | [-0.27, -0.08]          | [-0.29, -0.10]          |
| SDO                   | [0.02, 0.23]            | [0.02, 0.23]            | -                       | -                       | [0.21, 0.41]            | [0.21, 0.41]            |
| ENS                   | -0.19***                | -0.20***                | 0.30***                 | 0.31***                 | -                       | -                       |
| CMS                   | [-0.29, -0.08]          | [-0.31, -0.10]          | [0.21, 0.40]            | [0.21, 0.40]            | [0.11, 0.28]            | [0.11, 0.28]            |
| Uncertainty           | 0.27***                 | 0.26***                 | -0.13**                 | -0.13**                 | 0.20***                 | 0.20***                 |
| Loneliness            | [0.18, 0.35]            | [0.18, 0.35]            | [-0.22, -0.05]          | [-0.22, -0.05]          | [0.03, 0.18]            | [0.03, 0.18]            |
| Media use             | 0.09*                   | 0.09*                   | 0.11**                  | 0.11**                  | 0.08*                   | 0.09*                   |
| Political orientation | [0.01, 0.17]            | [0.02, 0.17]            | [0.03, 0.18]            | [0.03, 0.18]            | [0.01, 0.16]            | [0.01, 0.16]            |
| Age                   | 0.07                    | 0.05                    | 0.11*                   | 0.11**                  | -0.05                   | -0.06                   |
| Gender                | [-0.02, 0.15]           | [-0.05, 0.14]           | [0.03, 0.20]            | [0.03, 0.20]            | [-0.14, 0.03]           | [-0.15, 0.02]           |
| Education             | -0.02                   | -0.02                   | 0.05                    | 0.05                    | 0.06                    | 0.06                    |
| Ethnicity             | [-0.10, 0.07]           | [-0.10, 0.07]           | [-0.04, 0.13]           | [-0.04, 0.13]           | [-0.02, 0.15]           | [-0.02, 0.15]           |
| ENS x Media use       | 0.33***                 | 0.23**                  | 0.20**                  | 0.21**                  | -0.00                   | -0.06                   |
| R <sup>2</sup>        | [0.19, 0.47]            | [0.08, 0.38]            | [0.06, 0.33]            | [0.06, 0.36]            | [-0.15, 0.14]           | [-0.21, 0.08]           |
| F                     | -0.30***                | -0.31***                | 0.29***                 | 0.29***                 | 0.22***                 | 0.21***                 |
|                       | [-0.37, -0.24]          | [-0.37, -0.24]          | [0.23, 0.35]            | [0.23, 0.35]            | [0.15, 0.28]            | [0.14, 0.27]            |
|                       | -0.01**                 | -0.01*                  | -0.01*                  | -0.01*                  | 0.00                    | 0.00                    |
|                       | [-0.02, -0.00]          | [-0.01, -0.00]          | [-0.01, -0.00]          | [-0.01, -0.00]          | [-0.01, 0.01]           | [-0.01, 0.02]           |
|                       | 0.02                    | 0.01                    | 0.04                    | 0.04                    | 0.01                    | 0.00                    |
|                       | [-0.11, 0.14]           | [-0.12, 0.13]           | [-0.09, 0.16]           | [-0.08, 0.16]           | [-0.12, 0.13]           | [-0.12, 0.13]           |
|                       | 0.02                    | 0.02                    | 0.04                    | 0.04                    | 0.04                    | 0.04                    |
|                       | [-0.03, 0.07]           | [-0.03, 0.07]           | [-0.01, 0.09]           | [-0.01, 0.09]           | [-0.01, 0.10]           | [-0.01, 0.09]           |
|                       | 0.03                    | 0.03                    | 0.05                    | 0.05                    | 0.01                    | -0.01                   |
|                       | [-0.03, 0.08]           | [-0.02, 0.08]           | [-0.00, 0.10]           | [-0.00, 0.10]           | [-0.06, 0.04]           | [-0.06, 0.05]           |
|                       | -                       | 0.20***                 | -                       | -0.04                   | -                       | 0.14*                   |
|                       |                         | [0.09, 0.31]            |                         | [-0.14, 0.07]           |                         | [0.03, 0.24]            |
| R <sup>2</sup>        | .52                     | .54                     | .56                     | .56                     | .55                     | .56                     |
| F                     | 33.95***                | 33.37***                | 39.76***                | 36.68***                | 38.12***                | 36.13***                |

$n = 386$

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

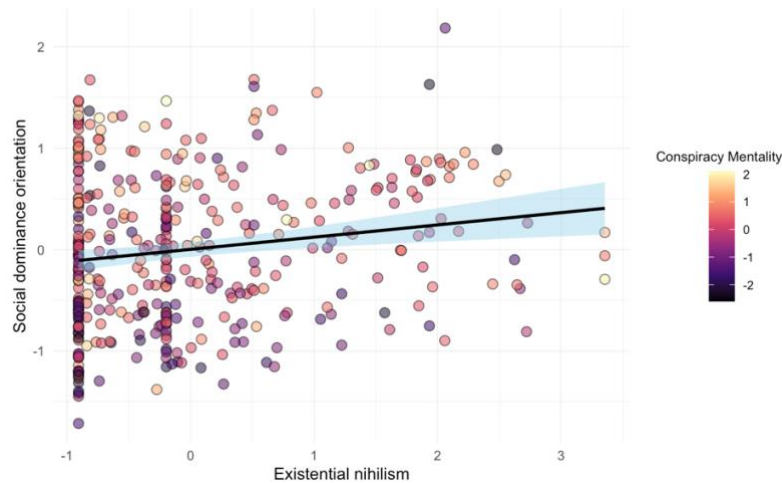
With regard to left-wing authoritarianism, the simultaneous linear regression model was significant,  $R^2 = .52$ ,  $F(12, 370) = 33.95$ ,  $p < .001$  (see Table 2). In this model LWA was positively predicted by ENS,  $\beta = 0.26$ ,  $p < .001$ , 95% CI [0.18, 0.36], media use,  $B = 0.33$ ,  $p < .001$ , 95% CI [0.19, 0.47], CMS,  $\beta = 0.09$ ,  $p = .020$ , 95% CI [0.01, 0.17], and RWA,  $\beta = 0.13$ ,  $p = .021$ , 95% CI [0.02, 0.23] (see Figure 3). It was also negatively predicted by SDO,  $\beta = -0.19$ ,  $p < .001$ , 95% CI [-0.29, -0.08]. Follow up tests indicated a significant model,  $R^2 = .55$ ,  $F(14, 368) = 31.54$ ,  $p < .001$ , with positive interactions between ENS and media use,  $\beta = 0.17$ ,  $p = .003$ , 95% CI [0.06, 0.28]. As media use is unstandardized, interaction estimates indicate the effect of a one-unit increase in media use at a one standard deviation increase in ENS on LWA. All other significant variables from the prior model remained so (see Table 2), and results of an ANOVA indicated the model with the interaction terms performed better when predicting left-wing authoritarianism,  $F(2, 372) = 8.66$ ,  $p < .001$ .



**Figure 3.** Predicted existential nihilism and conspiracy mentality on left-wing authoritarianism

When social dominance orientation was the dependent variable the linear regression model was significant,  $R^2 = .55$ ,  $F(12, 370) = 38.12$ ,  $p < .001$  (see Table 2). SDO was positively predicted by RWA,  $\beta = 0.31$ ,  $p < .001$ , 95% CI [0.21, 0.41], CMS,  $\beta = 0.08$ ,  $p = .026$ , 95% CI [0.01, 0.16], and

ENS,  $\beta = 0.19, p < .001, 95\% \text{ CI } [0.11, 0.28]$  (see Figure 4). It was also negatively predicted by LWA,  $\beta = -0.17, p < .001, 95\% \text{ CI } [-0.27, -0.08]$ . Follow up tests indicated no significant interaction effects with media use.



**Figure 4.** Predicted existential nihilism and conspiracy mentality on social dominance orientation

The initial path model demonstrated fit statistics outside of desired thresholds: SRMR = .06, RMSEA = 0.1, CFI = 0.91. Modification indices suggested an additional path between media use and LWA as well as between media use and ENS. Additionally to evenly parallel path regressions for LWA and RWA, a CMS path was added to the former, and an ENS path to the latter. With an SRMR = .022, RMSEA = .047, and CFI = .989, the respecified path model indicated much better fit (see Figure 5). While the RMSEA was slightly above the traditional .040 cutoff, other authors have indicated an RMSEA < .05 denotes excellent fit (Bauer & Curran, 2023).

The path model found that uncertainty positively predicted media use,  $\beta = 0.04, p = .035, 95\% \text{ CI } [0.003, 0.08]$ , CMS,  $\beta = 0.12, p < .001, 95\% \text{ CI } [0.06, 0.19]$ , and ENS,  $\beta = 0.16, p < .001, 95\% \text{ CI } [0.10, 0.22]$ . Meanwhile, media use positively predicted CMS,  $\beta = 0.24, p < .001, 95\% \text{ CI } [0.06, 0.42]$ , ENS,  $\beta = 0.29, p < .001, 95\% \text{ CI } [0.13, 0.44]$ , RWA,  $\beta = 0.40, p < .001, 95\% \text{ CI } [0.23, 0.58]$ , and LWA,  $\beta = 0.32, p < .001, 95\% \text{ CI } [0.15, 0.49]$ . Additionally, conspiracy mentality



## *Discussion*

Findings from Study 1 provide some insight into the relationships between perceptions of societal extremism, authoritarian attitudes, metacognitive styles, and media use. Hypothesized associations were largely supported—with some caveats—offering some understanding of how individuals' perceptions of a more radicalized society may be intertwined with broader psychological dynamics. Findings indicated that perceptions of society having grown more extreme are significantly correlated with right-wing authoritarianism (RWA) but not left-wing authoritarianism (LWA), suggesting that RWA may be more sensitive to perceptions of societal change, perhaps due to its emphasis on order and positive valuation of the past (Duckitt & Bizumic, 2013; Womick et al., 2019). However, it is also possible that the questions regarding perception of growth in extremism were worded in a way that leaned right-wing coded and so were only able to detect an effect in the direction of this political orientation. Results also indicated that individuals who are higher in conspiracy mentality (CMS) are more likely to believe that society is becoming increasingly radicalized. It is possible that a conspiratorial worldview may heighten sensitivity to perceived threats and changes within society, possibly as part of its explanatory function (Bowes et al., 2023; Stojanov & Halberstadt, 2019), reinforcing the belief that societal norms are deteriorating.

To no surprise, RWA was positively predicted by conspiracy mentality, replicating both prior research findings in this regard and widespread societal intuitions (Bowes et al., 2023; Frischlich et al., 2021). Uncertainty and media use as also predicting RWA offers some evidence that uncertainty threats may play a significant role in adoption of authoritarian ideology, and that it is further contributed to by a saturated information environment. Existential nihilism (ENS) negatively predicting RWA while positively predicting LWA may point to a fundamental difference between these two flavours of authoritarianism. A nihilistic worldview may conflict with the rigid certainties of right-wing authoritarianism that finds deep meaning in tradition and the past, but conversely

might drive a desire for individuals on the left to impose collective meaning as an attempt to reassert control in what feels like a chaotic and purposeless world. Furthermore, the correlation between RWA and LWA as predictors of each other in respective regression analysis, raises questions as to how different these respective authoritarian constructs are. As the path analysis suggests that the route to each is distinct, it may be that these are not distinct types of authoritarianism but rather separate representations of a single authoritarian characteristic whose shape is influenced by the meeting of environmental factors and other aspects of personality.

Study 1 also highlights the possible role of media use in these dynamics. As individuals experience uncertainty, they may increasingly turn to information consumption as a coping mechanism, which, in turn, reinforces authoritarian tendencies by offering material for structured narratives that align with their fears and uncertainties. This underscores the critical role information environments can play in shaping political attitudes, particularly in contexts where societal change is perceived as threatening. Interactions between media use and ENS in predicting LWA suggest that informational consumption amplifies the effects of the former as a metacognitive style, possibly by providing content that resonates with certain worldviews or confirms the world as chaotic and meaningless. However, the lack of significant interactions in predicting RWA could suggest that the relationship between media use and RWA may depend more on subject matter and content than the overall amount of information consumed.

Taken together, findings suggest that forms of authoritarianism may be shaped by different psychological pathways: RWA through uncertainty and conspiracy mentality, and LWA through loneliness followed by existential nihilism. This distinction has significant implications for understanding how different ideological groups process and respond to emotional states with metacognitive styles in the context of a saturated informational environment.

## **Study 2**

Study 2 builds upon the findings of Study 1 by introducing an experimental condition whereby participants were presented with historical data regarding the rates of political violence in the United States since 1970. The primary objective was to determine whether providing this contextual information could disrupt the perception of societal extremism and the development of authoritarian attitudes. The study also sought to replicate earlier findings regarding the connection between authoritarian attitudes and conspiratorial or nihilistic metacognitive styles. The hypotheses tested included the expectation that participants who viewed society as more extreme compared to the past would demonstrate higher levels of bipartisan authoritarianism, and that this perception would be moderated by exposure to historical data, reducing authoritarian indicators in the experimental group. Additionally, the study hypothesized that individuals resistant to moderation would score higher in existential nihilism and conspiracy mentality, and that these traits, along with authoritarianism, would correlate with low uncertainty tolerance and greater media use.

## ***Methodology***

Participants were again recruited from Amazon's Mechanical Turk platform. The sample consisted of 542 Americans. The sample was 51.8% men, 45% women, 1.7% non-binary/third gender, and 1.5% prefer not to say/did not answer. The ethnic breakdown of the sample was 75.5% white, 8.9% black, 8.3% Asian, 4.4% Latino or Hispanic, and 0.4% Native American. The average age was 44 years old. Political orientation leaned liberal to extremely liberal ( $M = 3.5$ ,  $SD = 1.8$ ) but resembled a normal distribution and met acceptable thresholds for skewness and kurtosis. After screening out participants who failed attention and manipulation checks, the final total sample size was  $n = 502$ .

Study 2 contained an experimental manipulation whereby participants were randomly assigned to one of two conditions. In the experimental condition, participants were shown real-world data from the Global Terrorism Database (Global Terrorism Database, 2023) regarding rates of political violence in the United States since (see Appendix A). In the control condition, participants were shown a graph with a similar trendline over the same period: vinyl sales in the United States since the early 1970s (Richter, 2024). Participants were asked three questions in relation to each graph intended to verify their understanding of the information being presented. After excluding participants who failed these manipulation checks and those who had incomplete responses, the total sample size was  $n = 251$  for the control condition, and  $n = 251$  for the experimental condition.

Participants were then again asked three questions meant to gauge their sensibilities regarding how extremist their society had become. To address the problem of these questions being potentially overly right-wing coded in Study 1, we altered the questions slightly to try and capture a sense of societal change in this regard from across the political spectrum. One question each was targeting at right- and left-wing people, and then an additional overall question meant to capture a general sense of societal extremism. All three questions contained a clear definition of the terms being asked about. Thus, targeting conservatives, we asked: *Radicalism is defined as a willingness to selectively use forcible actions to achieve practical goals in the service of particular political beliefs. With this definition in mind, do you think that the society you live in has grown more radical in recent years than it was in the past?* For liberals, the question was: *Reactionary is defined as a forceful opposition to political, social, economic progress or reform, advocating a return to a previously held status quo. With this definition in mind, do you think the society you live in has grown more reactionary in recent years than it was in the past?* To capture a general sense of societal extremism that we anticipated would resonate with both conservatives and liberals, the question was: *Extremism is defined as a belief in the legitimacy of using violence against those who do not agree with a set of ideas as*

*a form of political action. With this definition in mind, do you think that the society you live in has grown more extreme in recent years than it was in the past?* Responses to these questions were taken on a seven-point Likert-type scale ranging from “strongly disagree” to “strongly agree.” Participants were again provided with an open text response question where they were asked in what ways they felt societal change in these directions manifest.

To test behavioural indicators of authoritarianism as opposed to merely attitudes, six vignettes were devised based upon the right- and left-wing authoritarianism scale, with three targeted at each type of authoritarianism. These vignettes presented participants with scenarios that were dramatized versions of combined items from the LWA and RWA measures, about which they were asked to indicate their support for a particular outcome (see Appendix B for full vignettes). In the case of RWA derived scenarios, these involved: a state governor who calls in military assistance to quell largely peaceful protests in response to a supreme court ruling; a visiting family member who starts an argument over religious authority and morality and claims that latter doesn’t exist; and a neighbour’s daughter who seeks an out-of-state abortion while living in a state that heavily restricts access. LWA derived scenarios included: wealth seizure and home expropriation for a multimillionaire business owner; the suspension pending required sensitivity training of an employee who supported a traditional marriage campaign in their private lives and is deemed homophobic for doing so; and the banning of a pro-Western culture student group from a university campus and suspension of its members. Participants were asked about their likelihood of supporting a particular outcome on a seven-point Likert-type scale ranging from “extremely unlikely” to “extremely likely,” e.g., in the case of the state governor: *How likely would you be to support this governor for re-election based on his response to this crisis?* Participants were presented with the same psychometric measures in random order as in Study 1, with the exception of loneliness and uncertainty. Uncertainty tolerance (UTS)

was included to test a longer measure of uncertainty in contrast to the smaller existential uncertainty measure used in Study 1 (Dalbert, 1996).

Participants were assessed on the same psychometric and media use measures as in Study 1. The study concluded with a three-question measure of political orientation, as well as standard demographics.

### ***Analysis***

Analysis in Study 2 resembled Study 1 in most ways. The *lavaan* package was again used to generate prediction scores based on latent factor analysis for the psychometric measures. Similarly, an averaged perception score was calculated using the three-question perception of change in societal extremism measure, as was media use. The scenarios were categorized by political association: right- and left-wing authoritarian scenarios were averaged into a single score for each, based on three scenarios associated with each authoritarianism measure. All values were centered, and in the case of latent factor prediction estimates, centered and scaled, for ease of interpretation.

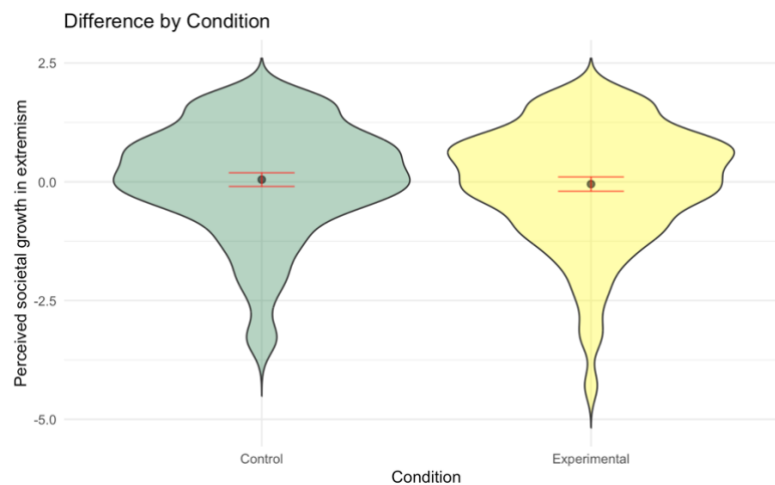
An independent samples *t*-test was conducted to examine overall differences in the means of perception score between experimental conditions ( $\alpha = 0.05$ ). By condition interactions were used to assess additional differences between conditions relevant to study hypotheses. Unlike Study 1, simultaneous linear regression models were used to test predicted perception of growth in societal extremism as an outcome, as well as for linear models that were fitted with RWA, LWA, and SDO as dependent variables. This was also applied to linear regression models where left- and right-wing authoritarian scenario scores were used as dependent variables. In this instance, LWA, RWA, SDO, CMS, ENS, and UTS were included as covariates along with the previously mentioned demographic controls, though LWA was removed as a predictor when left-wing authoritarian behaviour scenarios were an outcome due to their correlation, and the same logic was applied to RWA as a predictor

with right-wing authoritarian scenarios as the dependent variable. To test hypotheses iv and vii—that participants in the experimental condition who did not display moderation in authoritarian indicators will be high in ENS, CMS, and show low tolerance for uncertainty—LWA/RWA and the behaviour endorsement scores from their respective scenarios were divided at the midpoint to create a subset of the data that was comprised of the top half of each variable. Following from this, ENS and CMS were analyzed against experimental condition via *t*-test within each subset. The same was done for a perception of societal growth in extremism by media use interaction term, which was also subject to a correlation test in each subset for verification. This was done to test if those who had not moderated on authoritarian indicators in the experimental condition were higher on ENS and CMS compared to the control condition, and if media use and perception of growth in societal extremism was more correlated among those who had not moderated on authoritarian behavioural indicators in the experimental condition.

## ***Results***

An independent samples *t*-test indicated there was no significant differences in perception of growth in societal extremism between the control and experimental conditions,  $t(499.1) = 0.89, p = .374, 95\% \text{ CI } [-0.11 \text{ to } 0.30]$  (see Figure 6). A simultaneous linear regression model examining participants across conditions was significant,  $R^2 = .06, F(12, 487) = 2.71, p = .001$ . Conspiracy mentality positively predicted the perception of societal growth in extremism,  $\beta = 0.21, p < .001, 95\% \text{ CI } [0.07, 0.33]$ , as did left-wing authoritarianism,  $\beta = 0.18, p = .018, 95\% \text{ CI } [0.03, 0.34]$ . No significant by-condition interaction was found; however, there was a marginally significant interaction between CMS and condition,  $\beta = 0.20, p = .058, 95\% \text{ CI } [-0.01, 0.41]$ , such that higher levels of CMS may have an influence on increased perception of growth in societal extremism when

participants were shown accurate rates of historical violence indicating that it is lower than in the past.



**Figure 6.** Difference in perceived growth in societal extremism between control and experimental condition

With left-wing authoritarian behavioral scenarios as an outcome, the model was significant:  $R^2 = .27$ ,  $F(12, 487) = 15.13$ ,  $p < .001$  (see Table 3). Perception of growth in societal extremism was not significant, indicating that participants who viewed society as having grown more extreme were not more likely to endorse left-wing authoritarian behaviours. However, when the perception scores were examined independently (model:  $R^2 = .28$ ,  $F(12, 487) = 15.52$ ,  $p < .001$ ), participants who viewed society as having become more reactionary were more likely to endorse left-wing authoritarian behavioural,  $\beta = 0.09$ ,  $p = .025$ , 95% CI [0.01, 0.17]. ENS positively predicted left-wing endorsement of authoritarian behaviour,  $\beta = 0.18$ ,  $p = .004$ , 95% CI [0.06, 0.31], as did media use,  $\beta = 0.24$ ,  $p = .03$ , 95% CI [0.03, 0.45], whereas SDO negatively predicted the endorsement of these behaviours,  $\beta = -0.18$ ,  $p = .033$ , 95% CI [-0.33, -0.01]. As well, UTS,  $\beta = 0.17$ ,  $p = .006$ , 95% CI [0.05, 0.30], indicating that greater tolerance for uncertainty was associated with endorsement of left-wing authoritarian behaviours. There was no significant by-condition interaction for perception of growth in societal extremism and endorsement of left-wing authoritarian behaviour. However, there

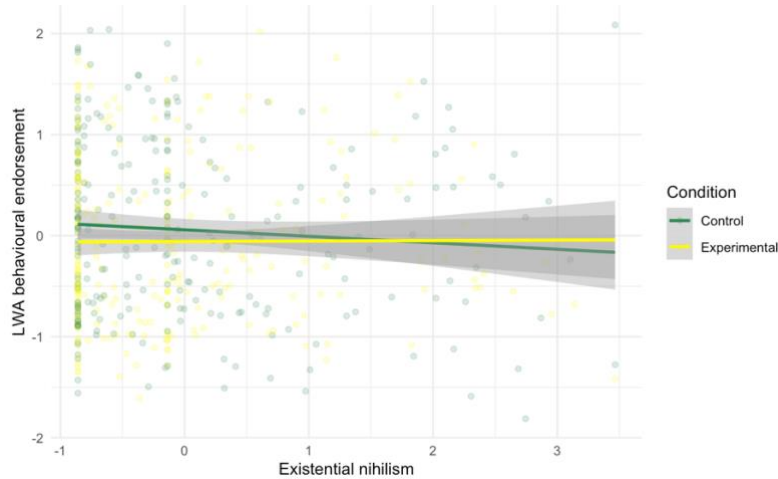
was a significant by-condition interaction for ENS,  $\beta = 0.45$ ,  $p < .001$ , 95% CI [0.21, 0.69] in an interaction model (see Figure 7), indicating that in the experimental condition where participants were shown accurate rates of political violence over time higher levels of existential nihilism positively predicted endorsement of left-wing authoritarian behaviour.

**Table 3.** Study 2 Linear Regression Models for Authoritarian Behavioural Indicators

| Predictor             | Criterion Variable         |                            |                         |                           |
|-----------------------|----------------------------|----------------------------|-------------------------|---------------------------|
|                       | LWA scenario               | LWA scenario               | RWA scenario            | RWA scenario              |
|                       | $\beta$ [95% CI]           | $\beta$ [95% CI]           | $\beta$ [95% CI]        | $\beta$ [95% CI]          |
| (Intercept)           | 0.51                       | 0.52                       | 0.02                    | 0.03                      |
| LWA                   | -                          | -                          | 0.17*<br>[0.03, 0.33]   | 0.16*<br>[0.01, 0.31]     |
| RWA                   | -0.03<br>[-0.22, 0.16]     | -0.07<br>[-0.26, 0.12]     | -                       | -                         |
| SDO                   | -0.18*<br>[-0.34, -0.01]   | -0.16*<br>[-0.32, -0.00]   | 0.23***<br>[0.09, 0.36] | 0.23***<br>[0.09, 0.36]   |
| ENS                   | 0.19**<br>[0.06, 0.31]     | 0.02<br>[-0.19, 0.15]      | -0.07<br>[-0.19, 0.04]  | -0.19**<br>[-0.34, -0.05] |
| CMS                   | 0.11<br>[-0.03, 0.25]      | 0.10<br>[-0.03, 0.24]      | 0.11*<br>[0.00, 0.23]   | 0.11<br>[-0.01, 0.22]     |
| UTS                   | 0.17**<br>[0.05, 0.30]     | 0.17**<br>[0.05, 0.30]     | -0.04<br>[-0.16, 0.07]  | -0.04<br>[0.14, 0.07]     |
| Media use             | 0.24*<br>[0.03, 0.45]      | 0.20<br>[-0.01, 0.41]      | 0.24**<br>[0.07, 0.42]  | 0.22*<br>[0.04, 0.40]     |
| Extremism growth      | 0.07<br>[-0.04, 0.17]      | 0.06<br>[-0.04, 0.16]      | -0.02<br>[-0.13, 0.06]  | -0.03<br>[-0.12, 0.06]    |
| Political orientation | -0.22***<br>[-0.33, -0.10] | -0.20***<br>[-0.31, -0.09] | 0.39***<br>[0.30, 0.48] | 0.39***<br>[0.30, 0.48]   |
| Age                   | -0.03***<br>[-0.04, -0.02] | -0.03***<br>[-0.04, -0.02] | -0.00<br>[-0.01, 0.01]  | -0.00<br>[-0.01, 0.01]    |
| Gender                | 0.40***<br>[0.20, 0.60]    | 0.40***<br>[0.21, 0.61]    | 0.04<br>[-0.13, 0.21]   | 0.05<br>[-0.13, 0.22]     |
| Education             | 0.00<br>[-0.08, 0.08]      | -0.00<br>[-0.08, 0.07]     | 0.01<br>[-0.06, 0.08]   | 0.01<br>[-0.06, 0.07]     |
| Ethnicity             | 0.09*<br>[0.02, 0.17]      | 0.11**<br>[0.03, 0.18]     | 0.01<br>[-0.05, 0.08]   | 0.02<br>[-0.04, 0.08]     |
| Condition             | -                          | 0.03<br>[-0.21, 0.27]      | -                       | 0.01<br>[-0.19, 0.21]     |
| ENS x Condition       | -                          | 0.45***<br>[0.21, 0.69]    | -                       | 0.28**<br>[0.07, 0.48]    |
| $R^2$                 | .27                        | .29                        | .35                     | .36                       |
| $F$                   | 15.13***                   | 14.24***                   | 21.92***                | 19.49***                  |

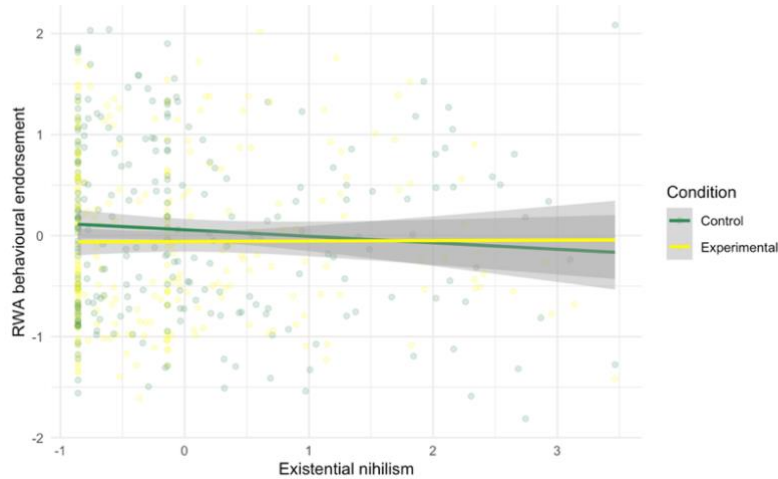
$n = 502$

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$



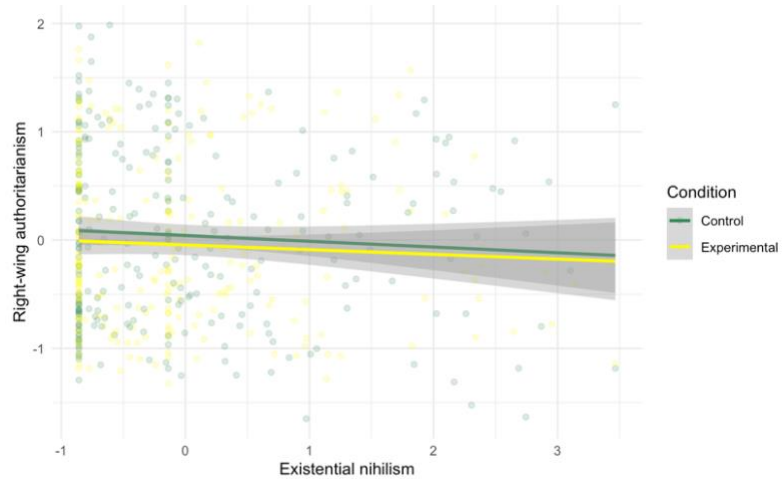
**Figure 7.** By-condition interaction for existential nihilism on LWA behavioural endorsement

The model in which right-wing authoritarian behaviour scenario scores were the dependent variable was significant,  $R^2 = .35$ ,  $F(12, 487) = 21.92$ ,  $p < .001$  (see Table 3). Both overall and individual measures of perception of growth in societal radicalism were non-significant in predicting the endorsement of right-wing authoritarian behaviour. However, behavioural endorsement was positively predicted by CMS,  $\beta = 0.11$ ,  $p = .047$ , 95% CI [0.001, 0.228], media use,  $\beta = 0.24$ ,  $p = .007$ , 95% CI [0.07, 0.42], and SDO,  $\beta = 0.23$ ,  $p < .001$ , 95% CI [0.09, 0.36], as well as LWA,  $\beta = 0.18$ ,  $p = .02$ , 95% CI [0.03, 0.33]. No significant by-condition interaction between perception of growth in societal extremism and right-wing behaviour endorsement was found. However, as above, there was a significant by-condition interaction with existential nihilism,  $\beta = 0.28$ ,  $p = .008$ , 95% CI [0.07, 0.48], indicating that higher levels of ENS were associated with right-wing behaviour endorsement in the experimental condition (see Figure 8).

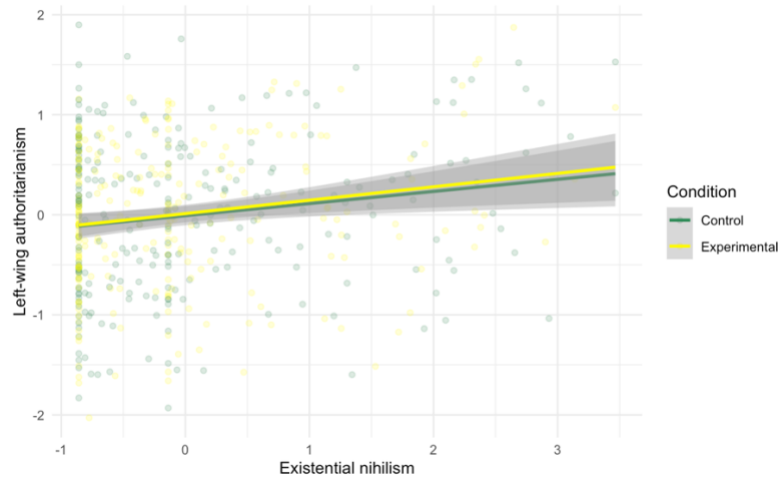


**Figure 8.** By-condition interaction for existential nihilism on RWA behavioural endorsement

Analysis with left-wing authoritarianism as an outcome generated a significant model,  $R^2 = .55$ ,  $F(12, 487) = 50.13$ ,  $p < .001$  (see Table 4). LWA was positively predicted by ENS,  $\beta = 0.26$ ,  $p < .001$ , 95% CI [0.20, 0.32], CMS,  $\beta = 0.08$ ,  $p = .015$ , 95% CI [0.02, 0.15], replicating findings from Study 1. It was also positively predicted by perception of growth in societal extremism,  $\beta = 0.06$ ,  $p = .018$ , 95% CI [0.01, 0.11], and negatively predicted by SDO,  $\beta = -0.08$ ,  $p = .015$ , 95% CI [-0.27, -0.11]. No significant by-condition interactions were found (see Figure 10). A linear regression model with right-wing authoritarianism as an outcome was also significant,  $R^2 = .58$ ,  $F(11, 487) = 62.13$ ,  $p < .001$  (see Table 5). RWA was positively predicted by CMS,  $\beta = 0.17$ ,  $p < .001$ , 95% CI [-0.27, -0.11], and media use,  $\beta = 0.11$ ,  $p = .034$ , 95% CI [-0.27, -0.11]. Once again, there was a significant by-condition interaction for ENS,  $\beta = 0.13$ ,  $p = .029$ , 95% CI [0.01, 0.24] (See Figure 9).



**Figure 9.** By-condition interaction for existential nihilism on right-wing authoritarianism



**Figure 10.** By-condition interaction for existential nihilism on RWA behavioural endorsement ( $p = .095$ )

**Table 4.** Study 2 Linear Regression Models for Authoritarian Measures

| Predictor             | Criterion Variable |                  |                  |                  |
|-----------------------|--------------------|------------------|------------------|------------------|
|                       | LWA                | LWA              | RWA              | RWA              |
|                       | $\beta$ [95% CI]   | $\beta$ [95% CI] | $\beta$ [95% CI] | $\beta$ [95% CI] |
| (Intercept)           | 0.26               | 0.28             | -0.00            | 0.00             |
| LWA                   | -                  | -                | -0.03            | -0.03            |
| RWA                   | -0.03              | -0.04            | -                | -                |
| SDO                   | [-0.13, 0.06]      | [-0.26, 0.12]    | [0.13, 0.28]     | [0.14, 0.28]     |
| ENS                   | -0.19***           | -0.19***         | -0.09**          | -0.14***         |
| CMS                   | [-0.27, -0.11]     | [-0.32, -0.00]   | [-0.16, -0.03]   | [-0.23, -0.07]   |
| UTS                   | 0.26***            | 0.21***          | 0.15***          | 0.14***          |
| Media use             | 0.08*              | 0.08*            | 0.11*            | 0.10*            |
| Extremism growth      | [0.01, 0.15]       | [-0.03, 0.24]    | [0.08, 0.21]     | [0.08, 0.21]     |
| Political orientation | 0.05               | 0.04             | -0.04            | -0.03            |
| Age                   | [-0.02, 0.11]      | [0.05, 0.30]     | [-0.09, 0.03]    | [-0.09, 0.13]    |
| Gender                | 0.07               | 0.06             | 0.01             | 0.00             |
| Education             | [-0.04, 0.17]      | [-0.01, 0.41]    | [0.01, 0.21]     | [0.00, 0.20]     |
| Ethnicity             | 0.06*              | 0.06             | 0.01             | 0.00             |
| Condition             | [0.01, 0.11]       | [-0.04, 0.16]    | [-0.04, 0.05]    | [-0.04, 0.05]    |
| ENS x Condition       | -0.26***           | -0.25***         | 0.30***          | 0.29***          |
| Age                   | [-0.31, -0.20]     | [-0.31, -0.09]   | [0.25, 0.35]     | [0.25, 0.38]     |
| Gender                | -0.01***           | -0.01***         | -0.00            | -0.00            |
| Education             | [-0.02, -0.01]     | [-0.04, -0.02]   | [-0.01, 0.00]    | [-0.01, 0.00]    |
| Ethnicity             | 0.18***            | 0.18***          | 0.06             | 0.07             |
| Condition             | [0.07, 0.28]       | [0.21, 0.61]     | [-0.03, 0.16]    | [-0.03, 0.16]    |
| ENS x Condition       | 0.01               | 0.01             | -0.00            | -0.00            |
| Age                   | [-0.03, 0.05]      | [-0.08, 0.07]    | [-0.04, 0.04]    | [-0.04, 0.03]    |
| Gender                | -0.01              | 0.10             | 0.04*            | 0.04*            |
| Education             | [-0.05, 0.03]      | [0.03, 0.18]     | [0.00, 0.07]     | [0.00, 0.08]     |
| Ethnicity             | -                  | -0.06            | -                | 0.02             |
| Condition             | -                  | [-0.21, 0.27]    | -                | [-0.10, 0.12]    |
| ENS x Condition       | -                  | 0.10             | -                | 0.13*            |
|                       | -                  | [0.21, 0.69]     | -                | [0.01, 0.24]     |
| R <sup>2</sup>        | .55                | .55              | .61              | .36              |
| F                     | 50.13***           | 43.38***         | 62.73***         | 19.49***         |

*n* = 502\**p* < .05 \*\**p* < .01 \*\*\**p* < .001

Participants above the midpoint in their endorsement of left-wing authoritarian behaviour in the experimental condition, i.e., who did not moderate based upon being provided with accurate data regarding rates of political violence over time, were not significantly different in levels of existential nihilism or conspiracy mentality. The same was true for those above the midpoint in endorsing right-wing authoritarian behaviours with regard to conspiracy mentality and existential nihilism—there was no significant difference between control and experimental conditions, and so

no evidence of moderation, or moderation resistance, in authoritarian behaviour endorsement (or authoritarian attitudes) regardless of experimental condition and strength of association with CMS or ENS. While this contradicts hypothesis iv, it is consistent with what appears to be the stability of association between ENS and CMS as metacognitive styles and authoritarian indicators. Similarly, no significant difference was found in levels of uncertainty tolerance between conditions when authoritarianism indicators were above the midpoint. Furthermore, there were no significant between condition differences in the correlation between media use and perception of societal growth in extremism at above-midpoint levels of authoritarianism indicators. Social dominance orientation was subject to the same procedure, and as with other indicators of authoritarianism, no significant between condition differences were found at higher levels of SDO.

### ***Discussion***

The findings from Study 2 largely confirm those from Study 1 while offering some additional insights into authoritarian indicators and their relationship to metacognitive styles and perception of societal growth in extremism. Individuals who perceived society as becoming more extreme were again expected to endorse bipartisan authoritarian behaviors, but this was tested against an experimental condition in which participants were presented with accurate data on rates of historical violence over time that demonstrated it remains much lower than in the past versus a control condition where they were presented with an unrelated trend regarding vinyl record sales. The results were generally mixed: the expectation that exposure to historical data on political violence would reduce authoritarian tendencies in those who perceived society as growing more extreme was not met. Indeed, the experimental manipulation did not demonstrate a significant effect on either individuals' perceptions of societal extremism or on indicators of authoritarian behavior and attitudes. This suggests the possibility of cognitive rigidity among individuals with high

authoritarian tendencies, irrespective of factual counter-narratives, and possibility indicates the overall stability of authoritarianism as a psychological construct. Additionally, participants who failed to moderate their authoritarian responses in the experimental condition were hypothesized to score higher on measures of existential nihilism and conspiracy mentality; results did not support this by-condition moderation suggesting that these metacognitive styles might also be deeply ingrained.

Similarly, media use predicted both LWA and RWA as in Study 1, reinforcing the possibility that media consumption may exacerbate authoritarian tendencies by providing content that aligns with pre-existing worldviews or acts as fodder to build a worldview upon. However, anticipated by-condition interactions between media use and perception of societal extremism were not significant, suggesting that the effect of media may be more generalized in its influence on authoritarian attitudes rather than contingent on the information presented.

By and large, uncertainty tolerance (UTS) also did not factor into the study's findings—beyond its (somewhat odd) positive association with LWA. There were also no related by-condition interactions, indicating that while uncertainty may play a role in shaping authoritarian inclinations, it does not significantly vary in response to experimental interventions where information meant to engender increased certainty is presented.

Unlike Study 1, LWA positively predicted the perception of societal growth in extremism across conditions. As the perception questions were changed in Study 2, it is possible that they were altered in such a way as to become the inverse of the right-wing-coded questions featured in Study 1—possibly due to the view of society as having become more reactionary that was a positive predictor of left-wing authoritarian behavioural endorsement. This may offer some evidence for the feedback loop theory whereby authoritarian attitudes and perceptions of extremism reinforce each other, in this case on the left, where existential fears and the desire for ideological purity may drive

perceptions of societal decline. CMS, however, did remain a significant predictor of perception of societal growth in extremism, as in Study 1, suggesting that this metacognitive style shapes one's view of the world, making individuals more resistant to factual information that contradicts their beliefs—as evidenced by the lack of significant moderation in the experimental condition. This might be further evidenced by the by-condition interaction where CMS approached positive significance ( $p = .058$ ), and a negative interaction with LWA across conditions ( $\beta = -0.18, p < .001$ ) in an exploratory model where CMS and LWA remained significant positive predictors of perceived growth in societal extremism.

As in Study 1, there was a significant positive association between RWA and CMS, as well as ENS and LWA. This suggests further evidence that these metacognitive styles have a stable relationship with authoritarian inclinations, as their positive relationship also extended to the endorsement of authoritarian behavioural scenarios. Dysfunctional metacognitive styles, then, may not only inform authoritarian attitudes, but behaviours as well. This was also reflected in the only significant by-condition interaction: that of ENS when endorsement of authoritarian behaviours were the dependent variables. This interaction was positive in both right- and left-wing authoritarian behavioural scenarios, indicating that participants at higher levels of existential nihilism who were shown accurate data demonstrating that political violence is not as severe as in the past were more likely to endorse authoritarian behaviours than those in the control condition. This presents an interesting possibility that authoritarian behavioural indicators are resistant to moderation at higher levels of ENS, and that attempts to do so via information about society may raise individual's sense that things are meaningless. Whether this sense of nihilism is directed at society itself or the information presented remains an open question.

## General Discussion

The present research aimed to explore the relationships between perceptions of societal extremism, authoritarian attitudes, and the psychological mechanisms underpinning them. Drawing from a theoretical framework that encompasses sociology, social psychology, political science, and history, this work posited that authoritarianism emerges from the perception of fragmenting social structures, uncertainty, and fear, and is often exacerbated by modern technological developments. It examined how contemporary manifestations of authoritarianism might be shaped by emotional experiences of uncertainty and loneliness within a particular informational environment, informing conspiracy mentality and existential nihilism as maladaptive metacognitive styles that inform both left- and right-wing authoritarianism.

Study 1 focused on the correlational relationship between perceived societal extremism growth and authoritarian attitudes, revealing that right-wing authoritarianism is particularly sensitive to these perceptions. This sensitivity could be attributed to RWA's emphasis on order and tradition, as well as its reactionary nature, which aligns with the idea that perceived societal changes threaten the status quo, prompting a defensive response. Study 2 found that left-wing authoritarianism also correlates with the perception that society has grown more extreme than in the past in certain circumstances. While the relationship is likely attributed to the differently-presented questions regarding societal change in Study 2, it also indicates a similar sensitivity as with individuals who are high in RWA, though one where fears of a society slipping into right-wing engendered chaos may prompt a controlling, ideological purity-enforcing authoritarian response.

Both studies also provided evidence that metacognitive styles, in this case conspiracy mentality and existential nihilism, may play a crucial role in shaping authoritarian attitudes. Conspiracy mentality was a significant predictor of RWA, consistent with prior research linking

conspiracy thinking to a heightened sense of threat and a tendency to view the world in Manichean terms, thereby supporting the notion that conspiracy thinking serves as a cognitive shortcut for making sense of an uncertain and often threatening world, leading to a greater endorsement of authoritarian beliefs as a means of protecting oneself from perceived dangers (Bowes et al., 2023). Existential nihilism, on the other hand, was found to be associated with LWA, suggesting that those who struggle with feelings of meaninglessness, perhaps also informed by both personal loneliness and uncertainty, are more likely to gravitate towards authoritarian ideologies that promise to restore purpose through ideological enforcement. These findings are intriguing considering Arendt's observations about the psychological conditions that give rise to totalitarianism: loneliness, isolation, and social and epistemological fragmentation. Existential nihilism and conspiracy thinking may be a contemporary manifestation of these conditions, leading to an increased openness to authoritarian attitudes and behaviours. Because the political right tends to valorize authority while emphasizing order, tradition, and conformity, it may be reactive to perceived disruptions in the social fabric that require an explanation for authority's failure and the resulting uncertainty that takes the shape of conspiracy theorizing. Whereas on the left, uncertainty and loneliness may inform existential concerns, leading to support for authoritarian measures as a means of imposing a sense of order and purpose in a world they perceive as chaotic and devoid of meaning.

There also appears to be reason to believe that the dynamics described above may be exacerbated by the overwhelming and often disorienting nature of contemporary information and media environments. Media appears to operate in some instances as a filter, or perhaps repository, for the distressing emotional experiences that appear to inform dysfunctional metacognitive styles to some degree. Its consistent relationship with bipartisan authoritarian attitudes and behavioral indicators, as well as its relationship with uncertainty in Study 1 and its interaction with ENS in predicting left-wing authoritarianism, offers some preliminary evidence that the contemporary digital

and social information environment may be disrupting cognitive processes of knowing and contributing to maladaptive metacognitive styles that feed into authoritarian beliefs and behaviours. In this way, the lack of effect in the experimental condition in Study 2, where participants were presented with accurate information, may suggest that confronting participants with evidence of a less violent present may have paradoxically heightened their sense of meaninglessness, thus increasing their desire for authoritarian solutions. This underscores the importance of considering the content and context of media consumption when examining its effects on political attitudes. Understanding the role of media and metacognitive styles in shaping these attitudes is crucial for addressing the broader implications of authoritarianism in contemporary political behavior.

### **Conclusions and Future Directions**

There are some limitations throughout this work: findings are largely correlational, and therefore no causality can be inferred. Furthermore, the differences in the questions regarding perceptions of societal extremism between studies make it difficult to draw firm conclusions about how the perception of growth in societal extremism operates as a phenomenon, and indeed whether it is a factor that informs authoritarian behavior. While these two studies offer some provisional evidence that it does, more research is needed to flesh out this association and examine the belief of an increasingly extreme society more generally. It appears that authoritarian attitudes are not only a response to perceived societal threats but are also shaped by deeper cognitive and emotional processes, which are influenced in some way by media and information. Longitudinal research, cross-cultural study, and replication of some of the present findings are needed to flesh out these dynamics in more detail.

Overall, this research contributes to a growing body of literature on the social and psychological factors that underlie authoritarianism. By linking perceptions of societal extremism to

authoritarian attitudes and examining the role of media and metacognitive styles, this research attempts to provide some additional nuance to how these dynamics operate in the contemporary context. This underscores the importance of addressing both the cognitive and emotional dimensions of authoritarianism in efforts to promote democratic resilience and social cohesion. This study contributes to the growing body of literature on the psychological underpinnings of authoritarianism and highlights the need for further research into how emotional, epistemological, and metacognitive factors may influence the uptake of authoritarian beliefs and behaviors. It suggests that efforts to mitigate authoritarianism must go beyond merely providing factual information intended to correct dangerous misapprehensions and instead focus on addressing the underlying psychological and emotional drivers that lead individuals to embrace authoritarian solutions. Future research should continue to explore these dynamics, particularly in relation to the evolving media landscape and its impact on political attitudes and behaviors.

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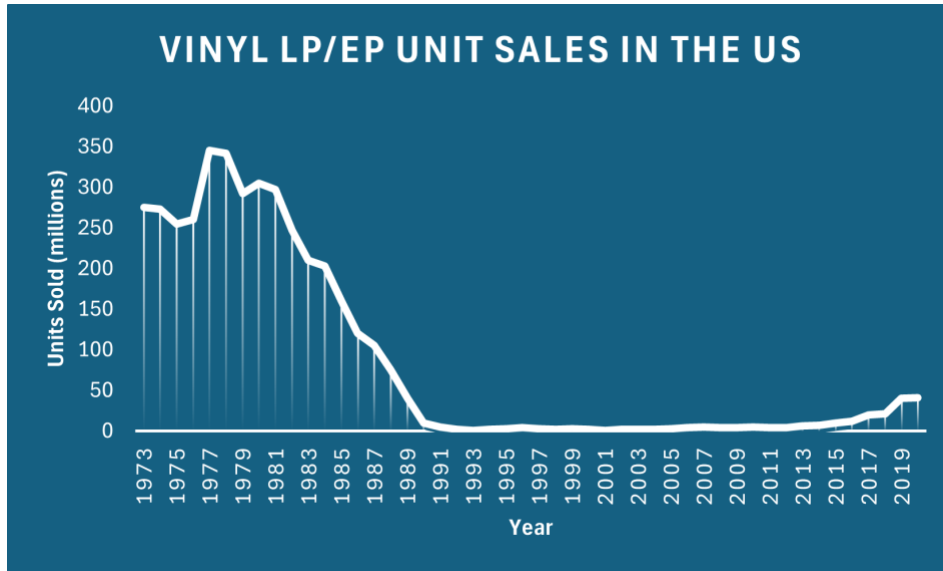
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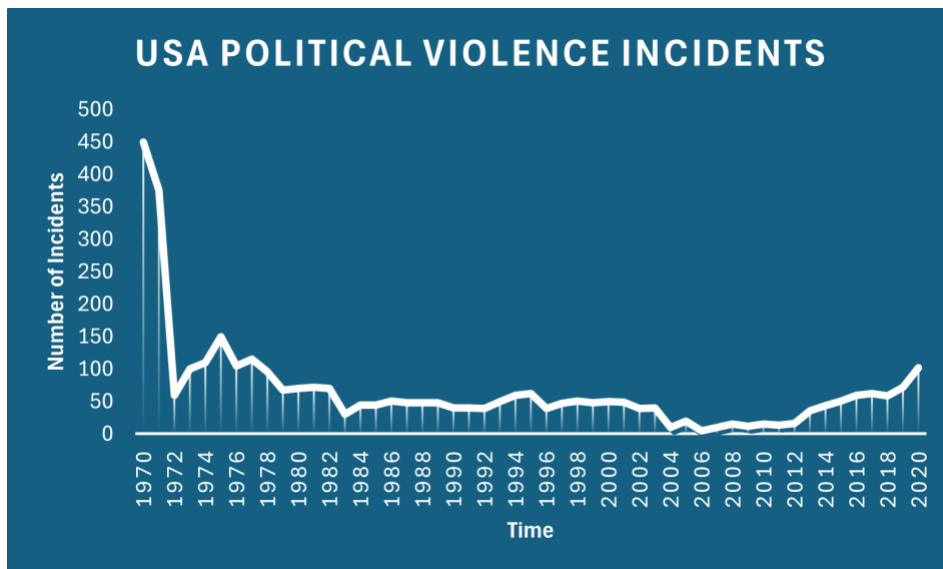
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## Appendix A. Study 2 Stimuli

*Control Condition:*



*Experimental Condition:*



## Appendix B. Authoritarianism Behavioural Scenarios

### **LWA:**

Jerome is a multi-millionaire who lives in an opulent home. He accumulated his wealth by running a business that has been criticized for demanding long hours of its employees, most of whom are paid minimum wage. A group of political activists in Jerome's state has proposed a referendum—Prop 101—that would target the wealth of business owners who engaged in practices that the group considers immoral, such as those of Jerome, even if those practices were legal at the time they were done. Among other provisions, Prop 101 would tax such people's wealth at up to 90%, would confiscate their homes if deemed excessively large or luxurious, and would strip them of the right to vote or contribute money to political campaigns.

*What is the likelihood that you would vote for Prop 101?*

Frank is religious and has long opposed gay marriage on these grounds. He holds this view largely privately and has no issue with LGBT+ individuals. He considers Rick, a gay man he works with, a good friend. In the past Frank signed a petition advocating for the state he lives in to adopt a “traditional marriage act.” A staff member at Frank's office found out about his support for the traditional marriage act, letting everyone at work know that Frank is homophobic, causing Frank to endure social isolation and the loss of his friendship with Rick. This staff member is gathering support to demand that upper management suspend Frank pending his completion of human resources guided sensitivity training.

*What is the likelihood you would join the call to management that Frank be subjected to suspension sensitivity training by HR?*

A large prestigious university has a new campus activist group called “Students for Western Culture.” They frequently demonstrate on campus, handing out pamphlets that suggest that while they do not have any dislike of people who are non-Western, they are concerned about the increasing focus on non-western cultures as a source of knowledge in the university curriculum, advocating for a return to teaching core Western writers, scientists, and philosophers. They have several social media profiles and a website that also express these views while suggesting that Western culture is generally under attack and should be intellectually defended. A sizable group of faculty, administrators, and students lobby the university to ban the group from campus and suspend the students who are involved.

*What is the likelihood you would join the campaign to lobby the university to suspend these students and ban their group from campus?*

**RWA:**

Following a court ruling against affirmative action, there are widespread protests across the United States by left-wing groups. A minority of these groups have engaged in widespread vandalism and property damage. Your state government requests assistance from the National Guard, who arrest peaceful protesters in addition to those who are committing vandalism. When asked about this by the media, the governor says that they can’t risk the possibility that the peaceful protesters may join the violence, and while no one has been seriously hurt yet, it is becoming likely. The governor

suggests the quickest way out of the situation is to have everyone detained until the moment passes and adds that this would not be a problem if the people who are engaging in protest would respect and obey authority, going home when told to and not having to face arrest.

*What is the likelihood you would support this governor for re-election based on his response?*

Over thanksgiving dinner at your home, cousin Sam who attends college in a distant city declares that there is no such thing as morality and that everyone who listens to religious leaders in this regard is a fool. They go onto say that what is immoral is nothing more than a personal point of view that changes over time. As a result, people should pursue their own lifestyles according to their own beliefs and desires, living their own truth as they go through life according to their own rules. Another family member chastises them saying “anything goes” is no way to run a society. A minor argument ensues that makes the meal uncomfortable for a time.

*How likely are you to tell Sam not to come to thanksgiving in the future thanksgivings unless she can keep her mouth shut and her thoughts to herself?*

Following of Roe v. Wade being overturned, the state you live in has brought in strict rules on abortion access. It is still possible to have one, but in only one distant location and only in the first four 4 weeks of pregnancy. Through the neighbourhood grapevine, you find out that your neighbor’s twenty-two-year-old daughter, Dahlia, who lives at home, found out she is pregnant three weeks ago and after some consideration has decided to seek out an abortion. Living close to the border with a neighboring state with easier access to abortions after four weeks, Dahlia’s mother is going to accompany her out of state to have the procedure which under the current laws is illegal. A

tip line has been set up to report people who are leaving the state to seek abortions to the authorities.

*How likely are you to call this tip line to report Dabria and her mother for seeking an out-of-state abortion?*