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When Lack of Control Leads to Uncertainty: Explaining the Effect of Anomie on Support for Authoritarianism

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Studies 2-4 were preregistered (see links in respective introductory sections). All data, analysis code, and research materials are available here: [link].

Keywords: anomie, authoritarianism, control, uncertainty, leadership

Abstract

Studies have shown that anomie, i.e., the perception that a society's leadership and social fabric are breaking down, is a central predictor of individuals' support for authoritarianism. However, causal evidence for this relationship is missing. Moreover, previous studies are ambiguous regarding the mediating mechanism and lack empirical tests for the same. Against this background, we derive a set of integrative hypotheses: First, we argue that perceptions of anomie lead to a perceived lack of political control. The repeated failure to exert control in the political sphere leads to feelings of uncertainty about the functioning and meaning of the political world. This uncertainty heightens people's susceptibility to authoritarianism because, we argue, the latter promises a sense of order, meaning, and the guidance of a 'strong leader'. We support our hypothesis in a large-scale field study with a representative sample of the German population ($N = 1504$), while statistically ruling out alternative explanations. Adding internal validity, we provide causal evidence for each path in our sequential mediation hypothesis in three preregistered, controlled experiments (conducted in the U.S., total $N = 846$). Our insights may support policymakers in addressing the negative political consequences of anomie.

Authoritarianism is on the rise. In Europe alone, support for authoritarian leaders has more than doubled since the 1960s, while their parties' share of seats in parliaments has tripled (Norris & Inglehart, 2019). A large body of theoretical and empirical work suggests that a central predictor of people's support for authoritarianism is anomie (e.g., Fromm, 1941; Merton, 1938; Scheepers et al., 1992; Sprong et al., 2019; Srole, 1956), a social condition characterized by the perceived deregulation and disintegration of the normative structure of society (Teymoori et al., 2017).

The literature hints at two potential explanatory mechanisms for why anomie may lead to authoritarianism, defined as a preference for oneness, sameness, and group cohesion (Duckitt, 1989; Stenner, 2005), however, no empirical test exists.

Some claim that anomie leads to a perceived *lack of political control* (e.g., Teymoori et al., 2017; Zhelnina, 2020), i.e., an enduring loss of influence over political processes or outcomes (Kofta et al., 2020; Teymoori et al., 2017), which in turn may increase support for authoritarianism as a compensatory control mechanism (Kay et al., 2008; Landau et al., 2015).

Other scholars speculate that perceptions of anomie come with *political uncertainty* (Chang & Arkin, 2002; Swader, 2017), i.e., the feeling that the political world is confusing, unpredictable, and meaningless (Kofta et al., 2020), which may increase support for authoritarianism because the latter functions as a psychological sense-making mechanism (e.g., Jost et al., 2003; Womick et al., 2019).

However, these potential explanations have largely treated lack of control and uncertainty as independent, ignoring the fact that typically they are causally related (Weary et al., 2010). Furthermore, previous conceptualizations have confounded the concepts anomie, uncertainty, and lack of control (e.g., Blank, 2003; Heydari et al., 2012). And in any case, previous evidence on the effect of anomie on authoritarianism was merely correlational,

rendering causal claims impossible (e.g., Sprong et al., 2019; Heydari et al., 2012; Lutterman & Middleton, 1970).

With the present paper, we seek to settle the debate and integrate these two streams of research to explain the effect of anomie on authoritarianism. To do so, we disentangle anomie from its previously confounded psychological consequences, lack of political control and uncertainty, and provide experimental tests that allow causal inferences. Conceptually, and contrary to the previous explanations, we show that the two psychological mechanisms of perceived lack of control and uncertainty are inextricably intertwined in a sequential mediation.

Our arguments are rooted in the Causal Uncertainty Model (Weary & Edwards, 1994) which postulates that constant feelings of lack of control lead individuals to feel uncertain regarding the operating principles of the social world. Individuals seek to avoid this highly distressing uncertainty, for example by searching for sense-making strategies rendering the world more predictable (Weary et al., 2010). Following this logic, we argue that anomie leads to a pervasive feeling that one cannot make an impact on the political process or achieve one's political goals, hence a lack of political control (Ådnanes, 2007; Bjarnason, 2009). This repeated failure to exert control further leads to the perception that one can neither understand nor predict political matters, thus causing political uncertainty (Edwards & Weary, 1998; Weary & Edwards, 1994). Attempting to escape this aversive uncertainty, individuals show heightened support for authoritarianism, which promises a sense of predictability, structure, and meaning by providing a belief system with a rigid worldview, clear social rules, and the guidance of a 'strong leader' (e.g., De Hoogh et al., 2015; Jost et al., 2003; Womick et al., 2019).

We test our sequential mediation hypothesis in a series of studies—including an analysis of representative German survey data and three preregistered experiments testing

each link of the hypothesized model to establish causal evidence for the hypothesized mediated pathway. While doing so, we also test for other sensible pathways.

Altogether, we conceptually integrate previous contradicting notions that have explained this effect either via a lack of control or feelings of uncertainty (e.g., Abse & Jessner, 1962; Betz, 1990; Calhoun, 1988; Teymoori et al., 2017), but to the best of our knowledge, by way of our study designs, we are the first to empirically show that, and why, anomie leads to authoritarianism. Notably, in doing so, we also disentangle anomie from its previously confounded psychological consequences and thus advance our understanding of this construct. Theoretically speaking, by showing that political uncertainty is directly related to support for authoritarianism, the present paper supports notions that view authoritarianism as a psychological security and sense-making mechanism (Jost et al., 2003; Womick et al., 2019). At the same time, the present conceptual framework favors an indirect effect of perceived lack of control on authoritarianism via uncertainty rather than a direct effect. This suggests that authoritarianism is (only) a compensatory control mechanism (Friesen et al., 2014; Kay et al., 2008) because it addresses the uncertainty that typically results from feelings of lack of control. As such, the present research also may feature practical utility for policymakers and civic actors who need an understanding of *why* anomie leads to support for authoritarianism to craft effective countermeasures.

The Effect of Anomie on Support for Authoritarianism

In this study, we define authoritarianism as a general preference for oneness, sameness, and intense group cohesion over individual freedom and autonomy (Duckitt, 1989; Stenner, 2005). While this conceptualization aligns with the concept of Right-Wing Authoritarianism (RWA; Altemeyer, 1996) and its attitudinal clusters conventionalism, submission, and aggression, unlike actual RWA, this definition does not conflate authoritarianism with its consequences, such as prejudice or intolerance (Duckitt, 1989;

Stenner, 2005). Thus, the present definition of authoritarianism refers to a general authoritarian tendency but is not restricted to a political spectrum such as right- or left-wing.

Authoritarianism has been characterized as a psychological reaction to various forms of threat (e.g., Asbrock & Fritsche, 2013; Doty et al., 1991; Mirisola et al., 2014; Neerdaels et al., 2024; Oesterreich, 2005; Sales, 1972, 1973). This reaction can take various forms, such as heightened submission to authoritarian leaders and regimes, hostility, and aggression toward 'deviants', or orientation toward conformity (e.g., Duckitt, 1989; Oesterreich, 2005). As such, the authoritarian reaction can be situationally evoked as a "flight into security" in response to a perceived threat (Oesterreich, 2005, p. 275; see also Arendt, 1973), for example, by providing a sense of certainty and meaning (De Hoogh et al., 2015; Womick et al., 2022).

A central "threat" factor that fosters support for authoritarianism is argued to be people's sense of anomie (Blank, 2003; McDill, 1961; Scheepers et al., 1992; Sprong et al., 2019; Srole, 1956). Originally a sociological concept, anomie refers to a state of a society undergoing drastic social and/or political changes characterized by deregulation and disintegration of the normative structure in society (Durkheim et al., 2005; Hartwich & Becker, 2019). Psychologically, anomie refers to the perception that the normative structure of society, i.e., its social fabric and leadership, is breaking down (Teymoori et al., 2017).

Scholars have frequently examined the effect of anomie on authoritarianism, with most studies showing a medium-size effect (e.g., Alietti & Padovan, 2013; Blank, 2003; Dekker & Ester, 1987; Heydari et al., 2012; Lutterman & Middleton, 1970; Scheepers et al., 1992; Sprong et al., 2019). However, theoretical and methodological problems with the extant literature render previous findings ambiguous. First, all the abovementioned evidence is correlational, which makes it possible that unobserved third or confounded variables drive the detected relationship between anomie and authoritarianism, or that the relationship is reversed such that authoritarianism leads to anomie. Second, we do not know *why* anomie would lead

to authoritarianism, limiting theoretical understanding and the development of effective interventions to mitigate the rise of authoritarianism.

Theoretically, scholars have proposed two general reasons for why anomie has an effect on authoritarianism — uncertainty and a lack of control (e.g., Frankl et al., 2006; Fromm, 1941; Swader, 2017; Teymoori et al., 2017; Zhelnina, 2020). However, there is a lack of empirical evidence examining these mechanisms. Moreover, previous scholars have confounded anomie with these two (e.g., Blank, 2003; Heydari et al., 2012). For instance, Heydari et al. (2012) reported a direct effect of anomie on authoritarianism using a scale that measured anomie in terms of feelings of personal uncertainty and perceived powerlessness regarding state institutions, thus conflating anomie with feelings of lack of political control and uncertainty. Similarly, Blank (2003) measured anomie using items tapping into uncertainty, for example, "Nowadays, I do not comprehend what really happens." (Blank, 2003, p. 273).

Accordingly, the goal of the present research is to theoretically and methodologically disentangle anomie from its confounding factors and examine whether and through which psychological mechanisms anomie leads to authoritarianism. In the following, we discuss the two proposed central mechanisms in more detail.

Lack of Political Control and Political Uncertainty as Possible Mechanisms: Similarities and Differences

Both concepts of lack of political control and uncertainty reflect an aversive state of arousal, resulting from a deficit in an important area of life: A deficit in agency (lack of control) and a deficit in understanding (uncertainty), both of which have been related to fundamental human needs (Greenaway et al., 2016; Kofta et al., 2020; Proulx, 2012; Williams, 2009). Both domains, i.e., the ability to exert control and to understand and predict, are fundamental to human existence because, ultimately, they are prerequisites to survival (Weary et al., 2010).

However, differentiating lack of control and uncertainty is important, for several reasons. Most importantly, they represent *different* fundamental human needs, whose deprivation has very different consequences: Lack of political control signals a threat to our innate need to control, i.e., to be able to reach our goals and to avoid undesired consequences (Greenaway et al., 2016; Kofta et al., 2020). Political uncertainty threatens the fundamental need for predictability, knowledge, and a shared reality and thus signals a sense-making deficit (Greenaway et al., 2016; Kofta et al., 2020; Kruglanski & Orehek, 2012). Accordingly, these two affective responses require fundamentally different efforts to reduce them and, by extension, to reduce support for authoritarianism. Thus, it's important to understand which of the two factors explains the effect of anomie on support for authoritarianism. First, we will review the literature discussing how each, a lack of political control and uncertainty, explains the effect of anomie on authoritarianism, including our concerns with these models. Then, we will present our theoretical integration, a sequential mediation.

Political Uncertainty as Potential Psychological Mechanism Behind Anomie's Effect on Authoritarianism

Scholars have offered several theoretical arguments for why uncertainty explains the effect of anomie on support for authoritarianism: According to Swader (2017), perceptions of anomie lead to uncertainty about societal values and norms, prompting individuals to seek structure, meaning, and certainty through authoritarian regimes. Similarly, Moghaddam (2019) ties the rise in autocracy to living in an "age of uncertainty" (p. 1). Calhoun (1988; see also Elchardus & Spruyt, 2016) links support for populism to a need for predictability during disruptive times, while Betz (1990) and Heitmeyer (1997) explain the rise of authoritarianism in Germany during the 80s and 90s through uncertainty caused by the shifting European political landscape.

However, we argue that aforementioned notions discussing the link between anomie, uncertainty, and authoritarianism are overlooking how anomie impairs one's ability to act:

Social psychological studies on threat suggest that various types of broader social and economic instabilities, social change, or existential threats have psychological consequences *because* they create a sense of loss of control (Fritsche et al., 2011; Greenaway et al., 2014). Hence, anomie, as a particular type of societal instability, primarily compromises the sense of control. The constant experience of control loss then almost inevitably leads to the sense that one can neither understand nor predict political events (Weary et al., 2010): Political uncertainty.

Lack of Political Control as a Potential Psychological Mechanism Behind Anomie's Effect on Authoritarianism

Major theories of anomie highlight its impact on control. Durkheim (2005) described how rapid societal change leads to feelings of helplessness, while Merton (1938) linked anomie to the failure to achieve societal goals, fostering hopelessness. Later scholars echoed this view: Bjarnason (2009) discussed anomie's effect on the inability to influence one's environment. Empirical studies conducted in the U.S. (Geis & Ross, 1998) and Bulgaria (Ådnanes, 2007) found that individuals in disorderly, anomic environments perceive less control over their lives.

Most individuals find lack of control highly distressing and want to avoid it (e.g., Friesen et al., 2014; Guinote et al., 2006). When people lose their sense of control, they turn to strategies to regain it, even in domains that are unrelated to the control-reducing event. For instance, a sense of lost control results in a heightened desire for hierarchy (Friesen et al., 2014) and authorities, like God or the government (e.g., Kay et al., 2008). Kay and colleagues (2008) argue that perceiving the world as uncontrollable is related to anxiety, which can then be alleviated by hierarchy and authority (as they provide a sense of structure and societal order).

Following this reasoning, several authors indicate that a lack of control could explain the effect of anomie on authoritarianism. For example, Abse and Jessner (1962) argued that

authoritarian leadership alleviates the helplessness evoked by anomie. Similarly, Teymoori and colleagues (2017) contended that perceptions of anomie can threaten individuals' fundamental need for control, which in turn heightens their endorsement of control-restoring ideologies and authoritarian reactions. Finally, qualitative evidence from Russia indicates that support for authoritarianism can be explained by a perceived lack of control in the political sphere, stemming from perceptions of anomie (Zhelnina, 2020).

Amidst this evidence for a relationship between anomie and a lack of control, we nevertheless have reasons to doubt a direct relationship between a lack of control and support for authoritarianism. First, while most approaches advocating such a relationship are merely theoretical or anecdotal (Teymoori et al., 2017; Zhelnina, 2020), the empirical evidence is inconclusive. Some studies have found evidence indicating a relationship between lack of control and constructs related to authoritarianism (e.g., Kay et al., 2008), but others have not (Nicol, 2007). Second, conceptually, Altemeyer (1998) suggested that authoritarianism is unlikely to be a reaction to control deprivation because submitting to authority rather insinuates giving up control. Accordingly, seminal studies on authoritarianism find the construct of authoritarianism unrelated to the desire to exert control (Altemeyer, 1998; Duriez & Van Hiel, 2002). Finally, and perhaps most importantly, some of the works that advanced support for authority (like hierarchy, god, or the government) as a compensatory control mechanism seem to have argued for an indirect effect via uncertainty (e.g., Kay et al., 2008; Landau et al., 2015). For example, Kay and colleagues (2008) suggest that when people experience lower levels of control, they are increasingly likely to desire authorities, like god or the government, due to a longing for "clear rules, guidelines, norms, and structure" as well as a sense of "order" (p. 21). Arguably, such wording is more descriptive of uncertainty than a lack of control, as political uncertainty specifically refers to a perceived lack of structure and order in the political world, coupled with a sense of confusion about political affairs and events (e.g., Kofta et al., 2020).

This potential confound, we argue, allows for another interpretation of the results found in studies on compensatory control: A lack of control increases submission to authorities *because it leads to uncertainty*. The work of Agroskin and Jonas (2010) supports this notion by providing correlational evidence showing that a lack of political control had an indirect effect on right-wing authoritarianism via the need for cognitive closure, which, the authors argued, signals a high need to reduce uncertainty.

Our Hypothesis: A Sequential Mediation Mechanism

While previous notions argue for either lack of control or uncertainty explaining the effect of anomie on authoritarianism, we theorize a *sequential* mediation in that a lack of political control caused by anomie can lead to a feeling of political uncertainty, which in turn heightens susceptibility to authoritarianism and its promises of psychological certainty and meaning (Jost et al., 2003; Womick et al., 2019). To support our argument, we refer to the Causal Uncertainty Model (Edwards & Weary, 1998), as it helps to clarify the relationship between these two mediators. According to this model, the repeated and pervasive feeling of control loss leads to uncertainty: An individual who repeatedly fails to exert control and reach their goals in the social world, despite trying, is likely to start questioning their ability to understand what is going on around them, how the social world functions, and feel uncertain about what the future may bring (Edwards & Weary, 1998; Weary et al., 2010). As uncertainty is a highly aversive experience, individuals will go to great lengths to reduce these feelings, looking for strategies to render the world more understandable, coherent, and predictable.

We argue that the context of anomie leads to a pervasive sense of lacking political control (Ådnanes, 2007; Bjarnason, 2009; Geis & Ross, 1998) because the fragmentation of society, a shared sense of apathy, and distorted communication hampers the ability of the public to work toward common political goals (Habermas, 1998; Katz, 1983). At the same

time, the perceived inability and ineffectiveness of the political establishment make it seem impossible to achieve sustainable change (Teymoori et al., 2017).

The repeated failure to exert control in the political sphere should produce a sense of political uncertainty for several reasons. First, the perception that one cannot exert political influence leads to uncertainty regarding one's *understanding* of the causes of political events, relations, and decisions (Weary et al., 2010). A person who repeatedly feels unable to get something done politically is eventually going to question their ability to understand how *anything* gets done in the political realm, for example, what the causes are behind political events and how political decisions are made. Supporting this notion, a range of studies on the causal uncertainty model shows how feelings of lack of control heighten uncertainty regarding one's understanding of causal relationships (e.g., Weary et al., 2010) or solutions to tasks (Kofta & Sedek, 1999).

Second, lack of political control leads to political uncertainty because it makes it hard to *predict* the political future: Being constantly unable to exert political control is likely leading to the conclusion that political control is in the hands of others, perhaps even unknown forces. And what these others want, what their goals are, and what they will do in the future, is likely perceived as uncertain. This notion is supported by a body of research on learned helplessness, which suggests that feeling a lack of control is related to a perceived inability to predict the future (Burger & Arkin, 1980; Seligman, 1975) and, accordingly, leads to increased belief in precognition, likely to attenuate the unpredictability caused by a lack of control (Greenaway et al., 2013). In the same vein, the literature in developmental psychology on harsh environments shows that a lack of control over one's immediate environment shifts one's attention to the uncertainty of the present and leads to a perceived difficulty in predicting the future (Frankenhuis et al., 2016).

Finally, in general, lack of political control leads to uncertainty because it makes people skeptical and confused about the general meaning and purpose of politics. Research

suggests that individuals tend to question the meaning of events they have no control over (e.g., Hohmann & Hogg, 2011; Newcomb & Harlow, 1986). This is especially likely in a political, democratic context, as we attach moral and ethical expectations to political institutions. Political leaders that seem detached from, and indifferent to, the will of citizens are, therefore, likely perceived as meaningless and senseless. Supporting this notion, studies show that lack of control is related to perceived meaninglessness in life (Newcomb & Harlow, 1986) and leads to illusory pattern recognition, reflecting a heightened desire for meaning and certainty (Whitson & Galinsky, 2008).

Uncertainty, in turn, will heighten individuals' susceptibility to authoritarianism for several reasons, as we argue: Authoritarianism promises order, structure, and clarity by establishing social hierarchies and clear differentiation between in- and outgroups (Jost et al., 2003; Womick et al., 2019). Moreover, authoritarianism offers a sense of guidance via a moral framework, norms and convention, and 'strong' leadership. At the same time, the ideology of authoritarianism encompasses clear ideas on how society should function, which may further reduce uncertainty about the future. Altogether, the perceived psychological benefits of order, guidance, and predictability may lead individuals to voluntarily trade freedom for an authoritarian regime (Arendt, 1973; Fromm, 1941; Schwartz, 2000). Empirical evidence supports this notion, showing that authoritarianism is associated with a heightened need for cognitive closure and structure, cognitive rigidity, low tolerance of ambiguity, and pervasive feelings of uncertainty (e.g., Jost et al., 2003; Frenkel-Brunswik, 1949; Kemmelmeier, 2010).

In summary, reviewing extant theorizing and empirical results, we argue that a lack of political control and political uncertainty will sequentially mediate the effect of perceived anomie on support for authoritarianism.

Hypothesis: *The effect of perceived anomie on support for authoritarianism is sequentially mediated by a lack of political control and political uncertainty.*

Methods

Study Overview

We tested our hypothesis in four studies following a full research cycle (Mortensen & Cialdini, 2010). This involves identifying a real-world phenomenon with societal relevance and then examining the model's elements in controlled, experimental environments. Therefore, we first test the hypothesized effect in a field study with high external validity, using a sample representative of the German population (Study 1). Subsequently, we validate these results in a controlled, experimental setting to explore the phenomenon with high internal validity. To this end, we ran a series of three preregistered experiments with U.S. participants (Studies 2-4) to generate causal evidence for our hypothesized sequential mediation model (Spencer et al., 2005; Stone-Romero & Rosopa, 2008). We can claim evidence for a causal mediation effect when the independent variable (X) has an effect on the measured first mediator (M1) (see Study 2), the manipulated first mediator (M1*) affects the measured second mediator (M2) (Study 3), and the manipulated second mediator (M2*) has an effect on the DV (Study 4) (Pirlott & MacKinnon, 2016; Spencer et al., 2005; Stone-Romero & Rosopa, 2008). Additionally, evidence for the causal mediation effect is provided when manipulation checks show an effect of each manipulated construct on the same scale that was used to measure that same construct in the previous experiment. This indicates that the operationalization of each construct, whether manipulated or measured, is similar (Spencer et al., 2005; Stone-Romero & Rosopa, 2008).

All procedures presented throughout the manuscript (Studies 1-4) comply with the current APA Ethical Principles of Psychologists and Code of Conduct. We report all manipulations, measures, and exclusions in the respective studies and follow JARS (Appelbaum et al., 2018). Studies 2-4 were preregistered (see links in respective sections). All data, analysis code, and research materials are available here: [link]. We managed all data using the software package Stata 15 (StataCorp., 2017) and performed mediation analyses

following recommendations by Hayes and Preacher (2014) and used the STATA syntax provided by UCLA: Statistical Consulting Group (2021a, 2021b).

Study 1 (Field Data): Testing our Hypothesis in a Panel Survey Representative of the German Population

Method

Sample. To test our hypothesis in a natural environment, we analyzed data from the German General Social Survey (ALLBUS; GESIS - Leibniz-Institut für Sozialwissenschaften, 2011). The ALLBUS is a study surveying the attitudes, behaviors, and social structure of German residents. Data for the ALLBUS are collected every two years and are representative of the German population. To ensure representativity, the sampling process encompasses two stages: First, German municipalities are selected with a probability proportional to their number of adult residents. In the second sample stage, individual persons are randomly selected from the municipal registers of residents. The data for our variables of interest were available for the year 2006 (GESIS - Leibniz-Institut für Sozialwissenschaften, 2011). Data and codebook can be downloaded via the following link: https://search.gesis.org/research_data/ZA4500. See Table 1 for an overview of the descriptive statistics and correlations for our study variables. Our total sample consisted of 1,504 participants with a mean age of 49.70 years, *SD* = 17.39. The average household monthly net income reported was €2087.14, *SD* = 1246.23. Of the participants, 52% were women, 62% were married, and 11% reported having a university degree. Since the items measuring authoritarianism were only presented to German citizens in the ALLBUS, all of the participants in the present sample have German citizenship.

Measures

Support for Authoritarianism. The ALLBUS study of 2006 includes two items designed to measure authoritarianism. These items are part of the Authoritarianism Short Form (Hübner et al., 1997), a scale designed to measure general authoritarianism while

building on Adorno and colleagues (2019). The items present in the ALLBUS are: "We should be grateful for our leaders who can tell us exactly what we should do and when" and "Generally, it is beneficial for a child later in life if it is being forced to adapt to its parents' views." Participants are asked to indicate their agreement on a scale ranging from 1 (*not at all*) to 7 (*completely*, $\alpha = .45$).

Anomie. The ALLBUS data of 2006 contained four items measuring anomie that are based on Srole's (1956) anomie scale. An example item: "Most people don't really care what happens to the next fellow". Participants are asked to indicate their agreement on a dichotomous scale (0 = *do not agree*; 1 = *agree*; $\alpha = .52$).

Lack of Political Control. In the present data, lack of political control was measured via two items designed to assess "respondents' belief in the effect of their own political participation on the government's actions" (Bechert & Quandt, 2009, p. 81). Participants were asked to indicate their agreement on a 5-point scale (1 = *do not agree at all*; 5 = *completely agree*). The items were "People like me don't have any say about what the government does" and "The average citizen has considerable influence on politics" (reverse scored, $\alpha = .52$)[1].

Political Uncertainty. In the present data, political uncertainty was measured via two items which were designed to measure participants' "understanding of politics [and] personal level of information, compared to others" (Bechert & Quandt, 2009, pp. 83-84). Participants are asked to indicate their agreement on a 5-point scale (1 = *do not agree at all*; 5 = *completely agree*). The items: "I feel that I have a pretty good understanding of the important political issues facing our country" (reverse scored) and "I think most of the people are better informed about politics and government than I am" ($\alpha = .60$)[1].

[1]To test the adequacy of these proxy items, we ran a preregistered study (Supplemental Material A) and compared them to an established scale by Kofta and colleagues (2020) that we also used in Studies 2 and 3. The results indicated that participants did not discriminate between these items and the scale used by Kofta and colleagues (2020).

Covariates. We included several variables that are likely to be correlated with anomie and/or authoritarianism that could bias our findings. We controlled for income (household monthly net income) and education (measured as the highest level of education) because of these variables' negative relationship with anomie (e.g. Heydari et al., 2012; Scheepers et al., 1992). Furthermore, we controlled for citizenship (German only versus several citizenships, as a proxy for an ethnic group) and gender because studies indicate that (some) ethnic minorities (Henry, 2011) and women are more likely to be authoritarian, the latter especially in societies with high gender inequality (Brandt & Henry, 2012). We also included age as a covariate because of its positive relationship with authoritarianism (Ruffman et al., 2016). Finally, we controlled for political views (*left* versus *right*) as a potential predictor of support for authoritarianism (Altemeyer, 1996). We conducted analyses with and without these covariates and found no major influence on the magnitude or pattern of effects. We therefore present all results for Study 1 including the covariates. Results excluding covariates can be found in the Supplemental Material B.

Results

To facilitate interpretation and comparison between coefficients, we standardized all continuous independent variables. Table 1 summarizes the correlations and descriptive statistics of unstandardized study variables. We detected no multivariate outliers when using the BACON method (Billor et al., 2000; software by Weber, 2010). We used weights provided by the ALLBUS (GESIS - Leibniz-Institut für Sozialwissenschaften, 2011) to account for the oversampling of participants from East Germany. To test our hypothesis, we interpreted the 95% bias-corrected confidence intervals from 10,000 bootstrapping samples. This indicated a significant indirect relationship between perceived anomie and support for authoritarianism via, sequentially, lack of control in the political sphere and political uncertainty (b = 0.007, 95% CI = [0.002, 0.01]). The calculation of completely standardized effects (Hayes, 2013) indicated a small effect size of 0.005 (Preacher & Kelley, 2011). See

Figure 1 for an overview of path coefficients. In summary, we found support for our hypothesis.

Importantly, however, as Table 1 shows, there was no significant relationship between anomie and support for authoritarianism directly. This evidence, of course, is merely correlational. In order to clarify the relationship between anomie and authoritarianism via causal evidence, we sought to test this effect in a subsequent experiment.

Figure 1

Study 1: Path Model Depicting the Regression Coefficients of the Hypothesized Model: The Effect of Perceptions of Anomie on Support for Authoritarianism Sequentially Mediated by Lack of Political Control and Political Uncertainty

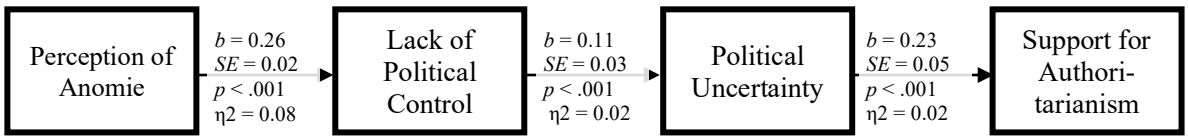

Table 1

Correlations and Descriptive Statistics for Unstandardized Variables in Study 1

Variables	*M*	*SD*	%	*n*	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Support for authoritarianism	3.05	1.49										
(2) Anomie	1.72	0.27			.004							
(3) Lack of political control	3.79	0.91			.006	.30***						
(4) Political uncertainty	2.85	1.11			.12***	.21***	.19***					
(5) Age in years	49.70	17.39			.21***	.10***	.14***	.001				
(6) Gender (woman)[a]			52	776	-.05	-.02	.02	.23***	.07**			
(7) Income[b]	2087.14	1246.23			-.05	-.23***	-.27***	-.25***	-.14***	-.05		
(8) University degree[c]			11	158	-.08**	-.24***	-.14***	-.19***	-.02	-.03	.27***	
(9) Political leaning (right-wing) [d]	5.18	1.74			.11***	.01	.04	.06*	.07**	-.07*	.04	-.09***

Note. $N = 1504$; *** $p < .001$, ** $p < .01$, * $p < .05$. [a] Female = 1, male = 0; [b]Monthly household net income (in Euro); [c]No = 0, yes = 1; [d]Scale ranging from 1 (*left*) to 10 (*right*).

Study 2 (Experiment): The Effect of Anomie on Lack of Political Control

Study 1 found correlational evidence for our hypothesized model using survey data, thus establishing external validity. For Study 2, our goal was to provide causal evidence for the total effect of anomie on authoritarianism as well as for the first path of the hypothesized model, the effect of anomie on lack of political control. This study was preregistered [link].

Method

Sample. Following a power analysis (Faul et al., 2007), we recruited 558 participants to detect an effect of $f = .17$ (of anomie on support for authoritarianism, as detected in a previous study[2]) at $\alpha < .05$ with 95% power. Participants were recruited via Prolific and received a compensation of $0.77. Participants had to be at least 21 years old to ensure a community sample with increased representativity, as students are overrepresented on Prolific in the 18-20 age group (Wild et al., 2022). Additionally, due to the study's focus on U.S. social and political issues, participants had to be U.S. citizens and native English speakers. We excluded 15 participants for failing an attention check. In the final sample, consisting of 543 participants, the average age was 42.31 years, $SD = 13.22$; of those participants, 271 identified as female, 265 as male, and 7 as 'other'; 56% reported being married; 9% reported being unemployed; 67% identified as White and 60% held a university degree. The reported median household income category was $55,001–$65,000. See Table 2 for a complete overview of the study variables and demographics across conditions.

Procedure. After participants had agreed to a study consent form and had read a short welcome note, they were randomly assigned to one of three conditions. The design followed a one-factor (high vs. low anomie vs. control condition) between-subjects design. Afterward,

[2]A different, preregistered version of the present Study 2 ([link] was part of the previous version of the manuscript. However, as one of the reviewers pointed out, this study was underpowered, leading us to re-run this study with a more adequate sample.

participants filled in scales measuring lack of political control and support for authoritarianism. After that, they reported their demographics (age, gender, education, employment status, marital status, household income, political leaning (right- versus left-wing), and ethnic group).

Manipulation of Perception of Anomie. Building on previous work (Duckitt & Fisher, 2003; Hartwich & Becker, 2019), we manipulated the perception of anomie by asking participants to read a vignette describing the society of the United States 10 years into the future (Supplemental Material C). In all conditions, we then asked participants to write down a few sentences on how they imagined this future society.

Following our conceptualization of anomie as perceived deregulation and disintegration of society, the text in the high-anomie condition described the United States as a society with a disintegrating social fabric and ineffective political leadership 10 years from now and reversed the wording for the low-anomie condition. Both experimental conditions were carefully worded in alignment with the theoretical construct (Teymoori et al., 2016, 2017), so that they would only manipulate participants' *perceptions of* society, but not unintentionally manipulate other constructs. Here is an excerpt of the manipulation text: "It seems like society is falling apart. There are no more moral standards to follow, and people do not seem to care about what is right and wrong. (…) [P]olitical leaders and their policies are generally perceived as illegitimate."

In the low-anomie condition, by contrast, the future U.S. was described as a highly cohesive and cooperative society, where politicians are perceived as legitimate and effective: "It seems like society is united and cohesive. There are clear and agreed-upon moral standards to follow, and people seem to care strongly about what is right and wrong. (…) [P]olitical leaders and their policies are generally perceived as legitimate."

In order to examine baseline levels of anomie, we included a control condition which consisted of a neutral vignette (of similar length as the experimental conditions) describing the architecture of the future United States. However, importantly, perceptions of anomie (and, by extension, political uncertainty and lack of political control) are context-sensitive (Sprong et al., 2019; Teymoori et al., 2017) and, therefore, likely to fluctuate considerably. This makes the measurements of these baselines in the control conditions likely to vary extensively, too. For this reason, we tested our hypothesis by comparing the high- versus the low-experimental conditions in all experimental studies.

Measures

Support for Authoritarianism. We measured support for authoritarianism with a scale designed by Sprong and colleagues (2019, validated by Lima et al., 2021) to assess a "wish for a strong leader." The scale consists of seven items using a 7-point response format (1 = *strongly disagree* to 7 = *strongly agree*). The scale has a good internal consistency (α = .92) in our study and includes the following: "America needs a strong leader who is willing to challenge democratic values and practices."

We chose this scale for several reasons: In order to avoid confounding authoritarianism with (conservative) political orientation, recent scholars have favored measuring (support for) authoritarianism as the desire for, and readiness to submit to, anti-democratic regimes, such as a 'strong leader' (Nilsson & Jost, 2020). This is also in line with the situational account of authoritarian reactions, which posits that specific social perceptions, such as a perceived threat, lead individuals to rely on strategies for a "flight into security" (e.g., Oesterreich, 2005, p. 275). This approach considers a general form of authoritarian reaction beyond individuals' political belief systems. Moreover, the unconditional submission to a 'strong leader', who is decidedly undemocratic and thus likely to limit the freedom of their supporters, clearly reflects a preference for group cohesion and sameness at the expense

of individual freedom and autonomy – the definition of authoritarianism used throughout the manuscript (Duckitt, 1989).

Lack of Political Control. We measured lack of political control with a scale developed by Kofta and colleagues (2020). The scale consists of four items asking participants for their agreement with several statements on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*). An example question: "People like me have no control over government actions" (α = .93).

Manipulation Check

Following recommendations (Fayant et al., 2017; Hauser et al., 2018), we conducted a manipulation check with an independent sample (N = 94) on Prolific. In this way, we sought to avoid the risk of the manipulation check itself exerting an additional manipulation or demand effect. We randomly assigned participants to one of the three experimental conditions used in the main study. Participants then rated the level of perceived anomie using the Perceived Anomie Scale (PAS; Teymoori et al., 2016). This scale operationalizes this concept as individuals' perception that society is breaking down in terms of its regulatory structure and its social fabric (Teymoori et al., 2016). These aspects relate to a higher-order factor about the generalized perception that the normative structure of society is breaking down (Teymoori et al., 2017). This robust higher-order factor has been empirically shown across diverse social settings (Teymoori et al., 2016).

The PAS (Teymoori et al., 2016) has 12 items: Half deal with the breakdown of leadership (i.e., its perceived illegitimacy and ineffectiveness) and the other half concern the breakdown of the social fabric (i.e., the interpersonal distrust and confusion around moral standards). All items were measured on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*), with a higher score indicating higher perceived anomie. Sample items are: "Politicians don't care about the problems of the average person" and "Most of the people think that if something

works, it doesn't really matter whether it is right or wrong" (α = .95). The results of an ANOVA test indicated that there was a significant overall effect of the manipulation on perceived anomie [$F(2, 91) = 11.09$, $p < .001$]. Bonferroni-corrected post hoc tests revealed that participants in the high-anomie condition scored significantly higher on the perceived anomie scale ($M = 5.33$, $SD = 0.76$) than participants in the low-anomie condition ($M = 3.92$, $SD = 1.73$, $p < .001$) or those in the control condition ($M = 3.93$, $SD = 1.31$, $p < .001$). The low-anomie and the control condition did not differ from each other ($p = 1.00$), suggesting that baseline levels of anomie were relatively low at the point of the data collection. Generally, we suspect that feelings of anomie are rather context-sensitive and likely to vary substantially in the current climate of frequent controversies and intense polarization in U.S. politics. However, while the baseline of anomie appears relatively low in this sample, the present results show that we successfully manipulated high levels of anomie.

Together, the present results provide support for the validity and efficacy of the manipulation used in Study 2[3]. However, given the likely content overlap between the constructs that were manipulated in Studies 2-4 (perceived anomie, lack of political control, and political uncertainty), we ran an additional, extended manipulation check in order to uncover unexpected confounding which may result in alternative explanations for our results (Supplemental Material E). We found no indication of confounding beyond the intended effects of the three manipulations.

Hypothesis testing. Table 2 depicts all descriptive statistics for all unstandardized variables in Study 2. Table 3 shows the correlation coefficients of unstandardized variables across conditions. We detected no multivariate outliers when using the BACON method (Billor et al., 2000; software by Weber, 2010). There was a significant overall effect of the

[3]We ran additional analyses to examine whether we manipulate anomie as a single latent factor construct (Supplemental Material D) as our theory predicts. As expected, results indicated that anomie, as measured and manipulated in the present manuscript, represents a unidimensional construct.

anomie manipulation on lack of political control, [$F(2, 540) = 180.96$, $p < .001$]. In support of our predictions, post hoc tests using the Bonferroni correction showed that participants in the high-anomie condition felt a significantly higher lack of political control ($M = 4.25$, $SD = 0.82$) than participants in the low-anomie condition ($M = 2.26$, $SD = 1.24$, $p < .001$, Cohen's $d = 1.88$) and the control condition ($M = 3.68$, $SD = 0.95$, $p < .001$). Low and control conditions differed significantly as well ($p < .001$).

Moreover, ANOVA results indicated an effect of anomie on support for authoritarianism [$F(2, 540) = 58.13$, $p < .001$]. In support of our predictions, post hoc tests using the Bonferroni correction indicated that participants in the high-anomie condition showed significantly higher support for authoritarianism ($M = 5.22$, $SD = 1.27$) than participants in the low-anomie condition ($M = 3.51$, $SD = 1.78$, $p < .001$, Cohen's $d = 1.10$) and the control condition ($M = 4.54$, $SD = 1.44$, $p < .001$). Low and control condition differed significantly as well ($p < .001$).

In summary, the results show that higher anomie leads to more lack of political control and support for authoritarianism than low anomie, therefore indicating first support of our hypothesis.[4]

[4] In Studies 2 and 3, we also tested our hypothesis via mediation analyses following recommendations by Hayes (2018). All of these can be found in the online supplements (Supplemental Materials F & H).

Table 2

Descriptive Statistics for Variables across Conditions in Study 2

Baseline characteristic	High-anomie condition				Low-anomie condition				Control condition				Total			
	M	*SD*	*n*	*%*	*M*	*SD*	*n*	*%*	*M*	*SD*	*n*	*%*	*M*	*SD*	*n*	*%*
Support for authoritarianism	5.22	1.27	177		3.51	1.78	183		4.54	1.44	183		4.41	1.67	543	
Political uncertainty	3.78	0.95	177		2.20	1.23	183		3.32	1.00	183		3.09	1.25	543	
Lack of political control	4.25	0.82	177		2.26	1.24	183		3.68	0.95	183		3.39	1.32	543	
Age in years	41.86	13.46	177		42.46	12.51	183		42.60	13.74	183		42.31	13.22	543	
Gender																
Female			84	47			93	51			94	51			271	50
Male			92	52			88	48			85	46			265	49
Other/Nonbinary			1	1			2	1			4	2			7	1
Household income (annual)[a]	6.60	3.01	176		6.87	3.03	183		6.56	3.05	183		6.68	3.03	542	
College degree[b]			116	66			107	58			102	56			325	60
Unemployed			7	4			22	12			19	10			48	9
Ethnic group[c]																
Native American/American Indian			1	1			1	1			1	1			3	<1
Asian/Asian American			7	4			12	7			9	5			28	5
Black/African American			40	23			28	15			51	28			119	22
Hispanic/Latin(a/o/x)			9	5			10	5			3	2			22	4
Other			1	1			2	1			1	1			4	<1
White			118	67			130	71			118	64			366	67

Marital status (married)[d]			101	57			100	55			103	56			304	596
Political ideology (right-wing)[e]	3.62	1.75	177		3.58	1.84	183		3.67	1.77	183		3.63	1.78	543	

Notes. [a]Measured in 10 categories/steps of $10,000, ranging from 1 (less than $15,000) to 10 (more than $95,000); [b]No college degree = 0, college degree or higher = 1; [c]Not married = 0, married = 1; [d]Two items measuring political leaning on social and economic issues, scale ranging from 1 (*strongly left*) to 7 (*strongly right;* α = .92).

Table 3

Correlations of Unstandardized Variables in Study 2

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) Support for authoritarianism	1.000																	
(2) Political uncertainty	.55***	1.000																
(3) Lack of political control	.47***	.72***	1.000															
(4) Age in years	-.04	.02	-.03	1.000														
Gender (5) Female	.03	.06	-.03	.12**	1.000													
(6) Male	-.01	-.05	.02	-.10*	-.97***	1.000												
(7) Non-binary	-.11*	-.03	.01	-.08	-.11**	-.11**	1.000											
(8) Household income (annual)[a]	-.03	-.03	-.04	.01	.005	.01	-.05	1.000										
(9) College degree[b]	-.04	-.003	-.001	-.03	-.06	.06	-.01	.40***	1.000									
(10) Unemployed	-.06	-.07	-.05	-.07	-.05	.03	.08	-.25***	-.16***	1.000								
Ethnic group (11) Native/ American Indian	.03	0.00	.03	0.00	.03	-.02	-.01	-.10*	-.04	-.02	1.000							
(12) Asian/Asian American	-.03	.02	-.05	-.15***	-.05	.06	-.03	.07	.12**	.05	-.02	1.000						
(13) Black/African American	.22***	.11*	.001	-.002	-.06	.07	-.06	.02	.13**	-.06	-.04	-.12**	1.000					
(14) Hispanic/Latin (a/o/x)	-.02	-.01	.01	-.11**	-.11**	.08	.14***	-.06	-.08	.04	-.02	-.05	-.11*	1.000				
(15) Other	-.12**	-.04	-.02	-.06	-.09*	.09*	-.01	-.01	-.02	.12**	-.01	-.02	-.05	-.02	1.000			
(16) White	-.16***	-.10*	.02	.13**	.14**	-.14**	.01	-.01	-.13**	-.01	-.11*	-.34***	-.76***	-.30***	-.12**	1.000		
(17) Marital status (married)[c]	.01	.03	.06	.23***	.03	-.04	.04	.39***	.13**	-.12**	-.08	-.08	-.02	-.06	.03	.09*	1.000	
(18) Political ideology (right-wing)[d]	.26***	.08	.07	.04	-.09*	.11*	-.09*	.07	-.05	-.11*	-.04	-.09*	-.002	-.03	-.04	.07	.15***	1.000

Notes. $N = 543$; *** $p < .001$, ** $p < .01$, * $p < .05$; [a]Measured in 10 categories/steps of $10,000, ranging from 1 (less than $15,000) to 10 (more than $95,000); [b]No college degree = 0, college degree or higher = 1; [c]Not married = 0, married = 1; [d]Two items measuring political leaning on social and economic issues, scale ranging from 1 (*strongly left*) to 7 (*strongly right;* $\alpha = .92$).

Study 3 (Experiment): The Effect of Lack of Political Control on Political Uncertainty

The results thus far indicate that the effect of anomie on support for authoritarianism is sequentially mediated by lack of political control and uncertainty (Study 1). However, they only provide causal evidence for the model's first path—the effect of anomie perceptions on lack of political control (Study 2). To establish causality for the second path in our hypothesized model (the effect of a lack of political control on political uncertainty), we ran a second experiment (Study 3), which was also preregistered [link].

Method

Sample. We recruited 171 US participants from Prolific who took part in the study in exchange for $1.50. According to our power analysis, we needed at least 117 participants to detect a medium effect of $f^2 = .15$ at $\alpha < .05$ with 95 % power (we oversampled to account for potential participant dropout). Again, we required all participants to be U.S. citizens, English native speakers, and at least 21 years old. Of the 171 participants, 82 identified as female, 84 as male, and 4 as non-binary (one participant did not reveal their gender). The average age was 39.19 years, *SD* = 13.06; 42% reported being married; 7% reported being unemployed; 74% identified as White; and 54% held a university degree. The reported median household income category was $55,001–$65,000. See Table 4 for a complete overview of the unstandardized study variables and demographics across conditions.

Procedure. After participants agreed to a consent form and read a short welcome note, they were randomly assigned to one of three conditions. The design followed a one-factor (high vs. low lack of political control vs. control condition) between-subjects design. Participants then filled in a scale measuring political uncertainty. After that, respondents reported their demographics (age, gender, education, employment status, marital status, household income, political leaning (right-versus left-wing), and ethnic group).

Manipulation of Lack of Political Control. Like in Study 2, we manipulated our independent variable by asking participants to read a vignette describing the society of the United States 10 years into the future (Supplemental Material G; Duckitt & Fisher, 2003; Hartwich & Becker, 2019). The vignette closely resembled the lack of political control scale by Kofta and colleagues (2020) used in Study 2 to make participants feel "like a pawn and [experiencing] an enduring loss of personal influence over the political world." Here is an excerpt of the manipulation text for the high condition: "In the United States of the future, you feel that people like you have absolutely no control over politics and government actions." The low lack of political control condition, by contrast, featured this text: "In the United States of the future, you feel that people like you have much control over politics and government actions." To ensure comparability between the experimental conditions and avoid confounding (lack of) political control with other concepts, we kept the wording between both experimental conditions very similar and made sure to only vary isolated words wherever possible, for example, "…*no* control over politics…" (high lack of political control condition) versus "…*much* control over politics…" (low lack of political control condition). Similar to Study 2, the control condition consisted of a neutral vignette (of similar length as the experimental conditions) describing the architecture of the future United States. In all conditions, participants were asked to write down a few sentences on how they imagined this future society.

Measures

Political Uncertainty. We measured political uncertainty via a scale developed by Kofta and colleagues (2020). The scale consists of four items asking participants for their agreement with several statements on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*). An example: "Lately it has been hard to understand what politicians want" ($\alpha = .88$).[5]

[5] Data collected for Studies 3 and 4 also included variables for a separate research project examining the effects of anomie on normative and nonnormative/violent political actions. See respective preregistration documents for

Results

Manipulation Check. Like in Study 2, we conducted a manipulation check with an independent sample ($N = 93$). Participants were randomly assigned to one of the three experimental conditions. We measured lack of political control with the same scale used in Study 2 (Kofta et al., 2020; $\alpha = .91$). The results of an ANOVA test indicated that there was a significant overall effect of the manipulation on lack of political control [F (2, 90) = 25.05, $p < .001$]. In support of our predictions, post hoc tests using the Bonferroni correction showed that participants in the high lack of political control condition felt a significantly higher lack of political control ($M = 4.38$, $SD = 0.72$) than participants in the low lack of political control condition ($M = 2.65$, $SD = 1.30$, $p < .001$). The low lack of political control condition also differed significantly from the control condition ($p < .001$). However, there was no significant difference between the high lack of political control condition and the control condition ($M = 3.88$, $SD = 0.79$, $p = .142$). With scores above the scale midpoint (3), participants in both the high lack of political control condition and the control condition experienced increased feelings of lack of political control to some extent. Just thinking about the future of the United States heightened these feelings, likely due to the sensitive nature of political control in the current climate of frequent controversies and intense polarization. Thus, while the baseline of lack of political control is high, these results show that we successfully manipulated high levels and low levels of lack of political control.

Hypothesis testing. Our hypothesis predicted that a lack of control in the political sphere would lead to feelings of political uncertainty. We detected no multivariate outliers when using the BACON method (Billor et al., 2000; software by Weber, 2010). The results of an ANOVA indicated an overall effect of the lack of political control manipulation on

a complete overview of gathered variables. Notably, these scales were collected sequentially after the focal measures for the present study so that they could not influence present results.

feelings of political uncertainty [$F(2, 168) = 19.13$, $p < .001$]. The results of post hoc tests using Bonferroni corrections confirmed that, as predicted, participants in the high lack of political control condition ($M = 3.66$, $SD = 1.02$) reported significantly more political uncertainty than participants in the low lack of political control condition ($M = 2.50$, $SD = 1.07$, $p < .001$, Cohen's $d = 1.11$). There was no significant difference between the high lack of political control and the control condition ($M = 3.22$, $SD = 0.96$, $p = .076$). The neutral control condition differed significantly from the low political control condition ($p = .001$).

In summary, the results of Study 3 provide causal evidence that a higher lack of control leads to more political uncertainty than a lower lack of control, further supporting our hypothesis.

Table 4

Descriptive Statistics for Variables across Conditions in Study 3

Baseline characteristic	High lack of political control condition				Low lack of political control condition				Control condition				Total			
	M	*SD*	*n*	%	*M*	*SD*	*n*	%	*M*	*SD*	*n*	%	*M*	*SD*	*n*	%
Support for authoritarianism	4.22	1.61	57		4.04	1.54	59		4.21	1.34	55		4.15	1.50	171	
Political uncertainty	3.66	1.02	57		2.50	1.07	59		3.22	0.96	55		3.12	1.12	171	
Age in years	39.28	12.89	57		40.24	14.43	59		37.98	11.76	55		39.19	13.06	171	
Gender																
Female			28	49			29	50			25	45	0		82	48
Male			28	49			28	48			28	51			84	49
Non-binary			1	2			1	2			2	4			4	2
Household income (annual)[a]	5.84	3.28	57		5.98	3.05	59		6.25	3.08	55		6.02	3.12	171	
College degree[b]			31	54			31	53			31	56			93	54
Unemployed			7	12			0	0			5	9			12	7
Ethnic group																
Asian/Asian American			3	5			2	3			4	7			9	5
Black/African American			5	9			8	14			9	16			22	13
Hispanic/Latin(a/o/x)			6	11			1	2			4	7			11	6
Other			0	0			1	2			1	2			2	1
White			43	75			47	80			37	67			127	74
Marital status (married)[c]			27	47			24	41			20	36			71	42
Political ideology (right-wing)[d]	3.09	1.88	57		2.86	1.79	59		2.70	1.53	55		2.89	1.74	171	

733 Notes. [a]Measured in 10 categories/steps of $10,000, ranging from 1 (less than $15,000) to 10 (more than $95,000); [b]No college degree = 0, college degree or higher = 1;
734 [c]Not married = 0, married = 1; [d]Two items measuring political leaning on social and economic issues, scale ranging from 1 (*strongly left*) to 7 (*strongly right;* $\alpha = .91$).
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Table 5

Correlations of Unstandardized Variables in Study 3

Variables		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) Support for authoritarianism		1.000														
(2) Political uncertainty		.21**	1.000													
(3) Age in years		-.13	-.02	1.000												
Gender	(4) Female	.01	-.11	.11	1.000											
	(5) Male	.01	.10	-.06	-.95***	1.000										
	(6) Non-binary	-.05	.06	-.15	-.15	-.15*	1.000									
(7) Household income (annual)[a]		-.001	-.02	-.05	.05	.05	.01	1.000								
(8) College degree[b]		-.22**	-.13	.05	-.04	.07	-.09	.25***	1.000							
(9) Unemployed		.04	.09	.06	.01	-.04	.11	-.14	-.07	1.000						
Ethnic group	(10) Asian/Asian American	.06	.08	-.09	-.12	.13	-.04	.22**	.01	-.06	1.000					
	(11) Black/African American	.14	-.01	-.13	.05	-.07	.06	-.17*	-.10	.03	-.09	1.000				
	(12) Hispanic/Latin (a/o/x)	-.03	.03	-.10	-.16*	.17*	-.04	-.05	.10	.11	-.06	-.10	1.000			
	(13) Other	-.05	.01	.16*	.004	.001	-.02	-.16*	-.01	-.03	-.03	-.04	-.03	1.000		
	(14) White	-.11	-.05	.16*	.11	-.11	.003	.09	.03	-.05	-.40***	-.65***	-.45***	-.18*	1.000	
(15) Marital status (married)[c]		-.09	.04	.31***	.13	-.09	-.13	.28***	.15*	-.09	.07	-.11	-.03	-.09	.09	1.000
(16) Political ideology (right-wing)[d]		.25**	.05	.17*	-.10	.15	-.15	-.05	-.20*	-.10	-.04	.02	-.04	-.01	.04	-.02

Notes $N = 171$; *** $p < .001$, ** $p < .01$, * $p < .05$; [a]Measured in 10 categories/steps of $10,000, ranging from 1 (less than $15,000) to 10 (more than $95,000); [b]No college degree = 0, college degree or higher = 1; [c]Not married = 0, married = 1; [d]Two items measuring political leaning on social and economic issues, scale ranging from 1 (*strongly left*) to 7 (*strongly right;* $\alpha = .91$).

Study 4 (Experiment): The Effect of Political Uncertainty on Support for Authoritarianism

Study 2 provided causal evidence for the first path of the hypothesized model, showing that high anomie leads to more lack of control and support for authoritarianism than low anomie. Study 3, in turn, showed that a high lack of political control leads to more political uncertainty than a low lack of political control. Consequentially, Study 4 was designed to provide causal evidence for the final path in our hypothesized model: the effect of political uncertainty on support for authoritarianism. Study 4 was also preregistered [link][6].

Method

Sample. According to a power analysis, we needed at least 117 participants to detect a medium effect of $f^2 = .15$ at $\alpha < .05$ with 95 % power. To account for potential dropouts, we recruited 170 participants from Prolific, who received compensation of approximately $0.93. Again, we required all participants to be U.S. citizens, English native speakers, and at least 21 years old. One participant was excluded for failing an attention check. In the final sample, consisting of 169 participants, the average age was 41.43 years, *SD* = 12.87; 82 participants identified as female, 84 as male, and three as non-binary. Furthermore, 50% reported being married, 7% reported being unemployed, 82% identified as White, and 60% held a university degree. The reported median household income category was $55,001–$65,000. See Table 6 for a complete overview of the unstandardized study variables and demographics across conditions and Table 7 for correlations of all unstandardized study variables.

Procedure. After agreeing to a study consent form and reading a short welcome note, participants were randomly assigned to one of three conditions (high political uncertainty condition, low political uncertainty condition, control condition). The procedure thus, again,

[6] Study 4 was preregistered before data collection. However, the preregistration includes a PDF that contains the names of the authors (which cannot be removed). Therefore, we created an anonymized copy of the original preregistration document (solely for the purpose of peer review), which can be found under the link above. Of course, the original (non-anonymous) preregistration is and stays available to the public.

utilized a one-factor between-subjects design. After the experimental manipulation, participants completed the scale of the dependent variable (support for authoritarianism). Afterward, respondents provided their demographic details (age, gender, education, marital status, annual household income, ethnic group, employment status, and political leaning (left- versus right-wing)).

Manipulation of Political Uncertainty. Following Studies 2 and 3, we manipulated political uncertainty by asking participants to read a vignette describing the society of the United States 10 years into the future (Supplemental Material I; Duckitt & Fisher, 2003; Hartwich & Becker, 2019). The vignette closely resembled the political uncertainty scale by Kofta and colleagues (2020) used in Study 3 and thus was intended to induce a "lack of certainty about the course of political events and the inability to predict what will happen" (Kofta et al., 2020, p. 901). An excerpt of high political uncertainty is: "In the United States of the future, the political landscape makes people feel very uncertain. For example, it is very hard to understand what politicians want." In the low political uncertainty condition, the future United States was described as a country where citizens felt very certain about the political landscape: "In the United States of the future, the political landscape makes people feel very certain. For example, it is very easy to understand what politicians want." Again, to ensure comparability between the experimental conditions and avoid confounding political (un)certainty with other concepts, we kept the wording between both experimental conditions very similar and made sure to only vary isolated words wherever possible, for example "…their actions are largely (un)predictable. (…) It is very hard (easy) to comprehend (…)". Similar to Studies 2 and 3, the control condition consisted of a vignette describing the architecture of the future United States. In all conditions, participants were asked to write down a few sentences on how they imagined this future society.

Measures

Support for Authoritarianism. Like in Studies 2 and 3, we measured support for authoritarianism with the "wish for a strong leader" scale (Sprong et al., 2019; $\alpha = .90$).

Results

Manipulation Check. Like in Studies 2 and 3, we conducted a manipulation check with an independent sample (via the extended manipulation check, see Supplemental Material E; $N = 345$). Participants were randomly assigned to one of the three experimental conditions. We measured political uncertainty with the same scale used in Study 3 (Kofta et al., 2020; $\alpha = .91$). The results of an ANOVA indicated that there was a significant overall effect of the manipulation on a measure of political uncertainty [$F(6, 338) = 11.33$, $p < .001$]. Bonferroni-corrected post hoc tests revealed that participants in the high political uncertainty condition scored significantly higher on the political uncertainty scale ($M = 4.05$, $SD = 0.97$) than participants in the low political uncertainty condition ($M = 2.58$, $SD = 1.18$, $p < .001$) and in the control condition ($M = 3.11$, $SD = 1.02$, $p < .001$). Even though political uncertainty scores in the low condition were below the scale's mid-level (3) and in the control condition slightly above, there was no significant difference between the low and the control condition ($p = .339$). Similar to Studies 2 and 3, we interpret this as an indication that the political context in the United States is highly volatile and fast-changing and that, at the time of data collection, baseline levels of political uncertainty were relatively low.

Hypothesis testing. Our hypothesis predicted that political uncertainty would directly lead to support for authoritarianism. Again, we detected no multivariate outliers when using the BACON method (Billor et al., 2000; software by Weber, 2010). The results of an ANOVA indicated an overall effect of the political uncertainty manipulation on support for authoritarianism [$F(2, 166) = 5.56$, $p = .005$]. The results of post hoc tests using Bonferroni corrections indicated that, as predicted, participants in the high political uncertainty condition

(M = 4.78, SD = 1.29) reported significantly more support for authoritarianism than participants in the low political uncertainty condition (M = 4.01, SD = 1.60, p = .015, Cohen's d = 0.53). Likewise, participants in the control condition (M = 3.99, SD = 1.46) indicated significantly less support for authoritarianism than participants in the high condition (p = .013, Cohen's d = 0.58). There was no significant difference between the low and the control condition (p = 1.00). In summary, the results show that higher political uncertainty leads to more support for authoritarianism than low political uncertainty, further supporting our hypothesis.

General Test of Alternative Models

Although we have strong theoretical and empirical reasons to support our sequential mediation hypothesis, using the Causal Uncertainty Model (Weary et al., 2010) to underpin the psychological mechanisms behind the impact of anomie on authoritarianism, we also examined alternative models and compared their fit to the data with our sequential mediation model.

Test of Parallel Mediation

Since previous, speculative explanations of the effect of anomie on authoritarianism focused on uncertainty (e.g., Elchardus & Spruyt, 2016; Swader, 2017) or control (e.g., Ådnanes, 2007) separately, we compared our hypothesized sequential mediation model with a parallel mediation model. Doing so, we followed recommendations (Hayes, 2018) to test both mediators in the same model, so as to separate spurious and epiphenomenal relationships from potential causal associations. According to Hayes (2018), this approach is advisable when potential mediators are correlated, which is the case in Study 1 (r(1502) = .19, p < .001) and Study 2 (r(541) = .72, p < .001). Thus, we first conducted parallel mediation analyses that included both political uncertainty and lack of control. Afterward, we aimed to assess whether

our hypothesized (sequential mediation) model provided a better fit to the data than the alternative, parallel model.

Study 1. The results from parallel mediation analysis indicated an indirect effect of anomie on authoritarianism via political uncertainty (b = 0.04, 95% CI = [0.02, 0.06]) but not via lack of political control (b = -0.004, 95% CI = [-0.03, 0.02]).

Moreover, a comparison of the Akaike information criterion (AIC) values and Chi-square fits showed that our hypothesized sequential mediation model (AIC = 93366.91) was preferable to the parallel mediation model (AIC = 93387.82). The Chi-square fits of both models differed significantly, χ 2 (1, N = 1504) = 22.91, p < .001, favoring our proposed model.

Study 2. The results from parallel mediation analysis indicated that the indirect effect of anomie on support for authoritarianism via political uncertainty was significant, both when the high-anomie condition was compared with the low-anomie condition (b = 1.11, 95% CI = [0.81, 1.46]) and with the control condition (b = 0.33, 95% CI = [0.18, 0.52]). Moreover, again there was no indirect effect of anomie on support for authoritarianism via lack of political control, both when comparing the high-anomie condition with the low-anomie condition (b = 0.22, 95% CI = [-0.18, 0.64]) and with the control condition (b = 0.06, 95% CI = [-0.05, 0.19]).

Similar to Study 1, AIC values and Chi-square fits of both models showed that the hypothesized sequential mediation model (AIC = 8909.90) was preferable to the parallel mediation model (AIC = 9230.48). The Chi-square fits of both models differed significantly as well, χ 2 (1, N = 543) = 332.58, p < .001, again favoring the hypothesized model.

Test of reverse order

Moreover, we tested another alternative model, placing political uncertainty first in the sequence and lack of political control second.

Study 1. Mediation analysis showed no indirect effect of anomie on support for authoritarianism via, in sequence, political uncertainty and lack of political control (b = -0.0003, 95% CI = [-0.002, 0.001]).

Study 2. Mediation analysis testing the reverse order of mediators yielded no significant results, neither when comparing the high- and the low-anomie condition (b = 0.12, 95% CI = [-0.10, 0.39]), nor when comparing the high- and the control condition (b = 0.04, 95% CI = [-0.03, 0.12]).

Study 3. Moreover, Study 3 showed no effect of lack of political control on support for authoritarianism [F (2, 168) = 0.26, p = .774], providing causal evidence against a reverse order of mediators and lack of control alone explaining the effect of anomie on authoritarianism.

Reverse Order of Complete Model

We also tested the reverse order of the complete model. As indicated in Supplemental Material E, experimental data from our extended manipulation check showed an effect of political uncertainty on lack of political control (b = 0.78, p = .001) and an effect of the latter on anomie (b = 1.04, p < .001). Moreover, mediation analysis using the correlational data from Study 1 indicated a significant indirect effect of authoritarianism on anomie via political uncertainty and lack of political control (b = 0.0009, 95% CI = [0.005, 0.002]).

In sum, while there is also partial evidence for reverse causality, these results show that the sequential mediation model that we hypothesize was superior to alternative models. Moreover, we find that lack of control is not sufficient to explain the link between anomie and support for authoritarianism. Instead, and in line with our hypothesis, lack of control links anomie to uncertainty, meaning that uncertainty but not lack of control is the proximal cause for the link between anomie and support for authoritarianism.

Transparency and Openness Statement

907 Studies 2-4 were preregistered (see links in respective introductory sections). All data,
908 analysis code, and research materials are available here: [link].
909
910

911 **Table 6**

912 *Descriptive Statistics for Variables across Conditions in Study 4*

Baseline characteristic	High political uncertainty condition				Low political uncertainty condition				Control condition				Total			
	M	*SD*	*n*	*%*	*M*	*SD*	*n*	*%*	*M*	*SD*	*n*	*%*	*M*	*SD*	*n*	*%*
Support for authoritarianism	4.78	1.29	59		4.01	1.60	56		3.99	1.46	54		4.27	1.49	169	
Political uncertainty	3.59	0.98	59		3.39	1.09	56		3.07	1.13	54		3.36	1.08	169	
Age in years	41.03	12.48	59		41.88	13.65	56		41.39	12.68	54		41.43	12.87	169	
Gender																
Female			30	51			25	45			27	50			82	49
Male			27	46			30	54			27	50			84	50
Non-binary			2	3			1	2			0	0			3	2
Household income (annual)[a]	6.63	3.15	59		5.63	3.24	56		6.07	3.21	54		6.12	3.21	169	
College degree[b]			37	63			33	59			32	59			102	60
Unemployed			2	3			6	11			4	7			12	7
Ethnic group																
Asian/Asian American			1	2			2	4			3	6			6	4
Black/African American			6	10			6	11			4	7			16	9
Hispanic/Latin(a/o/x)			3	5			2	4			1	2			6	4
Other			0	0			0	0			0	0			0	0
White			48	81			45	80			45	83			138	82
Marital status (married)[c]			28	47			31	55			26	48			85	50
Political ideology (right-wing)[d]	3.31	1.73	59		3.51	1.57	56		3.45	1.79	54		3.42	1.70	169	

913
914 Notes. [a]Measured in 10 categories/steps of $10,000, ranging from 1 (less than $15,000) to 10 (more than $95,000); [b]No college degree = 0, college degree or higher = 1;
915 [c]Not married = 0, married = 1; [d]Two items measuring political leaning on social and economic issues, scale ranging from 1 (*strongly left*) to 7 (*strongly right;* α = .84).

Table 7

Correlations of Unstandardized Variables in Study 4

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) Support for authoritarianism	1.000														
(2) Political uncertainty	.26***	1.000													
(3) Age in years	-.08	.001	1.000												
Gender (4) Female	.16*	.16*	-.05	1.000											
(5) Male	-.12	-.17*	.07	-.97***	1.000										
(6) Other/Nonbinary	-.14	.04	-.06	-.13	-.13	1.000									
(7) Household income (annual)[a]	-.07	-.06	.10	-.08	.12	-.17*	1.000								
(8) College degree[b]	-.05	-.12	-.05	-.06	.08	-.07	.60***	1.000							
(9) Unemployed	.04	.04	-.16*	-.22**	.19*	.14	-.16*	-.06	1.000						
Ethnic group (10) Asian/Asian American	-.05	-.10	-.14	-.06	.07	-.03	.11	.16*	.07	1.000					
(11) Native American	-.04	-.02	-.05	-.04	.05	-.02	.15	.11	-.04	-.03	1.000				
(12) Black/African American	.001	.08	-.05	.09	-.08	-.04	-.07	.01	-.01	-.06	-.04	1.000			
(13) Hispanic/Latin (a/o/x)	.08	.05	-.12	.01	.001	-.03	.10	.02	-.05	-.04	-.03	-.06	1.000		
(14) White	-.002	-.03	.18*	-.03	.01	.06	-.10	-.13	.01	-.40***	-.28***	-.68***	-.41***	1.000	
(15) Marital status (married)[c]	.01	-.02	.09	.04	-.01	-.14	.39***	.24**	-.14	-.07	.13	-.04	.06	-.01	1.000
(16) Political ideology (right-wing)[d]	.16*	.06	.11	-.13	.15*	-.07	-.02	-.01	.09	-.12	.05	-.07	-.07	.13	-.002

Note. $N = 169$; *** $p < .001$, ** $p < .01$, * $p < .05$; [a]Measured in 10 categories/steps of $10,000, ranging from 1 (less than $15,000) to 10 (more than $95,000); [b]No college degree = 0, college degree or higher = 1; [c]Not married = 0, married = 1; [d]Two items measuring political leaning on social and economic issues, scale ranging from 1 (*strongly left*) to 7 (*strongly right;* $\alpha = .84$).

General Discussion

Theoretical Contributions

The present paper illuminates the effect of anomie on authoritarianism in several ways. First, while previous evidence on this effect was merely correlational, we provide causal evidence indicating that anomie does, in fact, lead to support for authoritarianism. Second, while previous notions speculated about either lack of control or uncertainty explaining the effect of anomie on authoritarianism, we settle this debate and show, via a causal chain (Spencer et al., 2005; Stone-Romero & Rosopa, 2008), that lack of control and uncertainty sequentially explain the effect of anomie on support for authoritarianism. Our results further suggest that this model was superior to alternative explanations. Third, we clarify the concept of anomie by showing that control and uncertainty are not aspects, but *consequences* of anomie, contrasting previous scholars who have confounded these three constructs (Blank, 2003; Heydari et al., 2012).

The present results support recent notions that view authoritarianism as a psychological reaction to a deprivation of human needs, such as control and certainty and, therefore, potentially expand our understanding of authoritarianism as a sense-making mechanism (Greenaway et al., 2016; Jost et al., 2003; Kruglanski & Orehek, 2012; Womick et al., 2019). For example, while previous, correlational studies have indicated that authoritarians experience their lives as more certain, coherent, and meaningful (e.g., Womick et al., 2019), the present experimental evidence complements this view by indicating that feelings of uncertainty can also *lead* to a retreat to authoritarianism.

Importantly, the present findings also provide indirect support for the compensatory control model (e.g., Kay et al., 2008). According to our results, feelings of lack of control can increase support for authoritarianism, which may function as a compensatory control mechanism. However, based on our results, they do so only indirectly inasmuch – i.e., *because* – they lead to feelings of political uncertainty.

Moreover, by disentangling anomie, lack of control, and uncertainty we support recent notions emphasizing that anomie describes a perceived state of society and not a set of affective reactions (Teymoori et al., 2017). Thus, experiencing anomie can, but does not have to, lead to negative psychological reactions in an individual. This differentiation is important, as an individual's perception of society may be difficult to alter, especially if that perception is shared. However, the way individuals react to anomie may be more efficiently addressed by practitioners aiming to protect democracy (see below).

Generally, while previous theories focus on individual experiences in explaining authoritarianism, the present results show that support for authoritarianism can also be caused by perceptions of society and thus remind us of the importance of considering the broader social context. In the same vein, the present results potentially add a new perspective to views considering authoritarianism as a system justification ideology (e.g., Jost et al., 2004): More specifically, our results suggest that authoritarianism is not only a psychological mechanism justifying the status quo, but also a psychological security mechanism reacting to a system perceived as breaking down.

Practical Implications

By explaining why anomie leads to support for authoritarianism, we aim to support practitioners in politics and society who want to tackle the negative consequences of anomie more efficiently. For example, the present findings indicate that anomie perceptions are related to both lack of control and uncertainty in the political sphere. However, it is only when individuals feel politically uncertain that they show a heightened susceptibility to authoritarianism. Thus, our results provide evidence challenging the widespread notion that people support authoritarianism mainly because they believe that they do not have a way of exerting political control, and therefore hope for a 'strong leader' to swiftly take control and 'get things done'. For practitioners, this may mean that authoritarianism is more effectively countered through measures that decrease, or help to cope with, uncertainty, for example, by

offering sense and purpose. This may be communication clarifying 'the why' of political actions, explaining the sense of policies, or highlighting the values that political decisions are guided by (Quilter-Pinner et al., 2021). Similarly, political rhetoric conveying confidence may reduce uncertainty, and thus support for authoritarianism (White & Shullman, 2010). Or, somewhat counterintuitively, it might be that politicians who communicate openly about their own feelings of uncertainty can help individuals acknowledge – and thus cope with – their feelings of political uncertainty (Kruglanski & Ellenberg, 2023; White & Shullman, 2010).

Limitations and Directions for Future Research

The present set of studies is of course also not without limitations. For example, study samples involved only Western participants, limiting generalizability beyond such contexts. Also, it is worth noting that Study 1 did not indicate a significant total effect of anomie on authoritarianism. While this data was only correlational, and Study 2 does provide causal evidence for such an effect, this potential difference may be interesting to investigate for future studies. For example, it is conceivable that in Germany, with its particular history regarding authoritarianism, the relationship between anomie and authoritarianism is more indirect than in the United States.

Moreover, the present causal evidence for the hypothesized effect does not rule out the possibility of reverse causality. For example, correlational evidence from Study 1 shows a significant, indirect effect of authoritarianism on anomie via, in sequence, political uncertainty and lack of political control. Moreover, results from our extended manipulation check (Supplemental Material E) indicate that uncertainty also heightens lack of control, which also significantly affects anomie perceptions. Thus, safe the effect of authoritarianism on uncertainty, for which we have no causal test, our results suggest that uncertainty may also affect anomie via control. Importantly, however, the same manipulation check emphasizes that the present manipulations of anomie, lack of political control, and political uncertainty did not confound these three constructs.

Accordingly, it is possible that the constructs tested here also relate to each other in different sequences. For example, it seems conceivable that individuals' frustration about the perceived impossibility of exerting political influence, and/or their pervasive sense of confusion regarding political matters, increases individuals' perception of society breaking down, potentially contributing to a concerning feedback loop threatening democracy. Clarifying these relationships further, we believe, is an important endeavor for future studies.

At the same time, due to the absence of a direct causal effect of lack of political control on support for authoritarianism (as indicated by our test of alternative models), the present results do rule out some alternative pathways: 1) the possibility that only lack of control mediates the effect of anomie on authoritarianism and 2) a reversed order of the mediators (uncertainty preceding lack of control). Accordingly, the present results indicate that lack of control (only) leads to support for authoritarianism to the extent that it leads to uncertainty.

Importantly, even though we consider anomie as a key precursor to authoritarianism, it is likely that a range of factors can initiate the causal chain discussed throughout the manuscript. For example, historical observations and major theorists like Durkheim (2005), Fromm (1941), and Arendt (1973) suggest that various triggers related to societal disarray and normative confusion—characteristics of anomie—often precede societal changes and the rise of authoritarian leaders who promise to restore order. Thus, it might be that the mechanism presented in the present manuscript can be initiated or fostered by, for example, economic crises (e.g., Greece), deep-seated ethnic or religious conflicts (e.g., Israel, Syria), external or civil wars (e.g., Iraq), and populists zeitgeist. Also, during the COVID-19 pandemic, feelings of a lack of control associated with the spread of the virus (Marmarosh et al., 2020; Šrol et al., 2021) likely led to confusion and uncertainty, which then fostered authoritarian reactions in many nations (e.g., Filsinger & Freitag, 2022; Roccato et al., 2021). To what extent such

factors relate to a causal chain leading to authoritarianism presents an empirical question that we believe provides promising avenues for future research.

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Supplemental Online Materials

When Lack of Control Leads to Uncertainty: Explaining the Effect of Anomie on Support for Authoritarianism

Table of Contents

Supplemental Material A: Additional Study Testing the Adequacy of Proxy Items Used in Study 1

To empirically test the adequacy of the used proxy items in Study 1, we ran a preregistered study including 94 U.S. participants from Prolific [link]. The results showed a strong correlation between the ALLBUS proxy scale for lack of political control and the respective scale by Kofta and colleagues (2020, $r(92) = .70$, $p < .001$) and a medium-size correlation between the ALLBUS proxy scale for political uncertainty and the respective scale by Kofta and colleagues (2020, $r(92) = .43$, $p < .001$). Moreover, results from an exploratory factor analysis revealed that all items used to measure lack of political control (i.e., four items from Kofta and colleagues (2020) and two items from the ALLBUS (Bechert & Quandt, 2009)) loaded on (only) one factor with an eigenvalue higher than 1, with factor loadings of at least .51. Similarly, factor analysis showed that all items used to measure political uncertainty (i.e., four items from Kofta and colleagues (2020) and two items from the ALLBUS (Bechert & Quandt, 2009)) loaded on (only) one factor with an eigenvalue higher than 1, with individual factor loadings of at least .35. This indicates that participants did not discriminate between the scales we used in Study 1 and the respective established measures. Thus, in summary, we argue that our scales measuring lack of political control and political uncertainty are valid proxies for the scales used in Studies 2-4.

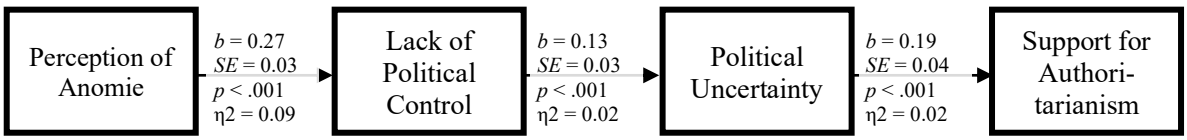
Supplemental Material B: Results of Study 1 Excluding Control Variables

We used weights provided by the ALLBUS (GESIS - Leibniz-Institut für Sozialwissenschaften, 2011) in order to account for the oversampling of participants from East Germany. See Supplemental Figure 1 for an overview of path coefficients. To test our hypothesis without control variables, we interpreted the 95% bias-corrected confidence intervals from 10,000 bootstrapping samples. Similar to results including control variables, this analysis indicated a significant indirect relationship between anomie and support for

authoritarianism via, sequentially, lack of political control and political uncertainty (b = 0.007, 95% CI = [0.003, 0.01]). The calculation of completely standardized effects (Hayes, 2013) indicated an effect size of 0.005, which may be interpreted as a small-size effect (Preacher & Kelley, 2011).

Supplemental Figure 1

Study 1: Path Model Depicting the Regression Coefficients of the Hypothesized Model Without Control Variables: The Effect of Anomie on Support for Authoritarianism Sequentially Mediated by Lack of Political Control and Political Uncertainty



Supplemental Material C: Anomie Manipulation Study 2

High-Anomie Condition. Imagine that you are 10 years in the future. While your personal affairs have not changed unexpectedly, there have been dramatic and far-reaching changes in the United States, the country in which you live.

It seems like society is falling apart. There are no more moral standards to follow, and people do not seem to care about what is right and wrong. The only thing that matters for most people is to have money and power. To achieve that, people think that honesty doesn't work all the time; dishonesty is sometimes a better approach to getting ahead. Everyone only does what is best for themselves, even if it means lying or cheating. Accordingly, there is very little trust among people and people are friends with others for their own benefit. Everyone fends for themselves; people rarely cooperate and help one another.

Just like the social fabric is breaking down, so is the leadership of the country. Politicians seem unable and unwilling to better the lives of the people. Due to social and class division, nepotism, and corruption, most people distrust politicians and think that they use their power illegitimately. Therefore, many laws are regarded as unfair. The government's laws and policies are not effective, and politicians do not seem to care at all about the problems of the people. Accordingly, political leaders and their policies are generally perceived as illegitimate.

Low-Anomie Condition. Imagine that you are 10 years in the future. While your personal affairs have not changed unexpectedly, there have been dramatic and far-reaching changes in the United States, the country in which you live.

It seems like society is united and cohesive. There are clear and agreed-upon moral standards to follow and people seem to care strongly about what is right and wrong. What matters for most people is to support and care for each other and to strive as a community. To achieve that, people think that honesty works best; dishonesty as an approach to getting ahead

is strongly rejected. Everyone tries to do what is best for society, even if it means having to cut back themselves. Accordingly, there is great trust among people and people are generally friendly toward one another. Everyone fends for the community; people frequently cooperate and help one another.

Just like the social fabric is flourishing, so is the leadership of the country. Politicians seem capable and willing to better the lives of the people. Due to most politicians' sense of fairness, integrity, and equality, most people trust politicians and think that they use their power legitimately. Therefore, most laws are regarded as fair. The government's laws and policies are effective, and politicians seem to care deeply about the problems of the people. Accordingly, political leaders and their policies are generally perceived as legitimate.

Control Condition. Imagine that you are 10 years in the future. Your personal affairs have not changed unexpectedly. You still live in the United States, which is much as they are today.

In the United States of the future, some buildings look more modern than today. Depending on the architect, some buildings have what one would call a rather futuristic look, for example, lots of glass, metal structures, and daring shapes. However, overall, the look of towns, villages, and cities has not changed a lot.

In that future, some of the roads, bridges, and train systems have been renewed, others need some work. There is somewhat more public transport than today, but not much. New train connections are established, and some metro systems in the cities are extended and running more frequently. Because people order goods online even more than today, you can see more delivery trucks, bikes, and workers on the streets than today.

Just like today, there will be a growing number of high-rise buildings in the cities. Due to new technology and knowledge, many of these skyscrapers are even taller than today. At the same time, a lot of older buildings stay preserved, so that most towns and cities have kept an appearance that is somewhat balanced between old and new structures, just like today.

Supplemental Material D: Testing the Higher-Order Factor of the Anomie Scale and Manipulation

We conducted several analyses in order to empirically determine whether the Perception of Anomie Scale (PAS; Teymoori et al., 2017) in the manipulation check consisted of one factor or more. As expected, exploratory factor analysis (EFA) revealed that anomie measured with the PAS (Teymoori et al., 2017) represents a unidimensional construct: EFA indicated that there was only one factor with an eigenvalue higher than 1, on which all items loaded with at least .71, indicating that the scale measured a single underlying construct (Briggs & Cheek, 1986).

Additionally, we tested whether the manipulation had different effects on the PAS subscales "leadership" and "social fabric", respectively. Supporting our prediction, results of a Wald test confirmed that the effects of the anomie manipulation (high versus low condition) on the "leadership" subscale did not differ significantly from the effect on the "social fabric" subscale: $F(1, 61) = 0.09$, $p = .767$. Together, these results support the notion that anomie, as measured and manipulated in the present manuscript, represents a unidimensional construct.

Supplemental Material E: Extended Manipulation Check

Since it is likely that there is an overlap in content between the constructs anomie, lack of political control, and political uncertainty, we ran an additional, extended manipulation check with an independent sample ($n = 345$) on Prolific. The goal was to check for unexpected confounding. For example, one may be concerned that the manipulation of political uncertainty led to support for authoritarianism (Study 3) because in reality, and unintendedly, said manipulation heightened perceived lack of control rather than uncertainty. This, of course, would invalidate our conclusions. However, ruling out such concerns empirically is somewhat complicated in the present context because 1) a shared variance of these three constructs (political uncertainty, lack of political control, and perceived anomie) is

to be expected (Kofta et al., 2020; Teymoori et al., 2017; Weary et al., 2010) and, partly, hypothesized. For example, according to our hypothesis, an effect of the manipulation of perceived anomie on feelings of a lack of political control is to be expected. At the same time, such an effect may be interpreted as an indication that our manipulation of anomie is *confounded* with lack of political control. Addressing this issue, we followed guidance by Baron and Kenny (1986; see also Hayes, 2018) and used statistical control in order to examine whether our manipulations showed indications of confounding beyond the effects that are expected. For example, we would expect participants in the high-anomie condition to indicate heightened perceived lack of political control (compared to the low-anomie condition). However, we would not expect such an effect when we control for anomie (as measured with the Perception of Anomie Scale (PAS; Teymoori et al., 2016), since the anomie manipulation should only lead to perceived lack of political control *because* it leads to perceived anomie. Thus, if we hold the manipulation's effect on (measured) perceived anomie constant, there should be no effect on lack of control (or political uncertainty, respectively). If, however, the manipulation of perceived anomie leads to lack of political control even while controlling for anomie (as measured with the PAS; Teymoori et al., 2016), one may conclude that the manipulation of anomie manipulates lack of control above and beyond its intended effect on anomie – in other words: that anomie and lack of control are confounded.

In the extended manipulation check, participants were each randomly assigned to one of the seven experimental conditions used in Studies 2-4: High-anomie condition; low-anomie condition, high lack of political control condition; low lack of political control condition; high political uncertainty condition; low political uncertainty condition; control condition.

Results

Manipulation of Perception of Anomie. Results of an ANOVA indicated that there was a significant overall effect of the manipulation on perceived anomie, as measured by the PAS (Teymoori et al., 2016), [$F(6, 338) = 11.45$, $p < .001$]. Bonferroni-corrected post hoc

tests revealed that participants in the high-anomie condition scored significantly higher on the perceived anomie scale ($M = 4.86$, $SD = 1.23$) than participants in the low-anomie condition ($M = 3.36$, $SD = 1.48$, $p < .001$). There was a significant difference between the control condition ($M = 4.50$, $SD = 1.16$) and the low-anomie condition ($p < .001$) but not the high-anomie condition ($p = 1$).

Since we planned to include continuous control variables, we conducted OLS regression for the remaining analyses. In line with our mediation hypothesis, the manipulation of perceived anomie (low versus high condition) had a significant effect on perceived lack of political control (as measured by the lack of political control scale by Kofta and colleagues (2020), $b = 1.22$, $p < .001$). However, when controlling for anomie (as measured by the PAS; Teymoori et al., 2016), there was no significant effect of the anomie manipulation on lack of political control ($b = 0.24$, $p = .162$).

Similarly, the manipulation of perceived anomie (low versus high condition) had a significant effect on political uncertainty (as measured by the political uncertainty scale by Kofta and colleagues (2020), $b = 0.83$, $p < .001$). However, again, when controlling for anomie, there was no significant effect of the anomie manipulation on political uncertainty ($b = 0.15$, $p = .465$).

In sum, it can be concluded that the present manipulation of perceived anomie increases lack of political control and political uncertainty (only) because it leads to perceived anomie. In other words, the results indicate that there is no unintended confounding of the present experimental manipulation of anomie, neither with political uncertainty nor with perceived lack of political control.

Manipulation of Perceived Lack of Political Control. Results of an ANOVA indicated that there was a significant overall effect of the lack of political control manipulation on perceived lack of political control [$F(6, 338) = 12.62$, $p < .001$]. Bonferroni-corrected post hoc tests revealed that participants in the high lack of political control condition scored significantly

higher on the perceived lack of political control scale (M = 4.38, SD = 0.79) than participants in the low lack of political control condition (M = 3.10, SD = 1.43, $p < .001$). There was a significant difference between the control condition (M = 3.57, SD = 1.10) and the high lack of political control condition (p = .006) but not the low lack of political control condition (p = .846).

Results of OLS regression analyses showed that, in line with our mediation hypothesis, the manipulation of perceived lack of political control (low versus high condition) had a significant effect on political uncertainty (b = 0.65, p = .003). However, when controlling for lack of political control, there was no significant effect of the lack of political control manipulation on political uncertainty (b = 0.03, p = .887).

Similarly, the manipulation of perceived lack of political control (low versus high condition) had a significant effect on perceived anomie (b = 1.04, $p < .001$). However, again, when controlling for lack of political control, there was no significant effect of the lack of political control manipulation on perceived anomie (b = -0.03, p = .882).

In sum, again it can be concluded that the present manipulation of lack of political control increases political uncertainty/perceived anomie *only* inasmuch it leads to perceived lack of political control. In other words, the results indicate that there is no unintended confounding of the present experimental manipulation of lack of political control, neither with political uncertainty nor with perceived anomie.

Manipulation of Political Uncertainty. Results of an ANOVA indicated that there was a significant overall effect of the uncertainty manipulation on political uncertainty [$F(6, 338)$ = 11.33, $p < .001$]. Bonferroni-corrected post hoc tests revealed that participants in the high political uncertainty condition scored significantly higher on the political uncertainty scale (M = 4.05, SD = 0.97) than participants in the low political uncertainty condition (M = 2.58, SD = 1.18, $p < .001$). There was a significant difference between the control condition (M = 3.11,

SD = 1.02) and the high political uncertainty condition ($p < .001$) but not the low political uncertainty condition ($p = .339$).

Results of OLS regression analyses showed that the manipulation of political uncertainty (low versus high condition) had a significant effect on perceived lack of political control ($b = 0.78$, $p = .001$). However, when controlling for political uncertainty, there was no significant effect of the political uncertainty manipulation on perceived lack of political control ($b = -0.01$, $p = .960$).

Similarly, the manipulation of political uncertainty (low versus high condition) had a significant effect on perceived anomie ($b = 0.98$, $p < .001$). However, again, when controlling for political uncertainty, there was no significant effect of the political uncertainty manipulation on perceived anomie ($b = 0.05$, $p = .842$).

In sum, again it can be concluded that the present manipulation of political uncertainty increases perceived lack of political control/perceived anomie *only* inasmuch it leads to political uncertainty. In other words, the results indicate that there is no unintended confound of the present experimental manipulation of political uncertainty, neither with perceived lack of political control nor with perceived anomie.

Finally, given the likely content overlap between anomie, lack of political control, and political uncertainty, we conducted a confirmatory factor analysis in order to test whether a model that treats the items of these three scales as independent (as suggested by our theory) provides a better fit to the data than a model that combines the scales' items. A comparison of the Akaike information criterion (AIC) values and Chi-square fits showed that a two-factor model (treating the three scales' items as independent) fits the data better (AIC = 21128.94) than a one-factor model (AIC = 22016.52) combining all items. The Chi-square fits of both models differed significantly as well, $\chi 2$ (3, $N = 345$) = 893.58, $p < .001$. These results indicate that the scales used in the present study measure three distinct constructs.

Supplemental Material F: Mediation Analyses and Robustness Check Study 2

We measured political uncertainty via a scale developed by Kofta and colleagues (2020). The scale consists of four items asking participants for their agreement with several statements on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*). An example: "Lately it has been hard to understand what politicians want" ($\alpha = 0.91$). Political uncertainty was significantly affected by the anomie manipulation according to an ANOVA, [$F(2, 540) = 104.83$, $p < .001$]. Post hoc tests using the Bonferroni correction showed that participants in the high-anomie condition felt significantly higher political uncertainty ($M = 3.78$, $SD = 0.95$) than participants in the low-anomie condition ($M = 2.20$, $SD = 1.23$, $p < .001$, Cohen's $d = 1.44$) and the control condition ($M = 3.32$, $SD = 1.00$, $p < .001$). Low and control condition differed significantly as well ($p < .001$).

To test our hypothesis in Study 2 via mediation analysis, we followed the bootstrapping procedures recommended by Hayes (2018) to estimate confidence intervals for the indirect effect of anomie perceptions on support for authoritarianism via lack of political control and political uncertainty. In doing so, we interpreted the 95% bias-corrected confidence intervals from 10,000 bootstrap samples. Moreover, in all mediation analyses, we followed recommendations by UCLA: Statistical Consulting Group (2021) who built on Hayes and Preacher (2014). This method uses dummy variables for all three categories, which allows the comparison of all three conditions simultaneously.

We first conducted seemingly unrelated regression (SUR) analyses to account for the likely possibility that error terms in a set of linear equations are correlated (Srivastava & Dwivedi, 1979). SUR permits the analysis of multiple regressions while allowing their errors to be correlated (Fiebig, 2003; Srivastava & Dwivedi, 1979). SUR shares many similarities with Structural Equation Modelling (SEM) and usually leads to similar results, also in the present studies. Unlike SEM, SUR only includes measured variables (not latent ones).

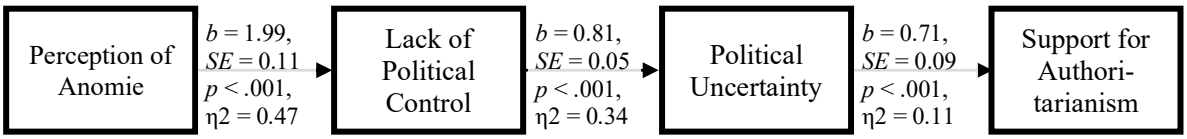
In line with our predictions, the results indicated a significant, positive relationship between high perceptions of anomie (compared to the low-anomie condition) and lack of political control ($b = 1.99$, $p < .001$, $\eta 2 = 0.47$), as well as between the latter and political uncertainty ($b = 0.81$, $p < .001$, $\eta 2 = 0.34$), and between political uncertainty and support for authoritarianism ($b = 0.71$, $p < .001$, $\eta 2 = 0.11$, see Supplemental Figure 2).

Mediation analysis supported our hypothesis: Participants in the high-anomie condition (compared to the low-anomie condition) showed increased support for authoritarianism, sequentially mediated by perceived lack of political control and political uncertainty ($b = 1.13$, 95% CI = [0.82, 1.51]). The calculation of partially standardized effects (Hayes, 2013) indicated a large effect size of 0.68 (Preacher & Kelley, 2011). Comparing the high- and the control condition also revealed a significant, indirect effect ($b = 0.34$, 95% CI = [0.20, 0.49]). In summary, the results supported our hypothesis.

Finally, given the likely content overlap between lack of political control and political uncertainty, we conducted a confirmatory factor analysis in order to test whether a model that treats the items of these two scales as independent (as suggested by our theory) provides a better fit to the data than a model that combines both scales' items. A comparison of the Akaike information criterion (AIC) values and Chi-square fits showed that a two-factor model (treating both scales' items as independent) fits the data better (AIC = 11697.81) than a one-factor model (AIC = 12182.6) combining all items. The Chi-square fits of both models differed significantly, $\chi 2$ (1, $N = 543$) = 486.79, $p < .001$. These results indicate that these scales' items measure two different constructs.

Supplemental Figure 2

Study 2: Path Model Depicting the Regression Coefficients of the Sequential Mediation Model: The Effect of Perceived Anomie on Support for Authoritarianism Sequentially Mediated by Lack of Political Control and Political Uncertainty



Supplemental Material G: Lack of Political Control Manipulation Study 3

High Lack of Political Control Condition. Imagine that you are 10 years in the future. While your personal affairs have not changed unexpectedly, there have been dramatic and far-reaching changes in the United States, the country in which you live.

In the United States of the future, you feel that people like you have absolutely no control over politics and government actions. Whatever the subject, for the average citizen there never seems to be a way to change things, politically. Politicians seem to be very much out of touch with the people they are elected to represent. Although they decide the fate of people like you, the ones in power do not seem to care about what the people want or need. When they make social or economic decisions, they never ask or consider ordinary people.

People in charge in administration seem to be completely uncooperative and disinterested in helping anyone who wants to make a positive difference. There are uncountable hurdles and barriers so that it seems impossible to get anything done, politically.

As a result, there is a general sense of lack of control in the political sphere, and whoever is committed to making a political or social impact will be discouraged and stop trying sooner or later. It feels that people like you are just entirely insignificant within the machinery of politics.

Low Lack of Political Control Condition. Imagine that you are 10 years in the future. While your personal affairs have not changed unexpectedly, there have been dramatic and far-reaching changes in the United States, the country in which you live.

In the United States of the future, you feel that people like you have much control over politics and government actions. Whatever the subject, for the average citizen there always seems to be a way to change things, politically. Politicians seem to be very much in touch with the people they are elected to represent. Whenever they decide the fate of people like you, the ones in power seem to care strongly about what people want or need. When they make social or economic decisions, they always ask or consider ordinary people.

People in charge in administration seem to be very cooperative and interested in helping anyone who wants to make a positive difference. There are not many hurdles and barriers so that it always seems possible to get something done, politically.

As a result, there is a general sense of control in the political sphere among the population, and whoever is committed to making a political or social impact will be encouraged and start trying sooner or later. It feels that people like you are playing a very significant role within the machinery of politics.

Control Condition. Imagine that you are 10 years in the future. Your personal affairs have not changed unexpectedly. You still live in the United States, which is much as they are today.

In the United States of the future, some buildings look more modern than today. Depending on the architect, some buildings have what one would call a rather futuristic look, for example, lots of glass, metal structures, and daring shapes. However, overall, the look of towns, villages, and cities has not changed a lot.

In that future, some of the roads, bridges, and train systems have been renewed, others need some work. There is somewhat more public transport than today, but not much. New train connections are established, and some metro systems in the cities are extended and

running more frequently. Because people order goods online even more than today, you can see more delivery trucks, bikes, and workers on the streets than today.

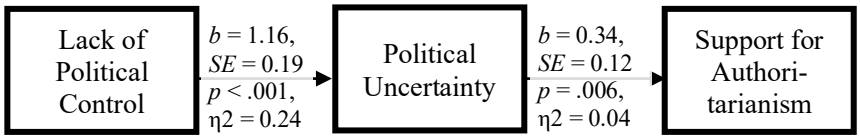
Just like today, there will be a growing number of high-rise buildings in the cities. Due to new technology and knowledge, many of these skyscrapers are even taller than today. At the same time, a lot of older buildings stay preserved, so that most towns and cities have kept an appearance that is somewhat balanced between old and new structures, just like today.

Supplemental Material H: Hypothesis Test via Mediation Analysis in Study 3

Like in Studies 2 and 3, we measured support for authoritarianism with the "wish for a strong leader" scale (Sprong et al., 2019; $\alpha = .91$). To test our hypothesis via mediation analysis, we again followed the bootstrapping procedures recommended by Hayes (2018). An analysis of seemingly unrelated regression (see Supplemental Figure 3) showed, as predicted, a significant effect of lack of political control on feelings of political uncertainty (when compared to the low lack of political control condition, $b = 1.16$, $p < .001$, $\eta 2 = 0.24$) and a significant, positive relationship between political uncertainty and support for authoritarianism ($b = 0.34$, $p = .006$, $\eta 2 = 0.04$). Moreover, we interpreted the 95% bias-corrected confidence intervals from 10,000 bootstrap samples. As predicted, there was a significant indirect effect of lack of political control on support for authoritarianism via political uncertainty when comparing the high and the low condition ($b = 0.40$, 95% CI = [0.08, 0.79]) and also when comparing the high and the control condition ($b = 0.25$, 95% CI = [0.05, 0.56]). The calculation of partially standardized effects (Hayes, 2013) indicated a large effect size of 0.27 (Preacher & Kelley, 2011, when comparing high- versus low condition). In summary, the results support our hypothesis.

Supplemental Figure 3

Study 3: Path Model Depicting the Regression Coefficients of the Partial Hypothesized Model: The Effect of Lack of Political Control on Support for Authoritarianism via Political Uncertainty



Supplemental Material I: Political Uncertainty Manipulation Study 3

High Political Uncertainty Condition. Imagine that you are 10 years in the future. While your personal affairs have not changed unexpectedly, there have been dramatic and far-reaching changes in the United States, the country in which you live.

In the United States of the future, the political landscape makes people feel very uncertain. For example, it is very hard to understand what politicians want. What they do and say seems confusing or pointless and meaningless at times. Their actions are largely unpredictable. It is very hard to comprehend why politicians do the things they do.

Likewise, it is impossible to understand the sense of government actions. People often wonder what the motives and goals of politicians are, how they come to their decisions, and what they are going to do next. In general, what politicians say and do seems completely unclear and confusing.

Accordingly, when it comes to politics, there is a general sense of uncertainty and insecurity among the people. Politics is so complicated and unclear that one cannot comprehend what is happening. Altogether, the political situation in the United States, in that future, seems so entangled that almost anything might happen.

Low Political Uncertainty Condition. Imagine that you are 10 years in the future. While your personal affairs have not changed unexpectedly, there have been dramatic and far-reaching changes in the United States, the country in which you live.

In the United States of the future, the political landscape makes people feel very certain. For example, it is very easy to understand what politicians want. What they do and say makes sense and seems justified and meaningful, usually. Their actions are largely predictable. It is very easy to comprehend why politicians do the things they do.

Likewise, it is easy to understand the sense of government actions. People usually feel that they understand what the motives and goals of politicians are, how politicians make their decisions, and what they are going to do next. In general, what politicians say and do seems completely clear and sensible.

Accordingly, when it comes to politics, there is a general sense of certainty and security among the people. Politics is so transparent and clear that one can easily comprehend what is happening. Altogether, the political situation in the United States, in that future, seems so sorted out that most people have a good understanding of the country's future.

Control Condition. Imagine that you are 10 years in the future. Your personal affairs have not changed unexpectedly. You still live in the United States, which is much as they are today.

In the United States of the future, some buildings look more modern than today. Depending on the architect, some buildings have what one would call a rather futuristic look, for example, lots of glass, metal structures, and daring shapes. However, overall, the look of towns, villages, and cities has not changed a lot.

In that future, some of the roads, bridges, and train systems have been renewed and many are still the same, and others need some work. There is a mixture of private car ownership and also public transport, just like today. New train connections are established, and some metro systems in the cities are extended. Because people order goods online even

more than today, you can see more delivery trucks, bikes, and workers on the streets than today.

Just like today, there will be a growing number of high-rise buildings in the cities. Due to new technology and knowledge, many of these skyscrapers are even taller than today. At the same time, a lot of older buildings stay preserved, so that most towns and cities have kept an appearance that is somewhat balanced between old and new structures, just like today

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