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Anti-establishment sentiments: realistic and symbolic threat appraisals predict populist attitudes and conspiracy mentality

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ABSTRACT

Previous research has found that populist attitudes and conspiracy mentality – here summarised as anti-establishment attitudes – increase when people feel threatened. Two types of intergroup threat have been distinguished, namely realistic threats (pertaining to socio-economic resources, climate, or health), and symbolic threats (pertaining to cultural values). However, there is no agreement on which types of threat and corresponding appraisals would be most important in predicting anti-establishment attitudes. We hypothesise that it is the threat itself, irrespective of its cause, that predicts anti-establishment attitudes. In the current paper, we conducted new (multilevel) regression analyses on previously collected data from four high-powered studies with multiple time points (Study 1) or collected in multiple nations (Studies 2–4). All studies included a populist attitudes scale, a conspiracy mentality scale, and different types of threat and emotion measures, reflecting both realistic and symbolic threats. Across studies, both realistic and symbolic threats positively predicted anti-establishment attitudes. The results support an emotional appraisal approach to anti-establishment attitudes, which highlights the importance of anxiety and feeling threatened regardless of what type of event elicits the threat.

Many individuals feel threatened by current political (e.g. ideological extremism), military (e.g. terrorism and armed conflicts), economic (e.g. financial crisis), health (e.g. global pandemic) and more complex crises (e.g. climate change, energy transition, sense of security) and develop negative sentiments about the status quo of their society (e.g. Forgas et al., 2021; Gootjes et al., 2021). Examples of these negative sentiments are populist attitudes and conspiracy beliefs, outlined in this paper as *anti-establishment attitudes*. Scholars in both populism (Forgas et al., 2021; Nguyen et al., 2022; Rodrik, 2020; Salmela & Von

Scheve, 2017, 2018) and conspiracy beliefs (e.g. Grzesiak-Feldman, 2013; Van Prooijen, 2020) have argued that the appraisal of societal events as threatening for one's social identity, societal position, income, wealth, social status, or well-being may increase these anti-establishment attitudes.

One recurring question is which type of threats are most important in predicting anti-establishment attitudes: realistic threats (e.g. personal economic status, financial resources, well-being), symbolic threats (e.g. system of values, cultural identity, way of life), or both (Noury & Roland, 2020)? There is

currently no consensus on this issue, as various studies have reached different conclusions (Antonucci et al., 2017; Heath et al., 2020; Ivarsflaten, 2008; Kessler & Freeman, 2005; McLaren & Johnson, 2007; Rebechi & Rohde, 2023). The aim of this paper is to provide further insight into the role of these distinct threats by re-analysing the relation between the nature of the threat and anti-establishment attitudes.

Anti-establishment attitudes and threat

While there is no definitive proof that anti-establishment attitudes have risen since the turn of the century, anti-establishment voices have grown louder and have resulted in greater electoral victories for populist parties (Droste, 2021). We use the term anti-establishment attitudes here as the overarching concept that refers to a political belief system characterised by negative sentiments about the government, including negative appraisals of mainstream political parties and a broad range of economic, political, or societal elites. Such broad anti-establishment attitudes have not only been considered a defining element of populist attitudes (Akkerman et al., 2014; Mudde, 2004), but also as an intrinsic part of conspiracy mentality (Imhoff & Bruder, 2014; Nera et al., 2021; Wood & Gray, 2019). Populism is an ideology characterised by the sovereignty of the people, the opposition between the population and the elites, and the dualistic *Manichean* worldview that divides the world between "good" and "evil" (Akkerman et al., 2014: Mudde, 2004). This ideology can be applied to both left- and right-wing radical groups and political parties (see also Salmela & Von Scheve, 2018). Conspiracy mentality is defined as the general tendency to attribute impactful societal events to conspiracies, such as secret and malevolent plots, by powerful elites. Thus, while populist attitudes and conspiracy mentality both imply negative views about societal elites and often co-occur (e.g. Abadi et al., 2021; Abadi, Bertlich, Dalege et al., 2024; Balta et al., 2022; Castanho Silva et al., 2017; Erisen et al., 2021; Hameleers, 2021; Imhoff et al., 2022; Van Prooijen, Rosema et al., 2022; Van Prooijen & Acker, 2015), the difference is that populist attitudes emphasise the perceived deprivation of the people and blame the elites (e.g. Nguyen et al., 2022), whereas conspiracy mentality rather focuses on the perceived secretive activities of the elites.

When individuals perceive that events will negatively affect their lives, and yet they lack control over them, they tend to appraise them as threatening. Importantly, such threat appraisals can also often escalate tensions between social groups (e.g. Abrams & Hogg, 1988; Branscombe et al., 1999; Tajfel & Turner, 2004), because they strengthen people's inclination to protect what they hold dear, and to seek refuge in their own social group. Social psychologists thus consider the perception of intergroup threat (Stephan, 2014; Stephan et al., 2015; Stephan & Stephan, 2000) as crucial for the appeal of populist rhetoric (Gerstlé & Nai, 2019; Levinger, 2017; Mols & Jetten, 2016; Morisi & Wagner, 2021; Rico et al., 2017) or conspiracy theories, because both types of anti-establishment attitudes emphasise conflict between social groups (e.g., Mudde, 2004; Schulz et al., 2018; Wirz et al., 2018).

Threat, anxiety, and appraisal theories of emotion

Scholars studying intergroup threats have emphasised the importance of conceptualising and measuring threats as *perceived* threats. This idea aligns with appraisal theories of emotion, which suggest that it is the subjective experience rather than the objective features of an event that are crucial for an emotion to occur (see Roseman, 1984, 2013; Scherer et al., 2001). Appraisals are quick, and often subconscious, evaluations of an event, based on one's concerns, goals or desires. They can thus be conceived of as mediators between a stimulus and an emotion, the stimulus being the remote cause of the emotion, and the appraisal the proximate cause (Moors, 2013; Moors et al., 2013; Roseman & Smith, 2001; Scherer et al., 2001). In other words, the same event may evoke distinct emotions in various people, because they appraise the event, or disparate aspects of the event, differently. Importantly, appraisals do not only cause an emotion, but also reflect the emotion's phenomenology, thus, shaping the content of the emotional experience (see also Frijda & Zeelenberg, 2001): appraising a situation as a threat is the cause of one's anxiety, but also the content of the anxiety-inducing experience.

Various appraisal dimensions have been identified, including motive (in)consistency, (un)certainty, (loss of) control, and agency (self- versus other-blame), and different combinations of these dimensions may cause different emotions (Frijda, 1986; Roseman et al., 1994; Roseman & Smith, 2001). More specifically,

appraisals of events preceding fear or anxiety have been described as motive-inconsistent, uncertain and low in control (or powerless), while there is no one to blame (Roseman et al., 1994). In addition, Smith and Lazarus (1993) proposed a second, more molar level of analysis that combines the different appraisal dimensions in one *core relational theme* for each emotion. Anxiety, fear, and worry have been associated with the core relational theme of *threat* (Lazarus & Smith, 1988; Smith & Lazarus, 1993): the expectation of being unable to adjust to harm, should it occur. Individual anxiety can also extend to the group level, which is referred to as "collective angst", defined by appraisals of threats to the future vitality of one's ingroup (Jetten & Wohl, 2012).

In sum, anxiety results from appraising (future) events as threatening (i.e. implying harm to oneself or one's group), uncertain (i.e. how the event will affect oneself or one's group) and incapable of changing them. The exact impact on one's life remains vague and unspecified, as long as one perceives a potential, harmful future impact, such as in the case of the influx of immigrants, a financial crisis, or climate change. Any societal event can be appraised as threatening, provided that an individual appraises it as potentially affecting one's goals or concerns negatively.

Different types of threat

Two general types of intergroup threat have been distinguished in the literature (Stephan, 2014; Stephan et al., 2015; Stephan & Stephan, 2000): *realistic threats* (threats to the ingroup's power, financial resources, or well-being) and *symbolic threats* (threats to the ingroup's system of values, cultural identity, or way of life). Both types of threat can be considered social status threats, where people perceive their ingroup as threatened by actions of the outgroup (Branscombe et al., 1999), while often, but not always, the threats coexist. One example of such overlap might be the support for Donald Trump during the 2016 US Elections by working-class voters who felt socio-economically marginalised (including ethnic and religious minorities), but also by the mainstream society (patriotic white and non-white population) who aimed to "Make America Great Again".

Various studies have reached differing conclusions about the importance of realistic and symbolic threats in explaining populism or conspiracy mentality. Some scholars argue that mainly realistic threats, such as increased economic uncertainties due to globalisation and economic precarity, are consistently linked to the growth of right-wing populism (e.g., Antonucci et al., 2017, 2023; Kessler & Freeman, 2005; Oesch, 2008; Rebechi & Rohde, 2023; Sprong et al., 2019; Swank & Betz, 2003). Other studies, however, have shown that symbolic threats are most strongly related to prejudice and anti-immigration attitudes (e.g., Heath et al., 2020; Hogan & Haltinner, 2015; Ivarsflaten, 2008; Lubbers et al., 2002; McLaren & Johnson, 2007) or infra-humanisation (Pereira et al., 2009) and may therefore be a more significant determinant (see also Hochschild, 2018). Still, other studies have suggested that the type of threat may be less relevant in explaining populism or that both types of threat interact (Noury & Roland, 2020). For instance, a large meta-analysis including 95 samples found that all forms of threat reinforce negative out-group attitudes (Riek et al., 2006; see also Meuleman et al., 2020). In addition, another study found no consistent relationship between political beliefs and specific types of threats (Brandt et al., 2021).

Threats have also been linked to increased conspiracy beliefs (for overviews, see Douglas et al., 2019; Jolley et al., 2018; Kofta et al., 2020; Poon et al., 2020; Van Prooijen, 2020; Van Prooijen & Acker, 2015), but no studies to date have explicitly distinguished between different forms of threat. Empirical research has found that conspiracy beliefs (or the more general trait conspiracy mentality) are associated with anxious attachment styles (Green & Douglas, 2018), anxiety in general (Grzesiak-Feldman, 2013), anxiety during the COVID-19 pandemic (Abadi et al., 2021; Leibovitz et al., 2021), dispositional fear of death (Newheiser et al., 2011), perceived economic inequality (Casara et al., 2022), powerlessness (Abalakina-Paap et al., 1999), loss of control (Kofta et al., 2020; Van Prooijen & Acker, 2015), ostracism (Poon et al., 2020), or the belief that core values in society are changing (Federico et al., 2018).

In sum, studies on the relation between different types of threats and anti-establishment attitudes have yielded inconsistent results, even suggesting that any type of threat may increase populist attitudes and conspiracy mentality. This raises the question of how anti-establishment theories may be a coping strategy in response to one's threat.

Anti-establishment attitudes as a coping strategy in response to threat

Feelings of anxiety, uncertainty and loss of control are states of mind that people find aversive and attempt

to reduce (Hogg, 2000; Kruglanski & Orehek, 2012). Anti-establishment attitudes may help to cope with and potentially reduce threat in two ways. First, they strengthen ingroup identification and social support, by highlighting and defending the shared values of one's cultural community (Leung et al., 2014). When anxious, people tend to become more sensitive to their ingroup's opinions and emotions ((Bruder et al., 2014; Manstead & Fischer, 2001) to cope with these feelings. The messages of political leaders who confirm the justification of threat appraisals, either as part of a conspiracy theory or as part of a populist message may not only provide consolation but also further strengthen the ingroup's sense of empowerment.

The second way in which anti-establishment attitudes may help cope with threat is by providing explanations that meet the need for certainty and epistemic sense-making (Van Prooijen, 2020). When anxious, people seek information, and the more anxious they are, the more information they seek (Charpentier et al., 2022). Shared narratives help people explain why they feel anxious after impactful events or when anticipating such events. Seeking validation from one's ingroup fulfills the need for certainty (Kruglanski & Orehek, 2012), because relying on the opinions of valued others can help reduce the uncertainty about an event.

Populist leaders or conspiracy theorists fulfill the need for ingroup identification and certainty by stressing the antagonism between groups (Abadi, Bertlich, Duyvendak et al., 2024; Hogg & Gøtzsche-Astrup, 2021; Obradović et al., 2020; Salmela & Von Scheve, 2018). They appeal to people's anxiety by providing emotionally charged narratives (e.g., Gerstlé & Nai, 2019; Kinvall, 2018) to account for their supporters' feelings of threat. Such narratives often blame the government or the corrupt elite (Abadi, Bertlich, Dalege et al., 2024; Abadi, Bertlich, Duyvendak et al., 2024; Rico et al., 2017), and also make nostalgic references to a glorious past, whereby capitalisation on realistic threats, such as an insecure economic future, go hand in hand with symbolic threats, including a sense of loss of traditional cultural values, identities and practices (Noury & Roland, 2020; Smeekes et al., 2018; Van Prooijen, Rosema et al., 2022).

The current research

In sum, anti-establishment attitudes (i.e. populist attitudes and conspiracy mentality) are rooted in people's anxiety, caused by the appraisal of impactful societal events as either realistic or symbolic threats to one's own group. There is no consensus, however, on which types of threats are most important, or whether the nature of the threat is relevant at all. Based on appraisal theories, we argue that the types of events causing the threat should not have a different impact on anti-establishment attitudes, because the negative feelings associated with the threat are the precondition to seek certainty and social support in one's ingroup and thus reinforce the susceptibility to populist rhetoric or conspiracy theories. Therefore, we expect that both realistic and symbolic threats predict populist attitudes and conspiracy mentality.

This paper presents findings from four different studies, which all included a populist attitudes scale, a conspiracy mentality scale, and different types of measures related to both realistic (economic, health, climate) and symbolic threats (e.g. immigrants). It is important to note that in some studies, we measured different self-reported emotions (anxiety, fear or worry), whereas in others we assessed the perception of threats. As illustrated in the introduction, appraisals and emotions refer to theoretically distinct, though closely related concepts, as the *appraisal* of threat can be regarded as the cause as well as the key content of the *emotion* anxiety (see Moors, 2013). This suggests that we can treat the concepts of both "appraisals" and "emotions" as indicators of people's subjective emotional experience, which is consistent with how emotions have been measured in many studies (e.g. Scherer et al., 2001). A second note concerns the use of different emotion terms across the four studies, namely anxiety, worry or fear. These emotions all belong to the same family, namely *distancing emotions* (Roseman, 2011, 2013). These three emotion terms have slightly different meanings and are used in different contexts (e.g. worry may refer to a more cognitive state of mind than fear), but they all involve an appraisal of threat and a tendency to move away from it (distancing). Subtle differences cannot be captured by single items, and therefore we treat them all as indicators of threat and anxiety.

The data of all studies have been reported in previous papers (see below), including details about data collection procedures and informed consent. The current paper presents new analyses and compares the datasets across the four studies. Study 1 (Kieskompas 2020; Krouwel et al., 2020) focused on the psychological, moral, and political processes underlying human responses to the COVID-19

pandemic in multiple waves ($N = 9033$) and included two types of realistic threat that both were salient during the pandemic (i.e. threats to health and to society). Study 2 (EVES 2019; Krouwel et al., 2019) was part of a large-scale two-wave online panel project conducted in 13 EU countries ($N = 70,882$) and focused on symbolic versus realistic threats. Study 3 (DEMOS 2019; Abadi, Duyvendak et al., 2024) was part of a large-scale project on the social-psychological predictors of populism in 15 European countries ($N = 8.059$) and Study 4 (DEMOS 2020; Abadi et al., 2023) was a survey on emotional responses to the COVID-19 pandemic in four European countries ($N = 2031$). An overview of sample characteristics and descriptive statistics of demographics can be found in Appendix A (see Tables A1–A5). Moreover, the bivariate analyses of all scales used in our studies can be found in Appendix B (see Tables B1–B5). An overview of scales and survey items used in all studies can be found in Appendix C.

Study 1 (Kieskompas 2020 data): a COVID-19 study

Study 1 focused on two different realistic threats that both were salient throughout the COVID-19 pandemic, namely threats to one's health (e.g. fear of contracting the coronavirus), and societal threats (e.g. fear of the implications of the pandemic for the economy, or public safety). We tested the relationships between these different types of realistic threats for populist attitudes and conspiracy mentality.

Method

Participants and design
The study was part of a large data collection project throughout 2020, focused on the psychological, moral, and political processes underlying human responses to the COVID-19 pandemic (Krouwel et al., 2020; for other publications emerging from this project, see Van Prooijen, Cohen Rodrigues et al., 2022, Van Prooijen, Etienne et al., 2023, Van Prooijen, Wahring et al., 2023). Although the study had three waves, for the current purposes we only use data from Wave 1 (April 2020, $N = 9033$; 6084 men, 2949 women, $M_{age} = 55.56$, $SD = 15.94$) and Wave 3 (December 2020, $N = 5745$; 4070 men, 1675 women, $M_{age} = 58.74$, $SD = 14.82$).

Procedure
Data collection was organised by Kieskompas ["Election Compass"], a national political research organisation. Kieskompas complies with EU privacy (GDPR) regulations, is closely monitored by the Dutch privacy authority, and adheres to the ethical norms of VU Amsterdam. Kieskompas coordinates large research panels, which were acquired through Voting Advice Applications prior to national elections and complemented with targeted survey studies. Participants received an email invitation for each wave.

Measures

Wave 1 included two types of realistic threats. The first is a measure of Health Threats, consisting of four items. Participants indicated how worried they were in light of the COVID-19 pandemic about their own health, their friends' health, their family members' health, and the health of the elderly (1 = *Not at all worried*, 5 = *Very worried*; $a = .81$). The second type of realistic threats concerned broader Societal Threats, operationalised with five items asking participants to indicate how worried they were about the economy, losing their job, the consequences of the virus for society, public safety, and crime ($a = .65$)

Furthermore, Wave 1 included the 5-item Conspiracy Mentality Questionnaire (CMQ; Bruder et al., 2013), which measures participants' general predisposition to believe conspiracy theories ($a = .88$; example item: "I think that many very important things happen in the world, which the public is never informed about"; 1 = *0% certainly not*, to 11 = *100% certainly*).

Wave 3 contained a 7-item measure of Populist Attitudes (1 = *strongly disagree*, 5 = *strongly agree*). This measure was designed by combining items from various different populism scales (e.g., Abts & Rummens, 2007; Akkerman et al., 2014; Elchardus & Spruyt, 2016; Weyland, 2001). The items were selected based on their joint psychometric performance in various previous panel studies run by Kieskompas. Example items are "Politicians should always listen to the problems of people", and "The will of ordinary people should be the highest principle in politics" ($a = .73$).

Results and discussion

The results were analysed with hierarchical linear regression analyses. Step 1 contained the control

Table 1. Study 1. Anti-establishment attitudes as a function of perceived threats to health and society.

Step 1	Populist attitudes		Conspiracy mentality	
	$B(SE)$	$CI_{95\%}$	$B(SE)$	$CI_{95\%}$
Age	0.003(.001)***	0.002; 0.004	−0.014(.001)***	−0.016; −0.011
Education Level	−0.130(.006)***	−0.143; −0.118	−0.232(.018)***	−0.267; −0.197
Gender	0.017(.017)	−0.017; 0.050	0.129(.047)**	0.037; 0.221
Political orientation	0.030(.004)***	0.023; 0.037	0.128(.010)***	0.108; 0.148
Step 2				
Realistic threats				
Health threats	−0.007(.001)	−0.028; 0.014	0.005(.031)	−0.055; 0.065
Societal threats	0.100(.013)***	0.075; 0.126	0.337(.036)***	0.266; 0.408

**p < .01.
***p < .001.

variables (gender, age, education level, and political orientation); Step 2 added the two threat measures – to health and to society – to the regression model. The results are displayed in Table 1.

For Populist Attitudes, Step 1 was significant ($R^2 = .110$), $F(4, 5094) = 157.347$, $p < .001$. More importantly, Step 2 added significantly to the regression model ($\Delta R^2 = .010$), $F(2, 5092) = 30.309$, $p < .001$. While Health Threats were unrelated to Populist Attitudes, Societal Threats predicted Populist Attitudes. The analyses on Conspiracy Mentality yielded similar results as for Populist Attitudes. Step 1 was significant ($R^2 = .056$), $F(4, 8161) = 120.998$, $p < .001$, as was Step 2 ($\Delta R^2 = .011$), $F(2, 8159) = 46.448$, $p < .001$. Health Threats did not predict Conspiracy Mentality, but Societal Threats predicted increased Conspiracy Mentality. Altogether, these results indicate that during the COVID-19 pandemic, the perception of broader threats to society, but not perceived threats to health predicted increased anti-establishment attitudes.

Study 2 (EVES 2019 data): a large-scale study in 13 European countries

Study 2 explicitly distinguished between symbolic versus realistic threats by focusing on participants' fear of losing their national identity and culture (symbolic threat) versus fear of losing their jobs (realistic threat).

Method

Sample

The study was part of a large-scale two-wave online panel study conducted in 13 EU countries (Belgium-Flanders and Belgium-Wallonia were collected separately, yielding 14 samples). The data contains a total of 70,882 responses (45,957 men, 24,925 women; $M_{age} = 48.51$ years, $SD = 16.75$). All the measures relevant for the present purposes were in the first wave (collected between February and May 2018).

Procedure

The data were again collected by Kieskompas ["Election Compass"], which coordinates large research panels in over 40 countries, which were acquired through online Voting Advice Applications (VAAs) prior to elections. Participants received an email invitation with an online link to participate. In countries where panel responses were insufficient (Austria, Belgium, Denmark, Germany, Hungary, Italy, Poland, Portugal, Romania and Sweden) respondents were also recruited via social media. The study was conducted in each participating country's native language. The full dataset is referred to as the European Voter Election Study (EVES) (for other publications emerging from this project, see Imhoff et al., 2022; Van Prooijen, Cohen Rodrigues et al., 2022).

Measures

The questionnaire contained a measure of political ideology with an 11-point scale (1 = *Left*, 11 = *Right*). Furthermore, the questionnaire contained a measure of education specifically tailored towards the educational system of each country in question. For each country, responses were then transformed into a single education index, in line with the International Standard Classification of Education (ISCED) framework, ranging from 1 (*Primary education or first stage of basic education*) to 6 (*Second stage of tertiary education [PhD]*).

Participants responded to the 5-item Conspiracy Mentality Questionnaire (CMQ; Bruder et al., 2013). An example item is "I think that many very important things happen in the world, which the public is never

informed about". Responses were on an 11-point scale ranging from 1 (certainly not 0%) to 11 (certain 100%; $\alpha = .85$).

Populist Attitudes were measured with a 9-item Populist Attitudes scale (Castanho Silva et al., 2017). Example items include "Politicians should always listen closely to the problems of the people", and "Government officials use their power to try to improve people's lives" (recoded) (1 = completely disagree, 5 = completely agree; $\alpha = .69$).

To measure Symbolic Threat, participants indicated the extent to which they currently were afraid of the loss of national identity and culture, and an increase in the number of immigrants (0 = not afraid at all, 10 = very much afraid; $r = .72$, $p < .001$). To measure Realistic Threat, participants indicated how anxious they were at work to be dismissed without good reason, and about future changes that might reduce their pay (1 = Not anxious at all, 4 = Very anxious); in addition, participants expressed to what extent they agreed with the statement "I fear that I might be fired in the future" (1 = Strongly disagree, 4 = Strongly agree). These three items were averaged into a reliable indicator of Realistic Threat ($\alpha = .75$).

Results and discussion

We analyzed the data with multilevel regression analyses, using the *lme4* and *lmerTest* packages in R (version 4.1.2). We entered Populist Attitudes and Conspiracy Mentality as dependent variables, and Realistic Threat, Symbolic Threat, as well as the four control variables (gender, age, education, and political orientation) as level-1 fixed effects. Country was added to the analyses as a level-2 random effect.

The results are displayed in Table 2. Three of the four control variables were significant predictors of Populist Attitudes: the latter were slightly stronger among women ($M = 3.34$, $SD = 0.54$) than men ($M =$

3.25, $SD = .58$), and were associated with lower education levels and a minor extent with left-wing political orientation. More importantly, Populist Attitudes were associated with both stronger Symbolic Threats as well as stronger Realistic Threats.

For Conspiracy Mentality, three out of four control variables were significant. Women reported stronger Conspiracy Mentality ($M = 7.20$, $SD = 2.05$) than men ($M = 6.85$, $SD = 2.14$). We find that Conspiracy Mentality was associated with lower education levels and slightly with a left-wing political orientation.[1] Crucially, both Symbolic Threats as well as Realistic Threats predicted increased Conspiracy Mentality.

Study 3 (DEMOS 2019 data): a large-scale study in 15 European countries

Study 3 examined the role of anxiety, measured by the appraisal of different types of threats and socio-economic factors in predicting populist attitudes and conspiracy mentality in 15 different European countries.[2]

Method

Sample

We collected survey data from participants in 15 European countries.[3] In total, our survey resulted in 9995 respondents, while 1936 respondents with missing values were excluded ("listwise deletion"), resulting in 8059 complete respondents.

Procedure

The survey was administered from English into 14 languages by native speakers. All translations were uploaded on the *Qualtrics XM* online platform (Version: July 2019) and the data were collected after being synchronised with a global research platform (*Cint*), which provided us a heterogeneous pool

Table 2. Study 2. Anti-establishment attitudes as a function of realistic and symbolic threats (country as level-2 random effect).

Level-1 (fixed effects)	Populist attitudes		Conspiracy mentality	
	B(SE)	CI$_{95\%}$	B(SE)	CI$_{95\%}$
Age	−0.001(.000)	−0.001; 0.000	−0.000(.001)	−0.002; 0.001
Education	−0.074(.003)***	−0.079; −0.068	−0.252(.012)***	−0.275; −0.229
Gender	0.050(.006)***	0.038; 0.062	0.373(.028)***	0.319; 0.427
Political orientation	−0.052(.001)***	−0.054; −0.049	−0.067(.006)***	−0.078; −0.055
Realistic threats	0.152(.004)***	0.144; 0.160	0.438(.018)***	0.403; 0.474
Symbolic threats	0.041(.001)***	0.039; 0.043	0.197(.005)***	0.187; 0.206

***$p < .001$.

of respondents across the 15 European countries involved in our project.[4]

Measures

Threats

We measured two types of threats, Realistic Threats (a = .71), consisting of three items (e.g. "I am afraid that I will lose my job in the near future") and Symbolic Threats, measured with one item ("The immigration of people from many other countries is a threat to my values").

Conspiracy mentality

The same five items from the Conspiracy Mentality Questionnaire (CMQ; Bruder et al., 2013) were used as in Studies 1 and 2 (a = .81).

Populist attitudes

This scale was based on existing items (Akkerman et al., 2014; Schulz et al., 2018), which was recently revised by Castanho Silva et al. (2017, 2020). The original scale was unreliable, however, and therefore we used only four items (a = .65), for example, "Politicians should always listen closely to the problems of the people".

Results and discussion

We analyzed the data with multilevel regression analyses and used the *lme4* and *lmerTest* packages in the statistical software *R* (version 4.1.2). We entered Populist Attitudes and Conspiracy Mentality as dependent variables; the two types of threats (Realistic and Symbolic) as predictors, and three control variables (gender, age and education) as level-1 fixed effects. Country was added to the analyses as level-2 random effect. The results are displayed in Table 3.

For Populist Attitudes, one out of the three control variables rendered a significant effect: Populist Attitudes were associated with older age. More importantly, Populist Attitudes were predicted by both Symbolic Threats and Realistic Threats.

For Conspiracy Mentality, one out of the three control variables was significant. Lower education predicted a stronger Conspiracy Mentality. Moreover, both Realistic and Symbolic Threats predicted increased Conspiracy Mentality.

Study 4 (DEMOS 2020 data): a large-scale study in 4 European countries

Study 4 examined the role of anxiety, measured by the appraisal of COVID-19-related threats, conspiracy mentality and populist attitudes in four European countries.

Method

Sample

Our sample consisted of 2031 participants. Our country samples included Germany, the Netherlands, Spain, and the United Kingdom.

Procedure

The survey was translated from English into three languages by native speakers. The translated surveys were uploaded on *Qualtrics XM* online platform (Version: April 2020) and the data were collected after being synchronised with a global research platform (*Cint*).

Measures

Threats

We measured four different types of threats: three realistic (health, climate, economic) and one symbolic (referencing cultural traditions). First, we developed a scale on Health Threats (using a 10-point Likert scale from *not at all* to *extremely*) to measure anxiety related to the coronavirus infection, which

Table 3. Study 3. Anti-establishment attitudes as a function of realistic and symbolic threats (country as level-2 random effect).

Level-1 (fixed effects)	Populist attitudes		Conspiracy mentality	
	B(SE)	$CI_{95\%}$	B(SE)	$CI_{95\%}$
Age	0.058 (.008)***	0.043; 0.072	0.025 (.009)**	0.007; 0.042
Education	−0.001 (.006)	−0.022; −0.001	−0.024 (.007)***	−0.037; −0.001
Gender	0.006(.019)	−0.032; 0.043	0.038 (.023)	−0.006; 0.082
Realistic threats	0.137 (.007)***	0.123; 0.152	0.174 (.009)***	0.157; 0.190
Symbolic threats	0.053 (.005)***	0.042; 0.63	0.121 (.006)***	0.109; 0.134

**$p < .01$.
***$p < .001$.

included three items, such as "I am worried about the effects of the coronavirus" ($a = 0.81$). Second, we included a Climate Threats scale ($a = .77$), consisting of five items, using a 10-point Likert-scale from *extremely unlikely* to *extremely likely* (e.g. "How likely do you think it is that there will be food scarcity in your country?"). Third, we included the same Economic Threats scale as in Study 3, including three items, using a 7-point Likert-scale from *not at all* to *extremely* ($a = .66$). Fourth, we included a Symbolic Threats scale ($a = .82$), comprised of four items (e.g. "How likely do you think it is that traditions of your country will disappear due to the increase of immigrants and asylum seekers?").

Conspiracy mentality
Similar to Studies 1, 2 and 3, we included the 5 items from the Conspiracy Mentality Questionnaire (CMQ; Bruder et al., 2013, $a = .83$).

Populist attitudes
We used a similar scale with four items as in Study 3 ($a = .69$).

Results and discussion
We analyzed the data with two multilevel regression analyses and used the *lme4* and *lmerTest* packages in the statistical software *R* (version 4.1.2). We entered Populist Attitudes and Conspiracy Mentality as dependent variables. Four types of threats (health, climate, economic and symbolic), were entered as predictors; three control variables (gender, age, education) were entered as level-1 fixed effects and country was added to the analyses as level-2 random effect. The results are displayed in Table 4.

Populist Attitudes were predicted by increasing age. Moreover, Populist Attitudes were predicted by Health Threats and Economic Threats. Conspiracy Mentality was predicted by lower education levels and gender. More importantly, Climate Threats, Symbolic Threats and Economic Threats predicted an increased Conspiracy Mentality.

General discussion
We argued that any threat, whether based on realistic or symbolic grounds, predicts populist attitudes and conspiracy mentality, because the common source for both types of threat is the subjective experience of anxiety, rather than the type of event causing the threat. We re-analyzed data from four different studies, all including measures on populism, conspiracy mentality, emotions. Different types of realistic and symbolic threat were measured. Overall, we found that both types of threat are significant predictors of anti-establishment attitudes. All studies also indicate that realistic threats, operationalised as economic and safety threats, are somewhat stronger predictors than symbolic threats.

This relative strength of realistic threats over symbolic threats is inconsistent with previous studies (e.g., Heath et al., 2020; Lubbers et al., 2002; McLaren & Johnson, 2007), but may be explained by different outcome measures (e.g. voting behaviours, or attitudes towards immigration and racial inequality) and different contexts of the studies (e.g. various European countries instead of the US). Although, our paper is not the first to find that socio-economic threats are important, our findings highlight that threats that predict increased anti-establishment attitudes may often be a combination of different types of threats (see also Riek et al., 2006). For example,

Table 4. Study 4. Anti-establishment attitudes as a function of various emotions (country as level-2 random effect).

Level-1 (fixed effects)	Populist attitudes		Conspiracy mentality	
	B(SE)	$CI_{95\%}$	B(SE)	$CI_{95\%}$
Age	0.146 (.017)***	0.113; 0.179	−0.009 (.019)	−0.045; 0.027
Education	0.023 (.015)	−0.007; 0.052	−0.038 (.017)*	−0.070; −0.005
Gender	0.081 (.043)	−0.002; 0.165	0.129 (.047)**	0.037; 0.221
Realistic threats				
Health threats	0.057 (.012)***	0.034; 0.082	0.003 (.014)	−0.023; 0.030
Climate threats	0.020 (.015)	−0.009; 0.049	0.072 (.016)***	0.041; 0.104
Economic threats	0.044 (.018)*	0.009; 0.079	0.081 (.020)***	0.042; 0.119
Symbolic threats	0.020 (.012)	−0.003; 0.042	0.164 (.013)***	0.139; 0.189

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

(1) a global financial crisis may lead to insecurity in the labour market in the Western countries, (2) but also to uncontrolled migration caused by mass unemployment in the developing world where multinational corporations have had outsourced their productions, (3) resulting in further job insecurity across Western countries, threats to personal safety and an increase in prejudice against and ethnic stereotyping of immigrants perceived as threatening; (4) finally, the populist rhetoric of Western politicians taps into this variety of anxiety-inducing threats and targets emotions related to nostalgia and nationalism, identity politics, economic protectionism, by promising future economic prosperity, hegemonic power as well as geopolitical independence. In other words, different types of threats often co-occur, and significant societal changes, in particular, can be appraised in terms of both realistic and symbolic threats. Thus, despite minor differences in the strength of predictors across the four studies, our findings confirm that the appraisal of impactful societal changes as threatening seems the most important predictor of anti-establishment attitudes. This supports our reasoning that not the types of events are the crucial factor but the appraised threat and anxiety.

The results also suggest that conspiracy mentality is somewhat more strongly predicted by threats than populist attitudes. This supports our expectation, as conspiracy theories often involve vague "bad actors" (e.g. "Deep State" or "New World Order"), whereas in populism the anti-elitism element is often targeted at specific groups perceived as elites, such as the political, bureaucratic or academic establishment.[5] Thus, conspiracy advocates capitalise more on people's general anxiety than populist politicians, who stress the resentment and anger that people should feel towards the establishment. This also supports the Existential Threat Model (Van Prooijen, 2020), according to which feelings of threat caused by adversity, uncertainty and distressing societal events facilitate the rapid spread of conspiracy theories, because they help people to explain their felt anxiety (i.e. through the process of epistemic sense-making), provided that salient antagonistic outgroups can be blamed.

The main exception to this general pattern of results is first that health-related threats included in Study 1 predicted neither populist attitudes nor conspiracy thinking, whereas the health-related threats measured in Study 4 did predict populist attitudes (but not conspiracy thinking). Both studies were conducted during the COVID-19 pandemic, which can be considered as a major realistic threat, but the measures were slightly different, which may explain the inconsistent results. In Study 1 the threat items were specifically focused on one's own health and the health of one's family, whereas the items in Study 4 were more general and focused on the broader health effects of the coronavirus. This broader measure of health threat may have tapped a more general anxiety during the pandemic, stressing uncertainty and the inability to change the situation, rather than a more individual concern about one's health. In line with our theorising, a direct threat that is more identifiable (e.g. contamination with coronavirus) and one that people can adjust to may be less likely to predict ant-establishment attitudes than broader societal threats, which are uncertain and less predictable. This explanation should be further examined in the future research.

Another exception concerns climate threats that did not predict populist attitudes. Climate threat was only measured in Study 4, however, and therefore we should be careful with drawing firm conclusions. One explanation could be that populist politicians often deny or trivialize climate change, and do not consider it an important political topic. On the other hand, climate change threats do predict conspiracy thinking, which is consistent with the notion that some conspiracy theories are about climate change. For example, the anti-GMO movement in the United States remains largely associated with the political left, while left-wing conspiracy theories affirm global warming yet claim that multinational corporations ("big business") deliberately pollute the environment for profit (Uscinski et al., 2017). Vice versa, there are right-wing conspiracy theories about climate scientists representing the left-wing elite pleading in favor of social change, while they would purposely fake data to receive research funding. Similarly, some conspiracy theorists have labelled climate change as a hoax perpetrated by leftist radicals to undermine local sovereignty (Douglas & Sutton, 2015).

In sum, the overall pattern of results supports our argument that appraisals of many different threats can be seen as predictors of both a populist mindset (e.g., Gerstlé & Nai, 2019; Levinger, 2017; Mols & Jetten, 2016; Morisi & Wagner, 2021; Rico et al., 2017) and conspiracy thinking (see also Casara et al., 2022; Douglas et al., 2019; Jolley et al., 2018; Kofta et al., 2020; Poon et al., 2020; Van Prooijen, 2020;

Van Prooijen & Acker, 2015). It should be noted that the likelihood of appraising an event as a threat to one's group status is also influenced by other contextual factors, such as a history of conflict, power relations or relative economic positions between groups (e.g. Burgoon et al., 2019). In addition, individual differences have also been shown to be important moderators of one's susceptibility to populist or conspiracy narratives, for example, the need for cognitive closure, the need for certainty, lack of institutional trust or conservatism (see also Forgas et al., 2021).

Strengths, limitations and future research

This paper involves various strengths. The four datasets include many different countries, as well as large and high-powered samples. The measures across the four studies were highly similar and therefore we succeeded in comparing the data properly. Thus, our study constituted by far the largest and most comprehensive investigation of the link between different types of threats, populist attitudes and conspiracy thinking that has been conducted to date. In this way, we were able to compare the predictive value of various types of threats. No previous studies have explicitly compared the effects of so many different forms of threat on both conspiracy beliefs and populist attitudes.

We also acknowledge some limitations. One limitation of the present research is that all data were self-reported and thus prone to biases. Especially the measurement of threat is sensitive and delicate because people are sometimes not aware of their own anxieties, or are not inclined to admit them. On the other hand, we have used different phrasings of the items across the four studies and many national contexts, and we have built on long traditions in the affective science of measuring subjective experiences of emotions, and the present measures are in line with the current state of the art in the research field. The fact that the results were consistent across studies, time and space further suggests good external validity in addition to the internal reliability. A second limitation is that the data are correlational, and therefore we cannot make any causal claims. Future research should include longitudinal designs or experiments meant to manipulate different types of threat and provide more information about the directions of the relationships (e.g. being attentive to populist rhetoric may also turn people more anxious). Third,

some measures may be improved (see also Makashvili et al., 2018). The various threats we measured may to some extent have tapped both realistic and symbolic elements (e.g. if one fears immigrants as a threat to one's culture, then one may also fear immigrants for safety or economic reasons; likewise, if one sees COVID-19 as a threat to society, then it may also be seen as threatening to more abstract values such as freedom), however, the fact that we did not find an impactful differentiation between realistic and symbolic threats, may indicate that this difference is not very relevant.

In conclusion, the current data show that both realistic and symbolic threats predict anti-establishment attitudes and therefore support the idea that generalised feelings of anxiety predict anti-establishment sentiments, relatively independent of what exactly has caused these feelings.

Notes

1. This marginal link with left-wing political orientation deviates from a similar research conducted by Imhoff et al. (2022) whereas this link was nonsignificant.
2. We also measured "anger at the government", but do not report it here. We conducted the regressions in Study 3 and 4 with this anger measure as a predictor as well, however it did not significantly change the results of the threat predictors.
3. Our sampled 15 countries include Bosnia-Herzegovina, Czech Republic, Denmark, France, Germany, Greece, Hungary, Italy, Lithuania, the Netherlands, Poland, Slovakia, Spain, Turkey and the United Kingdom.
4. Further details on the sampling procedure and quality control of our data collection (Studies 3-4) are included in Appendix D.
5. In our studies, the populist attitudes scale also included multiple items measuring anti-elitism, such as "the government is pretty much run by a few big interests looking out for themselves" and "quite a few of the people running the government are crooked".

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No potential conflict of interest was reported by the author(s).

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Data availability statement

The datasets presented in this manuscript are not readily available due to legal reasons (institutional and national laws). Based on the GDPR agreements of our involved projects (DEMOS, EVES, Kieskompas), datasets are only available to consortium partners unless published in a data journal. Requests to review the datasets can be directed to the corresponding author [DA].

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