

The Terrible Unknown: How Uncertainty Fosters Nationalist and Anti-Immigration Attitudes

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Supplementary Materials: Materials [see [Index of Supplementary Materials](#)]



Abstract

Uncertainty-identity theory (Hogg, 2000, 2007, 2012) postulates that people strengthen their adherence to, and identification with, extreme ideologies when they undergo an enduring uncertainty regarding their self-definition. Concomitantly, nationalist and extreme right-wing ideologies have been associated with the attribution of a threatening character to immigrant and refugee groups. We propose that self-uncertainty precedes the perceived threat posed by the latter groups, which in turn predicts adherence to nationalist attitudes. In one correlational (Study 1; $n = 169$) and one experimental study (Study 2; $n = 309$), we tested the mediational effects of perceived realistic and symbolic threat towards immigrants on the association between self-uncertainty and nationalist attitudes (belief in national superiority, support for anti-immigration laws and intention to vote for an anti-immigration party). In both studies, perceived realistic threat emerged as the most reliable mediator between self-uncertainty and nationalist attitudes. In addition (Study 2), we found a causal effect of self-uncertainty on realistic threat. We discuss the implications of these findings for social inclusion policies based on the reduction of uncertainty generated by immigration.

Keywords

uncertainty, nationalism, attitudes towards immigrants, realistic threat, symbolic threat

Non-Technical Summary

Background

Immigrant populations in Europe have steadily increased since the 1970s. This increase stirred up European citizens' support for anti-immigration movements, claiming that immigration yields economic and cultural costs to native European populations. As a result, many countries have seen progress towards an inclusive society relatively compromised. In Portugal (where we conducted the present studies), immigration significantly increased from 1980 onwards. In 2021, when our most recent data were collected, 5.2% of the country's population was of foreign origin. We believe that this calls for an examination of the antecedents and correlates of nationalist and anti-immigration attitudes in a Portuguese sample.

Why was this study done?

Psychological uncertainty is an aversive feeling, especially when it is important for individuals' self-definition. Individuals may attempt to reduce self-uncertainty by increasing their ingroup identification with a group that helps individuals deal with this uncertainty. This should be expressed in terms of negative feelings towards the outgroup (threat) and increased



adherence to a nationalist position. The present study examines how immigration-related self-uncertainty felt by members of the host population generates perceived threat and negative attitudes towards immigration while strengthening belief in the host national superiority.

What did the researchers do and find?

We conducted one correlational and one experimental study (respectively, Study 1 and Study 2). In Study 1, participants indicated their level of uncertainty regarding immigration, their feelings of threat, their belief in national superiority and their support for anti-immigration laws. In Study 2, we divided participants into two (High versus Low) uncertainty conditions. We measured the effect of uncertainty on the measures used in Study 1, as well as on participants' motivation to vote for an anti-immigration party. We found that uncertainty generates perceptions of realistic threat (i.e., threat regarding the nation's material resources), in association with stronger adherence to nationalist attitudes (belief in national superiority, support for anti-immigration laws and motivation to vote for an anti-immigration party). Symbolic threat (i.e., threat to the nation's values and identity) was related to these positions in a way similar to realistic threat but did not increase with higher uncertainty.

What do these findings mean?

Our findings suggest that, when people are uncertain about immigration, they perceive that immigrants jeopardise the ingroup nation's material resources, and that they deserve less to share these resources. Perceived threat increases the former's belief in their ingroup nation's superiority, support for legislation that limits immigration, and a concomitant willingness to vote for anti-immigration political parties. Although social psychological research has long shown that people are resilient to factual information contradicting their beliefs, policymakers might consider counteracting nationalist and anti-immigration attitudes by emphasising the non-threatening and beneficial character of immigration to the host nation.

The Population Division of the United Nations Department of Economic and Social Affairs (2019) indicates that migrant populations worldwide reached more than 272 million in 2019. This number is over three times higher than the estimated 84 million migrants in 1970. This increase in immigration spurred public support for nationalisms across Europe. However, nationalism and prejudice towards immigrant populations undermine the European Union's social diversity and inclusiveness agenda (European Commission, n.d.) and the United Nation's 2030 Agenda for Sustainable Development (United Nations, 2015). This situation calls for an examination of the antecedents and correlates of nationalist and anti-immigration attitudes in the populations of different host countries across the world.

Immigration in Portugal

The influx of immigration, namely issuing from Brazil, Cape Verde and the United Kingdom, nearly duplicated in Portugal after 2018 (PORDATA, 2022, 2023). According to the Migrant Integration Policy Index (MIPEX; Solano & Huddleston, 2020), in 2019, Portugal was the third most inclusive of the 56 countries analysed regarding integration policies. Indeed, Portuguese governments have traditionally adopted a liberal approach regarding immigration (Carvalho & Duarte, 2020). Until 2014, immigration was a neglected topic by the Portuguese media, a fact that co-occurred with low attitude polarisation, the inexistence of political tensions, and a generally positive tone regarding this issue (Carvalho & Duarte, 2020). However, following the 2019 legislative elections, an extreme right-wing and anti-immigration party ("Chega") became the third most influential group in the Portuguese parliament. The rise of extreme right-wing parties promotes an increased politicisation of immigration and, consequently, increased nationalist attitudes in Portugal may be expected in the upcoming years (Hutter & Kriesi, 2022; cf. also Eibach, 2021).

Nationalism and Perceived Threat Towards Immigrants

National identity concerns those aspects of individuals' self-concept that derive from their sense of belongingness to a distinctive national category (cf. Tajfel & Turner, 1979). National identity becomes especially relevant when individuals are faced with highly salient outgroup nations (cf. Hogg & Turner, 1987; Oakes et al., 1991; Turner et al., 1987).

It is worth noting that, although people are most often biased in favour of the ingroup (Tajfel, 1978; Tajfel & Turner, 1979), ingroup identification does not necessarily lead to ingroup bias and/or outgroup derogatory attitudes (Brewer, 1999; Hinkle & Brown, 1990). Indeed, people's attachment to the ingroup nation, its institutions, achievements, or products, may co-occur with a willingness to constructively criticise ingroup flaws (Marques & Pinto, 2023; Packer, 2008; Packer & Chasteen, 2010). In this vein, *patriotism* would be the manifestation of such a process as regards national identity (Blank & Schmidt, 2003; Kosterman & Feshbach, 1989). Conversely, belief in national superiority, an orientation toward the ingroup's national dominance, and concomitant denigration of outgroups, would characterise *nationalism* (Blank & Schmidt, 2003; Kosterman & Feshbach, 1989). Although both entail a positive sense of ingroup belongingness, patriotism usually co-occurs with positive attitudes towards immigrant outgroups, whereas nationalism co-occurs with negative attitudes towards those groups (Blank & Schmidt, 2003).

Nationalist attitudes may stem from a perception that immigrants' granted access to material resources jeopardises the nation's ability to fulfil the needs of its nationals and that immigrants are a menace to the ingroup's values and identity (Druckman, 1994). In other words, negative attitudes towards immigration may entail a *realistic threat*, and a *symbolic threat* (McLaren, 2003; Stephan et al., 2005), which are also a determinant of support for extreme-right-wing parties (Cutts et al., 2011; Lubbers & Coenders, 2017), that defend exclusionary policies to achieve national homogenisation (Carter, 2018) to the detriment of immigrants' well-being (Jäckle & König, 2017; Knabe et al., 2013). Furthermore, the expression of realistic and symbolic threat arguments may conceal the social undesirability associated with the blatant display of prejudice and discrimination against immigrants (Dovidio et al., 2016; Pereira et al., 2010; Pettigrew & Meertens, 1995) by ostensibly legitimating the need to protect the nation's identity and resources.

In this work, we examine the antecedents of anti-immigration attitudes, namely, uncertainty, realistic threat and symbolic threat, on the discrimination against immigrant populations in Portugal.

Uncertainty as an Antecedent of Perceived Threat

According to Berry (1992), contact between host and immigrant populations leads both to change and adapt to each other in an *acculturation* process. As the presence of new immigrant groups in the social environment changes reality, so should decrease host populations' confidence in their values, mores and expectations (Hogg, 2000). In this context, immigrants may be perceived as a challenge to that social reality, rather than an opportunity for innovation, economic development, and cultural diversity (Steenbergen & Siczek, 2017).

In a context of subjective uncertainty, increased identification with an entitative group or ideology should function as a device to cope with the perceived outgroup threat (e.g. Abrams et al., 2004; Brewer et al., 2004; Lüders et al., 2016; Pinto et al., 2016). Uncertainty-identity theory (e.g., Hogg, 2000, 2007, 2012) further suggests that this becomes more effective when the group's prototypical features are relevant to the source of the uncertainty (Hogg, 2012). Identification with highly entitative groups, which provide their members with clear and shared values and goals, as well as distinctiveness from other groups, should be especially effective in counteracting the effects of acute or enduring uncertainty (Abrams et al., 2004).

Uncertainty may thus be a powerful trigger for the support of extreme ideologies (Hogg, 2007), such as political conservatism, authoritarianism, nationalism, anti-immigrant attitudes, and adherence to populist far-right movements (Doosje et al., 2013; Gründl & Aichholzer, 2020; Jost & Napier, 2012). The fact that, in threatening situations, individuals are more likely to accept self-serving inequity even though they may recognise that it is ethically wrong to do so may reinforce this phenomenon (Loseman et al., 2009). As a result, members of the host population may overtly adopt increasingly negative attitudes towards immigration and immigrants, while construing blatant discrimination as a socially acceptable response (e.g. Blank & Schmidt, 2003).

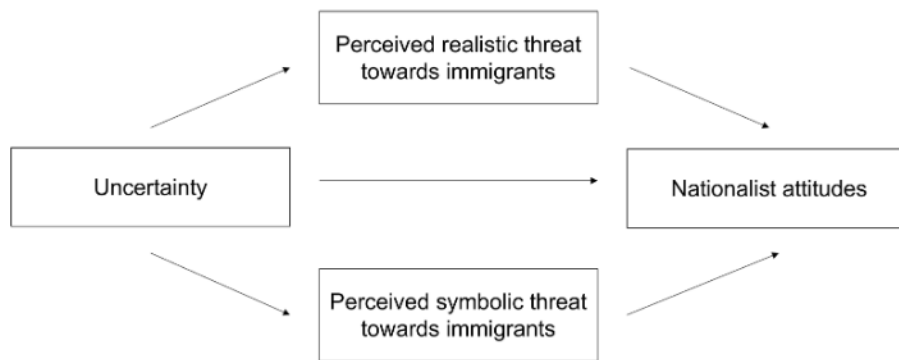
Present Studies

We test the role that uncertainty related to immigration has on the increase of feelings of threat and, consequently, on adherence to nationalist attitudes. Based on the idea that perceived realistic and symbolic threats often co-occur and generate nationalist and anti-immigration attitudes (e.g. Pereira et al., 2009; Stephan et al., 1999), we expect both kinds of threat to mediate between perceivers' immigration-related uncertainty and nationalist attitudes.

We conducted two studies employing mediation models taking uncertainty as the predictor, realistic and symbolic threat as mediators and nationalist attitudes as the outcome variable. We measured nationalist attitudes through belief in national superiority, support for anti-immigration laws (Studies 1 and 2) and voting intention for an anti-immigration party (Study 2). As such, uncertainty is expected to positively predict (or increase, in Study 2) both types of threat, which, in turn, are expected to positively predict nationalist attitudes¹ (see Figure 1).

Figure 1

Proposed Mediation Models



Study 1

Method

Participants

Participants were Portuguese citizens (128 female, 40 male, and one who declared “rather not to say” to the gender question; $N = 169^2$), aged 18 to 65 years old ($M = 33.59$, $SD = 11.44$), who voluntarily answered an online questionnaire disseminated on social media. From these, 140 (82.8%) had a higher education, 25 (14.8%) completed secondary school (12th grade), 1 completed the 9th grade, 1 completed the 6th grade, and 2 completed the 4th grade. A sensitivity analysis using WebPower (Zhang & Yuan, 2018) showed that this sample provides 80% power to detect an effect size as small as Cohen’s $f^2 = 0.07$, for a model with one main predictor, one mediator and two covariates.

Procedure

The online questionnaire was introduced as an “opinion survey on immigration”. The questionnaire was distributed through Facebook, Instagram and LinkedIn in October – November 2020. Participants gave their informed consent before the presentation of any questions. Their anonymity was ensured in compliance with the APA Ethics Code (APA, 2017). No compensation for participation was given.

1) We also tested for the impact of two variables in this process. Firstly, the effects of context-induced uncertainty may be moderated by variations in individuals’ intolerance to uncertainty (Hogg, 2007). Secondly, because discrimination against outgroups tends to increase with the spread of infectious diseases, and because our studies were conducted during the COVID-19 epidemic (cf. Adam-Troian & Bagci, 2021; Faulkner et al., 2004), we measured participants’ fear of COVID-19. We checked for whether intolerance of uncertainty and fear of COVID-19 function as covariates of nationalist attitudes (see Supplementary Materials for the measures). In Study 1, neither factor emerged as a significant predictor; in Study 2, there were no significant differences between conditions. Consequently, these variables were not introduced as covariates in the mediation models and will not be mentioned further.

2) Given our interest in the attitudes about immigration of the national majority, we dropped 4 participants from an initial sample of 173 participants, due to their nationality not being Portuguese.

Measures

The questionnaire comprised two sections: (1) sociodemographic information, (2) Perceived Realistic and Perceived Symbolic Threats, Uncertainty, Belief in National Superiority, and Support for Anti-Immigration Laws (see [Supplementary Materials](#)).

Uncertainty – Participants indicated how much they agreed that they felt “uncertainty” and “fear” when thinking about the entry of immigrants to Portugal (1 = I completely disagree; to 7 = I completely agree). We averaged the two answers to create an Uncertainty index ($r = .54, p < .001$).

Realistic Threat and Symbolic Threat – Participants responded to the Portuguese translations of [Stephan et al.’s \(1999\)](#) realistic (8 items, e.g., “Immigrants get more from this country than they contribute.”) and symbolic (7 items, e.g., “Immigration is undermining the Portuguese culture.”) threat scales, indicating to which extent they agreed with each item (1 = I completely disagree; 7 = I completely agree). Participants’ scores were averaged to a Realistic Threat and a Symbolic Threat indexes (respectively, $\alpha = .80$, and $\alpha = .67$).

Belief in National Superiority – We employed the measure of Belief in National Superiority as used in the International Social Survey Programme (National Identity III – ISSP 2013; [ISSP Research Group, 2015](#); 5 items; e.g., “Generally speaking, Portugal is a better country than most other countries”). Responses ranged from 1 (I completely disagree) to 7 (I completely agree). We averaged each participant’s scores to a Belief in National Superiority index ($\alpha = .70$).

Support for Anti-Immigration Laws – Participants reported the extent to which they agreed (1 = I completely disagree; 7 = I completely agree) with each one of six items (e.g., “There should be a stronger control of immigration into Portugal.”). We averaged the answers to a Support for Anti-Immigration Laws index ($\alpha = .93$).

Results

Correlational Analyses

[Table 1](#) displays the means, standard deviations, and Pearson product-moment correlations between the variables.³

Table 1

Means, Standard-Deviations and Correlations Between Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Uncertainty	2.69	1.43				
2. Realistic Threat	2.46	0.92	.53***			
3. Symbolic Threat	3.75	0.83	.46***	.56***		
4. Belief in National Superiority	3.56	1.11	.10	.26***	.28***	
5. Support for Anti-Immigration Laws	3.63	1.43	.43***	.60***	.70***	.18*

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

[Table 1](#) shows a positive correlation between Uncertainty and Realistic Threat, Symbolic Threat and Support for Anti-Immigration Laws. The correlation between Belief in National Superiority and Uncertainty is not significant. Realistic Threat and Symbolic Threat are strongly correlated. Stronger Realistic Threat is associated with stronger Belief

3) We also regressed the dependent variables on the sociodemographic variables, as well as on Intolerance of Uncertainty and Fear of COVID-19, in order to identify covariates for the mediation models. Age ($b = 0.02, p = .013$) and Political Orientation ($b = 0.19, p = .001$) predicted Belief in National Superiority, $R^2 = .13, F(6,162) = 4.05, p = .001$. Support for Anti-Immigration Laws was predicted by Political Orientation ($b = 0.46, p < .001$), $R^2 = .27, F(6,162) = 10.18, p < .001$.

in National Superiority and Support for Anti-Immigration Laws. A similar association pattern emerged for Symbolic Threat.

Although we used a convenience sample, an examination of the descriptive statistics shown in Table 1 suggests that participants reported low anti-immigration attitudes, as the mean scores generally fall below the scales' midpoint (4). Uncertainty and realistic threat show the lowest means, whereas symbolic threat and support for anti-immigration laws show the highest ones. This seems in line with the existing low politicisation level of immigration issues in Portugal, and in contrast with other European contexts in which this politicisation is higher (Carvalho & Duarte, 2020).

Mediation Analyses

We used the PROCESS macro (SPSS, version 27.0) with 5000 bootstraps (Model 4; Hayes, 2017) to test the mediation models. Model 1 includes uncertainty as the predictor, realistic threat and symbolic threat as the mediators, and belief in national superiority as the outcome. Model 2 differs from Model 1 on the outcome variable: support for anti-immigration laws. Covariates were age and political orientation in Model 1, and political orientation in Model 2.

In Model 1, uncertainty predicts realistic threat, $b = 0.29$, $p < .001$, $R^2 = .40$, $F(3,165) = 36.37$, $p < .001$, and symbolic threat, $b = 0.22$, $p < .001$, $R^2 = .36$, $F(3,165) = 31.19$, $p < .001$: the higher the uncertainty regarding immigration, the higher are realistic and symbolic threats. However, neither type of threat predicts belief in national superiority (realistic threat: $b = 0.18$, $p = .130$; symbolic threat: $b = 0.17$, $p = .175$), $R^2 = .14$, $F(5,163) = 5.48$, $p < .001$. The indirect effects are nonsignificant (see Table 2 for details).

Table 2

Results for Mediation Models 1 and 2

Predictor	Model 1						Model 2					
	Realistic Threat		Symbolic Threat		Belief in National Superiority		Realistic Threat		Symbolic Threat		Support for Anti-Immigration Laws	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Constant	0.87***	0.21	2.10***	0.20	1.75***	0.40	0.98***	0.15	2.52***	0.15	-0.95**	0.34
Uncertainty	0.29***	0.04	0.22***	0.04	-0.06	0.07	0.29***	0.04	0.21***	0.04	0.05	0.06
Political orientation	0.22***	0.04	0.19***	0.04	0.11	0.07	0.22***	0.04	0.21***	0.04	0.16**	0.06
Age	0.004	0.005	0.01	0.005	0.02*	0.01						
Realistic Threat					0.18	0.12					0.37***	0.11
Symbolic Threat					0.17	0.13					0.81***	0.11
<i>F</i>	36.37***		31.19***		5.48***		54.37***		40.28***		54.84***	
<i>R</i> ²	.40		.36		.14		.40		.33		.57	
Indirect effect of Realistic Threat			0.05 [-0.02, 0.12]						0.11 [0.04, 0.18]			
Indirect effect of Symbolic Threat			0.04 [-0.03, 0.11]						0.17 [0.10, 0.26]			

Note. The values for the 95% confidence interval for the indirect effects are presented between brackets.

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

In Model 2, uncertainty predicts realistic threat, $b = 0.29$, $p < .001$, $R^2 = .40$, $F(2,166) = 54.37$, $p < .001$, and symbolic threat, $b = 0.21$, $p < .001$, $R^2 = .33$, $F(2,166) = 40.28$, $p < .001$, which predict support for anti-immigration laws (realistic threat: $b = 0.37$, $p < .001$; symbolic threat: $b = 0.81$, $p < .001$), $R^2 = .57$, $F(4,164) = 54.84$, $p < .001$. The indirect effects were both found to be significant.

The strong correlation between the mediators ($r = .56$) increases sampling variance in the estimates, and this may affect the indirect effects, by increasing the width of the confidence intervals (Hayes, 2017). Therefore, we retested the previous models with each mediator separately (Models 3 to 6, with results in Table SM1 in the Supplementary Materials). In these models, Realistic Threat mediated the relationship between Uncertainty and both outcome variables, while Symbolic Threat only mediated the relationship between Uncertainty and Support for Anti-Immigration Laws⁴.

Altogether, our findings suggest that the higher was participants' uncertainty regarding immigration, the more they felt that their access to material resources (realistic threat) and the identity of their nation (symbolic threat) was at stake and the more they agreed with the implementation of legislation that restricts immigration, in order to protect those resources and identity. Additionally, realistic threat mediated the relationship between uncertainty and belief in national superiority when tested separately from symbolic threat. Although this may mean that this effect is small and must be interpreted with caution, it suggests that an increased belief in national superiority may result from the perceived realistic threat associated with uncertainty about immigration. Consistent with previous evidence (Bouman et al., 2014), our results suggest that uncertainty and perceived threat may have a relevant role in strengthening negative attitudes towards immigrants, particularly the support for anti-immigration laws.

Study 2

The correlational nature of Study 1 provides an initial insight into how uncertainty relates to perceptions of realistic and symbolic threats and how these threats mediate between immigration-related self-uncertainty and nationalist attitudes, especially support for anti-immigration laws. In Study 2, we manipulate immigration-related self-uncertainty in order to measure its impact on realistic and symbolic threats. We also consider that uncertainty should increase individuals' willingness to promote the exclusion of the source of that uncertainty (Doosje et al., 2013; Yitmen & Verkuyten, 2018). However, individuals may avoid overtly displaying behaviour consistent with their attitudes when such behaviour is considered as socially undesirable, as is the case of blatant prejudice and discrimination against outgroups (Dovidio et al., 1996; Gaertner & Dovidio, 1977; Glick & Fiske, 1996, 2001; Rydgren, 2003; cf. also Crandall et al., 2002). For these reasons, in Study 2, we also measured participants' intentions to vote for an anti-immigration party to test for their association with uncertainty and feelings of threat.

In Study 2, we expect to replicate the mediation findings of Study 1, while observing significant differences in perceived realistic and symbolic threat, and nationalist attitudes between participants in the High versus Low uncertainty conditions. Moreover, we expect symbolic and realistic threats to mediate between participants' self-uncertainty related to immigration and intention to vote for an anti-immigration political party.

Method

Participants and Design

Participants were part of a convenience sample of 309 Portuguese citizens (162 female, 142 male, 3 "other gender" and 2 "would rather not say") aged 18 to 72 years old ($M = 33.81$, $SD = 14.52$), recruited through social media⁵. Most ($n = 220$; 71.2%) participants had a higher education, 86 (27.8%) completed secondary school (12th grade) and three completed the 9th grade. Participants were divided into two Uncertainty conditions: High ($N = 164$) versus Low ($N = 145$). No significant differences emerged between conditions according to Age, $t(307) = -0.96$, $p = .340$, Sex, $\chi^2(3, N = 309) = 0.65$, $p = .886$, Educational Level, $\chi^2(2, N = 309) = 2.96$, $p = .227$, and Political Orientation, $t(307) = 0.46$, $p = .646$. A sensitivity analysis using WebPower (Zhang & Yuan, 2018) showed that this sample provides 80% power to detect a main effect as small as Cohen's $d = 0.32$, given our between-participants factorial research design.

4) The moderate to strong correlations found between uncertainty and both types of threat might raise concerns about the existence of a confounding. To rule out this possibility, we re-tested Models 3 to 6 (Models 3B to 6B) by reversing the placement of uncertainty and the mediator (see Table SM2 in the [Supplementary Materials](#)). The indirect effects in Models 3B and 5B were non-significant: uncertainty did not predict belief in national superiority. In Models 4B and 6B, the indirect effects were significant. Although these were smaller in value, we refrain from comparing them to our original models, as this, by itself, is not evidence of a better or truer model (Thoemmes, 2015). Nonetheless, in Study 2 we test the causal effect of uncertainty about immigration on realistic and symbolic threats.

5) Similarly to Study 1, in this study we dropped 12 participants from an initial sample of 321 participants, due to their nationality not being Portuguese.

Procedure

Between April and May 2021, participants answered an online questionnaire distributed through Facebook, Instagram and LinkedIn. Participants completed a short survey concerning their opinion on immigration and gave their informed consent before any data was collected, which included guarantees of anonymity and confidentiality of the data, as per the APA Ethics Code (APA, 2017). The survey platform randomly allocated participants to the experimental conditions. At the end of the survey, we debriefed participants about the nature and objectives of the study. No compensation for participation was given.

Our Uncertainty manipulation was similar to Hogg et al.'s (2010) two-stage manipulation of uncertainty (full description in the [Supplementary Materials](#)). Participants read a (bogus) newspaper article describing the (fictitious) results of a report showing that the Portuguese population had either an “ambiguous and uninformed” or a “firm and educated” opinion about the costs and benefits of immigrants entering the country. This was followed by 3 (bogus) testimonies by Portuguese citizens, that reinforced the (un)certainty felt by the population: these testimonies consistently showed either a general lack of knowledge and an ambiguous opinion (High Uncertainty condition) or an informed and definite opinion about immigration as a social issue (see [Supplementary Materials](#)). To reinforce our manipulation, after reading the newspaper article, participants were asked to think and write down “the three things about immigration” that made them “feel uncertain” (High Uncertainty condition) or “feel certain” (Low Uncertainty condition) “about themselves and their future”.⁶

Measures

We measured Realistic Threat ($\alpha = .79$), Symbolic Threat ($\alpha = .63$), Belief in National Superiority ($\alpha = .68$) and Support for Anti-Immigration Laws ($\alpha = .93$) on response scales identical to those in Study 1 (see [Supplementary Materials](#)). We also measured participants' Voting Intention (“How willing are you to vote for a party that opposes inclusive policies for immigrants?”; 1 = “Not at all”; 7 = “Very much”).

Results

Main Dependent Measures

We expected the uncertainty manipulation to affect realistic threat and voting intention. In support of this prediction, realistic threat was significantly stronger in the high than in the low uncertainty condition (respectively, $M = 2.4$, $SD = 0.9$, and $M = 2.1$, $SD = 0.7$; $t(301) = 2.48$, $p = .012$, $d = 0.28$). In parallel, voting intention yielded a higher mean in the high than in the low uncertainty condition (respectively, $M = 1.4$, $SD = 1.0$, and $M = 1.1$, $SD = 0.6$; $t(271) = 2.45$, $p = .015$, $d = 0.27$): participants in the former condition were more motivated to vote for an anti-immigration party than those in the latter condition. However, contrary to our prediction, no differences emerged between the two conditions on symbolic threat, $t(307) = 0.53$, $p = .598$, $d = .06$, belief in national superiority, $t(307) = -1.08$, $p = .283$, $d = -0.12$, and support for anti-immigration laws, $t(307) = 1.48$, $p = .141$, $d = 0.17$.

The above results indicate that higher self-uncertainty causes a higher realistic threat and a stronger intention to vote for anti-immigration parties. However, uncertainty does not seem to increase symbolic threat, belief in national superiority, or support for anti-immigration laws.

Correlational and Mediation Analyses

Correlations confirmed a linear relationship between self-uncertainty and realistic threat, as well as between realistic threat, belief in national superiority, support for anti-immigration laws and voting intention. We found no association between self-uncertainty and symbolic threat⁷ (see [Table 3](#)). Moreover, descriptive statistics show values similar to those

6) This priming has been the subject of a pilot study, which has shown its effectiveness (Hogg et al., 2007), and used extensively to manipulate uncertainty (e.g. Hogg et al., 2010; see Choi & Hogg, 2020, for a review).

7) We also conducted regression analyses on our dependent variables with Uncertainty and Symbolic Threat as predictors and found that the latter variable significantly predicted Belief in National Superiority, $b = 0.45$, $p < .001$, $R^2 = .12$, $F(2,306) = 20.26$, $p < .001$, Support for Anti-Immigration laws, $b = 1.13$, $p < .001$,

found in Study 1, suggesting weak anti-immigration attitudes in this sample. The Voting Intention mean is low, possibly due to participants' reluctance to display a socially undesirable attitude by stating their willingness to vote for a political party that aims to exclude immigrants (cf. Crandall et al., 2002). Because uncertainty only affected realistic threat, we used this variable as the sole mediator in the mediation models.

Table 3

Means, Standard Deviations and Correlations Between Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Self-Uncertainty ^a	–	–					
2. Realistic Threat	2.25	0.86	.14*				
3. Symbolic Threat	3.76	0.81	.03	.58***			
4. Belief in National Superiority	3.50	1.10	-.06	.27***	.34***		
5. Support for Anti-Immigration Laws	3.57	1.35	.08	.60***	.68***	.25***	
6. Voting Intention	1.26	0.82	.14*	.42***	.36***	.18**	.43***

^aSelf-Uncertainty is coded as 0 = "Low Uncertainty" and 1 = "High Uncertainty".

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

We used the PROCESS macro (SPSS, version 27.0) with 5000 bootstraps (Model 4; Hayes, 2017) to test three mediation models. These models differ regarding their outcome variable, respectively belief in national superiority, support for anti-immigration laws, and voting intention, in the first, the second, and third tested model (see Table 4).

Table 4

Results for the Mediation Models

Predictor			Model 1		Model 2		Model 3	
	Realistic threat		Belief in National Superiority		Support for Anti-Immigration Laws		Voting Intention	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Constant	2.12***	0.07	2.81***	0.17	1.43***	0.18	0.31*	0.12
Self-Uncertainty ^a	0.24*	0.10	-0.22	0.12	-0.001	0.12	0.13	0.09
Realistic threat			0.36***	0.07	0.95***	0.07	0.39***	0.05
<i>F</i>	6.13*		13.61***		87.33***		33.97***	
<i>R</i> ²	.02		.08		.36		.18	
Indirect effect			0.09 [0.02, 0.17]		0.23 [0.05, 0.42]		0.09 [0.02, 0.20]	

Note. The values for the 95% confidence interval for the indirect effects are presented between brackets.

^aSelf-Uncertainty is coded as 0 = "Low Uncertainty" and 1 = "High Uncertainty".

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

Consistent with results of Study 1, self-uncertainty predicted realistic threat ($b = 0.24$, $p = .014$); $R^2 = .02$, $F(1,307) = 6.13$, $p = .014$. In turn, realistic threat predicted belief in national superiority, $b = 0.36$, $p < .001$, $R^2 = .08$, $F(2,306) = 13.61$, $p < .001$, support for anti-immigration laws, $b = 0.95$, $p < .001$, $R^2 = .36$, $F(2,306) = 87.33$, $p < .001$, and voting intention, $b = 0.39$, $p < .001$, $R^2 = .18$, $F(2,306) = 33.97$, $p < .001$. The indirect effects were significant, suggesting that stronger self-uncertainty led participants to perceive a higher realistic threat on the part of immigrants, thereby expressing stronger belief in national superiority, support for anti-immigration laws and intention to vote for an anti-immigration party.

$R^2 = .47$, $F(2,306) = 134.15$, $p < .001$, and Voting Intention, $b = 0.37$, $p < .001$, $R^2 = .15$, $F(2,306) = 26.57$, $p < .001$. This shows that, though uncertainty did not create symbolic threat in the participants, the latter is still a relevant predictor of nationalist attitudes.

General Discussion

Our results indicate that immigration-related uncertainty generates a sense of realistic threat, which, in turn, entails stronger nationalist attitudes. In Study 1, we found that the more uncertain individuals feel about immigration and its impact on their lives, the higher the threat perceived in association with that immigration, regarding both the nation's material resources (realistic threat) and culture (symbolic threat). These, in turn, lead individuals to support anti-immigration laws (cf. McLaren, 2003; Pereira et al., 2010). Additionally, perceived realistic threat (though not symbolic threat) may mediate the relationship between participants' uncertainty regarding immigration and belief in national superiority (Cutts et al., 2011; Lubbers & Coenders, 2017).

Consistent with findings of Study 1, in Study 2 realistic threat (though not symbolic threat) mediated the relationship between participants' uncertainty and belief in national superiority, their support for anti-immigration laws and their intention to vote for anti-immigration parties. We also found that participants' willingness to vote for an anti-immigration party was significantly stronger in the High than in the Low uncertainty condition, suggesting that adherence to extreme political positions can result, at least in part, from a feeling of self-uncertainty (Hogg, 2007, 2012).

The mediating role of symbolic threat is less strongly supported in these studies. Study 2 showed that, although high uncertainty increases realistic threat, it did not increase symbolic threat, which is inconsistent with the significant association between uncertainty and symbolic threat found in Study 1. Moreover, in Study 1, symbolic threat only mediated the relationship between uncertainty and support for anti-immigration laws (in Study 2, the lack of differences between conditions prevented us from testing it as a mediator). Thus, in both studies, realistic threat more consistently mediated the relationship between uncertainty and nationalist attitudes, than did symbolic threat. This suggests that material concerns were more relevant to our participants when faced with uncertainty about immigration than were their ingroup national identity concerns.

Limitations and Directions for Future Studies

Our results seem consistent and reliable. However, we should point out three possible limitations of the present research and some directions for future studies.

First, we conducted both studies with convenience samples. This advises caution as regards the generalisation of our findings. The fact that our samples consist mostly of female, young and highly educated people, who appear to have less negative attitudes towards immigration (Dražanová et al., 2024) is in line with the descriptive results of both studies. If these attitudes are genuine, we may expect to replicate our results in a representative sample. However, if these participant groups are more concerned with political correctness, uncertainty could facilitate the emergence of less positive attitudes in them, by claiming feelings of (realistic) threat, which can legitimise these attitudes (Pereira et al., 2010). Thus, replicating these studies with a representative sample would clarify our results.

A second limitation deals with the uncertainty induction in Study 2. This induction may have had a stronger impact on realistic than on symbolic threat, due to the salience of personal, rather than collective consequences, hence potentially decreasing the concerns about the nation's identity on participants' responses (cf. Hogg & Mahajan, 2018). Indeed, realistic threat could more easily be associated with individual concerns than symbolic threat, as one's economic situation is more easily subject to change than one's culture and traditions. Future research, using experimental studies, and employing inductions separately targeting the personal and collective impact of immigration, should address this limitation. The internal consistency of the symbolic threat scale was also slightly below adequate levels, which may have affected the results concerning this variable (Nunnally & Bernstein, 1994); future studies should employ a different scale to measure this construct.

The third and final limitation concerns these studies' potential contribution to uncertainty-identity theory. We measured participant's belief in the superiority of their nation, a fundamental characteristic of a nationalist ideology (Blank & Schmidt, 2003; Kosterman & Feshbach, 1989). Not surprisingly, our results support the idea that uncertainty promotes voting for political groups in support of a positive ingroup differentiation. However, we did not directly measure participants' ingroup (national) identification, a cornerstone of uncertainty-identity theory (Hogg, 2000, 2007, 2012). Our results allow us to hypothesise that strong ingroup identification may increase in response to uncertainty,

and that it may serve to reduce it. Nonetheless, future studies should incorporate a measure of nationalist identification, as a predictor and as an outcome of the process, in order to clarify this process while contributing relevant evidence for uncertainty-identity theory.

Notably, in Portugal, economic concerns are consistently at the top of the population's minds (Fernandes & Magalhães, 2020). Portugal went through five economic recessions in the last four decades and is expected to suffer through one more due to the COVID-19 pandemic and (as far as we can foresee as we are writing) the war between Russia and Ukraine (cf. also Cabrita-Mendes, 2021). On the other hand, immigrants in Portugal have consistently had the same origins, which could reduce one's uncertainty related to symbolic matters. Another noteworthy characteristic of Portugal is its recent status as an immigrant-receiving nation (Reyneri & Fullin, 2011). It seems that a recent history of receiving immigrants is more associated with higher perceived realistic threat, whereas symbolic threat only emerges later in that process (Bergamaschi, 2013). Economic concerns may thus be more present in our sample, given the relatively recent upsurge of immigration in the country. Therefore, replication studies in samples from other countries, especially those with a stronger economy, more diversity in terms of immigrant nationalities and a longer history of immigration, could expand on these findings.

Implications for Policy

Our results suggest that nationalist attitudes may function as a coping device against the uncertainty that arises when individuals face the differences between their cultural and ethnic characteristics and those of immigrant populations, and a potential competition for resources between the two groups. Increased nationalist attitudes seem to reflect individuals' motivation to ensure ingroup homogeneity and intergroup distinctiveness as a means to protect their social identity as ingroup members (Abrams et al., 2004; Rieger et al., 2017; cf. Tajfel, 1978; Turner et al., 1987). Attitudes towards immigration (and other issues) are relatively stable (Kustov et al., 2021) and may be difficult to change when new information is provided (e.g., Lord et al., 1979; Shepherd & Kay, 2012). However, the implementation of informational strategies aimed to reduce the population's uncertainty in a way that demystifies the perception of immigrant groups as posing symbolic and realistic threats may be an important way to help nationals redefine their national identity as being able to encompass different cultures in an inclusive, respectful and mutually beneficial way (Grigorieff et al., 2020).

Conclusions

According to uncertainty-identity theory, individuals are motivated to hold the satisfying impression that they know where they are socially located and how to behave towards others (Hogg, 2000, 2007, 2012). Immigration can disrupt this impression by creating uncertainty due to the changes it triggers in the way that the host nation functions to adjust to new members, including resource distribution (Berry, 1992). In such contexts, individuals seem more willing to lend support to measures that aim to reduce the source of uncertainty, such as voting for political parties that promise to protect the nationals by reducing immigration, based on material and economic concerns.

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Supplementary Materials

The Supplementary Materials include the following items (for access, see Alves et al., 2024):

- The uncertainty manipulation used in Study 2 (in English and Portuguese)

- Measures of Study 1 and 2
- Results for Mediation Models 3 to 6, in which perceived realistic and symbolic threat are tested separately as mediators
- Results for Mediation Models 3B to 6B, in which perceived realistic and symbolic threat are tested as predictors and uncertainty is tested as mediator

Index of Supplementary Materials

Alves, S. G., Pinto, I. R., & Marques, J. M. (2024). *Supplementary materials to "The terrible unknown: How uncertainty fosters nationalist and anti-immigration attitudes"* [Additional information]. PsychOpen GOLD. <https://doi.org/10.23668/psycharchives.14146>

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