

## **Attitudes Toward Immigration: The Role of Personal Predispositions**

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*This article examines if deep-seated psychological differences add to the explanation of attitudes toward immigration. We explore whether the Big Five personality traits matter for immigration attitudes beyond the traditional situational factors of economic and cultural threat and analyze how individuals with different personalities react when confronted with the same situational triggers. Using a Danish survey experiment, we show that different personality traits have different effects on opposition toward immigration. We find that Openness has an unconditional effect on attitudes toward immigration: scoring higher on this trait implies a greater willingness to admit immigrants. Moreover, individuals react differently to economic threat depending on their score on the traits Agreeableness and Conscientiousness. Specifically, individuals scoring low on Agreeableness and individuals scoring high on Conscientiousness are more sensitive to the skill level of immigrants. The results imply that personality is important for attitudes toward immigration, and in the conclusion, we further discuss how the observed conditional and unconditional effects of personality make sense theoretically.*

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**KEY WORDS:** attitudes toward immigration, personality, Big Five, Denmark

With a continuing increase in immigration to Western societies paralleled by an intensification of political conflict around the issue, the question of how public opinion toward immigration is formed has become as relevant as ever with implications for both present and potential immigrants as well as those designing policies to meet the challenges associated with increased immigration. Generally speaking, research has focused on two explanations of attitudes toward immigration: economic threat, emphasizing material interest in terms of economic well-being, and cultural threat, focusing on concern over social identity (Sides & Citrin, 2007; Sniderman, Hagendoorn, & Prior, 2004). While the explanatory mechanism differs between the two perspectives, both implicitly assume that individuals respond independently of their psychological predispositions when exposed to the same situational trigger in terms of economic or cultural threat.

Following Zaller (1992) and extant work on authoritarianism (Duckitt, 1989; Feldman, 2003; Feldman & Stenner, 1997; Lavine, Lodge, Polichak, & Taber, 2002; Oyamoto, Fisher, Deason, &

Borgida, 2012) and ethnocentrism (Kinder & Kam, 2010), the assumption of a uniform response is difficult to sustain: individual motivational and dispositional factors have to be taken into account when explaining attitude formation. Zaller (1992) mentions that “inherited or acquired personality factors” (p. 23) probably shape how individuals respond to situational stimuli, but he did not examine this empirically. Studies of authoritarianism and ethnocentrism argue that these predispositions or beliefs have to be activated or triggered to have an effect on attitudes such as prejudices and intolerance. They also argue that deep-seated psychological differences such as personality traits may be important (e.g., Feldman 2003, p. 68; Kinder & Kam, 2010, pp. 33–34), but in general they do not examine these psychological dispositions (cf. however, Duckitt, 2001; Sibley & Duckitt, 2009). Recent research has taken up this challenge and demonstrated that individuals think and behave differently politically depending on their personal predispositions, specifically their *personality* (Carney, Jost, Gosling, & Potter, 2008; Gerber, Huber, Doherty, & Dowling, 2010; Gerber, Huber, Doherty, & Dowling, 2011; Gerber, Huber, Doherty, Dowling, Raso & Ha, 2011; Hibbing, Ritchie, & Andersson, 2011; Jost, Federico, & Napier, 2009; Mondak, 2010; Mondak, Canache, Seligson, & Hibbing, 2010; Mondak & Halperin, 2008; Mondak, Hibbing, Canache, Seligson, & Anderson, 2010). Building on this burgeoning literature, we examine how personality influences attitudes toward immigration beyond and in conjunction with situational factors in terms of economic and cultural threat. Thus, whereas recent studies of immigration attitudes in political psychology focus mainly on situational triggers of threat (Brader, Valentino, & Suhay, 2008; Hainmueller & Hiscox, 2007, 2010; Newman, Hartman, & Taber, 2012; Sides & Citrin, 2007; Sniderman et al., 2004), we scrutinize the role played by deep-seated psychological predispositions in forming these attitudes.

We examine the impact of personality on attitudes toward immigration using a Danish survey, which includes the 60-item NEO-Five Factor Inventory (NEO-FFI) measuring the five traits included in the Big Five personality scheme: Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. By using the 60-item inventory, we measure the five traits more reliably than using very brief measures with only one or two items per trait (Credé, Harms, Niehorster, & Gaye-Valentine, 2012; Gosling, Rentfrow, & Swann, 2003). In the survey, we embedded a survey experiment in which we varied economic threat (in terms of the skill level of immigrants) and cultural threat (in terms of the country of origin of immigrants), which allow us to analyze whether the Big Five personality traits matter beyond that of the two main situational factors in shaping attitudes toward immigration, but also, and more importantly, how personality traits may moderate the impact of these situational factors.

In the following, we first discuss how the Big Five personality traits may influence attitudes toward immigration, either directly or as moderators of economic and cultural threat. In the next section, we present our research design, data, and operationalization of the variables employed in the analyses. We then present the results of the empirical analysis before concluding by discussing our findings.

### **Personality and Political Attitude Formation**

Recent research has emphasized how personality traits influence people’s political attitudes (Gerber et al., 2010; Mondak et al., 2010a; Mondak & Halperin, 2008). Specifically, these studies have scrutinized the role of the Big Five personality traits, which a long line of psychological research has shown to be a valid representation of human personality. The Big Five personality scheme includes the following five traits: Openness (to Experience), Conscientiousness, Extraversion, Agreeableness, Neuroticism (or its inverse, Emotional Stability) (Costa & McCrae, 1992; Goldberg, 1992, 1993; McCrae & Costa, 1999; Shiner & DeYoung, 2013; see also Mondak, 2010, for a review of the Big Five literature and its relevance for political science). People who score high on *Openness to Experience* tend to be open-minded, tolerant, creative, curious, and generally

appreciative of encounters with novel and alternative ideas, people, and situations. A high score on *Conscientious* implies strong industriousness, impulse control, dutifulness, sense of organization, adherence to norms and rules, and a preference for order and dependability. *Extraversion* is associated with an energetic, active, and excitement-seeking approach to life, outgoing and sociable behavior, and positive emotionality in general. Individuals who score high on *Agreeableness* tend to be cooperative, sympathetic, altruistic, modest, and generally prosocial and communal in their orientation toward other people. A high score on *Neuroticism* is associated with anxiety, uneasiness, feelings of vulnerability, and a high sensitivity to negative emotions in general. The five personality traits are influenced by genetic differences as well as childhood environment. They become stable early in life and are therefore only to a limited extent susceptible to socially induced changes later in life (Bouchard & McGue, 2003; Shiner & DeYoung, 2013). Consequently, personality traits have been seen as largely exogenous to political attitudes and behaviors (cf. Mondak, 2010, although see Verhulst, Eaves, & Hatemi, 2012, for a differing view).

Recent work has emphasized the conditional nature of the influence of personality on attitudes (Gerber, Huber, Doherty, & Dowling, 2010; Mondak, Hibbing et al., 2010a; Mondak, Canache et al., 2010b). Mondak et al. (2010a) thus suggest that “expression of personality traits will vary by situation” (p. 90). A similar view is expressed in the literature on authoritarianism and ethnocentrism with regard to the role of these dispositions in shaping prejudice and intolerance (Feldman, 2003; Kinder & Kam, 2010). Here, we argue that the converse is also likely to be true: that responses to situations vary by personality. That is, we expect individuals to respond differently to the same environmental stimulus based on their personality.

The idea that individuals varying in psychological dispositions respond differently to various situational triggers squares well with established theories of political attitudes and public opinion (cf. Feldman, 2003; Feldman & Stenner, 1997; Kinder & Kam, 2010). Whether individuals construe opinions from the most accessible top-of-their-head considerations (Zaller, 1992, p. 48), engage in more cognitively demanding processes (Kam, 2012), or experience particular emotional reactions (Brader et al., 2008), it is unlikely that individuals react in the same way to situational triggers and information more generally. That is, whether they find a situation or stimulus important, relevant, and applicable when they form their opinion (Nelson, Clawson, & Oxley, 1997; Kam, 2012).

### Personality and Attitudes Toward Immigration

Previous studies have shown that the Big Five personality traits exercise an important influence on political attitudes more generally (Carney et al., 2008; Gerber et al., 2010; Gosling et al., 2003; Jost et al., 2009; Mondak, Hibbing et al., 2010a; Mondak & Halperin, 2008; cf. also McRae & Costa, 1999), but the impact of the Big Five personality traits on attitudes toward immigration has largely been overlooked.<sup>1</sup> That said, the study of how constructs related to personality traits may influence attitudes toward out-groups, and prejudice more generally, is by no means a new phenomenon. Dating back to the work of Adorno, Frenkel-Brunswick, Levinson, & Sanford (1950) and Allport (1954) with subsequent extensions by Pratto, Sidanius, Stallworth, & Malle (1994) (Social Dominance Orientation) and Altemeyer (1981) (Right-Wing Authoritarianism), there is an important line of work emphasizing the role of the so-called authoritarian personality in forming prejudice toward out-groups. However, as pointed out by Sibley and Duckitt (2008) in a recent review, authoritarianism and related phenomena can be criticized for not referring to generalized dispositions, but rather

<sup>1</sup> Notable exceptions are the studies by Vecchione, Caprara, Schoen, Castro, and Schwartz (2012), looking at perceived consequences of immigration, and Gallego and Pardos-Prado (2014), focusing on attitudes toward immigrants.

express basic social attitudes and values.<sup>2</sup> Instead, authoritarianism is in itself influenced by underlying personality traits (specifically, Openness, Conscientiousness, and Agreeableness) and as such mediates the influence of personality on prejudice (Duckitt, 2001; Duckitt, Wagner, de Plessis, & Birum, 2002; Ekehammar, Akrami, Gylje, & Zakrisson, 2004; Sibley & Duckitt, 2009). For that reason, we focus on the role of the Big Five personality traits rather than more proximate beliefs, values, or attitudes. However, we also include a measure of authoritarianism in the empirical analyses to test whether personality traits influence attitudes toward immigration beyond this potentially mediating variable.

### *Direct Effects of Personality on Attitudes Toward Immigration*

The literature provides some directions to the potential direct role of the Big Five personality traits in forming attitudes toward immigration. Previous results show that particularly Openness, and to a lesser extent Agreeableness and Conscientiousness, are related to ethnic or racial prejudice—either directly or indirectly through more proximate factors (Flynn, 2005; Hodson, Hogg, & MacInnis, 2009; Sibley & Duckitt, 2008, 2009). We therefore have the strongest expectations about the role of these traits in explaining attitudes toward the issue of immigration that arguably is related to the more general domain of prejudice and tolerance.

We conjecture that people who score high on *Openness to Experience*, with their tolerance for diversity, appreciation of novelty, and positive response to unconventional and complex stimuli, will be more positive toward immigration. Conversely, people low on Openness cherish unambiguous moral prescripts and traditional norms for how the world should operate and are therefore likely to be more sensitive to threats to the existing social order including out-groups “which espouse values different from their own” (Sibley & Duckitt, 2008, p. 252).

We expect individuals scoring high on *Agreeableness* to hold pro-immigration attitudes as their altruistic, trusting and prosocial orientations toward other people in general should also embody a tolerance toward newcomers and therefore less strict immigration attitudes. Conversely, people low on Agreeableness, who are less concerned with the well-being of others and society as a whole, would tend to be more skeptical of immigration, which they are likely to see as an influx of potential competitors for scarce resources (Sibley & Duckitt, 2008).

People scoring high on *Conscientiousness* have a strong preference for order and dependability and may therefore fear that increased immigration will undermine the existing social order—either because immigrants threaten the viability of the welfare state or because they do not comply with the social and cultural norms of the host society. For these reasons, we expect people on the high end of the Conscientiousness trait to be more likely to oppose immigration.

There is less evidence that the two last traits in the Big Five scheme, *Neuroticism* and *Extraversion*, play a role in forming general prejudice. Consequently, we do not have any clear expectations regarding their impact on attitudes toward immigration. One may expect the uneasy and anxious nature of people scoring high on Neuroticism to result in negative attitudes toward immigration as immigrants may be seen as a disturbing and potentially threatening factor that reinforces their “dangerous worldviews” (Van Hiel et al., 2007, pp. 134, 137; cf. also Sibley & Duckitt, 2009). Extraversion influences the more social aspects of politics including political activism and participation, but it is less obvious how it would be related to attitudes toward immigration. However, we included both traits to explore the collective impact of the Big Five scheme on attitudes toward immigration.

<sup>2</sup> The view that authoritarianism is best conceptualized as “ideological beliefs” or broad social and political values is not new, however. See, for example, Duckitt (1989) on authoritarianism and group identification; Feldman (2003) on authoritarianism as a preference for social order and conformity; or Jost et al. (2003) on authoritarianism as a product of motivated social cognition. See also Lavine et al. (2002).

*Moderating Effects of Personality on the Impact of Economic and Cultural Threat*

As pointed out earlier, our aim is not only to gauge the direct effects of personality on attitudes toward immigration, but also to scrutinize if personality moderates how people respond to the main situational factors identified in the literature—economic and cultural threat. That is, whether individuals with certain personality characteristics are more or less prone to respond negatively to economic and/or cultural threat. This is in line with recent work by Gerber et al. (2010), Mondak, Hibbing et al. (2010a), and Mondak, Canache et al. (2010b) who show that personality often operates in conjunction with situational (or contextual) factors when influencing political attitudes and behavior.

Traditional explanations of attitudes toward immigration have revolved around economic and/or cultural threat according to which opposition toward immigration is seen as a function of individuals' perception of immigrants as a threat to their (nation's) economic well-being and/or social identity.

The perspective emphasizing economic threat argues that opposition to immigration is evoked by concerns over the potential economic burden caused by immigration. Generally speaking, two types of economic concerns have been suggested to generate opposition toward immigration: economic self-interest (e.g., competition over jobs) and more sociotropic considerations about the national economy as a whole (Sniderman et al., 2004; cf. also Newman, Hartman, & Taber, 2012). In a recent survey experiment, Hainmueller and Hiscox (2010) find little evidence of the role of economic self-interest (see also Hainmueller & Hiscox, 2007; Newman et al., 2012, pp. 644–645). Rather, concern for the aggregate (local) economy appears to be the main economic motive driving opposition toward immigration.

The perspective emphasizing cultural threat argues that skepticism toward immigration can be explained by the native population perceiving immigrants with a different culture as a threat to the culture they identify with and hence their social identity. As individuals generally have a desire for group differentiation and a positive evaluation of their own in-group (Kinder & Kam, 2010), natives are reluctant to accept immigrants who have a different cultural background and therefore are not seen as part of their in-group (Newman et al., 2012; Sniderman et al., 2004; Tajfel, 1981).

As described in detail below, we operationalize economic and cultural threat in a survey experiment in which we differentiate the immigrant group in question according to two characteristics: *skill level* and *country of origin*.<sup>3</sup> In line with Hainmueller and Hiscox (2010), we argue that the skill level (high- vs. low-skilled) of immigrants relates mainly to economic threat to the national economy. Country of origin (Western vs. non-Western) taps cultural distance from natives in the destination country (with Western immigrants being perceived to be more culturally similar) and hence the extent to which immigrants are perceived as a threat to the cultural identity of natives (see Brader et al., 2008, for a comparable operationalization in the U.S. context).

The personality traits that are the most likely moderators of the impact of economic and cultural threat on attitudes toward immigration are again Openness to Experience, Conscientiousness, and Agreeableness. First, we expect Openness to be a moderator of the impact of cultural threat on attitudes toward immigration. Given their curious nature and attraction to alternative ideas and people, we expect individuals scoring high on Openness to be relatively less restrictive toward immigrants with a different cultural background compared to individuals scoring lower on this trait. In other words, we expect a high score on Openness to mitigate the potentially negative effect of cultural threat from non-Western immigration. We do not have strong expectations about the moderating impact of Openness on the economic threat of immigration in terms of immigrants' skill

<sup>3</sup> We use the term “threat” to keep in line with much of the previous literature (Brader et al., 2008; Newman et al., 2012; Sniderman et al., 2004), although the “threat” is only implicitly assumed by means of the immigrant characteristics in the conditions in the survey experiment.

level, but we still examine this in the analysis. Second, we expect Agreeableness to moderate the impact of both cultural and economic threat. People scoring high on this trait tend to be altruistic, sympathetic, and compassionate, especially toward those they perceive to be worse off. Therefore, we conjecture that individuals who are high on Agreeableness are less sensitive to the economic or cultural background of immigrants (i.e., respond less negatively to those backgrounds associated with cultural and economic threat) compared to their peers who score lower on this trait. Third, we also expect Conscientiousness to moderate both cultural and economic threat. Given that people scoring high on Conscientiousness attach great importance to achievement, order, and reliability, we expect them to be more likely to see immigrants with low skills and a foreign (non-Western) culture as a potential threat to the national culture and the economic well-being of their country (especially the economic viability of the welfare state) and therefore prone to respond more negatively to immigration by people with these backgrounds. That is, scoring high on Conscientiousness seems likely to magnify the sense of economic and cultural threat.

### Research Design, Data, and Variables

Like many other countries, Denmark—the context studied in this article—has experienced a marked increase in immigration from the last part of the 20th century onwards. Politically, immigration became a highly salient issue on the political agenda from the early 1990s, which is manifested in the growing popularity of the populist right-wing party, the Danish People’s Party that has opposition to immigration as an important aspect of their political platform (see Green-Pedersen & Krogstrup, 2008).

To examine the influence of personality on attitudes toward immigration, we use a web survey of a nationally representative sample of the Danish population. The survey was distributed to a representative sample of an Internet panel containing approximately 400,000 Danes. It was fielded between May 25 and June 6, 2010. Invitations to participate in the survey were sent to 8,012 persons, and 3,612 answered the questionnaire, which equals a response rate of 45%.<sup>4</sup> In the present analysis, we limited our sample exclusively to Danish citizens<sup>5</sup> having received one of the four frames in the survey experiment used (see below), thereby reducing the initial number of respondents to 2,862.

The dependent variable of the study was measured through a survey experiment, which embedded variation in economic and cultural threat from immigration in terms of frames differentiating immigrants on skill level (economic threat) and country of origin (cultural threat) as noted earlier. In the survey experiment, respondents were asked whether “Denmark should allow more *high-/low-skilled* immigrants from *Western/non-Western countries* to move here.”<sup>6</sup> Subjects were randomly assigned to one of four frames differentiating between the various combinations of the two conditions in the survey experiment.<sup>7</sup> The strength of the experimental design is that it induces exogenous variation in the situational factors, which we hypothesize to be conditioned by personality. Consequently, we do not have to rely on, for example, self-reported interpretations of situational stimuli, which may be affected by personality traits as noted by Gerber et al. (2011). Moreover, using a survey experiment to tap economic and cultural threat helps to avoid ordering effects and response

<sup>4</sup> In order to adjust for nonresponse and to make the sample nationally representative on a number of characteristics, we applied a poststratification weight (based on gender by age, region, education, and the election results from the national election in 2007) in the analyses.

<sup>5</sup> We limit our sample to Danish citizens as we suspect that immigration attitudes may be shaped by different forces among noncitizens, who are immigrants themselves.

<sup>6</sup> As the freedom of movement is widespread within the EU and a number of other European countries, we specified in the introduction to the question that the respondents should focus only on immigrants coming from outside the EU and Europe.

<sup>7</sup> A fifth neutral frame asking whether “Denmark should allow more immigrants to move here” was included in the survey, but this frame is excluded from the analyses as we are specifically interested in the variation in the economic and cultural background of the immigrants in question embodied in the four other frames.

set among respondents when asking four separate, consecutive questions about various immigrant groups (Gaines, Kuklinski, & Quirk, 2007; Sniderman et al., 2004). Hence, using an experimental design, we obtain a cleaner estimate of how psychological predispositions condition situational factors in terms of economic and cultural threat.

A note on the measurement of economic threat by the skill level of immigrants is in order at this point. As noted earlier, arguments concerning economic threat come in two variants: one emphasizing economic self-interest and another putting more emphasis on sociotropic concerns over the national economy as a whole. In line with Hainmueller and Hiscox (2010), we argue that the skill level of immigrants primarily taps economic threat to the national economy insofar as the response to immigrants with different skills is independent of the skill level of natives, which is indeed what our results show.<sup>8</sup> This stands in contrast to models emphasizing labor market competition and hence economic self-interest, which predict that natives should react most negatively to immigrants with a skill level similar to their own. Moreover, a manipulation check of the experimental manipulations confirms this assertion. After being asked about their attitudes toward a given group of immigrants (the experimental treatment), the respondents were asked whether this specific group “would be an economic burden to Danish society,” which we take to be a measure of perceived threat of the immigrant group to the national economy.<sup>9</sup> Regressing this assessment on skill level and country of origin of the immigrant group in question (and an interaction between the two conditions) displays a highly significant (and rather strong) relationship with immigrant skill level ( $z = 22.20$ ,  $p < 0.001$ ), but not country of origin or the interaction between skill level and country of origin.<sup>10</sup> In an additional study, a survey of second- to fourth-year students fielded in April 2013 ( $N = 326$ ), we explicitly asked the extent to which respondents perceived low- and high-skilled immigrants to be a threat to (1) the Danish welfare state, (2) the Danish labor market, and (3) “your own economic opportunities.” For all three items, low-skilled immigrants were seen as significantly more threatening than high-skilled immigrants (see Table A2 in the online supporting information). Furthermore, the difference in threat perception of high- and low-skilled immigration was largest when the question concerned the viability of the welfare state, followed by the labor market question, and smallest when the question focused on own economic opportunities (all differences are significant at the  $p < 0.01$  level). Taken together, these results strongly suggest that the skill level of immigrants tap economic threat to the national economy, notably the perceived viability of the welfare state.

The response categories to the question in the survey experiment were “Strongly agree” (1), “Agree somewhat” (2), “Disagree somewhat” (3), and “Strongly disagree” (4). Table 1 shows the wording and distribution of answers for each of the four frames. From Table 1 it is evident that the most positive attitudes are expressed toward high-skilled Western immigrants, closely followed by high-skilled non-Western immigrants. The strongest opposition is toward low-skilled non-Western immigrants, closely followed by low-skilled Western immigrants. This suggests that skill level (i.e., national economic considerations) rather than country of origin (i.e., culture) is the main situational factor driving attitudes toward immigration in Denmark.

To measure the Big Five personality traits we rely on a 60-item inventory (NEO-FFI) (John, Naumann, & Soto, 2008) with 12 items related to each of the five personality dimensions (see Skovdahl-Hansen, Mortensen, & Scioetz, 2004). While the five traits can be measured with only one or two items per trait (Gosling et al., 2003), recent research shows that such very short and less reliable measures can lead to an underestimation of the influence of personality on behaviors but also that this problem can be remedied using slightly longer measures (Credé et al., 2012).

<sup>8</sup> We modeled this statistically as an interaction between the skill level of immigrants and the skill level of the respondents. None of the interaction terms were significant thus indicating that the findings by Hainmueller and Hiscox (2010) in the United States generalize to Denmark in this regard. Results are available upon request.

<sup>9</sup> Measured on a 4-point scale from “strongly agree” to “strongly disagree.”

<sup>10</sup> Results obtained from an ordered probit analysis.

**Table 1.** Vignette Wording and Response Distribution in Survey Experiment

“Denmark should allow more . . .”	Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree	Numbers of Observations
. . . <i>high-skilled</i> immigrants from <i>Western</i> countries to move to Denmark	39.08 (276)	44.45 (302)	11.88 (76)	4.59 (26)	680
. . . <i>high-skilled</i> immigrants from <i>non-Western</i> countries to move to Denmark	30.59 (224)	48.47 (342)	15.45 (101)	5.49 (32)	699
. . . <i>low-skilled</i> immigrants from <i>Western</i> countries to move to Denmark	5.92 (42)	24.91 (191)	35.32 (258)	33.85 (241)	732
. . . <i>low-skilled</i> immigrants from <i>non-Western</i> countries to move to Denmark	5.20 (39)	23.19 (181)	37.21 (279)	34.39 (252)	751

*Note.* Cell entries in columns 2–5 indicate weighted percentages with unweighted numbers of observations in parentheses. “Don’t know” answers are set to missing in the analysis.

**Table 2.** Descriptive Statistics for Personality Scales

Personality Trait	Scale Mean (std. dev.)	Cronbach’s Alpha
Openness to Experience	0.517 (0.148)	0.715
Conscientiousness	0.587 (0.148)	0.789
Extraversion	0.566 (0.151)	0.812
Agreeableness	0.560 (0.152)	0.738
Neuroticism	0.406 (0.158)	0.847

*Note.* All scales are constructed to range between 0 (lowest observed value on trait) and 1 (highest observed value on trait). Number of observations = 2,862.

The personality assessment consists of 60 statements about the respondents to which they were asked to indicate their agreement on a 5-point Likert scale with the categories “Strongly agree,” “Agree somewhat,” “Neutral,” “Disagree somewhat,” and “Strongly disagree.” In constructing a scale for each of the five personality dimensions, we summated the 12 statements (recoded to be identically signed) relating to a given dimension. Generally speaking, the response distribution on the statements in the inventory was not highly skewed (the modal response category was “Agree somewhat,” “Neutral,” or “Disagree somewhat” for all items) and for that reason we did not—unlike some studies (cf. Mondak, 2010)—log the items before constructing the scales. All scales were constructed to range between 0 (lowest observed value on the trait) and 1 (highest observed value on trait). Table 2 shows the descriptive statistics and alpha values for the scale for each of the five personality traits. The constructed scales are internally consistent with alpha values ranging from 0.715 for Openness to 0.847 for Neuroticism.<sup>11</sup>

In the models estimating attitudes toward immigration, we include a broad set of control variables in addition to the demographic variables of gender, age, and age squared. First, we include the standard SES variables of education<sup>12</sup> and household income.<sup>13</sup> Next, we also include measures of authoritarianism and interethnic contact (here, contact with immigrants), which have been shown to be important predictors of both interethnic prejudice and intolerance more generally (Feldman, 2003; Pettigrew & Tropp, 2006; Oyamoto, Borgida, & Fisher, 2006; Sniderman, Hagendoorn, & Prior, 2004). We then also include measures of political ideology in accordance with earlier analyses of the

<sup>11</sup> A factor analysis of each of the traits showed acceptable loadings of the personality items on facets/subtraits as well as of the subtraits on the general traits (only few loadings were less than 0.5, and many were above 0.7). See Appendix B in Bakker, Verhulst, and Hatemi (2012) for more details.

<sup>12</sup> Captured through three dummies with “completed primary school” as the reference category.

<sup>13</sup> This was measured on a scale from 0 to 10 but recoded to run between 0 (lowest income) and 1 (highest income) in the analyses.

impact of personality on specific policy attitudes (Mondak, 2010, pp. 135–140).<sup>14</sup> Specifically, we include measures of ideology on the two salient dimensions in Danish politics regarding economic redistribution of resources (“old politics”) and noneconomic, value-related issues revolving around the conflict over libertarian-authoritarian values (“new politics”) (Borre, 1995; Stubager, 2006).<sup>15</sup> The online appendix includes a description of the measurement of the control variables constructed as scales (authoritarianism, interethnic contact, and the two measures of political ideology) as well as descriptive statistics for these scales (Table A1).

The causal relationship between a number of the control variables and personality may be considered ambiguous. Although we consider the SES variables to be mainly endogenous to personality (Duckworth & Seligman, 2005; Poropat, 2009), the opposite may also be the case (i.e., the SES variables may influence personality development) (Borghans, Duckworth, Heckman, & Weel, 2008; Paunonen & Ashton, 2001). Similarly, while personality has generally been considered causally prior to political ideology in earlier studies (Gerber et al., 2010; Mondak, 2010), this assumption has been challenged in recent analyses (Verhulst et al., 2012). Finally, authoritarianism and interethnic contact are likely to partially mediate the influence of personality on attitudes toward immigration. Given the potentially mediating influence of authoritarianism and interethnic contact, and the causal ambiguities of the SES variables and political ideology, we run analyses both with and without these control variables in order to gauge if the Big Five personality traits affect attitudes toward immigration beyond these factors. To the extent that personality effects are partially mediated by these variables, the estimated effects of the personality traits in the models with all control variables included are conservative estimates.

## Results

The results of the empirical analyses are reported in Table 3, which displays models in which the four frames (each combination of the two conditions in the survey experiment) are collapsed into one dependent variable with indicators of each condition included as independent variables. That is, dummies indicating whether the respondent responded to the high-/low-skilled frame, the Western/non-Western frame, and an interaction between the two frames in order to examine whether special “premiums” are attached to combinations of the two conditions.<sup>16</sup> We estimate four models. Model 1 includes only main effects of the personality traits and the demographic control variables, whereas Model 2 adds the potential confounding and/or mediating variables education, household income, authoritarianism, interethnic contact, and the two measures of political ideology.<sup>17</sup> Models 3 and 4 parallel Model 1 and 2, respectively, but also include interaction terms between skill level and country of origin of the immigrants in question and the traits Openness, Agreeableness, and Conscientiousness as hypothesized above. All models were estimated using ordered probit regression with standard errors clustered at the municipality level to take into account that individuals living within the same municipality may resemble each other and thereby affect the standard errors. In the analyses, the dependent variable was reversed so higher values indicate more positive attitudes toward immigration.

The results in Table 3 strongly support our expectation that the three traits of Openness to Experience, Agreeableness, and Conscientiousness affect attitudes toward immigration beyond the

<sup>14</sup> Party identification may also be relevant as control variable, but we do not have a measure of this in our data. However, to the extent that personality is causally prior to party identification, as suggested by Mondak (2010; chap. 5), including the latter variable would only speak to the potential mediation of the effect of personality on attitudes toward immigration.

<sup>15</sup> The value-related dimension relates to immigration (Borre, 1995; Stubager, 2006), but we decided to exclude an item specifically relating to immigration to reduce endogeneity.

<sup>16</sup> Estimating the model without the interaction between skill level and country of origin yields results similar to those reported in Table 3 with regard to the personality traits.

<sup>17</sup> We base all analyses on the observations in the full models in order to rule out confounding by nonresponse on certain variables.

**Table 3.** Personality and Attitudes Toward Immigration

	Model 1	Model 2	Model 3	Model 4
High-skilled immigrant	1.353*** (0.057)	1.488*** (0.063)	1.251*** (0.277)	1.509*** (0.259)
Western immigrant	0.049 (0.069)	0.061 (0.073)	-0.227 (0.315)	-0.299 (0.325)
High-skilled × Western	0.160** (0.075)	0.180** (0.088)	0.165** (0.076)	0.189** (0.090)
Openness (0–1)	2.122*** (0.218)	0.637*** (0.228)	2.121*** (0.309)	0.602* (0.342)
Conscientiousness (0–1)	-0.621*** (0.213)	-0.361** (0.206)	-1.177*** (0.272)	-0.964*** (0.284)
Extraversion (0–1)	0.001 (0.245)	0.177 (0.245)	-0.002 (0.239)	0.173 (0.239)
Agreeableness (0–1)	1.001*** (0.179)	0.526*** (0.193)	1.211*** (0.296)	0.837*** (0.305)
Neuroticism (0–1)	-0.471** (0.216)	-0.255 (0.236)	-0.525** (0.219)	-0.315 (0.236)
Male	0.048 (0.053)	0.037 (0.051)	0.042 (0.054)	0.031 (0.052)
Age	-0.043*** (0.011)	-0.033** (0.013)	-0.043*** (0.011)	-0.032** (0.013)
Age <sup>2</sup> /100	0.036*** (0.011)	0.033*** (0.013)	0.036*** (0.010)	0.033*** (0.012)
Household income (0–1)		0.216* (0.114)		0.214* (0.113)
Education (Ref. = completed primary school)				
Vocational education		0.048 (0.062)		0.059 (0.062)
High school degree or some college		0.071 (0.095)		0.063 (0.095)
Completed college		0.006 (0.070)		0.002 (0.068)
Right-wing on economic issues (0–1)		0.590*** (0.145)		0.615*** (0.146)
Right-wing on value-related issues (0–1)		-2.446*** (0.167)		-2.461*** (0.166)
Authoritarianism (0–1)		-0.839*** (0.155)		-0.869*** (0.154)
Contact with immigrants (0–1)		0.443*** (0.131)		0.443*** (0.131)
High-skilled × Openness			-0.196 (0.326)	-0.283 (0.309)
High-skilled × Conscientiousness			1.249*** (0.374)	1.293*** (0.394)
High-skilled × Agreeableness			-0.939*** (0.350)	-1.121*** (0.348)
Western × Openness			0.213 (0.290)	0.350 (0.318)
Western × Conscientiousness			-0.153 (0.343)	-0.103 (0.354)
Western × Agreeableness			0.453 (0.379)	0.417 (0.383)
Observations	2,579	2,579	2,579	2,579
Pseudo R <sup>2</sup>	0.164	0.226	0.168	0.231

Note. Parameter estimates with cluster robust standard errors in parenthesis. Thresholds not reported. All analyses are conducted on the same observations.

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

effect of other factors in the model. This indicates that attitudes toward immigration are partly rooted in personal predispositions and not only subject to external environmental factors. However, the personality traits display differential effects on attitudes toward immigration as one trait (Openness) has an effect beyond that of cultural and economic threat, while Agreeableness and Conscientiousness moderate the impact of economic threat as is evident from the interaction terms in Model 3 and 4.<sup>18</sup> We comment on each trait in turn.

Openness has a significant impact on attitudes toward immigration, and as expected, people who score higher on Openness—who are characterized by being tolerant and open-minded—are significantly more proimmigration. Interestingly, the impact of Openness is universal in the sense that it is independent of the immigrant group in question, which is evident from the insignificant interaction terms between Openness and the two conditions tapping the skill level and country of origin of immigrants. In other words, scoring high on Openness generally entails more positive attitudes toward immigration regardless of the economic and cultural characteristics of the immigrant group. This runs counter to our expectation that Openness would moderate the impact of cultural threat. It is also important to note that the impact of Openness to experience on attitudes toward immigration is substantially reduced after including the SES variables, authoritarian values, contact with immigrants, and political ideology. All of these variables (except income) are related to Openness, and the reduction in the direct impact of this personality trait on attitudes toward immigration thus suggests partial mediation.

In line with our expectation, people scoring high on Agreeableness, who are characterized by altruism, tender-mindedness and trust, tend to view immigration more positively. As for Openness, the impact of Agreeableness remains significant but is somewhat reduced (though less than for Openness) when the SES variables, interethnic contact, authoritarian values, and political ideology are included in the model. This is primarily due to a moderate correlation between Agreeableness and authoritarianism, which substantiates the finding that the latter mediates the impact of this personality trait (Sibley & Duckitt, 2009). However, contrary to the effect of Openness, the impact of Agreeableness is dependent on the background of the immigrants in question. As expected and evidenced by the significant interaction with skill level of immigrants, Agreeableness moderates the negative impact of economic threat on attitudes toward immigration. Contrary to our expectation, no moderating impact is found for cultural threat. Figure 1 illustrates the moderating impact of Agreeableness on economic threat by plotting the predicted probability of strongly agreeing or somewhat agreeing that more immigrants should be allowed into Denmark depending on the skill level of immigrants as well as the Agreeableness score of the respondent (varying from minimum to maximum).<sup>19</sup>

Figure 1 illustrates that individuals respond differently to economic threat depending on their score on Agreeableness. Whereas there is no difference in the reaction to high-skilled immigration for people high or low on Agreeableness (this type of immigration is universally well liked with a predicted probability of somewhat agreeing or strongly agreeing to allow this type of immigration hovering around 80%), this trait markedly moderates the response to low-skilled immigration. The general skepticism toward low-skilled immigration is much more pronounced for respondents scoring low on Agreeableness, with a predicted probability of agreeing to allow more immigration of only 0.15. The predicted probability for respondents scoring high on Agreeableness is 0.42. In other words, scoring higher on Agreeableness attenuates the effect of economic threat on attitudes toward immigration. As hypothesized above, compassion for those who are worse off and a universally sanguine perception of human nature are likely to make people scoring high on Agreeableness less prone to differentiate between immigrants based on their skill level.

<sup>18</sup> The Big Five personality traits are jointly significant in all models ( $p < 0.01$ -level). The interaction terms between personality traits and the skill level of immigrants included in Model 3 and 4 in Table 3 are also jointly significant in both models ( $p < 0.01$ -level).

<sup>19</sup> Unless otherwise noted, all predicted probabilities were calculated for the low-skilled, non-Western immigrant condition with the remaining categorical variables held at their modes and continuous variables held at their means.

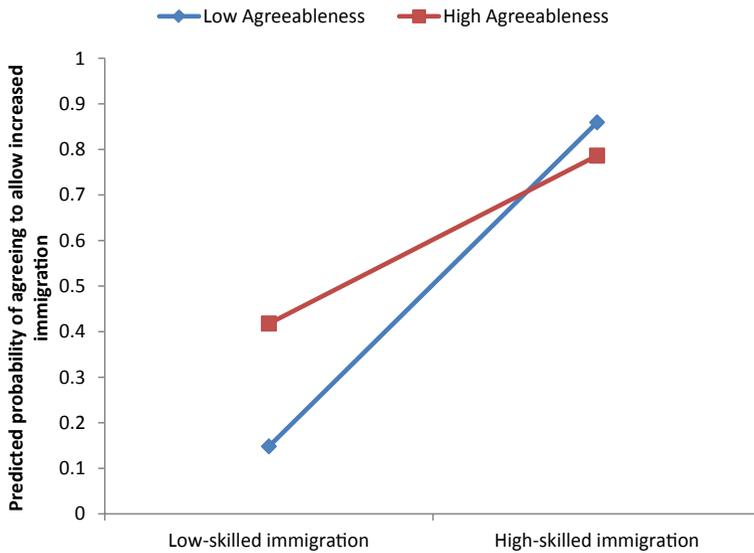


Figure 1. The moderating impact of Agreeableness on the effect of economic threat on attitudes towards immigration.

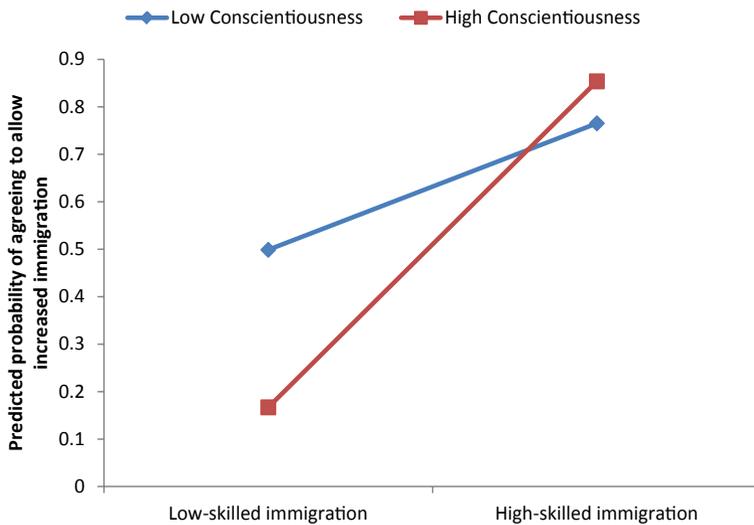


Figure 2. The moderating impact of Conscientiousness on the effect of economic threat on attitudes towards immigration.

Like Agreeableness, Conscientiousness has a conditional impact on attitudes toward immigration. It moderates the impact of economic threat (but not cultural threat), which is evident from the interaction terms in Table 3. Figure 2 illustrates this contingent relationship, plotting the predicted probability of strongly agreeing or somewhat agreeing to allow more immigration into Denmark depending on the immigrants’ skill level and the respondent’s level of Conscientiousness (varying from minimum to maximum).

People scoring high on Conscientiousness differ much more in their reaction to high- and low-skilled immigrants than people scoring low on this trait. Agreeing to allow low-skilled immigration varies from strong opposition (predicted probability of 0.17) for people scoring high on

Conscientiousness to neutral views among people scoring low on Conscientiousness (predicted probability of 0.50). In contrast, high-skilled immigration is strongly supported more or less independently of the respondents' level of Conscientiousness: the predicted probability of somewhat agreeing or strongly agreeing to allow this type of immigration is around 80% across scores on this trait. In other words, the respondents' responsiveness to economic threat associated with low-skilled immigration is highly contingent on their score on the personality trait of Conscientiousness with people scoring high on this trait being much more sensitive to the skill level of immigrants.

Given the emphasis attached to order, reliability, and caution by people scoring high on Conscientiousness, the moderating impact of this trait may reflect that highly conscientious people are likely to see low-skilled immigrants as a threat to the Danish welfare state. Individuals scoring high on Conscientiousness tend to be industrious, hardworking, and have strong impulse control, and they may fear that low-skilled immigrants do not hold such qualities and therefore are less likely to become integrated into the labor market thereby incurring costs on the welfare state. Our data allow us to go some way in substantiating this interpretation by means of the survey question used in the manipulation check regarding whether an immigrant group "would be an economic burden to Danish society." This question essentially taps what we expect to be the main reason that people high on Conscientiousness oppose immigration. To assess this, we regressed the survey question on Conscientiousness, and this variable interacted with skill level and country of origin of the immigrant group in question (plus the additional variables included in Model 3). The results show that being higher on Conscientiousness is associated with a more widespread perception of economic burden in general, but significantly more so with regard to low-skilled than high-skilled immigrants. Hence, the results corroborate our interpretation of why being higher on Conscientiousness imply significantly more negative attitudes toward low-skilled immigration, namely because low-skilled immigrants are seen as an economic burden to society.

Extroversion and Neuroticism, for which we did not have specific expectations, are not significantly associated with attitudes toward immigration in the full models, but Neuroticism is significantly negatively related to proimmigration attitudes in models without the potentially confounding and/or mediating variables.

The results for the control variables substantiate many of the traditional situational factors explaining attitudes toward immigration. Most importantly, immigrants' skill level is an important determinant of attitudes toward immigration (with more pronounced opposition to low-skilled immigration), which supports the findings by Hainmueller and Hiscox (2010) in the United States. Immigrants' country of origin is a nonsignificant factor in itself, which is a bit surprising given the politicized nature of the cultural background of immigrants in Denmark. However, there is a special premium attached to coming from a Western country for high-skilled immigrants, as witnessed by the significant two-way interaction term, suggesting that negative stereotypes may have some conditional effect also in the Danish context (cf. Brader et al., 2008). Authoritarianism fosters negative attitudes toward immigration, whereas interethnic contact promotes proimmigration attitudes. As expected, a right-wing stance on the value-related dimension is strongly, negatively correlated with proimmigration attitudes. More surprisingly, right-wing attitudes in the economic domain are positively correlated with proimmigration attitudes.<sup>20</sup> Education has no effect on opposition to immigration in the models including the other potential confounding and/or mediating variables, but this mainly reflects a moderately strong correlation with value-related attitudes of which it is often seen as an antecedent (Hainmueller & Hiscox, 2007; Stubager, 2006). Household income has a weak positive impact on attitudes toward immigration. Finally, age has a negative impact on attitudes toward immigration, which is largest when people are in their early 50s.

<sup>20</sup> One interpretation of this finding may be that individuals holding economically liberal attitudes are more proimmigration out of concerns for free competition in the labor market.

## Conclusion and Discussion

This article has moved beyond the assumption that individuals react uniformly to situational factors and examined how deep-seated psychological dispositions in terms of personality traits affect attitudes toward immigration: directly and, more importantly, in conjunction with the situational factors of economic and cultural threat. Adding the Big Five personality traits thus allow us to develop a fuller understanding of the formation of attitudes toward immigration by examining how different personalities respond to the same situational triggers. Using a Danish survey experiment, we showed that personality traits have both direct and moderating effects on opposition toward immigration. As expected, Openness to Experience has a strong effect; individuals scoring higher on this trait are significantly more willing to admit immigrants than individuals scoring lower on the trait. Contrary to expectations, Openness does not moderate the effect of cultural threat. We do, however, find that individuals react differently to economic threat depending on their level of Conscientiousness and Agreeableness. Individuals scoring high on Conscientiousness and individuals scoring high on Agreeableness are both more sensitive to the skill level of immigrants than individuals on the other ends of these traits. Collectively, the results suggest that the literature on attitudes toward immigration, and political attitude formation more generally, benefits from incorporating explanations emphasizing personal predispositions and their interaction with situational factors.

The results raise two theoretical puzzles. First, how can we make sense of the somewhat surprising result that Openness does not moderate the impact of threat on attitudes toward immigration when Agreeableness and Conscientiousness do? Second, save the small interaction effect with the skill level of immigrants, why does cultural threat not have any effect on immigration attitudes in Denmark, either directly or in interaction with personality traits? Characteristics related to the issue domain and the political context may provide part of the answer.

*Issue domain and situational triggers.* Following work on authoritarianism and ethnocentrism, the effect of predispositions will “*always be contingent*” (Feldman, 2003, p. 51, emphasis original) and depend on the extent to which “there is resonance” between an issue/a frame and the predisposition it may or may not activate (Kinder & Kam, 2010, p. 40). The immigration issue fundamentally concerns openness to newcomers, who are different from the native population. To a person high on Openness, social conformity is disheartening, and the arrival of immigrants with alternative outlooks, sense of aesthetics, and ideas may be positive irrespective of the immigrants’ auxiliary characteristics. Thus, independent of an immigrant’s background, the issue of immigration may not invoke a perception of threat to a person who cherishes diversity and pluralism; the additional characteristics of immigrants are not salient to an open individual.<sup>21</sup>

The secondary characteristics of immigrants resonate more closely with the traits Agreeableness and Conscientiousness. Highly Agreeable individuals arguably oppose low-skilled immigrants less, presumably because this immigrant group solicits understanding, empathy, and altruism among people on the high end of this trait. Similarly, individuals high on Conscientiousness respond more negatively to low-skilled immigrants, because this groups is perceived as a cost to society. In both cases, the secondary characteristics are important, relevant, and applicable to the trait.

Following this line of reasoning, issue domain is itself a conditioning factor that may resonate with certain personality traits just like the situational triggers. Consequently, attitudes may be formed in a different interplay between situational triggers and personality traits in other issue domains. This is clearly a topic for further research.

<sup>21</sup> Indeed, the effect of immigrant skill level (and country of origin) on the extent to which respondents see immigrants as “an economic burden to Danish society” is not moderated by Openness (in the analysis reported for Conscientiousness). Individuals high on Openness in general perceive immigration as less of an economic burden.

*Political context.* The finding that cultural threat does little to trigger anti-immigration sentiments in Denmark stands in contrast to results from the Netherlands (Sniderman et al., 2004) and several studies in the United States, which have found that cultural threat, and the anxiety that follows, influences attitudes toward immigration (Brader et al., 2008; Newman et al., 2012). There is no reason to expect that the diverging findings in the different national contexts are not real; they likely reflect contextual differences such as the history of immigration and the size and saliency of different ethnic groups (cf. Schneider, 2008). Understanding when and why cultural and economic threat matters in different settings is arguably a fruitful avenue for further investigation.

The viability of the generous welfare state preoccupies Danish voters, not least in the wake of the financial crisis in 2008. Economic threat from low-skilled immigration is therefore a concern, and more so for some personalities than others. In political contexts where cultural threat matters, we suspect that personality traits will also moderate the effect of cultural threat on immigration attitudes. More generally, if a situational trigger is both salient and relevant, individual predispositions will likely be activated and condition how individuals receive and respond to this information. To paraphrase Feldman (2003), the effect of personality traits on political attitude formation “will always be contingent.” The present article is a contribution to a better understanding of some of these contingencies. We recommend more research on the conditional influence of personality traits across policy domains and in different political contexts to advance this research agenda further.

### ACKNOWLEDGMENTS

The authors would like to thank the VELUX foundation as well as the Faculty of Social Science, University of Southern Denmark (for an FIK grant) for financial support. Moreover, we would like to thank the editors at Political Psychology as well as the anonymous referees for helpful comments. We are also grateful for valuable feedback from participants at the 2011 NYU-CESS Experimental Political Science Workshop, the panel “Citizens and the Big Five” at the 2011 Meeting of the International Society of Political Psychology, and the “Personality, Individual Differences and Behavioral Genetics” Colloquium at the University of Minnesota, April 2013. Finally, thanks to Kim Mannemar Sønderskov and Bertel Teilfeldt for advice on the statistical analyses. Any remaining errors are, of course, our own. Correspondence concerning this article should be addressed to Peter Thisted Dinesen, Department of Political Science, University of Copenhagen, Øster Farimagsgade 5, DK-1353 Copenhagen K. E-mail: ptd@ifs.ku.dk

### REFERENCES

- Adorno, T. W., Frenkel-Brunswick, E., Levinson, D. J., & Sanford, N. S. (1950). *The authoritarian personality*. New York, NY: Harper.
- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, MA: Addison-Wesley
- Altemeyer, R. A. (1981). *Right-Wing Authoritarianism*. Winnipeg: University of Manitoba Press.
- Bakker, B., Verhulst, B., & Hatemi, P. K. (2012). Personality and political attitudes: Exploring the fine-grained relationship between personality and political attitudes. Presented at the 2012 Annual Meeting of the Midwest Political Science Association.
- Borre, O. (1995). Old and new politics in Denmark. *Scandinavian Political Studies*, 18, 187–205.
- Borghans, L., Duckworth, A. L., Heckman, J. J., & Weel, B. T. (2008). The economics and psychology of personality traits. *Journal of Human Resources*, 43, 972–1059.
- Bouchard Jr., T. J., & McGue, M. (2003). Genetic and environmental influences on human psychological differences. *Journal of Neurobiology*, 54, 4–45.
- Brader, T., Valentino, N. A., & Suhay, E. (2008). What triggers public opposition to immigration? Anxiety, group cues, and immigration threat. *American Journal of Political Science*, 52, 959–978.

- Carney, D. R., Jost, J. T., Gosling, S. D., & Potter, J. (2008). The secret lives of liberals and conservatives: Personality profiles, interaction styles, and the things they leave behind. *Political Psychology, 29*, 807–840.
- Costa, P. T., & McCrae, R. R. (1992). *NEOPI-R. professional manual*. Odessa, FL: Psychological Assessment Resources.
- Credé, M., Harms, P., Niehorster, S., & Gaye-Valentine, A. (2012). An evaluation of the consequences of using short measures of the Big Five personality traits. *Journal of Personality and Social Psychology, 102*, 874–888.
- Duckitt, J. (1989). Authoritarianism and group identification: A new view of an old construct. *Political Psychology, 10*, 63–84.
- Duckitt, J. (2001). A dual-process cognitive-motivational theory of ideology and prejudice. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology, 33*, (pp. 41–113). San Diego, CA: Academic Press.
- Duckitt, J., Wagner, C., de Plessis, I., & Birum, I. (2002). The psychological bases of ideology and prejudice: Testing a dual-process model. *Journal of Personality and Social Psychology, 83*, 75–93.
- Duckworth, A. L., & Seligman, M. E. P. (2005). Self-discipline outdoes IQ in predicting academic performance of adolescents. *Psychological Science, 16*, 939–944.
- Ekehammar, B., Akrami, N., Gylje, M., & Zakrisson, I. (2004). What matters most to prejudice: Big-Five personality, Social Dominance Orientation, or Right-Wing Authoritarianism? *European Journal of Personality, 18*, 463–482.
- Feldman, S. (2003). Enforcing social conformity: A theory of authoritarianism. *Political Psychology, 24*, 41–74.
- Feldman, S., & Stenner, K. (1997). Perceived threat and authoritarianism. *Political Psychology, 18*, 741–770.
- Flynn, F. J. (2005). Having an open mind: The impact of openness to experience on interracial attitudes and impression formation. *Journal of Personality and Social Psychology, 88*, 816–826.
- Gaines, B. J., Kuklinski, J. H., & Quirk, P. J. (2007). The logic of the survey experiment reexamined. *Political Analysis, 15*, 1–20.
- Gallego, A., & Pardos-Prado, S. (2014). The Big Five personality traits and attitudes towards immigrants. *Journal of Ethnic and Migration Studies, 40*, 79–99.
- Gerber, A. S., Huber, G. A., Doherty, D., & Dowling, C. M. (2010). Personality and political attitudes: Relationships across issue domains and political contexts. *American Political Science Review, 104*, 111–133.
- Gerber, A. S., Huber, G. A., Doherty, D., & Dowling, C. M. (2011). The Big Five personality traits in the political arena. *Annual Review of Political Science, 14*, 265–287.
- Gerber, A. S., Huber, G. A., Doherty, D., Dowling, C. M., Raso, C., & Ha, S. E. (2011). Personality traits and participation in political processes. *Journal of Politics, 73*, 692–706.
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment, 4*, 26–42.
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist, 48*, 26–34.
- Gosling, S. D., Rentfrow, P. J., & Swann Jr., W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality, 37*, 504–528.
- Green-Pedersen, C., & Krogstrup, J. (2008). Immigration as a political issue in Denmark and Sweden. *European Journal of Political Research, 45*, 610–634.
- Hainmueller, J., & Hiscox, M. J. (2007). Educated preferences: Explaining attitudes toward immigration in Europe. *International Organization, 61*, 399–442.
- Hainmueller, J., & Hiscox, M. J. (2010). Attitudes toward highly skilled and low-skilled immigration: Evidence from a survey experiment. *American Political Science Review, 104*, 61–84.
- Hibbing, M. W., Ritchie, M., & Andersson, M. R. (2011). Personality and political discussion. *Political Behavior, 33*, 601–624.
- Hodson, G., Hogg, S. M., & MacInnis, C. C. (2009). The role of “dark personalities” (narcissism, Machiavellianism, psychopathy), Big Five personality factors, and ideology in explaining prejudice. *Journal of Research in Personality, 43*, 686–690.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3<sup>rd</sup> ed.) (pp. 114–58). New York, NY: Guilford Press.
- Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin, 129*, 339–375.
- Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology, 60*, 307–333.
- Kam, C. D. (2012). The psychological veracity of Zaller’s model. *Critical Review, 24*, 545–567.
- Kinder, D. R., & Kam, C. D. (2010). *Us against them. Ethnocentric foundations of American opinion*. Chicago, IL: Chicago University Press.

- Lavine, H., Lodge, M., Polichak, J., & Taber, C. (2002). Explicating the black box through experimentation: Studies of authoritarianism and threat. *Political Analysis, 10*, 343–361.
- McCrae, R. R., & Costa Jr., P. T. (1999). A five-factor theory of personality. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and Research* (2<sup>nd</sup> ed.) (pp. 139–153). New York, NY: Guilford Press.
- Mondak, J. J. (2010). *Personality and the foundations of political behavior*. New York, NY: Cambridge University Press.
- Mondak, J. J., & Halperin, K. D. (2008). A framework for the study of personality and political behavior. *British Journal of Political Science, 38*, 335–362.
- Mondak, J. J., Hibbing, M. W., Canache, D., Seligson, M. A., & Anderson, M. R. (2010a). Personality and civic engagement: An integrative framework for the study of trait effects on political behavior. *American Political Science Review, 104*, 85–110.
- Mondak, J. J., Canache, D., Seligson, M. A., & Hibbing, M. W. (2010b). The participatory personality: Evidence from Latin America. *British Journal of Political Science, 41*, 211–221.
- Nelson, T. E., Clawson, R. A., & Oxley, Z. M. (1997). Media framing of a civil liberties conflict and its effect on tolerance. *American Political Science Review, 91*, 567–583.
- Newman, B. J., Hartman, T. K., & Taber, C. S. (2012). Foreign language exposure, cultural threat, and opposition to immigration. *Political Psychology, 33*, 635–657.
- Oyamot Jr, C. M., Borgida, E., & Fisher, E. L. (2006). Can values moderate the attitudes of right-wing authoritarians? *Personality and Social Psychology Bulletin, 32*, 486–500.
- Oyamot Jr, C. M., Fisher, E. L., Deason, G., & Borgida, E. (2012). Attitudes toward immigrants: The interactive role of the authoritarian predisposition, social norms, and humanitarian values. *Journal of Experimental Social Psychology, 48*, 97–105.
- Paunonen, S. V., & Ashton, M. C. (2001). Big Five factors and facets and the prediction of behavior. *Journal of Personality and Social Psychology, 81*, 524–539.
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*, 751–783.
- Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin, 135*, 322–338.
- Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality & Social Psychology, 67*, 741–776.
- Schneider, S. L. (2008). Anti-immigrant attitudes in Europe: Outgroup size and perceived ethnic threat. *European Sociological Review, 24*, 53–67.
- Shiner, R. L., & DeYoung, C. G. (2013). The structure of temperament and personality traits: A developmental perspective. Chapter 6 in P. D. Zelazo (Ed.), *The Oxford handbook of developmental psychology* vol. II. New York, NY: Oxford University Press
- Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review, 12*, 248–279.
- Sibley, C. G., & Duckitt, J. (2009). Big-Five personality, social worldviews, and ideological attitudes: Further tests of a dual process cognitive-motivational model. *Journal of Social Psychology, 149*, 545–561.
- Sides, J., & Citrin, J. (2007). European attitudes toward immigration: The role of interests, identities, and information. *British Journal of Political Science, 37*, 477–504.
- Skovdahl-Hansen, H., Mortensen, E. L., & Scioetz, H. K. (2004). *Documentation of the Danish NEO PI-R and NEO PI-R Short Version*. Copenhagen: Danish Psychological Association.
- Sniderman, P. M., Hagendoorn, L., & Prior, M. (2004). Predisposing factors and situational triggers: Exclusionary reactions to immigrant minorities. *American Political Science Review, 98*, 35–50.
- Stubager, R. (2006). *The education cleavage*. Aarhus, Denmark: Politika.
- Tajfel, H. (1981). *Human groups and social categories: Studies in social psychology*. Cambridge, MA: Cambridge University Press.
- Van Hiel, A., Cornelis, I., & Roets, A. (2007). The intervening role of social worldviews in the relationship between the five-factor model of personality and social attitudes. *European Journal of Personality, 21*, 131–148.
- Vecchione, M., Caprara, G., Schoen, H., Castro, J. L. G., & Schwartz, S. H. (2012). The role of personal values and basic traits in perceptions of the consequences of immigration: A three-nation Study. *British Journal of Psychology, 103*, 359–377.
- Verhulst, B., Eaves, L. J., & Hatemi, P. K. (2012). Correlation not causation: The relationship between personality traits and political ideologies. *American Journal of Political Science, 56*, 34–51.
- Zaller, J. R. (1992). *The nature and origin of mass opinion*. Cambridge, UK: Cambridge University Press.

### Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's web-site:

**Appendix:** Construction of scales for the control variables

**Table A1:** Descriptive statistics on control variables

**Table A2:** Perceptions of economic threat of low- vs. high-skilled immigrants