

Exploring the link between personality traits and European attitudes towards refugees

Louis Talay¹ & David De Coninck²

¹ *The University of Sydney, Sydney, Australia*

² *Centre for Sociological Research, KU Leuven, Leuven, Belgium*

This paper is not the copy of record and may not exactly replicate the document published in *International Journal of Intercultural Relations* (2020). Please do not copy without the author's permission. The journal version is available at <https://doi.org/10.1016/j.ijintrel.2020.04.002>

The correct citation for this article:

Talay, L., & De Coninck, D. (2020). Exploring the link between personality traits and European attitudes towards refugees. *International Journal of Intercultural Relations*, 77, 13-24. doi:[10.1016/j.ijintrel.2020.04.002](https://doi.org/10.1016/j.ijintrel.2020.04.002)

Correspondence concerning this article should be addressed to David De Coninck, KU Leuven, Centre for Sociological Research, Parkstraat 45 box 3601, 3000 Leuven, Belgium.

Email: david.deconinck@kuleuven.be

Exploring the link between personality traits and European attitudes towards refugees

Abstract: Attitudes towards refugees are formed via complex interactions between socioeconomic factors, perceptions of cultural threat and personality traits. Yet despite the widespread social changes the European refugee situation has generated throughout the continent, no previous literature has adequately examined these interactions in that context. This study addressed that gap by testing the relationship between personality traits and European attitudes towards refugees in the context of the European refugee crisis by conducting an ordinal regression analysis of data obtained from online surveys that we distributed in four European countries (N = 6,000). Questions were aligned with descriptors used in the Five Factor model of personality traits and a proxy of the Honesty-Humility trait used in the HEXACO model. Our results indicate that Openness to Experience, Agreeableness, and Honesty-Humility are negatively associated with refugee prejudice. Findings about Neuroticism, Extraversion, and Conscientiousness are mixed. Moreover, our results revealed that intercultural contact has a positive impact on attitudes towards refugees and that the valence of this contact plays a more significant role than the frequency of contact. Given that attitudes towards refugees have been found to correlate with asylum policy preferences, these discoveries are of considerable value to people working in asylum policy settings, as they provide them with a more nuanced understanding of the factors influencing election results; especially during a period where refugee resettlement is a salient issue.

Keywords: Personality; Big Five; Intergroup contact; Attitudes towards refugees; Europe; HEXACO

Introduction

Refugee policies in democratic European countries are largely determined by public attitudes towards refugees. It is widely understood that these attitudes are influenced by socioeconomic factors (De Coninck, 2020; Scheepers, Gijssberts, & Coenders, 2002; Scheve & Slaughter, 2001) and perceptions of cultural threat (McLaren & Jonson, 2007; Sniderman & Hagendoorn, 2007; Talay, 2017). However, it has also been demonstrated that they are impacted by personality traits (Carlson et al., 2019). Yet, to our knowledge there are no studies that have investigated the relationship between personality traits and attitudes towards refugees in the context of the contemporary European refugee situation. We believe this represents a significant gap in the literature given the evidence on the situational nature of the formation of exclusionary attitudes (Sniderman, Hagendoorn, & Prior, 2004) and the conviction that refugee prejudice develops out of complex interactions between ‘psychological predispositions’ and social factors (Gallego & Pardos-Pardo, 2013, p. 94). Because the European refugee situation has generated a series of unique and unprecedented socioeconomic and sociocultural changes across the continent, results from studies that have examined the effect of personality traits on refugee prejudice in a different context might not accurately explain the development of such prejudice in contemporary Europe. As far as we are aware, there is only one other study that has explored this link, yet it did so in the United States (Carlson et al, 2019). In order to acquire a more nuanced understanding of the factors that influence asylum (refugee) policy in the context of the European refugee situation, one needs to investigate the effect of personality traits on the attitudes towards refugees using European subjects who are living in the ‘situation’. With this understanding policy advisors can develop more effective strategies for garnering support for humane refugee agendas. This study seeks to establish whether personality traits are associated with attitudes towards refugees by collecting online survey data from four European countries (Belgium, France, the

Netherlands, Sweden), and conducting a regression analysis that isolates factors from a hybrid of the widely used five-factor model of personality traits¹ (FFM) (Goldberg, 1993) and the HEXACO model (Ashton & Lee, 2001).

The next section will outline the context of this study, including an overview of the European refugee situation and how it has impacted the political scene in each of the four countries of this study. Following this, a thorough literature review will be conducted, covering the theoretical developments relevant to this topic along with research on the impact of personality on the formation of attitudes toward various out-groups. After this we will explicate the research methodology before presenting and discussing the results of the analysis.

Context

The influx of an unprecedented number of asylum seekers during the recent refugee crisis has placed several European nations under considerable strain. Despite calls for the establishment of an EU-wide asylum system to help allocate asylum seekers more fairly among member states and relieve the disproportionate burden faced by some countries, asylum (refugee) policy remains a national competence within the EU. Nevertheless, all EU member states are signatories of the 1967 United Nations Refugee Protocol and therefore agree to minimum standards regarding the treatment of asylum seekers and refugees, including the non-refoulement principle, which prohibits the expulsion of such peoples to a territory where their freedoms are threatened (UNHCR, 2010). The UN defines a refugee as a person with a “well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion” (UNHCR, 2010). An asylum seeker is a person

¹ Factors of the five-factor model of personality traits are often referred to as the “Big Five” personality traits.

who is seeking to become a refugee but has not yet had their application approved by national authorities. If an asylum seeker does not satisfy the criteria pertaining to the UN definition for a refugee, states are not legally obliged to accommodate them as they are effectively a voluntary migrant (often referred to as an economic migrant or immigrant). This distinction between forced migrants (asylum seekers and refugees) and voluntary migrants is important because this study's survey design focuses exclusively on attitudes towards refugees (a category of forced migrant) rather than 'generalised prejudice' or voluntary migrants and therefore could feasibly generate different results given their legal and moral implications.

All four countries chosen for this study have come under criticism for their restrictionist asylum policies. In 2017, the year this study's survey experiment was conducted, the asylum application rejection rate was 73.2% in France, 52.9% in Sweden, 51% in the Netherlands and 46.3% in Belgium (AIDA, 2019). Although it is possible a significant proportion of these figures could be attributed to illegitimate claims to asylum, reports from various migration and human rights institutes indicate that there is considerable resistance to refugee resettlement in each country. The UN High Commissioner for Refugees and NGOs condemned France's asylum law for "undermining access to asylum, including by weakening appeal rights and safeguards for those subject to accelerated asylum procedures" (Human Rights Watch, 2019, p. 225). Legal authorities have also denounced the squalid living conditions at asylum seeker camps throughout the country (Human Rights Watch, 2019). Although Sweden was once renowned for its progressive stance towards refugees and attracted the most asylum seekers per capita in the world at the start of the refugee situation in 2015, a major policy shift in 2016, which made the attainment of permanent residency status and family reunification very difficult, resulted in a sharp decline in asylum applications and grants (Skodo, 2018). In Belgium the non-refoulement principle has been continuously violated and forced migrants have been subject to neglect, police-inflicted

violence and dire living conditions (Keen, Meadows, & Welander, 2019). And the Dutch government has reduced accommodation capacity for asylum seekers for consecutive years since 2015 as part of a broader strategy to force the EU to establish an external processing system for asylum procedures (Human Rights Watch, 2019; van Selm, 2019).

One of the main factors behind the adoption of more restrictionist asylum policies in France, Sweden and the Netherlands during the refugee situation has been the rise in popularity of each nation's respective far-right populist parties (FRPP) and the subsequent change in the balance of power at both a national and European policymaking level (Lewis et al., 2018; Skodo, 2018; van Selm, 2019). These parties have framed the refugee situation as a 'crisis' representing a major threat to the national culture and the economic utility of locals (Krzyżanowski, Triandafyllidou, & Wodak, 2017). Although no Belgian FRPP has been nearly as successful during the same period, this is likely due to the restrictionist policy shift of the more ideologically "palatable" centre-right New Flemish Alliance, which formed a coalition government between 2014-18 (Downes & Loveless, 2018). Moreover, the New Flemish Alliance appears to have used the same discursive frame as the majority of successful FRPPs in the current context (De Cleen, 2017). This is significant as scholars have cited the highly negative discursive framing of refugees and migrants as one the two situational factors with the greatest impact on local attitudes towards refugees (the other being increased contact frequency with migrants and refugees) (Ackermann & Ackermann, 2015; Gallego & Pardos-Prado, 2013; Sibley & Duckitt, 2008; 2009; 2010). Consequently, it would be reasonable to assume that one of the main reasons why restrictionist asylum policies have been adopted in the four countries of this study is because a considerable proportion of their national electorates believe that refugee resettlement results in cultural and economic decline for locals and their society. Yet there is solid evidence to suggest that these perceptions of economic and cultural threat are inaccurate and that they are present

throughout the EU (Blau & Mackie, 2017; Bratsberg, Raaum, Røed, & Schøne, 2014; Talay, 2017). In that sense, this study's survey experiment would arguably be just as useful if it were carried out in other EU member states, however the four above-listed countries were selected due to cost reasons. If a correlation is discovered between personality traits and attitudes towards refugees as is later hypothesised, then we will have generated a stronger knowledge base from which scholars and policy advisors can seek to redress the misperceptions that contribute to unsatisfactory outcomes for forced migrants.

What we know about European attitudes towards refugees

The integrated threat theory (ITT) forms the theoretical basis of many studies that explore the predictors of local attitudes toward migrants and refugees (Riek, Mania, & Gaertner, 2006; Stephan et al., 2005; Stephan & Stephan, 2000). In its updated version, ITT holds that negative attitudes towards social out-groups (literature almost exclusively looks at immigrants) can be explained by two types of threat: realistic (threats to physical wellbeing and individual financial utility) and symbolic (threats to one's culture, including its values, customs and traditions) (Stephan & Renfro, 2002). Although the validity of the realistic threat argument (Blau & Mackie, 2017; Bratsberg et al., 2014; Steinhardt, 2011) and to a lesser degree, the symbolic threat argument (Talay, 2017), have been refuted by empirical research, findings from a comprehensive study at the Pew Research centre reveal that a relatively high percentage of Europeans still perceive refugees and asylum seekers as a threat to local cultural and individual economic utility (Wike, Stokes, & Simmons, 2016). The study also showed that Europeans are concerned that refugees will increase the likelihood of terrorism in their respective countries and commit more crimes than other social groups (Wike, Stokes, & Simmons, 2016). Although these fears tend to be more severe in Eastern European countries than in other parts of the continent, populations that displayed the least fear of the

above-mentioned issues were still registering percentage scores of over 30, which is more than enough to affect policy outcomes (Wike, Stokes, & Simmons, 2016). Moreover, over a quarter of participants from each nation included in the survey held negative views of Muslims and more than half of them believe that Muslims do not want to adopt host country customs and its way of life, suggesting that the perception of Islam impacts local attitudes towards refugees. This link is somewhat reflected in the results from a recent European Social Survey (ESS) release, which demonstrate that Muslim people represent the second least preferred group of migrants (in front of Gypsies) in a list containing migrants from “poorer countries outside Europe,” “different race or ethnic groups” and “Jewish people” (Heath & Richards, 2016).

Research comparing the two categories of threat tends to show that the perceived symbolic threat of refugees and immigrants is a stronger determinant of border control policy preferences than perceived realistic threats (McLaren & Jonson, 2007; Sniderman & Hagendoorn, 2007; Talay, 2017). However, as mentioned in the introduction, the public tends to perceive immigrants more negatively than refugees (De Coninck, 2020). This is likely impacted by the way in which both groups are depicted in the media and by various political actors. Although FRPPs have framed refugees in a highly negative fashion, other more moderate political parties and progressive media outlets have often portrayed them as victims of a dire situation who are deserving of aid (Lawlor & Tolley, 2017). Depictions of voluntary migrants during the European refugee situation, on the other hand, tend to be consistently negative across the political spectrum (Lawlor & Tolley, 2017). Despite this knowledge of the difference between the portrayals and public perceptions of voluntary and forced migrants, previous literature that explores how personality traits interact with these perceptions often fails to distinguish between such out-groups.

Which personality traits are likely to influence attitudes towards refugees?

Research in the field of this study is typically guided by or conducted in response to two opposing theories of intercultural contact: group threat theory and the contact hypothesis. The former argues that the more frequently in-group members interact with out-groups, the more likely they are to develop negative attitudes towards the corresponding out-group (Blumer, 1998; Coser, 1956). Proponents of the theory attribute this outcome to the perception of a threatened collective status in the presence of large numbers of out-group members (LeVine & Campbell, 1972; Scheepers et al., 2002). The contact hypothesis, on the other hand, theorises that increased intercultural contact results in a reduction of prejudice between in-group and out-group members (Allport, 1954; Pettigrew, 1998). This premise is very much related to Adorno et al. (1950) and Allport's (1954) discoveries on generalised discrimination and modern accounts of 'blind prejudice' (Eberhardt, 2019), which recognise the inclination of individuals to take cognitive shortcuts and rely on loose stereotypes to make sense of their world if they are not able access alternative semantic structures such as direct personal contact.

In Allport's seminal work, his observations on generalised prejudice lead him to the conclusion that "prejudice is basically a trait of personality" (1954, p. 73). At roughly the same time, another group of researchers were trying to link nine 'authoritarian' personality traits to attitudes of prejudice, yet their work failed to detect any significant links (Adorno et al., 1950). However, several decades latter Bob Altemeyer (1981) improved Adorno et al.'s (1950) right-wing authoritarian scale and demonstrated in further studies that several traits were accurate predictors of prejudice and ethnocentrism (Altemeyer, 1998). Other researchers were also able to show that social dominance orientation traits, such as a preference for the hierarchical organisation of society, also correlated with generalised prejudice (Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius & Pratto, 1999). Yet,

although the right-wing authoritarian and social dominance orientation scales have been able to predict individual feelings of prejudice, they do so on the basis of “social attitudes and beliefs that express basic values of a broadly ideological nature” rather than using items that measure generalised behavioural dispositions such as those typically found in personality scales (Sibley & Duckitt, 2008, p. 250). In the wake of the renewed interest in the relationship between personality traits and prejudice, two taxonomies were created to help operationalize this measurement.

The first of these taxonomies is the FFM (Goldberg, 1993), which relies upon a factor analysis of an individual’s relationship with language to determine their personality traits. This approach is derived from Galton’s (1884) ‘lexical hypothesis’ and its underlying principle that “the most important individual differences in human transactions will come to be encoded as single terms in some or all of the world’s languages” (Goldberg, 1993, p. 26). Accordingly, the model sees analysts link the key language used in survey experiments to the corresponding five traits: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience. Although the taxonomy often comes under criticism for “reducing the rich tapestry of personality to a mere five traits”, Goldberg (1993, p. 27) emphasises that its goal is to act as a framework that allows the myriad human traits to be systematically analysed, arguing that “these broad domains incorporate hundreds, if not thousands of traits”.

Despite several studies having used the FFM in an attempt to determine whether certain personality traits correlate with prejudice, these studies have generally focussed on a type of prejudice that is not specific to refugees such as attitudes towards immigrants (Gallego & Pardos-Prado, 2013), racial prejudice or generalised prejudice (Sibley & Duckitt, 2008; Stürmer et al., 2013). Such prejudice does not necessarily reflect attitudes towards refugees given that personality has been shown to have a varying impact across prejudice domains (Akrami, Ekehammar, & Bergh, 2011; Sibley & Duckitt, 2008). Racial or

generalised prejudice could, for example, be based on one's perception of or contact with locally based out-groups such as second-generation Asians in the United States. Yet despite exhibiting such prejudice, that same individual may be sympathetic towards a refugee's situation due to the fact that their migration was forced rather than voluntarily selected and consequently hold favourable views of them. The type of prejudice we are concerned with in our study is specific to refugees, so although certain aspects of prejudice may be blind (unspecific) (Zick et al., 2008) generalised prejudice or prejudice towards other (non-refugee) groups are unlikely to be predictive of attitudes towards refugees.

The second taxonomy that has been used to test the relationship between personality traits and prejudice was developed by Ashton and Lee in 2001 and is known as the HEXACO model, deriving its name from its six factors: Honesty-Humility, Emotionality, Extraversion (X), Agreeableness, Conscientiousness, and Openness to Experience. Four of the six factors in the HEXACO model also appear in the FFM and both models use the same descriptors to characterise each of those four factors. However, two factors in the HEXACO model are unique: 'Honesty-Humility' and 'Emotionality'. The addition of the first of those two factors arguably accounts for "some elements that are often misrepresented in the Big-Five model, as well as additional and previously missed, or excluded, subdomains reflecting an orientation toward fairness and sincerity in social relations" (Stürmer et al., 2013, p. 833). However, as the HEXACO model's creators (Ashton & Lee, 2001, p. 332) point out, the addition of this factor "does not have profound impacts on the core content of the Big Five factors"; it simply results in the recalibration of some of the language associated with the Agreeableness factor, and to a lesser extent, the Conscientiousness factor. Perhaps it is unsurprising then that studies that have used the HEXACO model have not made any major discoveries regarding the Honesty-Humility factor's effect on individual levels of prejudice (Stürmer et al., 2013; Zeigler-Hill, Marcus, & Besser, 2017). Nevertheless, multiple studies have found that

Honesty-Humility has an opposing effect on attitudes: it predicts increases in right-wing authoritarianism and also predicts a decrease in social dominance orientation (Hodson, Hogg & MacInnis, 2009; Lee et al., 2009; Sibley et al., 2010). Sibley et al. (2010, p. 521) theorise that this outcome can be explained by the simultaneous desire of people high in Honesty-Humility to view “the potential gains from cooperation” (especially when one’s context is perceived as dangerous and threatening) and “the risk that one would lose out on potential gains that might be had by cheating or exploiting others”. ‘Emotionality’, on the other hand, although sharing some descriptors with ‘Neuroticism’ from the FFM such as anxiety and depression, appears a little narrower than the latter, omitting anger, indignation and other descriptors that fit into a broader category of negative feelings (Ashton & Lee, 2001; Goldberg, 1993).

Despite the limitations of prior literature for our study, we believe there is enough empirical and theoretical basis for three hypotheses. The most reliable data relevant to our objectives arguably come from Carlson et al.’s (2019) study on the predictive role of personality traits and religion on American attitudes towards Syrian refugees. Results from this study, which used the Five-Factor model, showed that Agreeableness and Openness to Experience correlated positively with favourable attitudes towards refugees whereas Conscientiousness and Extroversion were negatively associated with such attitudes. Neuroticism had no significant effect on refugee prejudice. Although Sibley and Duckitt’s (2008) large meta-analysis compared the findings of 71 studies that have used personality models to predict various types of prejudice (rather than refugee-specific prejudice), their identical conclusion with regards to Openness to Experience and Agreeableness may indicate that certain aspects of prejudice are blind. Moreover, there appears to be a sound theoretical explanation for these findings: “individuals high in Openness to Experience tend to have more liberal social and political attitudes, whereas individuals high in Agreeableness tend to

be more tender-minded and altruistic” (Carlson et al., 2019, p. 95). Gallego and Pardos-Prado (2013) offer an explanation that, although specific to immigrants, could feasibly hold true in relation to refugees. They argue that “persons high in Agreeableness have a caring and kind orientation towards other people in general. They should be both more likely to empathise with immigrants and more reluctant to engage in any kind of conflict, including intergroup conflict”, whereas “people high in Openness are more tolerant and enjoy different types of diversity... They are also more attentive to information disconfirming stereotypes” (Gallego & Pardos-Prado, 2013, p. 82). Subsequently, we hypothesise that Agreeableness and Openness to Experience will be positively related with favourable attitudes towards refugees.

Additionally, there is reason to believe that intergroup contact could mediate the effect of certain personality traits on attitudes towards refugees. Although group threat theory and the contact hypothesis offer plausible explanations for the possible impact of intergroup contact on refugee-specific prejudice, they overlook the importance of an individuals’ evaluation of this experience. According to Graf, Paolini, and Rubin (2014, p. 537), if we do not consider the effects of negative contact, then “part of the picture is absent, and this poses a serious limitation to the knowledge gained from intergroup contact research and its applicability to real life settings”. Thus, it is unlikely the frequency of contact that determines various types of prejudice, “it is the richness of contact that matters” (Ahmed, 2017, p. 548). A study that measured contact and prejudice throughout multiple German cities confirmed this by demonstrating that prejudice was only slightly lower in large cities (more opportunities for intergroup contact) than smaller ones and that prejudice ultimately depended on the quality of contact (Dirksmeier, 2014). From this discovery and the preceding rationale, we hypothesise that contact valence will be more predictive of attitudes towards refugees than contact frequency.

Methodology

We distributed an online questionnaire to adults aged 18 to 65 in Belgium, Sweden, France, and the Netherlands, in September and October of 2017. It was fielded for three weeks, at which point a sample size of 6,000 respondents (1,500 per country) was reached. The primary aim of the recruitment effort was to gather data to investigate associations between sociological, psychological, and media indicators, and attitudes towards immigrants and refugees (De Coninck, d'Haenens, & Joris, 2019). We opted for an online questionnaire because of its (cost) efficiency, and country selection was based on convenience: the Belgian polling agency we worked with has a strong presence in the four countries under study, which meant we could limit the cost of the study and still receive a large dataset. The polling agency drew a nonrandom heterogeneous purposive sample out of its available panels, with heterogeneity in terms of age and gender. The response rate was about 35 per cent and responses were weighted by gender and age to ensure that the data were representative for these characteristics within each country. Respondents were contacted through e-mail with the request to cooperate in a study, without offering incentives. The survey itself was distributed via the polling agency's own tool, and in the official language of the country or region (either Dutch, French, or Swedish) that respondents resided in. Translations of the survey were carried out by professional translators, ensuring that the terminology used in the questions is considered 'everyday language' by the respondents. Respondents were unable to skip questions, but some did have a 'No answer'-option. Each question was presented on a different page, and respondents did not have the option to return to previous questions and change their answer. The questionnaire took about 15 min to complete (De Coninck, 2020). Ethical approval for this study was obtained by the Social and Societal Ethics Committee (G-2017 07 854) of KU Leuven.

Measures

Dependent variables: Attitudes towards refugees

To measure attitudes towards refugees, we adapted a scale previously used in rotating modules of the European Social Survey (ESS). It was created to measure migration attitudes and was included in Round 1 (2002) and Round 7 (2014). The original scale consists of six items asking which groups of immigrants should be allowed to come and live in the country (European Social Survey, 2014). Because we want to measure attitudes on refugees, we presented the same scale but switched out the word ‘immigrant’ for ‘refugee’. An example of one of the items is: ‘To what extent do you think refugees mentioned below should be allowed to come and live here?’, with answer option ‘Refugees of a different race or ethnicity than most of [country]’s population’. Answer categories ranged from 1 (allow none) to 4 (allow many). We presented the scale in its original form and added an extra item concerning refugees from Muslim countries. The reason for the inclusion of this item lies in the fact that most newcomers entering Europe in the refugee crisis originate from Syria, Iraq, or Afghanistan – predominantly Muslim countries (Pew Research Center, 2017). Before completing this block of items, we presented respondents with the UN-definition of refugees so that respondents across all four countries would have a uniform understanding of this group when completing the questionnaire. Cronbach’s alpha value indicates high internal reliability for this scale ($\alpha = .94$). Additional information regarding this scale (exact wording, internal consistency, item correlations) can be found in Appendix A.

Independent variables: Five Factor Model of personality traits with Honesty-Humility factor

In order to collect data on the dimensions of the FFM, we used a brief measure of personality characteristics containing 10 items. Each item contains a personality characteristic, and people were asked to indicate to what extent it applied to them (1 = does not apply at all, 5 =

fully apply). Although such measures are somewhat less adequate than more expansive assessments of personality characteristics, the choice for a shorter version was made to limit the survey length, which has been shown to significantly affect drop-out (Vicente & Reis, 2010). The 10 items cover both poles of each personality dimension of the FFM: outgoing, enthusiastic/reserved, quiet (Extraversion), reliable, disciplined/disorganized, sloppy (Conscientiousness), empathetic, warm/critical, confrontational (Agreeableness), open to new experiences, profound/conservative, not creative (Openness to Experiences), tense, irascible/calm, emotionally stable (Neuroticism). The version we use was developed by Gosling, Rentfrow and Swann Jr. and “reached adequate levels in terms of: (a) convergence with widely used Big Five measures in self, observer, and peer reports, (b) test–retest reliability, (c) patterns of predicted external correlates, and (d) convergence between self and observer ratings” (Gosling, Rentfrow, & Swann Jr., 2003, p. 504). Items on the opposite pole of each personality dimension are reverse coded to obtain accurate scores for all dimensions.

Although the HEXACO model does not seem to generate findings that are fundamentally different to those that come from the FFM model, the additional Honesty-Humility factor used in the former appears to be informative (Stürmer et al., 2013). Honesty-Humility “represents the tendency to be fair and genuine in dealing with others, in the sense of cooperating with others even when one might exploit them without suffering retaliation” (Ashton & Lee, 2001, p. 156). To determine this trait’s presence, descriptors such as humility, trust, fairness, sincerity and altruism are assessed. Although this dimension is not included in the FFM-measure (see above), we created a proxy through the following three items: ‘Generally speaking, would you say that most people can be trusted, or that you can’t be too careful in dealing with people?’, ‘Do you think that most people would try to take advantage of you if they got the chance, or would they try to be fair?’, and ‘Would you say that most of the time people try to be helpful or that they are mostly looking out for

themselves?’ These items originate from the ESS, where they are a part of the core questionnaire that is included in each round to measure trust – one of the key elements of Honesty-Humility. Answer options range from 0 to 10, with high scores indicating a tendency to be trusting of others. These scores are then recoded to correspond to those of the other personality dimensions (1-5).

Independent variables: Intergroup contact

Intergroup contact was measured in three ways: whether or not a respondent has any friends with a migration background (1 = yes; 0 = no), how frequently they have random contact on the street, in stores, at work... with people with a migration background (1 = never; 7 = every day), and the perceived quality of this intergroup contact (1 = very bad; 11 = very good) (European Social Survey, 2014).

Additional variables

At the individual level, we include measures of a range of socioeconomic and demographic characteristics that may be relevant to attitudes towards refugees. Educational attainment is measured using ISCED – the International Standard Classification of Education -, which allows for a harmonized measurement of educational attainment across countries. We also include measures of gender (1 = female; 0 = male), age (18–65), and country of residence. In Table 1, we present descriptive statistics of the sample for all variables used in the analyses.

Table 1. Descriptive statistics

	Mean	Std Dev	Min	Max
Attitudes towards refugees	2.53	0.85	1	4
Personality dimensions				
Extraversion	3.09	0.90	1	5
Agreeableness	3.55	0.73	1	5
Neuroticism	2.50	0.80	1	5
Openness to Experience	3.45	0.72	1	5
Conscientiousness	3.77	0.79	1	5
Honesty-Humility	3.71	1.81	1	5
Intergroup contact				
Friends	0.68	0.47	0	1
Random contact	4.81	2.01	1	7
Valence of contact	7.37	2.26	1	11
Age	43.37	13.26	18	65
Gender				
Male	0.49	0.50	0	1
Female	0.50	0.50	0	1
Educational attainment	4.34	1.14	1	6
Household income	2.84	1.48	1	6
Country of residence				
Belgium	0.25	0.43	0	1
France	0.25	0.43	0	1
Netherlands	0.25	0.43	0	1
Sweden	0.25	0.43	0	1

Analytic strategy

Due to the ordinal nature of the items that measure attitudes in this study, a statistical assumption is violated: these data are not normally distributed. The data are also clearly nested within countries thereby requiring multilevel modelling. Before proceeding with this analysis, it is prudent to ask if multilevel modelling is required with the given data. After all, “nested datasets do not automatically require multilevel modelling. If there is no variation in response variable scores across level-2 units ... the data can be analyzed using ordinary least squares multiple regression” (Peugh, 2010, p. 88). To answer this question, we use dependent variable to calculate the intra-class correlation coefficient (ICC). The ICC can be characterised as the proportion of (in this case) attitude score variation across countries (level 2-units) and as the expected correlation between the attitude scores of two respondents (level 1-units) from the same country (Peugh, 2010). A high ICC value indicates that a large proportion of variance in attitude scores can be explained by mean attitude score differences between countries. For more information on the calculation of the ICC, see Peugh (2010). We find an ICC of 0.03, indicating that only 3% of variance in attitude scores can be explained by mean differences between countries. Previous literature finds ICC values from .05 to .20 to be the most common values in multilevel modelling applications in the social sciences (Muthén, 1994; Spybrook, Raudenbush, Liu, Congdon, & Martinez, 2008). Given our low ICC value, this measure suggests that multilevel modelling may not be the most appropriate analysis to perform given the current data.

In a first step of our analysis, we conducted a Pearson correlation analysis to investigate which measures of personality, intergroup contact, or intergroup attitudes were associated with one another (see Table 2). Although the theory acknowledges that there are potentially multiple mediated relationships, such analyses require that a large number of assumptions be met (e.g., having no misspecification of causal direction, no omitted

variables, no imperfect measurement) (MacKinnon, Fairchild, & Fritz, 2007). Unfortunately, we could not rule out recursive relationships between attitudes towards refugees and predictors such as intergroup contact or ideology. Also, the dataset we used did not have highly valid and reliable measures of intergroup contact. Moreover, the fact that we looked at many different variables implied that the number of possible relationships was extremely large. This made mediation analyses difficult, and “we instead turn to the conventional approach in sociological studies and regress attitudes towards [refugees] on the Big Five personality traits” (Gallego & Pardos-Prado, 2013, p. 89), adding the measures of the different types of predictors (sociodemographic characteristics, intergroup contact, personality traits) of attitudes towards refugees in a stepwise manner. Given the non-normal nature of our data, we conducted ordinal regressions. We began by adding the sociodemographic characteristics (model 1), after which we included indicators on intergroup contact (model 2). Subsequently, we added each personality dimension separately (model 3 – model 8) and concluded with a full model (model 9). We also ran several models with interactions between the valence of intergroup contact and personality characteristics (following moderate correlations between these characteristics in Table 2), but these did not yield any significant results and were excluded from the presentation of the results².

² These additional analyses are available upon request.

Results

We reported Pearson pairwise correlations between personality dimensions, intergroup contact measures, and attitudes towards refugees in Table 2. As for the link between personality dimensions and attitudes towards refugees, correlations were similar to those of comparable studies (for example, see Carlson et al, 2019 and Gallego & Pardos-Prado, 2013). The correlation of Agreeableness with attitudes was 0.17 and highly statistically significant. Furthermore, the correlation of Openness to Experience, which was expected to be large, was 0.21 and highly statistically significant as well. Neuroticism was only moderately associated with attitudes towards refugees with a (significant) correlation coefficient of -0.05. Extraversion and Conscientiousness were not found to be statistically correlated with attitudes towards refugees. Honesty-Humility was strongly and significantly correlated with attitudes towards refugees with a correlation coefficient of 0.28.

Correlations between indicators of intergroup contact and attitudes towards refugees indicated that the frequency of contact was a predictor of attitudes, with intergroup contact through friends (0.19) and random people on the street (0.25) positively and significantly associated with attitudes. However, as expected, it was the valence or quality of this direct intergroup contact which most strongly predicted attitudes towards refugees (0.44).

In Table 3, we presented the estimates of the ordinal regression coefficients and standard errors. In line with the findings from the bivariate correlations, we found that Agreeableness (0.27) and Openness to Experience (0.27) are most strongly associated with attitudes towards refugees. An increase of one standard deviation in these traits is associated with an increase of one-third of a standard deviation in attitudes towards refugees. These findings, combined with those from the bivariate correlations, provide support for first two hypotheses that Agreeableness and Openness to Experience would be positively associated with attitudes towards refugees. An increase of one standard deviation in Honesty-Humility

and Neuroticism generates an increase of about one-sixth of a standard deviation in attitudes towards refugees. Finally, Extraversion and Conscientiousness are negatively associated with attitudes: an increase of one standard deviation in these personality traits is associated with a decrease of about one-eighth of a standard deviation in attitudes towards refugees.

Indicators on intergroup contact were positively associated with attitudes towards refugees. Having friends with a migration background was associated with an increase of 0.14 standard deviations in attitudes towards refugees, while an increase of one standard deviation in random intergroup contact was associated with a 0.08 standard deviation increase in attitudes towards refugees. However, it was the valence of this contact which played a much larger role than either type of contact: an increase of one standard deviation in the (perceived) valence of intergroup contact generated an increase of over one-third of a standard deviation in attitudes towards refugees. These findings, along with those from the bivariate correlations, confirmed our third hypothesis: contact valence was more predictive of attitudes towards refugees than contact frequency.

With regards to sociodemographic characteristics, we found that age was negatively related to attitudes – although the coefficient was very small; and an increase of one standard deviation in educational attainment generated an increase of just under one-third of a standard deviation in attitudes towards refugees. As for fixed country effects, we observed that Swedes held significantly more positive attitudes than Belgians, whereas the French held more negative attitudes. The Dutch did not significantly differ from Belgians in this regard.

Table 2. Pearson correlations between personality dimensions, intergroup contact, and attitudes towards refugees

	Attitudes	Extraversion	Agreeableness	Neuroticism	Openness to Experience	Conscientiousness	Honesty-Humility	Friends contact	Random contact	Valence of contact
Attitudes	1.000									
Extraversion	.02	1.000								
Agreeableness	.17**	.08**	1.000							
Neuroticism	-.05**	-.20**	-.36**	1.000						
Openness to Experience	.21**	.32**	.30**	-.24**	1.000					
Conscientiousness	.01	.11**	.29**	-.35**	.20**	1.000				
Honesty-Humility	.28**	.07**	.15**	-.14**	.11**	.05**	1.000			
Friends contact	.19**	.13**	.03*	-.05**	.18**	-.04**	.09**	1.000		
Random contact	.25**	.13**	.10**	-.13**	.21**	.11**	.10**	.31**	1.000	
Valence of contact	.44**	.06**	.21**	-.10**	.19**	.03*	.25**	.24**	.22**	1.000

Notes: *: $p < 0.05$; **: $p < 0.01$.

Table 3. Ordinal regression models of attitudes towards refugees

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Age	-.01*** (.00)	-.01*** (.00)	-.01*** (.00)	-.01*** (.00)	-.01*** (.00)	-.01*** (.00)	-.01*** (.00)	-.01*** (.00)	-.01*** (.00)
Gender (ref: Male)									
Female	.11* (.05)	.09 (.05)	.09 (.05)	.01 (.05)	.08 (.05)	.05 (.05)	.09+ (.05)	.10* (.05)	.00 (.05)
Educational attainment	.36*** (.02)	.29*** (.02)	.29*** (.02)	.29*** (.02)	.29*** (.02)	.28*** (.02)	.29*** (.02)	.27*** (.02)	.28*** (.02)
Country of residence (ref: Belgium)									
France	-.36*** (.06)	-.35*** (.07)	-.34*** (.07)	-.30*** (.07)	-.34*** (.07)	-.34*** (.07)	-.34*** (.07)	-.29*** (.07)	-.31*** (.07)
Netherlands	.17* (.07)	.00 (.07)	.00 (.07)	-.01 (.07)	.00 (.07)	-.01 (.07)	-.00 (.07)	-.03 (.07)	-.01 (.07)
Sweden	.47*** (.07)	.56*** (.07)	.57*** (.07)	.64*** (.07)	.56*** (.07)	.53*** (.07)	.56*** (.07)	.53*** (.07)	.64*** (.07)
Intergroup contact									
Friends		.17** (.06)	.18** (.06)	.18** (.06)	.17** (.06)	.13* (.06)	.16** (.06)	.16** (.06)	.14* (.06)
Random contact		.08*** (.01)	.08*** (.01)	.07*** (.01)	.08*** (.01)	.07*** (.01)	.08*** (.01)	.08*** (.01)	.08*** (.01)
Valence of contact		.39*** (.01)	.39*** (.01)	.38*** (.01)	.39*** (.01)	.38*** (.01)	.39*** (.01)	.36*** (.01)	.35*** (.01)
Personality dimensions									
Extraversion			-.06* (.03)						-.11*** (.03)
Agreeableness				.27*** (.04)					.27*** (.04)
Neuroticism					.05+ (.03)				.17*** (.03)
Openness to Experience						.25*** (.04)			.27*** (.04)
Conscientiousness							-.08* (.03)		-.13*** (.03)
Honesty-Humility								.18*** (.01)	.18*** (.01)
Nagelkerke R²	.08	.28	.28	.28	.28	.28	.28	.30	.32

Notes: Standard errors in parentheses. n = 6,000. +: p < 0.10; *: p < 0.05; **: p < 0.01; ***: p < 0.001.

Discussion

In this study we explored the link between personality traits and European attitudes towards refugees in the context of the European refugee situation. Although multiple scholars had already published findings on the effect of personality traits on various forms of prejudice, only one other study that we were aware of had examined the effect of personality on refugee prejudice (Carlson et al, 2019). However, that study looked at American attitudes towards Syrian refugees, which could feasibly have generated different results given the different contextual influences. Furthermore, our study also examined whether certain types of intergroup contact mitigated the effect of personality on refugee prejudice.

Our results confirmed our first two hypotheses concerning the association between higher Openness to Experience and Agreeableness and positive attitudes towards refugees, which in turn appear to support the findings of the studies we based those hypotheses on (Carlson et al., 2019; Gallego & Pardos-Pardo, 2013; Sibley & Duckitt, 2008). We also discovered that Honesty-Humility had the same association with refugee prejudice. Although prior literature on this personality trait appeared to be contradictory, this finding could be interpreted as support for the notion that people who are honest and fair see the “potential gains from cooperation” rather than exhibiting those facets selectively to benefit at someone else’s expense (Sibley, 2010, p. 521). Contrary to previous literature on prejudice that was not specific to refugees (Gallego & Pardos-Pardo, 2013; Sibley & Duckitt, 2008;), we found that Extraversion was negatively related to attitudes towards refugees. This finding, however, supports Carlson et al.’s (2019) discovery that Extraversion was positively associated with American prejudice towards Syrian refugees. Unfortunately, neither we nor Carlson et al. (2019, p.102) have a feasible explanation as to why facets of Extraversion such as “warmth, gregariousness, assertiveness, activity, and excitement seeking” would correlate negatively with attitudes towards refugees. Conscientiousness was also found to have a positive

correlation with refugee prejudice, which was consistent with Carlson et al.'s (2019) study. In this case, the authors did have an explanation for the association, arguing that facets of Conscientiousness such as orderliness, efficiency and dutifulness would all be susceptible to the negative media coverage of refugees in the context of the study. Finally, we found mixed results regarding Neuroticism: bivariate analyses showed a fairly weak negative correlation with attitudes towards refugees, but a positive association with attitudes was found in the regression analysis. This is in line with previous research that provided inconsistent evidence about the association of Neuroticism with prejudice (Carlson et al., 2019; Sibley & Duckitt, 2008). One possible explanation by Rosenstein (2008) points to the assumption that Neuroticism may predict attitudes for some types of prejudice, but not for others. Different groups can be perceived as threatening to a varying degree, and Neuroticism may only generate negative attitudes towards groups that people perceive as threatening, such as immigrants. Refugees may be perceived as less threatening, which is in line with findings by De Coninck (2020) and could explain the positive association of this trait with attitudes towards refugees.

Our study also made an important discovery regarding the association between intergroup contact and attitudes towards refugees. The results were mostly in line with Allport's contact hypothesis, which states that frequent contact between in-group and out-group members reduces negative attitudes from the in-group towards the out-group (Pettigrew, 1998). Yet, although the debate amongst scholars generally centres on whether contact (typically frequent contact) between in-groups and out-groups is associated with some form of prejudice towards out-groups, what is often neglected is the significance of the type of contact. Intergroup contact can be measured in many different ways, and some types of contact may be more influential than others. Accordingly, we not only measured the frequency of participant contact with people from other ethnic groups, but we also

distinguished between random contact and contact with friends and assessed the perceived quality of the contact. Our results revealed that the valence of this contact was even more strongly related to attitudes than the frequency of contact and so an assessment of the perceived quality of one's contact is integral to the understanding of the mitigating effect of intergroup contact. This discovery confirmed our hypothesis and thus supported the earlier work of several scholars (Ahmed, 2017; Dirksmeier, 2014; Graf et al., 2014).

In a partial replication of the research design of Gallego and Pardos-Prado (2013), we combined personality traits with relevant socio-economic and contact predictors of attitudes towards refugees. Although Agreeableness and Openness to Experience have moderate associations with attitudes, several of the included social predictors still show sizeable effects. We were also able to demonstrate that the negative association of conscientiousness with attitudes towards refugees persisted even after controlling for the role of educational attainment. This is particularly meaningful given the knowledge that many conscientious individuals obtain a high level of education.

Limitations

One of the main shortcomings of this study was that it did not assess the possible mediation and moderation relationships between personality and social factors. Future research is needed to examine the exact mechanisms behind why personality affects attitudes towards refugees. Although there have been scarce attempts to combine personality psychology and social research in the past, this study builds on these attempts by providing findings based on a large dataset with information of 6,000 citizens across four European countries in 2017. This provides a more comprehensive examination of the relationship between situational and dispositional factors in predicting attitudes towards immigrants, but future research on this topic remains necessary. Furthermore, we must be careful in generalizing these findings to other European populations. The country selection in this study was based on convenience,

and although the country subsamples are representative for the adult population within each country, data from other European countries with different population characteristics may exhibit different relationships between personality characteristics and intergroup attitudes. However, we do believe that the results presented here are important and constitute a starting point for further inquiry.

As research strives to further understand prejudice towards refugees, we recommend that future studies consider the role of right-wing authoritarianism and social dominance orientation along with personality characteristics, since the relationship between personality and attitudes towards refugees may be further mediated by these variables. Future research may also include exploring these variables in relation to general prejudice or comparing the findings to the specific prejudice of immigrants or other migrant groups. Finally, we also recommend future studies to consider comparing different ‘types’ of refugees: from specific countries, faith groups, or with different migration motives (e.g., war, climate change).

Conclusion

To our knowledge this is only the second study that has examined the relationship between personality and refugee-specific prejudice. Our findings are largely consistent with those of the other study that investigated this relationship (Carlson et al., 2019), reinforcing the knowledge of the effect the traits of Agreeableness, Extraversion, Openness to Experience, and Conscientiousness in particular have on these attitudes. This was especially interesting considering the different contextual environments of the two studies and arguably suggests that media portrayal of refugees is more determinant of these attitudes than the real-life problems they ostensibly stem from. In addition to this, our findings shed light on the role of intergroup contact as a mitigating factor in the formation of these attitudes. Although contact frequency negatively correlated with refugee prejudice, it was the valence of this contact that had the greater impact on this association. This latter discovery could feasibly be of use to

studies exploring other types of prejudice given that our intergroup contact variables did not specify contact with refugees.

Disclosure of interest

The authors declare no conflict of interest.

Acknowledgements

This research was supported by funding from the Belgian Science Policy Office (BELSPO), as part of the framework program BRAIN-be (Belgian Research Action Through Interdisciplinary Networks), through the contract number BR/165/A4/IM2MEDIATE and from the KU Leuven Research Council within the framework of the C2-research project FRIENDS with project number 3H170314.

References

- Ackermann, K., & Ackermann, M. (2015). The Big Five in context: Personality, diversity and attitudes toward equal opportunities for immigrants in Switzerland. *Swiss Political Science Review*, *21*: 396–418. doi:10.1111/spsr.12170.
- Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., & Sanford, N. (1950). *The authoritarian personality*. New York, NY: Harper & Row.
- Ahmed, S. (2017). News media, movies, and anti-Muslim prejudice: Investigating the role of social contact. *Asian Journal of Communication*, *27*: 536–553. doi:10.1080/01292986.2017.1339720.
- AIDA. (2019). Asylum information database: Country reports. *Asylum Information Database*. Retrieved from asylumineurope.org.
- Akrami, N., Ekehammer, B., & Bergh, R. (2011). Generalized prejudice: Common and specific components. *Psychological Science*, *22*: 57–59. doi:10.1177/0956797610390384
- Allport, G. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.
- Altemeyer, B. (1981). *Right-wing authoritarianism*. Winnipeg, Canada: University of Manitoba Press.
- Altemeyer, B. (1998). The other “authoritarian personality”. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 47–92). San Diego, CA: Academic Press.
- Ashton, M. C., & Lee, K. (2001). A theoretical basis for the major dimensions of personality. *European Journal of Personality*, *15*: 327–353. doi:10.1002/per.417.
- Blau, F. D., & Mackie, C. (2017). *The economic and fiscal consequences of immigration*. Washington, D.C.: The National Academies Press.
- Blumer, H. (1998). Race prejudice as a sense of group position. In M. W. Hughley, *New tribalisms: The resurgence of race and ethnicity* (pp. 31–40). London, UK: Palgrave Macmillan.

- Bratsberg, B., Raaum, O., Røed, M., & Schøne, P. (2014). Immigration wage effects by origin. *The Scandinavian Journal of Economics*, 116: 356–393. doi:10.1111/sjoe.12053.
- Carlson, M. M., McElroy, S. E., Aten, J. D., Davis, E. B., Van Tongeren, D., Hook, J. N., & Davis, D. E. (2019). We welcome refugees? Understanding the relationship between religious orientation, religious commitment, personality, and prejudicial attitudes toward Syrian refugees. *The International Journal for the Psychology of Religion*, 29: 94–107. doi:10.1080/10508619.2019.1586067.
- Coser, L. A. (1956). *The functions of social conflict*. New York, NY: Routledge.
- De Cleen, B., Zienkowski, J., Smets, K., Dekie, A., & Vandevordt, R. (2017). Constructing the ‘refugee crisis’ in Flanders. Continuities and adaptations of discourses on asylum and migration. In M. Barlai, B. Fähnrich, C. Griessler, & M. Rhomberg (Eds.), *The migrant crisis: European perspectives and national discourses* (pp. 59–78). Münster, Germany: LIT Verlag.
- De Coninck, D. (2020). Migrant categorizations and European public opinion: Diverging attitudes towards immigrants and refugees. *Journal of Ethnic and Migration Studies*, 46: 1667–1686. doi:10.1080/1369183X.2019.1694406.
- De Coninck, D., d’Haenens, L., & Joris, W. (2019). Investigating intergroup attitudes in Europe: Cross-national data on news media, attitudes towards newcomers, and socio-psychological indicators. *Data in Brief*, 26: 104535. doi:10.1016/j.dib.2019.104535.
- Dirksmeier, P. (2014). Are urbanites more permissive? Germany’s urban geography of prejudice. *Urban Affairs Review*, 50: 835–863. doi:10.1177/1078087414520950.
- Downes, J., & Loveless, M. (2018). Centre right and radical right party competition in Europe: Strategic emphasis on immigration, anti-incumbency, and economic crisis. *Electoral Studies*, 54: 148–158. doi:10.1016/j.electstud.2018.05.008.

- Eberhardt, J. L. (2019). *Biased: The new science of race and inequality*. New York, NY: Viking Press.
- European Social Survey. (2014). *ESS Round 7 source questionnaire*. London: ESS ERIC Headquarters, Centre for Comparative Social Surveys, City University London.
- Gallego, A., & Pardos-Prado, S. (2013). The Big Five personality traits and attitudes towards immigrants. *Journal of Ethnic and Migration Studies*, 40: 79–99. doi:10.1080/1369183X.2013.826131.
- Galton, F. (1884). Measurement of character. *Fortnightly Review*, 36:179–185.
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *The American Psychologist*, 48: 26–34. doi:10.1037/0003-066X.48.1.26.
- 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. doi:10.1016/S0092-6566(03)00046-1.
- Graf, S., Paolini, S., & Rubin, M. (2014). Negative intergroup contact is more influential, but positive intergroup contact is more common: Assessing contact prominence and contact prevalence in five central European countries. *European Journal of Social Psychology*, 44: 536–547. doi:10.1002/ejsp.2052.
- Heath, A., & Richards, L. (2016). *Attitudes towards immigration and their antecedents: Topline results from Round 7 of the European Social Survey*. London, UK: European Social Survey ERIC.
- Hodson, G., Hogg, S., & MacInnis, 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. doi:10.1016/j.jrp.2009.02.005
- Human Rights Watch. (2019). *World report 2019: Events of 2018*. New York, NY: Seven Stories Press.

- Keen, L., Meadows, A., & Welander, M. (2019). *No way forward, no way out: Human rights infringements facing refugees and displaced people in Belgium*. Brussels, Belgium: Refugee Rights Europe.
- Krzyżanowski, M., Triandafyllidou, A., & Wodak, R. (2018). The mediatization and the politicization of the “refugee crisis” in Europe. *Journal of Immigrant & Refugee Studies*, *16*: 1–14. doi:10.1080/15562948.2017.1353189.
- Lawlor, A., & Tolley, E. (2017). Deciding who’s legitimate: News media framing of immigrants and refugees. *International Journal of Communication*, *11*: 967–991.
- Lee, K., Ashton, M., Pozzebon, J., Visser, J., Bourdage, J., & Ogunfowora, B. (2009). Similarity and assumed similarity in personality reports of well-acquainted persons. *Journal of Personality and Social Psychology*, *96*: 460–472. doi:10.1037/a0014059.
- LeVine, R. A., & Campbell, D. T. (1972). *Ethnocentrism: Theories of conflict, ethnic attitudes, and group behaviour*. Oxford, UK: Wiley.
- Lewis, P., Clarke, S., Barr, C., Holder, J., & Kommenda, N. (2018, November 20). Revealed: One in four Europeans vote populist. *The Guardian*. Retrieved from: <https://www.theguardian.com/world/ng-interactive/2018/nov/20/revealed-one-in-four-europeans-vote-populist>
- MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, *58*: 593–614. doi:10.1146/annurev.psych.58.110405.085542.
- Mclaren, L., & Jonson, M. (2007). Resources, group conflict and symbols: Explaining anti-immigration hostility in Britain. *Political Studies*, *55*: 709–732. doi:10.1111/j.1467-9248.2007.00680.x.
- Muthén, B. O. (1994). Multilevel covariance structure analysis. *Sociological Methods & Research*, *22*: 376–398. doi:10.1177/0049124194022003006.

- Peugh, J. L. (2010). A practical guide to multilevel modeling. *Journal of School Psychology, 48*: 85–112. doi:10.1016/j.jsp.2009.09.002.
- Pettigrew, T. (1998). Intergroup contact theory. *Annual Review of Psychology, 49*: 65–85. doi:10.1146/annurev.psych.49.1.65.
- Pew Research Center. (2017). Europe's growing Muslim population. *Pew Research Center*. Retrieved from <http://assets.pewresearch.org/wp-content/uploads/sites/11/2017/11/06105637/full-report-for-web-posting.pdf>
- 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 and Social Psychology, 67*: 741–763. doi:10.1037/0022-3514.67.4.741.
- Riek, B. M., Mania, E. W., & Gaertner, S. L. (2006). Intergroup threat and outgroup attitudes: A meta-analytic review. *Personality and Social Psychology Review, 10*: 336–353. doi:10.1207/s15327957pspr1004_4.
- Rosenstein, J. E. (2008). Individual threat, group threat, and racial policy: Exploring the relationship between threat and racial attitudes. *Social Science Research, 37*: 1130–1146. doi:10.1016/j.ssresearch.2008.04.001.
- Scheepers, P., Gijsberts, M., & Coenders, M. (2002). Ethnic exclusionism in European countries. Public opposition to civil rights for legal migrants as a response to perceived ethnic threat. *European Sociological Review, 18*: 17–34. doi:10.1093/esr/18.1.17.
- Scheve, K., & Slaughter, M. (2001). Labour market competition and individual preferences over immigration policy. *The Review of Economics and Statistics, 83*: 133–145. doi:10.1162/003465301750160108.
- Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review, 12*: 248–279. doi:10.1177/1088868308319226.

- Sibley, C. G., & Duckitt, J. (2009). Big-Five personality, social worldviews, and ideological attitudes: Further tests of a dual process cognitive-motivational model. *The Journal of Social Psychology, 149*: 545–561. doi:10.1080/00224540903232308.
- Sibley, C. G., & Duckitt, J. (2010). Personality, ideology, prejudice, and politics: A dual-process motivational model. *Journal of Personality, 78*: 1861–1894. doi:10.1111/j.1467-6494.2010.00672.x.
- Sibley, C. G., Harding, J. F., Perry, R., Asbrock, F., & Duckitt, J. (2010). Personality and prejudice: Extension to the HEXACO personality model. *European Journal of Personality, 24*: 515–534. doi:10.1002/per.750.
- Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression*. Cambridge, UK: Cambridge University Press.
- Skodo, A. (2018). Sweden: By turns welcoming and restrictive in its immigration policy. *Migration Policy Institute*. Retrieved from <https://www.migrationpolicy.org/article/sweden-turns-welcoming-and-restrictive-its-immigration-policy>
- Sniderman, P., & Hagendoorn, L. (2007). *When ways of life collide*. Princeton, NJ: Princeton University Press.
- Sniderman, P., Hagendoorn, L., & Prior, M. (2004). Predisposing factors and situational triggers: Exclusionary reactions to immigrant minorities. *The American Political Science Review, 98*: 35–49. doi:10.1017/S000305540400098X.
- Spybrook, J., Raudenbush, S. W., Liu, X.-F., Congdon, R., & Martinez, A. (2008). *Optimal design for longitudinal and multilevel research: Documentation for the “Optimal Design” software* (Working paper). Available at: <https://pdfs.semanticscholar.org/968e/e295121b114db964b384456237e7d7263e0b.pdf>

- Steinhardt, M. F. (2011). The wage impact of immigration in Germany – New evidence for skill groups and occupations. *The BE Journal of Economic Analysis & Policy*, 11: 1–35. doi:10.2202/1935-1682.2615.
- Stephan, W.G., & Stephan, C.W. (2000). An integrated threat theory of prejudice. In S. Oskamp (Ed.), *The Claremont symposium on applied social psychology: Reducing prejudice and discrimination* (p. 23–45) Mahwah, NJ: Lawrence Erlbaum Associates.
- Stephan, W. G., & Renfro, C. L. (2002). The role of threat in intergroup relations. In D. M. Mackie & E. R. Smith (Eds.), *From prejudice to intergroup emotions: Differentiated reactions to social groups* (pp. 191–207). New York, NY: Psychology Press.
- Stephan, W. G., Renfro, C. L., Esses, V. M., Stephan, C. W., & Martin, T. (2005). The effects of feeling threatened on attitudes towards immigrants. *International Journal of Intercultural Relations*, 29: 1–19. doi:10.1016/j.ijintrel.2005.04.011.
- Stürmer, S., Benbow, A., Siem, B., Barth, M., Bodansky, A. N., & Lotz-Schmitt, K. (2013). Psychological foundations of xenophilia: The role of major personality traits in predicting favorable attitudes toward cross-cultural contact and exploration. *Journal of Personality and Social Psychology*, 105: 832–851. doi:10.1037/a0033488.
- Talay, L. (2017). What do we reliably know about European perceptions of Muslim asylum seekers? *Australia and New Zealand Journal of European Studies*, 9: 57–82.
- UNHCR. (2010). *Convention and Protocol Relating to the Status of Refugees*. Geneva, Switzerland: The United Nations Refugee Agency.
- van Selm, J. (2019). Migration in the Netherlands: Rhetoric and perceived reality challenge Dutch tolerance. *Migration Policy Institute*. Retrieved from <https://www.migrationpolicy.org/article/migration-netherlands-rhetoric-and-perceived-reality-challenge-dutch-tolerance>

- Vicente, P., & Reis, E. (2010). Using questionnaire design to fight nonresponse bias in web surveys. *Social Science Computer Review*, 28: 251–267. doi:10.1177/0894439309340751.
- Wike, R., Stokes, B., & Simmons, K. (2016). Europeans fear wave of refugees will mean more terrorism, fewer jobs. *Pew Research Center*. Retrieved from <https://www.pewresearch.org/global/2016/07/11/europeans-fear-wave-of-refugees-will-mean-more-terrorism-fewer-jobs/>
- Zeigler-Hill, V., Marcus, D. K., & Besser, A. (2017). The roles of personality traits and perceived threat in the attitudes of Israelis toward peace with the Palestinians. *Personality and Individual Differences*, 116: 296–300. doi:10.1016/j.paid.2017.05.007.
- Zick, A., Wolf, C., Küpper, B., Davidov, E., Schmidt, P., & Heitmeyer, W. (2008). The syndrome of group-focused enmity: The interrelation of prejudices tested with multiple cross-sectional and panel data. *The Journal of Social Issues*, 64: 363–383. doi:10.1111/j.1540-4560.2008.00566.x.

Appendix A

Items measuring attitudes towards refugees

To what extent do you think refugees mentioned below should be allowed to come and live here?

1. Refugees of the same race or ethnicity as most of [country]'s population.
2. Refugees of a different race or ethnicity than most of [country]'s population.
3. Refugees of the richer countries in Europe.
4. Refugees of the poorer countries in Europe.
5. Refugees of the richer countries outside Europe.
6. Refugees of the poorer countries outside Europe.
7. Refugees coming from Muslim countries who wish to work in [country].

Table A1. Internal consistency, standardized factor loadings, and correlations between items on attitudes towards refugees

($\alpha = .94$)	Factor loading	1.	2.	3.	4.	5.	6.	7.
1.	.78***	-						
2.	.92***	.76**	-					
3.	.80***	.74**	.72**	-				
4.	.92***	.74**	.84**	.77**	-			
5.	.86***	.70**	.77**	.87**	.77**	-		
6.	.93***	.69**	.87**	.69**	.88**	.79**	-	
7.	.87***	.62**	.82**	.65**	.78**	.75*	.85**	-

Note. Answer options range from 1 (allow none) to 4 (allow many).