

# **Are there Limits to Empathy? A Survey Experiment on empathic Concern and Perspective-taking as Bases for Attitudes towards different Groups of Refugees**

Nora Huth-Stöckle<sup>1</sup> & Boris Heizmann<sup>2</sup>

<sup>1</sup> University of Wuppertal, Germany; [nhuth@uni-wuppertal.de](mailto:nhuth@uni-wuppertal.de); <https://orcid.org/0000-0002-1651-9101>

<sup>2</sup> GESIS - Leibniz Institute for the Social Sciences, Germany; <https://orcid.org/0000-0001-5853-9613>

## **Abstract**

This article examines how empathic concern and perspective-taking influence different exclusionary attitudes towards refugees. More specifically, we investigate how empathic competence underpins social distance towards refugees and the opposition to granting them civil rights. Furthermore, we explore the potential constraints of this relationship by investigating the moderating role of different refugee characteristics via a survey-experimental approach using single-wave data from the GESIS Panel, a representative survey conducted in Germany. The refugee characteristics relate to having a Muslim vs. Christian background and having high vs. low qualifications, implying different levels of intergroup threat. The results indicate that higher levels of perspective-taking and empathic concern are associated with lower social distance towards refugees and opposition to granting rights to refugees. Furthermore, while the respondents' exclusionary attitudes were higher towards refugee groups, implying higher levels of intergroup threat, empathic concern and perspective-taking predicted more positive attitudes towards the different groups of refugees equally. This implies that the effect of empathy does not depend on outgroup characteristics.

**Keywords:** empathy, outgroup attitudes; refugees; intergroup threat

## **Introduction**

Refugee immigration has gained significant attention in Europe due to the high numbers of displaced persons arriving during the flight migration in 2015 and the subsequent years. Many European Societies have seen a remarkable influx of refugees in recent years, putting increased emphasis on this topic on the European Union's political agenda to find a joint strategy for dealing with this issue. Especially in Germany, one of Europe's main destination countries, refugee migration has led to far-reaching societal consequences. The so-called 'refugee crisis' created growing tensions in political and public debates on immigration, with some parts of German society supporting the rising number of refugees and others opposing it (BMFSFJ 2017; Kober and Kösemen 2019). As immigration continued, public opinion regarding refugees became increasingly exclusive (Czymara 2020; Gorodzeisky 2022).

Several studies demonstrate that empathic competences contribute to more positive attitudes towards outgroups. However, scholars have also noted possible limits of empathy (Cameron, Conway et al. 2022; Cameron, Scheffer et al. 2022; Ferguson et al. 2020) suggesting that the motivation to engage in empathy is influenced by the contextual situation alongside perceived cognitive and emotional costs of engaging in empathy. Therefore, empathic competences may not always translate into more positive attitudes towards outgroups, and the effect of empathy may vary for different outgroups. For instance, it may be emotionally and cognitively more challenging to empathize with outgroups perceived as more threatening, making empathy less effective in fostering positive attitudes towards those groups. In this regard, several empirical studies have shown that attitudes towards immigrant groups are more exclusionary when perceptions of these groups as threatening are higher (Czymara and Schmidt-Catran 2017; Gorodzeisky and Semyonov 2019; Jedinger and Eisentraut 2020; Meuleman et al. 2019). Together, this invites the questions of to what extent attitudes towards refugees are rooted in

empathy and whether empathic competences equally affect attitudes towards different refugee groups, relating to different levels of cultural or economic concerns.

We contribute to previous research in several ways. First, we expand the body of existing work on exclusionary attitudes towards refugees by investigating the influence of empathy. We conceptualize empathy as a multidimensional construct with a cognitive and affective component. We do this in the German context in which the topic of refugee immigration is highly salient, both politically and demographically, but also in terms of public debates (e.g., Czymara and Dochow 2018; Heidenreich et al. 2019). Specifically, we investigate how the affective component of empathy, i.e., empathic concern, and the cognitive component of empathy, i.e., perspective-taking, relate to attitudes towards refugees. Secondly, by varying refugees' characteristics, we analyze the boundaries of empathic concern and perspective-taking and assess the potential moderating role of refugees' religious background and employability. Thus, we investigate to what extent the effects of empathic competence are group-specific. Third, our study differentiates between two exclusionary attitudes: We take a more nuanced look at attitudes towards refugees by distinguishing between social distance, i.e., the willingness to accept refugees into one's direct social environment, and granting refugees basic civil rights. This shows whether and how the proposed mechanisms differ according to the proximity of the life contexts mentioned in the two outcome measures.

Our main analyses, subsequent multiverse corroboration, and replication with an alternative dataset show that attitudes towards refugees diverge strongly according to religion and skill levels and that empathic concern and perspective-taking are highly relevant predictors of such attitudes. However, refugee characteristics do not moderate these relationships, both in terms of statistical and substantive significance. Since this is based on more than 350 model specifications from our multiverse analysis and replications with another dataset, we can

confidently conclude that both aspects of empathy transcend religious and skill-related boundaries when it comes to exclusionary attitudes towards refugees.

## **Theoretical Background**

### ***Empathy and Outgroup Attitudes***

Empathy has been broadly defined as a ‘complex psychological inference in which observation, memory, knowledge, and reasoning are combined to yield insights into the thoughts and feelings of others’ (Ickes 1997: 2). Most definitions understand empathy as a multidimensional phenomenon that includes both cognitive and affective elements (Cuff et al. 2016). In our study, we follow the conceptualization of Davis (1980, 1983), with empathic concern being the affective component and perspective-taking being the cognitive component. Empathic concern involves feeling with people and emotional involvement in the situation of others, while perspective-taking involves considering and adopting others’ viewpoints.

Both concepts are expected to have beneficial consequences for intergroup relations by reducing outgroup prejudice. Affective and cognitive empathy enables opening up to the experiences and situations of outgroup members, allowing for emotional involvement and perspective adaption. This can counteract outgroup prejudice by reducing the perceived dissimilarity between self and outgroup members and by perceiving outgroup members based on their individual characteristics rather than their group membership (e.g., Crocetti et al. 2021; Galinsky and Moskowitz 2000; Miklikowska 2018; Stephan and Finlay 1999; Yzerby et al. 2002). Perspective-taking and empathic concern can help to increase the perceived overlap between the self and the outgroup, reducing in-group bias and leading to an understanding that outgroup members are not so different from themselves (Yzerby et al. 2002). Furthermore, putting oneself in the shoes of others allows one to understand an opposite point of view and its rationale, and it helps to recognize the values of other cultures and traditions (Verkuyten et

al. 2019; Verkuyten and Yogeewaran 2017). Previous research based on self-reported measures (Bruneau et al. 2018; Miklikowska 2018; Onraet et al. 2017; Pawlicka et al. 2019) and on experimental designs (Galinsky and Moskowitz 2000; Vescio et al. 2003) has shown that the ability to consider the perspective of others can shift attitudes towards outgroup members and immigrant policies into a more positive direction.

Empathic concern has been found to be positively associated with outgroup attitudes in general (Bergh and Akrami 2016; Taylor and Glen 2020) and a wide range of immigration attitudes in particular (Boag and Carnelley 2016; Bruneau et al. 2018; Pawlicka et al. 2019). For instance, Verkuyten and colleagues found that empathy increases the native Dutch's support of immigrants' rights and assistance (Verkuyten 2004; Verkuyten et al. 2018). Bruneau, Kteily, and Laustsen (2018) show that empathic concern predicted less anti-refugee policy support and lower levels of blatant dehumanization of Muslim refugees in Hungary, Greece, and Spain. A recent meta-analysis (Cowling et al. 2019) found no association between empathy and attitudes towards refugees, raising the question of potential boundaries of empathy. However, this finding is based only on four studies, which led the authors to call for further investigations of this relationship. We address this gap with the present study.

### ***Are There Limits to Empathy? The Potential Moderating Role of Intergroup Threats***

Although it is widely acknowledged that individuals differ in their empathic competence, there is evidence that empathy differs not only between persons but also substantially varies across different situations (Cuff et al. 2016; Zaki 2014; Zaki and Ochsner 2012). This implies that empathy has both a stable trait component and a context-specific state component. While there is evidence that both affective and cognitive components of empathy foster positive attitudes towards outgroups, scholars have noted possible boundaries of the effects of empathy (Cameron, Conway, et al. 2022; Cameron, Scheffer, et al. 2022; Ferguson et al. 2020). For instance, scholars have postulated that people's motivation for empathy decreases when

directed at outgroup members compared to ingroup members (Zaki 2014).

This means that people's general empathy-related tendencies may not always lead them to view outgroups more positively. Instead, the motivation towards group-specific empathic emotions or to engage in actual empathic behavior might be influenced by perceived emotional and cognitive costs and benefits of empathy, as well as the anticipated consequences (Cameron, Conway, et al. 2022; Cameron et al. 2019; Cameron, Scheffer, et al. 2022). In the context of intergroup attitudes, the potential of affective and cognitive empathy to result in a more positive view of the outgroup may be reduced when the outgroup is associated with higher perceived emotional or cognitive costs of empathy. As we will argue below, perceiving an outgroup as threatening or culturally distant may increase such psychological costs and limit the potential beneficial effects of empathy on outgroup attitudes. In the upcoming section, we will explore this topic in greater depth by discussing the potential moderating role of perceived threats on the effects of empathic concern and perspective-taking on outgroup attitudes.

The Intergroup Threat Theory (Stephan et al. 2008, 2016; Stephan and Stephan 2016) provides a theoretical framework for understanding negative attitudes towards outgroups, including refugees. The central tenet of this theoretical approach is that negative outgroup attitudes stem from perceiving the outgroup as threatening to one's ingroup's interests. Two types of threats are typically distinguished: realistic and symbolic threats. Realistic threats can be expressed in concern for the national economic and financial situation. Symbolic threats, by contrast, relate to threats to the culture, values, and collective identity. Previous studies have demonstrated that varying perceptions of immigrant groups as threatening influence attitudes towards these groups (Czymara and Schmidt-Catran 2017; Gorodzeisky and Semyonov 2019; Jedinger and Eisentraut 2020; Meuleman et al. 2019); and both symbolic and realistic threat perceptions were found to predict anti-refugee attitudes (Cowling et al. 2019).

As can be seen, empathy may have limits when it comes to particular outgroups. On the one hand, it might be that refugees, without regard for their characteristics, are per se seen as more deserving of humanitarian attention than may be the case for ordinary immigration groups in ‘normal’ times (De Coninck 2020). This could also be related to the extensive media coverage of global crises in recent years (Heidenreich et al. 2019), which may foster a general understanding of the motives behind this particular type of migration. However, the arguments presented above suggest that the type of refugees is important for attitudes towards refugees as such and for the extent to which the respondents’ general empathic tendencies are related to these two outcomes.

The perception of outgroups as threatening can increase empathy’s cognitive and emotional costs, leading to decreased empathic behavior towards those outgroups (Newman et al. 2015). Further research has shown that individuals tend to avoid situations that elicit empathy, especially when such situations come with costs, such as money, time, or emotional distress (Cameron et al. 2016). Moreover, perceived cognitive costs, such as aversion, effort, and efficacy, can also discourage individuals from engaging in empathic behavior (Cameron et al. 2019). This suggests that it is more difficult to develop and sustain empathic orientations towards groups perceived as threatening or strongly dissimilar to one’s ingroup. Both can be true to a varying extent for immigrants in general and refugees in particular.

In order to approach the issue of whether there are limits to the influence of empathy on different types of refugees, we opt for a survey-experimental approach that splits the refugee group framing into four subgroups with low or high employment prospects and with Christian or Muslim backgrounds. The evaluation of the migrants’ potential economic contribution to the country, as well as their religious background, have been shown to affect the likelihood of approving immigrants and asylum seekers both in cross-national comparison (Bansak et al. 2016; Diehl et al. 2018; Heizmann 2016; Heizmann and Ziller 2020; Naumann et al. 2018;



Turper et al. 2015) and in the German context (Czymara and Schmidt-Catran 2016; Erisen and Kentmen-Cin 2017; Fietkau and Hansen 2018). These group characteristics approach realistic and symbolic threats, respectively: Employment prospects refer to threats to the economy or welfare.<sup>1</sup> Therefore, increasing threats in that regard should not only directly influence attitudes towards refugees (Bansak et al. 2016) but also weaken the link between empathy and these attitudes. In predominantly Christian countries like Germany, being of a Muslim background refers to symbolic threat and cultural distance.<sup>2</sup> Religion also refers to one of the brightest boundaries between social groups in general (Brubaker 2013) and between majority members and refugees in particular (Bansak et al. 2016). We therefore also expect that empathic concern and perspective-taking have a lower impact when respondents are presented with the treatment with the Muslim refugee group.

### *Exclusionary Attitudes: Social Distance and Refugee Rights as Outcome Variables*

In this study, we focus on two types of exclusionary attitudes as outcome variables: the unwillingness to accept refugees into one's social environment and the withholding of civil rights from them. While both exclusionary attitudes refer to exclusion based on ethnic and/or cultural background, they do so in different contexts. The former form is more proximally

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<sup>1</sup> Referring to work-related skills has the advantage that it encompasses language proficiency, education levels, prior work experience, and potential further dimensions. Differentiating these aspects would greatly complicate our empirical setup. Moreover, in the context of refugee immigration to Germany, high German language skills may represent a somewhat unrealistic vignette scenario.

<sup>2</sup> The relationship between refugee group characteristics and exclusionary attitudes towards these groups can also be understood through the lens of theories of symbolic boundary making (Lamont and Molnar 2002; Wimmer 2008; Brubaker 2013; Heizmann 2016). In short, when individuals draw symbolic boundaries, they separate individuals into in-group members and out-group members via certain characteristics. Migrants and non-migrants are prototypical groups separated by boundaries, but these theories can be applied to many contexts (Lamont and Molnar 2002). Migration-related boundaries often are based on ascribed characteristics such as race and religion, or based on achieved characteristics such as education and skills. These characteristics can be related to the aforementioned symbolic and realistic threats, and theories of boundary making delineate the various processes through which these boundaries can become blurred, shifted or even inverted (e.g. Wimmer 2008). However, we do not measure such boundaries directly, e.g. in the form of individually-reported assessments of boundary characteristics. We instead vary the dimensions of skill and christian/muslim religion solely in our experimental treatment, i.e. skill and religion are exogenous in our setup, which in our view is more appropriately conceptualized with the above-mentioned threat approach. We therefore opted not to base our theoretical framework on boundary-making theories.

directed towards excluding the outgroup from one's direct social environment by opposing intergroup contact of varying degrees of intimacy (Pettigrew and Meertens 1995). It is also closely linked to other causally prior negative attitudes towards outgroup members, such as perceived threat (Helbling 2014; Rapp 2017). The latter has a more distal character in that it aims to exclude the outgroup from society by denying them certain rights, and it is closely related to political intolerance and conservative values (Helbling 2014). Research also suggests that majority group members are more likely to guarantee an outgroup certain rights than to accept a member of an outgroup into one's immediate surroundings (Rapp 2017). This further highlights the importance of examining both types of exclusionary intentions separately for a better understanding of the role of empathy in reducing prejudice towards outgroups: It allows us to assess the generalizability of these associations across different types of exclusionary attitudes.

## **Hypotheses**

We can summarize our theoretical considerations as follows. Based on previous studies, we expect both empathic concern and perspective-taking to decrease negative attitudes towards refugees:

Hypothesis 1a:       Persons with a stronger tendency to feel empathic concern have a lower social distance towards refugees than persons with a low tendency for empathic concern.

Hypothesis 1b:       Persons with a stronger tendency to feel empathic concern are less likely to oppose granting rights to refugees than persons with a low tendency for empathic concern.

Hypothesis 2a: Persons with a stronger tendency to take others' perspectives have lower social distance towards refugees than persons with a low tendency for perspective-taking.

Hypothesis 2b: Persons with a stronger tendency to take others' perspectives are less likely to oppose granting rights to refugees than persons with a low tendency for perspective-taking.

Furthermore, prior research and theorizing suggest that there are constraints regarding the influence of empathic concern and perspective taking on positive attitudes towards refugees:

Hypothesis 3: Refugees' characteristics moderate the effects of perspective-taking and empathic concern:

- (a) The effect of empathic concern and perspective-taking on attitudes is smaller towards Muslim refugees compared to Christian refugees.
- (b) The effect of empathic concern and perspective-taking on attitudes is smaller towards refugees with low employability compared to refugees with high employability.

### **The Contextual Setting: Refugee Migration to Germany**

Germany experienced a sharp increase in asylum applications in 2015/2016 due to the humanitarian crisis in Syria, and the political situation, among others, in Afghanistan, Iraq, and Eritrea. In 2015, an estimated 890,000 refugees arrived in Germany, making it one of Europe's top host countries (BMI 2016).

Reactions to these newcomers varied widely within the population and partly changed with the course of migration in recent years. At the beginning of the increased flight immigration to Germany in 2015, a broad public welcomed refugees and showed a strong willingness to support them. In a representative study in 2017, fifty-five percent of the respondents stated that

they supported refugees in some way in the past two years (for example, through donations or social engagement) (BMFSFJ 2017). At the same time, other parts of German society reacted with hate and violence. In 2015, the Federal Criminal Police recorded more than 1,000 crimes against asylum accommodations, 5.2 times more than the prior year (BKA 2016). Moreover, the relatively positive public opinion towards immigration diminished, and a certain skepticism spread in the years following the flight crisis (Kober and Kösemen 2019). These facts illustrate the polarizing power of the refugee issue in Germany. The polarization effect of the refugee issue is also reflected in the strengthening of the radical right party ‘Alternative für Deutschland’ (‘alternative for Germany’, AfD). The motives to support the AfD can be found in the voters’ anti-migration attitudes, cultural anxiety, and fears of social disadvantages (Arzheimer and Berning 2019; Decker 2016; Goerres et al. 2018).

Germany is a good country case for a deeper understanding of attitudes towards refugees, not only because of the high number of refugees but also because of the considerable variation in the public response to this type of migration. However, the issue of refugee immigration is contentious in many countries, as a need for a better allocation of asylum seekers within the EU was seen early on across Europe (Heizmann and Ziller 2020).

## **Data and Methods**

### ***Data***

For our analysis, we conducted an original study module within the GESIS Panel (Bosnjak et al. 2018), a survey that allows researchers to collect their own data. The GESIS Panel is a probability-based mixed-mode access panel (GESIS 2020) with the German-speaking population between 18 and 70 years permanently residing in Germany as the target population. The survey allows generalizable conclusions about the German-speaking population of adult individuals who permanently reside in Germany (Pöttschke and Weiß 2020). Respondents receive an incentive of 5 € per wave with a duration between 20-25 minutes. The panel study

comprises three recruiting cohorts of the years 2013, 2016, and 2018. The sample was drawn in a two-stage sampling procedure from municipal population registers with municipalities being the first sampling stage and individuals the second sampling stage (Bosnjak et al. 2018). For our study, respondents were asked various questions on their attitudes towards refugees and their socio-psychological personality characteristics in December 2019 and January 2020. The overall retention rate for the GESIS Panel wave we used ranges for the three recruitment cohorts between 56 and 83 percent (Bretschi et al. 2020).<sup>3</sup> We excluded 281 respondents with a foreign citizenship (5.92 percent of the initial sample) and excluded 516 responses that indicated a low response quality (9.91 percent of the initial sample)<sup>4</sup>, resulting in a final sample size of 3,988 respondents.

### ***Measurements***

For our analyses, we combined measures from our study module (comprising perspective-taking, empathic concern, vignette experiment, social distance, and opposition to granting civil rights) with additional information regarding covariates obtained from the standard modules of the GESIS Panel. Tables A1 and A2 provide an overview of the variables used, such as their question wording, sampling statistics, and the respective fieldwork phase.

### ***The Survey Experiment: Intergroup Threat and Outcome Variables***

After answering the questions regarding empathic concern, perspective taking and various covariates, respondents were randomly assigned to one of four vignette groups, resulting in ca. 1,300 respondents per vignette group.

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<sup>3</sup> The cumulative response rate is obtained by multiplying the recruitment rate (between 18 and 29 percent), profile rate (between 77 and 79 percent), completion rate (between 87 and 93 percent), and retention rate (between 82 and 56 percent) for each of the three recruitment cohorts. This results in 10 to 12 percent cumulative response rate for the three recruitment cohorts (Bretschi et al. 2020: 10).

<sup>4</sup> Specifically, we excluded responses with a particularly fast or slow response time (upper or lower percentiles in response time for the survey experiment) and those showing a high inconsistency between answers to reverse-worded items on the social distance scale compared to the other items (an average deviation exceeding 2 points on a 5-point Likert scale).

Using a 2x2 between-subject vignette experiment, we varied the characteristics of the refugee groups referred to in the outcome variables that are presumably connected to different levels of intergroup threat (see the Appendix, Table A1). In the context of realistic group threat, we differentiated between highly skilled professionals (low-threat condition, cf. Bansak et al. 2016; Hainmueller and Hiscox 2010) and unskilled workers (high-threat condition). Regarding symbolic group threat, we differentiated between refugees of the Christian faith (low-threat condition) and refugees of the Muslim faith (high-threat condition; cf. Jedinger and Eisentraut 2020). The vignette read as follows:

‘We would now like to ask you a few questions about a fictitious situation. It concerns a group of refugees who might come to Germany to live here. Imagine that these refugees would come to Germany in large numbers. Most of the members of this group are [*highly skilled professionals / unskilled workers*] of [*Christian / Muslim*] faith. To what extent do you agree with the following statements?’

Respondents answered the questions regarding social distance and opposition to refugee rights towards one randomly assigned refugee group. Table A3 in the Online Appendix documents the means and standard deviations of the respondents’ demographic and other key variables across the four experiment groups.

We created the measure of social distance based on five items (see Appendix, Table A1). On a five-point Likert scale (1 ‘completely disagree’ to 5 ‘completely agree’), respondents indicated the extent to which they would accept members of the respective refugee group in their social environment. For example, they were asked to indicate whether it would bother them ‘to have a member of this group as a direct work colleague.’

The opposition to granting civil rights was measured with four items. Respondents were asked to rate on a five-point Likert scale (1 ‘completely agree’ to 5 ‘completely disagree’) whether they agree that members of the respective refugee group should be granted specific rights (see Appendix, Table A1). For example, they were asked whether ‘members of this group should

be allowed to organize public demonstrations.’ Table A1 provides the complete list of items, their question wording, and the order of the items.

### *Independent Variables and Covariates*

Key independent variables: Perspective-taking was measured with seven items from the Interpersonal Reactivity Index (IRI, Davis 1983). Respondents were asked to rate on a five-point Likert scale (1 ‘does not apply at all’ to 5 ‘fully applies’) questions such as ‘I try to look at everybody’s side of a disagreement before I make a decision’ or ‘I sometimes find it difficult to see things from the ‘other guy’s’ point of view’ (see Appendix, Table A1 for a complete list of items).

We measured empathic concern with seven items from the IRI. For this dimension, respondents rated on a five-point Likert scale (1 ‘does not apply at all’ to 5 ‘fully applies’) for example, whether they ‘sometimes do not feel very sorry for other people when they are having problems’ or ‘are often quite touched by things that [they] see happen’ (see Appendix, Table A1 for a complete list of the items).

Covariates: Furthermore, we control for additional covariates that are expected to influence both our independent and dependent variables and thus could confound our results. For each covariate, we provide references that demonstrate its impact on both empathy and attitudes towards refugees, thus potentially posing a confounding factor. Since the covariates were obtained from the standard modules of the GESIS Panel and not all covariates were surveyed in the wave of our study module (wave gf - conducted between December 2019 and February 2020), we additionally used information from preceding waves. Table A2 provides an overview of the variables’ sampling statistics and the respective fieldwork phase. We included the political orientation of the respondents due to its impact on both empathy and prejudice towards

refugees (Cowling et al. 2019; Hasson et al. 2018), measured on an 11-point Likert scale (0 ‘left-wing’ to 10 ‘right-wing’). Since this question was not surveyed in the same wave as our survey experiment, we obtained this information from preceding waves (conducted between April 2018 and July 2019). We controlled respondents’ socioeconomic status as a potential confounder (see Cowling et al. 2019; Silke et al. 2018) using respondents’ education, household income, and employment situation. The educational level was operationalized based on the information on respondents’ school leaving certificates with three categories (1 ‘no or lower school degree’ 2 ‘medium school degree’ 3 ‘upper school degree’).<sup>5</sup> Respondents’ household income was measured with 9 answer categories ranging from 1 ‘less than 900 €’ to 9 ‘6000 € and more’. Due to missing values, we additionally used information from a preceding wave (conducted between December 2018 and February 2019). We coded the employment situation with three categories (0 ‘not employed’ 1 ‘part-time employed’ 2 ‘full-time employed’). We further control for respondents’ sex (see Cowling et al. 2019; Rochat 2023), age (see Beadle and De La Veda 2019; Cowling et al. 2019), and religious affiliation (see Cowling et al. 2019; Silke et al. 2018). Sex was measured with two categories (0 ‘male’ 1 ‘female’), and age ranged from 24 to 76. Respondents’ migration background was measured with two categories (0 ‘no migration background’ 1 ‘first- or second-generation immigrant background’). The religious affiliation was measured based on a question asking ‘Which church or religious community are you a member of?’ with answer categories of ‘No religious community’, ‘Roman Catholic Church’, ‘Protestant Church (with free churches)’, and ‘Other’. Due to the limited number of cases in the ‘other’ category (appr. 2.6 %), we coded a binary variable that distinguishes between 1 ‘Christians (Roman Catholic or Protestant Church)’ and 0 ‘Other or no religious community’.

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<sup>5</sup> The first category comprises school leaving qualifications up to the ninth grade, such as the so-called *Hauptschulabschluss*. The second category includes school leaving qualifications after the tenth grade, such as the so-called *Realschulabschluss*. The last category includes the high school certificate, the so-called *Abitur* and *Fachabitur*.



In the robustness analyses, we additionally controlled for respondents' religiosity and socially desirable response behavior (see section Robustness Analysis). Religiosity was measured with four categories ranging from 1 'not at all religious' to 4 'very religious.' The questions regarding religiosity and socially desirable response behavior were surveyed two months prior to the other variables (religiosity between August 2018 and October 2019; social desirability between October and December 2019). However, it can be assumed that the religiosity and response behavior have not changed in this short time. To control for socially desirable response behavior that might affect responses to both the empathy and prejudice measures, we followed the procedure described by Podsakoff and colleagues (2003, 2012) and applied the directly measured latent method factor technique. More specifically, we added a latent construct of social desirability to our model measured with the Social Desirability-Gamma Short Scale (KSE-G) (Kemper et al. 2014). We allowed both the social desirability indicators and the indicators of the constructs of interest (i.e., empathic concern, perspective taking, and attitudes towards refugees) to load on the latent factor of social desirability (Podsakoff et al. 2012: 558).

### *Model*

We applied Structural Equations Modelling (SEM) as it enables us to test the measurement model while investigating the relationship between the different constructs in the latent variables model. We built our models with the statistical programs Stata 16.1 and Mplus version 8 using the Stata ado 'runmplus' (Jones 2013). We used maximum likelihood estimation with robust standard errors in all models.

## **Results**

### *Preliminary Analyses*

First, we tested the dimensionality of the exclusionary attitudes and the empathy measures. To test the dimensionality of the indicators, we followed Bollen and Grandjean's approach (1981). We assumed that social distance and attitudes towards refugees' rights are two distinct components of ethnic exclusion. Accordingly, we estimated a confirmatory factor analysis (CFA) with two factors (Table A6, models M0b): one underlying the social distance indicators and the second underlying the attitudes towards refugees' rights indicators. We compared this model with the unidimensional CFA model (Table A6, models M0a). We followed the same procedure with regard to empathic concern and perspective-taking (Table A6). In line with David (1983), we assumed that empathic concern and perspective-taking are two distinct components of empathy. The  $\chi^2$ -tests support that the two factors (social distance and attitudes towards refugees' rights respective empathic concern and perspective taking) are distinct (see Tables A4 and A5). Furthermore, the models with two factors show a better model fit.<sup>6</sup> The full measurement models are depicted in the Appendix, Table A6.

### *Main Analyses*

In the first set of models, we investigated the association between empathic concern and perspective-taking and (i) social distance (Table 1, model M1a), and (ii) opposition to granting rights (Table 1, model M1b). In line with hypotheses 1a and 1b, empathic concern had a significant negative effect on social distance ( $b = -0.337$ ,  $p < 0.001$ ) and opposition to granting rights ( $b = -0.182$ ,  $p < 0.001$ ), indicating that those who are more concerned about others' welfare are more socially accepting towards refugees and more willing to grant them rights. Similarly, perspective-taking had a significant negative effect in both models (M1a:  $b = -0.129$ ,  $p < 0.001$ ; M1b:  $b = -0.131$ ,  $p < 0.001$ ). In line with hypotheses 2a and 2b, these findings

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<sup>6</sup> The CFA furthermore revealed that some errors of measurement are correlated due to two types of method effects. The method effects resulted (a) from similar (right to demonstrate vs. right to organize politically), and (b) from reverse-worded assessment items (social distance items regarding neighbor, colleague, and marrying). We addressed these method effects by allowing the respective indicator errors to correlate (Brown, 2006) (Table 2, models M0c; Table A6).

suggest that individuals with a stronger tendency to take the perspective of others tend to have lower levels of social distance towards refugees and to be more willing to grant rights.

*(insert table 1 here)*

The models further reveal that both social distance towards refugees and the willingness to grant refugees rights depend on the refugee group's characteristics. The social distance towards unskilled refugees was higher than towards highly skilled refugees (M1a, unskilled vs. highly skilled Christians:  $b = 0.372$ ,  $p < 0.001$ ). Similarly, respondents were less willing to grant rights to unskilled refugees (M1b, unskilled vs. highly skilled Christians:  $b = 0.293$ ,  $p < 0.001$ ). Moreover, respondents' attitudes were more negative towards Muslim refugees, suggesting a higher social distance and opposition to granting rights to Muslims than to Christians (M1a, highly skilled Muslims vs. Christians:  $b = 0.233$ ,  $p < 0.001$ ; M1b, highly skilled Muslims vs. Christians:  $b = 0.241$ ,  $p < 0.001$ ). Thus, we find more negative attitudes towards those groups of refugees that are presumably linked to higher intergroup threat perceptions. The coefficients for the low-skilled Muslim treatment (M1a:  $b = 0.680$ ,  $p < 0.001$ ; M1b:  $0.553$ ,  $p < 0.001$ ) also show that both dimensions act in an additive fashion, implying especially strong reservations against this particular type of refugee immigrants.

In the models M2a and M2b (Table 2), we examined the constraints of empathic concern and perspective-taking by investigating the interaction effects of the refugee group's characteristics with empathic concern and perspective-taking.

*(insert table 2 here)*

The model results show no interaction effect of the refugee group's characteristics (employability or religion) for the association between empathic concern and social distance (Table 2, model M2a) or political tolerance (Table 2, model M2b). Similarly, the refugee

group's characteristics do not moderate the association perspective-taking and social distance (Table 2, model M2a) or opposing refugee rights (Table 2, model M2b). Accordingly, we find no evidence for the hypotheses that threat perceptions mitigate the effects of empathic concern and perspective-taking. Instead, our results suggest that empathic concern and perspective-taking have an equal effect on exclusionary attitudes across different groups of refugees.

### ***Robustness Analyses***

In addition to our main analyses, we (i) checked the robustness of our models by conducting a multiverse analysis, and (ii) replicated our models using a second survey data set collected in Germany.

First, we conducted multiverse analyses to systematically assess the robustness of our findings (Auspurg and Brüderl 2021; Simonsohn et al. 2020; Steegen et al. 2016; Young and Holsteen 2017). We followed the multiverse analysis approach of Simonsohn and colleagues (2020) and Young and Holsteen (2017). Table A8 in the Appendix provides an overview of the robustness analyses: we varied (i) the operationalization of our variables and the covariates included in our models, (ii) the exclusion criteria for the analyses sample, and (iii) the handling of missing values. These variations in model specifications resulted in 384 models.

Table 3 shows the results of the multiverse analysis regarding models M1a (social distance) and M1b (opposing refugee rights). The results of the multiverse analysis indicate high robustness of our findings both in terms of sign stability and statistical significance. The association between empathic concern and social distance (resp. opposition to refugee rights) is negative in 96.1 percent (resp. 85.6 percent) of the model specifications and statistically significant in all model specifications. Similarly, the association between perspective-taking and social distance (resp. opposition to refugee rights) is negative in 97.5 percent (resp. 91.2 percent) of the model specifications, and statistically significant in all model specifications.

Thus, our initial findings that empathic concern and perspective-taking are associated with lower levels of social distance and opposition to refugee rights are highly robust.

*(insert table 3 here)*

Despite the high robustness of the results, the multiverse analyses reveal some variance in the strength of the estimated regression coefficients. Interestingly, controlling or not controlling for social desirability influences the effect strength of empathic concern and perspective-taking, with models including the social desirability scale resulting in smaller effect sizes (see Table A9 in the Online Appendix, cf. Anderson 2019; Eisenberg et al. 1989).

Next, we assessed the robustness of the moderating role of the refugee groups' characteristics on the associations between empathic concern and perspective-taking and social distance towards refugees (Table 4) and opposition to granting rights (Table 5). The multiverse analysis supports the finding that empathic concern and perspective-taking translate to more positive attitudes towards all groups of refugees equally, as the interaction terms are statistically insignificant across all model specifications.

*(insert tables 4 and 5 here)*

In the second step of robustness checks, we replicated our main models using data from another survey conducted in Germany (Hainmueller 2016). Initially, the survey data was collected for a conjoint experiment where respondents indicated their willingness to accept asylum seekers, which randomly varied in nine characteristics (Bansak et al. 2016). This data set is well suited to replicate our models described above because the survey varied, among other characteristics, the employability (employed vs. unemployed) and religious affiliation (Christian vs. Muslim)

of the asylum seekers, and additionally collected information on the respondents' empathic concern and perspective taking.<sup>7</sup>

*(insert table 6 here)*

In line with our initial models, the replication analyses (Table 6) suggest that respondents reporting higher tendencies of empathic concern and perspective-taking are less opposed to accepting asylum seekers (M1, empathic concern:  $b = -0.119$ ,  $p < 0.001$ ; M1, perspective taking:  $b = -0.057$ ,  $p < 0.01$ ). Moreover, the results of model M2 indicate that the asylum seekers' characteristics do not moderate the association of empathic competences and the willingness to accept asylum seekers. Thus, the replication analyses confirm our initial findings.

## **Discussion and Conclusion**

The present research investigated the consequences of two aspects of empathic competence for two forms of anti-refugee attitudes. In the first step, we examined the influence of empathic concern and perspective-taking on (i) social distance towards refugees and (ii) opposition to granting refugees rights. In the second step, we investigated whether empathic concern and perspective-taking have limits when it comes to different outgroups who tend to be perceived as a threat to varying degrees. Specifically, we tested in a survey experiment whether empathic concern and perspective-taking equally translate to more positive attitudes towards refugees with different levels of employability (highly-skilled professionals vs. low-skilled workers)

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<sup>7</sup> The dataset used in the replication analyses differs in some critical characteristics from our primary survey. First, the dataset contains only the factor scores of empathic concern and perspective-taking, so we could not compute SEMs. Second, the outcome measures the willingness to accept asylum seekers and thus differs from the outcomes of our initial analyses. Third, in the conjoint experiment, a larger number of asylum seeker characteristics were randomly varied, and each respondent assessed ten different asylum applications. To account for this data structure, we control for all conjoint attribute levels and compute random effects models with cluster-robust standard errors (adjusted for the respondent level). For more detailed information on the replication dataset, please refer to Hainmueller (2016).

and of different religious affiliations (Christians vs. Muslims), i.e. whether there is a moderation of these effects by refugee characteristics.

We found that cognitive and affective empathy, i.e., perspective-taking and empathic concern, predicted exclusionary attitudes towards refugees. In line with our hypotheses, respondents with higher levels of perspective-taking, respectively empathic concern, reported lower social distance towards refugees and lower opposition to granting rights to refugees. Furthermore, while the respondents' social distance and opposition to granting rights were higher towards groups representing higher levels of intergroup threat, the effects of empathic concern and perspective-taking appeared to be independent of threat-related refugee characteristics, as both empathic competence measures predicted more positive attitudes towards the different groups of refugees regardless of the group at hand in the treatments. For example, respondents showed more negative attitudes towards refugees when presented with Muslim refugees instead of Christian refugees in the questionnaire. This finding is in line with previous research (Bansak et al. 2016, 2023; Esses 2021) and recent public debates on so-called first- and second-class refugees in Germany (e.g., Lindenbach 2022; Sammann 2022), as Ukrainian refugees arriving in Germany more recently often experienced a more positive reception compared to other groups, such as refugees from Afghanistan and Syria. However, empathic concern and perspective-taking equally predicted more positive attitudes towards Christian and Muslim refugees, contrary to the assumption that the association between empathic competence and attitudes towards refugees is context-specific and moderated by refugees' characteristics. Moreover, we conducted systematic robustness tests by running multiverse analyses and by replicating our results with a different dataset to provide insights into the robustness of these findings across various alternative model specifications. Our findings appeared to be highly robust both in terms of sign stability and statistical significance: The interaction terms are never significant across the specifications of our multiverse analysis. Moreover, even if the results

obtained were statistically significant, the resultant associations between empathic concern and perspective-taking and the outcome variables would be very close substantively to the findings we present for the models without the interactions (M1a and M1b). This also is true for the replication with another dataset. We can therefore say with reasonable confidence that the influence of empathic concern and perspective-taking is not meaningfully dependent upon the combination of two of the most salient refugee characteristics.

One possible reason for the absence of these moderation effects could be that refugees in general elicit empathy as they may be perceived as involuntarily migrated individuals of particular vulnerability. Previous research has shown that immigrants fleeing persecution or dire situations often evoke feelings of empathy (Verkuyten et al. 2018) and more positive attitudes and support (Czymara 2017; De Coninck 2020). The largely forced nature and often dramatic circumstances of this type of migration therefore seem to elicit a particular humanitarian concern and compassion (Bansak et al 2016, Newman et al. 2015, Maestri and Monforte 2020) that to some extent transcends group boundaries. The perception of refugees as a vulnerable group might thus evoke generalized empathy, with other group characteristics being less decisive for this relationship.

However, there are limitations in the current study and fruitful starting points for future research. We tested whether the generalized individual empathic competence of empathic concern and perspective-taking relates to more positive attitudes towards outgroups. This approach relates to whether *interpersonal* empathy tendencies affect a person's outgroup attitudes. However, replicating our study using *intergroup* empathy, that is, feeling empathetic and taking the specific perspective of refugees, would provide additional evidence of the role and limits of empathy in attitudes towards refugees. Future research could therefore provide further evidence of the effects and limits of empathy by employing this specific type of empathy (see Cakal et al. 2021; Mashuri et al. 2017; Swart et al. 2011).



Another avenue of investigating the limits of empathy could lie in employing a different outcome variable in the form of access to finite or zero-sum welfare resources. Such a research endeavor could be situated within the deservingness literature (e.g. Oorschot 2000; Reeskens and van der Meer 2019; Koos and Seibel 2019), where access to such resources is of focal importance. For example, it could be that empathy effects on support for welfare resource access are lower in the ‘unskilled’ treatments due to the potentially lower levels of (future) reciprocity.

Furthermore, subsequent studies might consider the consequences of empathic concern and perspective-taking on intergroup emotions (Mackie and Smith 2002). General differences in the ability to feel with or to put oneself in the shoes of others could result in different emotional reactions towards specific outgroups. For instance, empathy in the form of perceiving refugees as a group in need and distress could elicit emotional reactions such as pity and compassion and, through this, foster prosocial behavior (e.g., Neuberg and Cottrell 2002). Emotional reactions therefore could be investigated as potential mediators or mechanisms that underlie the relationship between empathic predispositions and behavior-related responses such as social distance or granting certain rights.

A notable limitation of our study is that we exclusively focused on German natives’ attitudes towards refugees. While this is a highly relevant context due to the large-scale refugee immigration in recent years, respondents in other countries might diverge in their responses, for example, if refugee immigration is a more hypothetical social phenomenon instead of an actual demographic fact. Thus, future studies should investigate whether the proposed associations between empathy and outgroup attitudes are consistent across nations and also apply to other outgroups. Likewise, there is a potential for investigating boundary dimensions other than skills and religion, for example language, ethnicity, formal education, or even age and gender. However, especially when these dimensions have multiple categories, this would

be highly complex and would necessitate a very different empirical approach from the one taken here.

A final limitation of the current work is that our measures were all based on self-reported items and that both items regarding empathic concern and perspective-taking and exclusionary attitudes towards refugees may be biased by the respondents' social desirability tendencies. Future research could address this issue by using experimental designs or implicit association tests to measure the variables of interest. However, in the robustness analyses, we did our best to control for such potentially biasing effects by controlling for respondents' social desirability tendencies.

The current research advances the understanding of the impact of empathic concern and perspective-taking on attitudes towards refugees by showing that both of these empathic competences translate into more positive outgroup attitudes towards different groups of refugees. The results suggest that respondents with higher empathic concern and perspective-taking tendencies possess more inclusive attitudes towards refugees. Furthermore, the influence of empathy on anti-refugee attitudes appears to function independently of intergroup threats and is not limited to specific groups of refugees for both social distance and opposition to granting refugee rights. This pattern between empathic competence and anti-refugee attitudes will likely arise independently of the refugee groups' characteristics, and for different attitudes, as our robust findings for a non-existent moderation effect have shown.

The apparent generality of this mechanism highlights that empathy is of vital importance for immigration societies per se. Thus, intergroup relations programs and interventions that aim to foster empathy towards others and enhance understanding of other's perspectives could make an important contribution to improving intergroup relations (see Stephan and Finlay 1999). For instance, promoting intergroup contact between refugees and the majority society might encourage empathy and perspective-taking between groups and thereby potentially mitigate

outgroup prejudice (Pettigrew and Tropp 2008). This also relates to future immigration, as it can be expected that immigration will continue due to e.g. climate change and its potential aftereffects. Large-scale climate refugee movements would not only necessitate supranational policy solutions to address the difficulties brought about by these influxes. As we have shown, societies receiving such migration flows would be well-advised to foster an empathetic stance towards such inflows within their populations, as this appears to be a key dimension in creating a generally more inclusive societal climate for this type of immigrant group.

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## **Disclosure statement**

The authors report there are no competing interests to declare.

## **Data availability statement**

The data that support the findings of this study are openly available in GESIS Data Archive, Cologne at <http://doi.org/10.4232/1.13573>, reference number ZA5665 v37.0.0 2020-11-10.

The R scripts and the Stata scripts for the data preparations and analyses are available at the following link: [https://osf.io/yfxtv/?view\\_only=5118c7ab98fb47be8b9fc8b833fe71c5](https://osf.io/yfxtv/?view_only=5118c7ab98fb47be8b9fc8b833fe71c5)

## **Ethics Research Statement**

This research study is exempt from ethical review as it solely involves the secondary analysis of data available to the scientific community. The survey underlying this study has been conducted by the GESIS (2020). Consequently, the responsibility for data collection and protection lies with the original data collectors and the authoring institution.

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Table 1. Structural equation models (M1a and M1b)

	M1a			M1b		
	Social distance			Opposition to granting rights		
	Coef.	SE	Stand. Coef. <sup>a</sup>	Coef.	SE	Stand. Coef. <sup>a</sup>
Sex (Ref. male)	0.128**	(0.042)	0.052	0.243***	(0.040)	0.101
Age	0.008***	(0.002)	0.093	0.010***	(0.002)	0.114
Migration background:						
No migration background	Ref.			Ref.		
First- or second-generation immigrant	0.375***	(0.071)	0.078	0.259***	(0.065)	0.055
Religious affiliation:						
No or Other religious affiliation	Ref.			Ref.		
Christian (Protestant or Catholic)	-0.154***	(0.039)	-0.063	-0.094*	(0.037)	-0.039
Education:						
Low	Ref.			Ref.		
Intermediate	0.048	(0.055)	0.019	-0.050	(0.053)	-0.020
High	-0.334***	(0.057)	-0.137	-0.616***	(0.055)	-0.256
Household income	-0.054***	(0.011)	-0.089	-0.064***	(0.011)	-0.107
Employment situation:						
Not employed	Ref.			Ref.		
Part-time employed	0.014	(0.055)	0.005	0.067	(0.054)	0.022
Full-time employed	0.073	(0.051)	0.030	0.101*	(0.050)	0.042
Political orientation <sup>b</sup>	0.178***	(0.011)	0.274	0.183***	(0.011)	0.286
Empathic concern	-0.337***	(0.032)	-0.276	-0.182***	(0.030)	-0.151
Perspective-taking	-0.129***	(0.027)	-0.106	-0.131***	(0.026)	-0.109
Treatment:						
Highly skilled - Christians	Ref.			Ref.		
Unskilled - Christians	0.372***	(0.049)	0.305	0.293***	(0.049)	0.244
Highly skilled - Muslims	0.233***	(0.051)	0.191	0.241***	(0.051)	0.201
Unskilled - Muslims	0.680***	(0.052)	0.557	0.553***	(0.051)	0.460
RMSEA	0.036			0.038		
CFI	0.911			0.907		
TLI	0.904			0.900		

N=3,988; a. binary variables are STDY standardized, numeric variables are STDYX standardized. b. Political orientation: 0 'left-wing' to 10 'right-wing'. RMSEA= Root Mean Square Error Of Approximation; CFI= comparative fit index; TLI=Tucker–Lewis index.

Table 2. Structural equation models (M2a and M2b)

	M2a		M2b			
	Social Distance		Opposition to granting rights			
	Coef.	SE		Coef.	SE	
Empathic concern	-0.306***	(0.047)	-0.251	-0.144**	(0.055)	-0.119
Perspective-Taking	-0.120**	(0.045)	-0.098	-0.084	(0.051)	-0.069
Treatment: Highly skilled - Christians	Ref.			Ref.		
Unskilled - Christians	0.372***	(0.048)	0.305	0.294***	(0.049)	0.244
Highly skilled - Muslims	0.231***	(0.051)	0.189	0.243***	(0.051)	0.202
Unskilled - Muslims	0.679***	(0.052)	0.556	0.551***	(0.051)	0.457
perspective-taking x highly skilled - Christians	Ref.			Ref.		
perspective-taking x unskilled - Christians	-0.001	(0.064)	0.000	-0.074	(0.067)	-0.027
perspective-taking x highly skilled - Muslims	-0.025	(0.070)	-0.009	-0.043	(0.070)	-0.015
perspective-taking x unskilled - Muslims	-0.008	(0.075)	-0.003	-0.060	(0.072)	-0.022
Empathic concern x highly skilled - Christians	Ref.			Ref.		
Empathic concern x unskilled - Christians	-0.064	(0.064)	-0.023	-0.065	(0.071)	-0.024
Empathic concern x highly skilled - Muslims	-0.016	(0.071)	-0.006	-0.099	(0.075)	-0.035
Empathic concern x unskilled - Muslims	-0.047	(0.076)	-0.017	-0.007	(0.073)	-0.003

N=3,988; we used the same control variables as in models M1a and M1b: sex, age, migration background, employment situation, religious affiliation, education, household income, and political orientation (see Table A7 for the full model results).

*Table 3. Model robustness (multiverse analysis of models M1a and M1b): social distance and opposition to granting rights*

Model	M1a	M1a	M1b	M1b
Outcome variable	Social distance	Social distance	Opposition to granting rights	Opposition to granting rights
Independent variable of interest	Empathic concern	Perspective-taking	Empathic concern	Perspective-taking
Initial regression coefficient	-.336, $p < .001$	-.129, $p < .001$	-.182, $p < .001$	-.131, $p < .001$
Number of models	355 (29 out of 384 models did not converge)	355 (29 out of 384 models did not converge)	318 (66 out of 384 models did not converge)	318 (66 out of 384 models did not converge)
Sign stability	96.1 %	97.5 %	85.6 %	91.2 %
Significance rate	100 %	100 %	100 %	100 %
Minimum estimated regression coefficient	-.433	-.184	-.289	-.226
Maximum estimated regression coefficient	.42	.179	.278	.216

Note. The table shows the robustness of the models M1a and M1b across 355 respective 318 model specifications.

*Table 4. Model robustness (multiverse analysis of model M2a): social distance*

Independent variable of interest	Unskilled Christians x empathic concern	Highly skilled Muslims x empathic concern	Unskilled Muslims x empathic concern	Unskilled Christians x perspective-taking	Highly skilled Muslims x perspective-taking	Unskilled Muslims x perspective-taking
Initial regression coefficient	-.064, $p > .05$	-.016, $p > .05$	-.047, $p > .05$	-.001, $p > .05$	-.025, $p > .05$	-.008, $p > .05$
Sign stability	63.5 %	50.0 %	60.3 %	52.0 %	80.1 %	77.3 %
Significance rate	0 %	0 %	0 %	0 %	0 %	0 %
Minimum estimated regression coefficient	-.112	-.087	-.141	-.044	-.113	-.103
Maximum estimated regression coefficient	.155	.098	.144	.038	.098	.100

Note. The table shows the robustness of model M2a across 348 model specifications (36 out of 384 models did not converge).

*Table 5. Model robustness (multiverse analysis of model M2b): opposition to granting rights*

Independent variable of interest	Unskilled Christians x empathic concern	Highly skilled Muslims x empathic concern	Unskilled Muslims x empathic concern	Unskilled Christians x perspective-taking	Highly skilled Muslims x perspective-taking	Unskilled Muslims x perspective-taking
Initial regression coefficient	-.065, $p > .05$	-.099, $p > .05$	-.007, $p > .05$	-.074, $p > .05$	-.043, $p > .05$	-.060, $p > .05$
Sign stability	79.1 %	79.1 %	61.7 %	83.0 %	79.8 %	82.6 %
Significance rate	0 %	0 %	0 %	0 %	0 %	0 %
Minimum estimated regression coefficient	-.098	-.154	-.111	-.098	-.098	-.108
Maximum estimated regression coefficient	.089	.15	.097	.084	.188	.111

Note. The table shows the robustness of model M2b across 253 model specifications (131 out of 384 models did not converge).

Table 6. Model robustness (replication analysis): model M1 and M2

	M1		M2	
	Opposition to allowing applicants to stay in Germany		Opposition to allowing applicants to stay in Germany	
	Coef.	SE	Coef.	SE
Sex (ref. male)	-0.037	(0.078)	-0.036	(0.079)
Age	0.015***	(0.003)	0.015***	(0.003)
Education (ref. ISCED <4)	-.048	(.079)	-.047	(.081)
Political orientation	0.213***	(0.021)	0.213***	(0.025)
Empathic concern	-0.119***	(0.018)	-0.109***	(0.024)
Perspective-taking	-0.057**	(0.019)	-0.059*	(0.024)
Treatment: Employed - Christians	Ref.		Ref.	
Unemployed- Christians	0.324***	(0.069)	0.366***	(0.096)
Employed - Muslims	0.1596***	(0.0398)	0.157**	(0.057)
Unemployed- Muslims	0.453***	(0.068)	0.467***	(0.093)
Empathic concern x employed - Christians			Ref.	
Empathic concern x unemployed - Christians			-0.049	(0.035)
Empathic concern x employed - Muslims			-0.008	(0.020)
Empathic concern x unemployed - Muslims			-0.008	(0.035)
Perspective-taking x employed - Christians			Ref.	
Perspective-taking x unemployed - Christians			0.038	(0.036)
Perspective-taking x employed - Muslims			0.012	(0.022)
Perspective-taking x unemployed - Muslims			-0.018	(0.036)

1,087 respondents; 10,870 respondent-rating observations; additional covariates: conjoint attribute levels; random-effects models, cluster-robust SEs.