



# Unity in diversity: Exploring the effect of oneness with humanity on the willingness to donate to Syrian and Ukrainian refugees<sup>☆,☆☆</sup>

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## ABSTRACT

A sense of oneness with another person or group implies a sense of interconnectedness and overlap with that other, and perceived oneness has been found to foster willingness to help others in need. Despite its potential importance, little empirical research has explored the influence of sense of oneness on attitudes and behaviours towards refugees. This work addresses the question of whether encouraging a sense of oneness with all humanity can increase people's perceived oneness with specific refugee outgroups and, through this, willingness to donate to refugees to help them. People might often be reluctant to see overlap between themselves and outgroups, but perceived oneness with outgroups should increase if perceived oneness with all of humanity is salient. This means that increasing perceived oneness with all of humanity could potentially be a powerful lever to increase perceived oneness with refugees, and willingness to help them. In one exploratory ( $N = 165$ ) and one preregistered confirmatory experimental study ( $N = 180$ ), we show that individuals primed with the idea of oneness with all humanity reported heightened oneness with refugees, and this in turn predicted higher willingness to donate to both Syrian and Ukrainian refugees.

## 1. Introduction

Throughout history, numerous philosophical, religious, and cultural traditions have recognized the inherent interconnectedness of individuals with other human beings (Leary, Tipsord, & Tate, 2008). The concept of interconnectedness is recognized across psychological theories as a critical guide for cognition and behaviour. It bridges diverse and sometimes even somewhat incompatible theoretical approaches, underscoring its fundamental importance of interconnectedness. For example, Social Identity Theory suggests that people favour members of their ingroup and strive to see their ingroup in a positive light (Tajfel & Turner, 1986). Self-categorization theory (Turner, 1985) suggests that group memberships are a guiding principle that structure social cognition. Evolutionary psychology suggests that kin selection implies a natural tendency to favour those genetically similar to us (Tajfel &

Turner, 1986). Moreover, the pervasiveness of societal racism that creates divisions based on perceived differences also speaks to the human tendency to create in- and outgroups (Bynum, Burton, & Best, 2007). This paper will particularly draw on insights from the literature on perceived oneness with all of humanity (McFarland et al., 2019), which has linked this type of perceived interconnectedness to a range of positive outcomes. It has even suggested that perceiving oneself in relation to the whole of existence is the basis for being well-adjusted, morally upright, and fully functioning society (Leary et al., 2008).

The current refugee crisis, one of the greatest humanitarian challenges of our time, affects over 100 million individuals forcibly displaced from their homes due to conflict, persecution, and human rights violations (UNHCR, 2022). Refugees receive varied responses from the citizens of destination countries, some of them willing to help whereas others are reluctant to do so (Böhm, Theelen, Rusch, & Van Lange, 2018

<sup>☆</sup> To maintain the focus and clarity of the manuscript, we focus here on those measures relevant to our research questions/hypotheses. The studies did include some additional measures: [Study1: Justice Sensitivity, Empathy, Identification with Ingroup, Perceived Intergroup Threat, Perceived Injustice, Attribution of Blame, Trust in Charities. Study 2: Empathy]. Full questionnaire and data are available on the OSF.<sup>☆☆</sup> 2 There were no Syrian participants in both studies. In Study 2, we identified two Ukrainian participants, but we retained them in the analysis. When we excluded them, all results remained consistent, except for one finding that has no bearing on the present hypotheses and it unsurprising: the willingness to donate to Syrian refugees was significantly higher than to Ukrainian refugees. Detailed results of this analysis are available in the Supplementary Analyses on the OSF.

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Moenandar & Godioli, 2022).

In this paper, we aim to investigate whether enhancing perceived oneness with all humanity can increase individuals' feelings of oneness with *specific groups* of refugees. We also explored whether heightened feelings of oneness with refugees mediate the relationship between oneness with all humanity and willingness to help refugees. Finally, we examined whether these effects would extend beyond self-reported willingness to donate to actual behavioural donation tendencies.

## 2. Being 'One' with another

There is clearly variation in the extent to which people feel connected and interdependent with others, and people can feel a sense of oneness even with outgroup members (for example; Kunst et al., 2018), or even with very high-level categories as all of humanity (Jiao & Luo, 2022; McFarland et al., 2019). The concept of perceived oneness has overlap with other psychological concepts such as identification (Tajfel & Turner, 1986), inclusion of the other in the self (Aron, Aron, & Smollan, 1992), and fusion (Gómez et al., 2020). For example, identity fusion is a strong feeling of 'oneness' with a group, which drives individuals to act in self-sacrificing ways for the group or its members (Gómez et al., 2020; Swann, Jetten, Gómez, Whitehouse, & Bastian, 2012; Whitehouse et al., 2017). In the current work, 'oneness' is defined as an individual's sense of connectedness or unity with another entity (Coomber & Harré, 2022). This sense of oneness can be experienced at various levels, such as with an individual, a social group, all humanity, nature, or the entirety of existence (Coomber & Harré, 2022).

Various measures have been used to quantify one's identification with all humanity. These include the Global-Human Identity Scale (Der-Karabetian & Balian, 1992), Global Identity Scale (Türken & Rudmin, 2013), Human Identity Salience (Nickerson & Louis, 2008), and Identification With All Humanity Scale (McFarland, Webb, & Brown, 2012; for more details, refer to McFarland et al., 2019). Despite their slight differences, these measurements consistently reflect a deep sense of belonging and connection to the global human community. They offer complementary approaches to measuring an individual's sense of universal interconnectedness, with each measure yielding results that are consistent and strongly related to the others (McFarland et al., 2019).

It is also crucial to distinguish between the concepts of oneness and identification with all humanity on the one hand and universalistic values on the other hand. Whereas universalistic values focus on transcending personal interests to promote the welfare of all (Mannarini, Rochira, Ciavolino, & Salvatore, 2020), identification with all humanity centres more on a deep sense of belonging and connection to the global community. Both concepts contribute to a global mindset, but they emphasize different aspects of individuals' relationship with the broader human community.

Overall, the psychology literature presents concepts similar to, but distinct from, oneness with all of humanity. We focus on this concept in our research as it readily allows exploration of attitude transference between nested group identities, as will become clear in the following.

Perceived oneness with all of humanity implies oneness even with subsections of humanity that are typically perceived as being an 'out-group' or maybe even outside the boundaries of moral obligation. In other words, if a person feels one with all other humans, then this person would also feel one with other humans that might, under other circumstances, be rejected as outgroup members—refugees are one such example. An idea tested by the current research was whether by making salient oneness with all of humanity, one could increase perceived oneness specifically with refugees, a group that can be assumed to be seen as not very closely related to the self by non-refugee respondents.

## 3. Oneness affecting prosociality

Previous research has shown that feeling a sense of oneness is associated with prosociality. For instance, participants in one study were

more likely to help victims if they experienced a sense of oneness with the victim rather than just feelings of personal distress (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997). Additionally, people who have a greater sense of connectedness with other people tend to be more altruistic and less egocentric (Jiao & Luo, 2022), be more empathetic (Jiao & Luo, 2022), and more positive attitudes towards immigrants (Sedlár, 2024). Feeling oneness is also associated with greater pro-environmental behaviours (Garfield, Drwecki, Moore, Kortenkamp, & Gracz, 2014). Most relevant to the current work, individuals with greater identification with all humanity tend to have greater knowledge of global humanitarian concerns, selectively expose themselves to more information on these issues, and are more likely to support international charities and humanitarian organizations (McFarland et al., 2012; McFarland, Brown, & Webb, 2013; Sparkman & Hamer, 2020). Identification with all humanity also predicts intergroup forgiveness (Hamer, Penczek, & Bilewicz, 2017), support for refugees (Bassett & Cleveland, 2019), and cooperative health behaviours (Barragan et al., 2021; Deng, 2021; Marchlewska, Hamer, Baran, Górska, & Kaniasty, 2022; Murphy et al., 2021; Sparkman, 2022).

The benefits of feeling a sense of connection with other people are not limited to the recipient but also affect the individuals who experience this connection (Leary et al., 2008). For instance, individuals who have a stronger sense of personal connection with others often experience better emotional well-being, such as lower levels of depression and higher life satisfaction (Leary et al., 2008). Edinger-Schons (2020) found that oneness beliefs are positively associated with life satisfaction, even after controlling for variables like age, gender, and religious affiliation.

Oneness can be experienced in relation to outgroups, and oneness has been linked to more prosocial responses, but previous research has not focused specifically on refugee contexts. The goal of the present work was to test whether greater perceived oneness with refugee outgroups could be encouraged by making salient oneness with all humanity, and whether this in turn would inspire greater willingness to donate money to help refugees in need. In other words, a concern of the research was to test whether by emphasizing shared humanity one could turn people who would otherwise be seen as outside the sphere of moral responsibility into people who would be included in it (Reykowski, 2002).

## 4. Salience and cognitive accessibility of oneness

People's judgements are greatly affected by the salience of the cues in their social environments (Andrejević, White, Feuerriegel, Laham, & Bode, 2022; Luca & Smith, 2013; Shamay-Tsoory & Abu-Akel, 2016; Tversky & Kahneman, 1973; Weinstein, Vansteenkiste, & Paulmann, 2020). Previous research has shown that the order in which information is presented has an effect on salience and accessibility. Numerous studies have varied the order in which participants were asked about different variables to vary their cognitive accessibility, with the expectation that a variable will be more strongly correlated with its hypothesized outcomes if it is assessed first and if it is therefore more cognitively accessible. For example, Bohner et al. (1998) found that Rape Myth Acceptance (RMA) was more strongly correlated with Rape Proclivity (RP) when RMA was assessed before (not after) RP, suggesting a causal effect of RMA on RP. Similarly, Maricuțoiu, Payne, and Iliescu (2019) demonstrated that participants reported higher self-esteem when they first (vs. after) completed a task that involves associating oneself with positive words.

Other evidence showing that the way questions are asked affects people's evaluations comes from self-anchoring research. Since individuals tend to see themselves positively, they also evaluate the group they belong to positively (Otten, 2004). Studies show that evaluating oneself before one's ingroup results in higher group ratings than when the ingroup is evaluated first (Cadinu & Rothbart, 1996; Otten, 2003). Once again, then, the order in which constructs are assessed affects their situational salience, and variables that are situationally more salient

(because they were assessed first) will correlate more strongly with variables they affect if those variables are *subsequently* assessed.

The hypothesis of this paper posits that attitudes towards a broad category will – when made salient – generalize to sub-categories contained within the broad category, because under these conditions people will be aware that their attitudes towards the broad category should also apply to their attitudes towards the narrower category. This can be interpreted as a type of halo effect, where an attitude towards a broader category will colour reactions towards sub-components of that category—but only when the broader category is psychologically salient and cognitively accessible. We expected that under conditions where oneness with all of humanity was salient, perceived oneness with refugees would be higher, and in turn willingness to help refugees would also be higher.

## 5. Differences between groups

Although not the main focus of this work, an additional goal was to test not only if the pattern of associations would replicate across different refugee groups, but also to test whether between-group differences would emerge in terms of mean-level perceived oneness with them and willingness to help them. Previous studies have shown that people evaluate some groups more positively than others (Montreuil & Bourhis, 2001; Verosky, Tyack, & Martinez, 2021). A number of factors contribute to how minority groups are perceived – for example, the values minority groups are perceived to have (López-Rodríguez et al., 2023) and their perceived motivation for migrating (Bilgen, Zagefka, Bjornsdottir, & Abayhan, 2023). Indeed, Bilgen et al. (2023) previously found that British participants were more willing to help Ukrainian refugees than Syrian refugees, a pattern possibly attributable to a difference in perceived cultural similarity (Albada, Hansen, & Otten, 2021; Reches & Feddes, 2019) between the ingroup and the two refugee outgroups. Because of this, and because we expected perceived similarity to be higher with Ukrainian compared to Syrian refugees, we expected to find overall more perceived oneness with and willingness to help Ukrainian refugees, compared to Syrian refugees.

## 6. The current research and hypotheses

In the current research, we manipulated the cognitive accessibility of oneness with all of humanity to chart the effect of this on perceived oneness with refugees and willingness to help refugees. We proposed that an awareness of being connected to, similar to, and one with all other humans should lead to an increased feeling of being one with a specific category of humans: refugees.

We expected that cognitive accessibility of oneness with all of humanity would be positively associated with oneness with refugees. In other words, if it is salient to an individual that they are connected to all humans, they should also feel more connected to a specific group of humans (refugees), more so than when oneness with all humans is not cognitively accessible. We further anticipated that greater perceived oneness with refugees would be positively correlated with greater willingness to donate money to help them.

In Study 1, half of the participants completed the scale for oneness with all humanity before the scale for oneness with Syrian refugees, while the remaining half completed the scale for oneness with Syrian refugees before the scale for oneness with all humanity. We hypothesized that participants who completed the scale for oneness with all humanity before the scale for oneness with Syrian refugees would score higher on oneness with Syrian refugees than those participants who completed the scale for oneness with Syrian refugees before the scale for oneness with all humanity (H1). Moreover, we expected that oneness with refugees would in turn predict willingness to help them. Thus, we anticipated an indirect effect of the order manipulation on willingness to help, through oneness with Syrian refugees (H2). We also tested the same hypothesis focusing on measured variables rather than the order

manipulation. We hypothesized that participants who scored higher on measured oneness with all humanity would also score more highly on oneness with Syrian refugees, which in turn would affect willingness to help the refugees, again amounting to an overall hypothesized indirect effect (H3).

Study 2 was a preregistered conceptual replication of Study 1. We aimed to replicate the first study's findings, this time using a fictitious article. In addition, we wanted to determine whether effects found in Study 1 would generalize to different refugee groups, so this time we asked questions not only for Syrian but also for Ukrainian refugees. We also tested if Ukrainian refugees would receive more help than Syrian refugees. We additionally measured participants' behavioural donation tendencies to assess whether effects of oneness would not only be evident for self-reported willingness to donate, but whether effects would translate into behaviour.

In Study 2, we expected that participants in the experimental condition (oneness with humanity manipulation) would feel greater oneness with both Syrian (H1a) and Ukrainian (H1b) refugees compared to those in the control condition (oneness with all humanity not enhanced). We also expected an indirect effect of the manipulation on willingness to donate to Syrian (H2a) and Ukrainian (H2b) refugees, mediated by perceived oneness with that group. We further hypothesized that participants would feel a higher level of oneness with Ukrainians than Syrians (H3) and would be more willing to donate to Ukrainian refugees than to Syrian refugees (H4). Finally, we explored whether there would be an indirect effect of *measured* oneness with all humanity on willingness to donate to Syrian and Ukrainian refugees through oneness with them. We did not preregister a hypothesis for this, but we reasoned that if a manipulation affects a certain dependent variable, then a measure tapping into the same construct as the manipulation should show the same effect. We report all measures, manipulations and exclusions.<sup>1</sup> All relevant preregistrations, materials, data, and analysis scripts for both studies in this paper can be accessed on the OSF (<https://osf.io/s9vb7/>).

## 7. Study 1

All aspects of this and the subsequent study adhered to BPS ethics guidelines and were cleared by the ethics review board of the lead institution.

Study 1 was an exploratory study that employed an order manipulation to vary the salience of oneness with all of humanity; this study focused on Syrian refugees only. We tested the effects of this manipulation on oneness with Syrian refugees and willingness to help them.

### 7.1. Method

#### 7.1.1. Participants

We recruited 185 undergraduate students, 164 of whom provided complete data (146 female, 17 male, 1 non-binary;  $M_{\text{age}} = 19.14$  years,  $SD = 2.88$ , 92 White, 36 Asian, 7 Black, 9 mixed, and 13 other race/ethnicity; 110 without migration background, 54 with migration background), from a UK university and provided them with course credit compensation for their participation between December 2021 and March 2022. Data collection occurred while the student pool was open, and the analysis was conducted after it had closed. A sensitivity power analysis using G\*power (Erdfelder, Faul, & Buchner, 1996) showed that our sample size afforded 80 % power to detect an effect size of  $d = 0.39$  in an independent samples *t*-test (one-tailed) with  $\alpha = 0.05$ .

#### 7.1.2. Materials

We used the Inclusion of Other in the Self Scale (Aron et al., 1992) to measure *oneness with all humanity* and *oneness with Syrian refugees*. We instructed participants: 'in this section, please select a pair of circles that you feel best represents your own level of identification (feeling a part of, feeling love towards, having concern for) with each of the following'

Targets were ‘all humans everywhere’ and ‘Syrian refugees’. Respondents choose a pair of circles from seven with different degrees of overlap for each target, measuring their perceived oneness on a scale from 1 (*low oneness*) to 7 (*high oneness*).

We adapted five items from Zagefka, Noor, Brown, Hopthrow, and de Moura (2012) to measure willingness to donate to Syrian refugees: ‘I would be willing to give donations to Syrian refugees’, ‘I think it is important to give donations to Syrian refugees’, ‘I think it is the right thing to do to give donations to Syrian refugees’, ‘I think everyone should donate money to Syrian refugees’ and ‘I would give the maximum amount I could afford to Syrian refugees’ ( $\alpha = 0.87$ ). Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).

Our survey included several demographic questions, including sex, age, ethnicity, nationality, and migration background.

### 7.1.3. Procedure

Following informed consent, participants were randomly assigned to one of two conditions. Participants in the Humanity Oneness First condition completed the scale for oneness with all humanity followed by the scale for oneness with Syrian refugees. In contrast, participants in the Refugees Oneness First condition completed the scale for oneness with Syrian refugees first and then the scale for oneness with all humanity. After completing the oneness scales, participants indicated their willingness to donate to Syrian refugees. They then provided demographic information before debriefing.

## 7.2. Results and discussion

Bivariate correlations are reported in Table 1. First, we examined whether emphasizing oneness with all humanity before oneness with Syrian refugees increased feelings of oneness with Syrian refugees. Results showed that participants in the Humanity Oneness First condition reported significantly higher levels of oneness with Syrian refugees ( $M = 3.36$ ,  $SD = 1.80$ ) compared to participants in the Refugees Oneness First condition ( $M = 2.69$ ,  $SD = 1.64$ ),  $t(163) = -2.48$ ,  $p = .014$ ,  $d = 0.39$ , in line with H1.

To test H2, we conducted a mediation analysis using the PROCESS macro developed by Hayes (2022) testing oneness with Syrian refugees as a mediator between manipulation condition and willingness to donate. Results indicated that, as predicted, condition significantly predicted oneness with Syrian refugees, which in turn significantly predicted willingness to help (see Fig. 1). Importantly and in line with H2, there was a significant indirect effect of condition on willingness to donate through oneness with Syrian refugees,  $ab = 0.08$ ,  $SE = 0.04$ , 95

% CI [0.01, 0.16].

Next, we conducted another mediation analysis to test H3, to see if oneness with Syrian refugees would mediate the relationship between oneness with humanity, as tapped into by a measured variable (rather than experimental condition), and willingness to donate. Our results indicated that oneness with all humanity significantly predicted oneness with Syrian refugees, which in turn significantly predicted willingness to donate (see Fig. 2). There was a significant indirect effect of measured oneness with all humanity on willingness to donate through oneness with Syrian refugees,  $ab = 0.03$ ,  $SE = 0.01$ , 95 % CI [0.01, 0.06].

In summary, these results suggest that emphasizing oneness with all humanity can enhance feelings of oneness with Syrian refugees, which in turn increases willingness to donate.

## 8. Study 2

Our second study, which was preregistered, aimed to replicate and build upon the findings from the first study using a different methodological approach. Study 1 utilized an order manipulation technique to manipulate the cognitive salience of oneness with all humanity. Specifically, we brought the idea of oneness with all humanity to the forefront of participants’ minds, heightening their awareness of this concept, by using an order manipulation (i.e., by either asking participants first about oneness with all humanity or not asking this first). In contrast, Study 2 employed a direct manipulation of the concept of oneness, achieved through a fictitious article designed to explicitly increase participants’ perceived oneness with all humanity. These different approaches, prompting effects of a concept by making it cognitively more accessible (Study 1) and by increasing endorsement of it (Study 2), were hypothesized to have a similar effect in terms of influencing feelings of oneness with refugees and their willingness to donate. This methodological triangulation, i.e. attempting to show the same effect using different methods in the two studies (a more subtle priming approach in Study 1 and direct manipulation in Study 2), was intended to provide evidence for the robustness and generalizability of the phenomena under study. The employment of a different methodology in Study 2 serves to strengthen the robustness of our findings. By using these distinct methodologies, we sought to demonstrate the generalizability of our findings across different contexts and stimuli.

In addition, we also added a new factor to the design: Rather than just focusing on Syrian refugees we included ‘country of origin’ (Syrians vs. Ukrainians) as a within-participants factor, to determine whether effects would generalize to different refugee groups. We additionally measured participants’ behavioural donation tendencies to assess whether effects of oneness would not only be evident on outcomes of self-reported willingness to donate, but whether effects would translate into actual behaviour.

We preregistered our hypotheses (<https://osf.io/2t3mj/>), anticipating that participants in the experimental condition (oneness) would feel greater oneness with both Syrian (H1a) and Ukrainian (H1b) refugees compared to those in the control condition (oneness with all humanity not enhanced). We also expected an indirect effect of the manipulation on willingness to donate to Syrian (H2a) and Ukrainian (H2b) refugees mediated by perceived oneness with them. Please note that preregistered hypotheses pertain to willingness to donate, but we also tested these patterns for behavioural donation tendencies. In an exploratory step, we also tested whether perceived oneness with refugees would mediate between *measured* oneness with all humanity and helping.

Furthermore, we hypothesized that participants would feel a higher level of oneness with Ukrainians than with Syrians (H3) and would be more willing to donate to Ukrainian refugees than to Syrian refugees (H4).

**Table 1**  
Means, standard deviations, and correlations with confidence intervals for Study 1.

Variable	<i>M</i>	<i>SD</i>	1	2	3
1. Condition	0.55				
2. Oneness with all Humanity	4.76	1.50	−0.03 [−0.18, 0.12]		
3. Oneness with Syrian Refugees	3.06	1.76	0.19* [0.04, 0.33]	0.26** [0.12, 0.40]	
4. Willingness to Donate to Syrian refugees	3.63	0.77	0.08 [−0.07, 0.23]	0.20* [0.05, 0.34]	0.27** [0.12, 0.41]

Note.  $df = 163$ . *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95 % confidence interval for each correlation. Condition coded such that Humanity Oneness First = 1, Syrian Oneness First = 0. \*  $p < .05$ , \*\*  $p < .01$ .



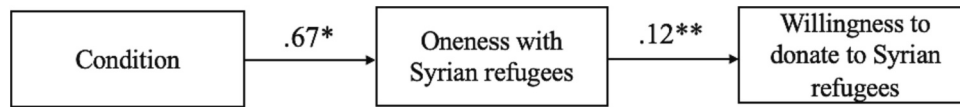


Fig. 1. Mediation for H2 for Study 1.

Note. Condition coded such that Oneness = 1, Control = 0. \*  $p < .05$ , \*\*  $p < .01$ .

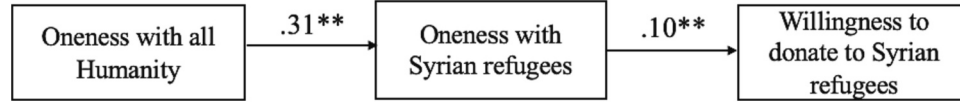


Fig. 2. Mediation for H3 for Study 1.

Note. \* indicates  $p < .05$ . \*\* indicates  $p < .01$ .

## 8.1. Method

### 8.1.1. Participants

We recruited 180 undergraduate students (150 female, 25 male, 5 non-binary;  $M_{\text{age}} = 18.81$  years,  $SD = 1.30$ , 105 White, 35 Asian, 13 Black, 18 mixed, and 9 other race/ethnicity; 131 without migration background, 46 with migration background<sup>2</sup>) from a UK university and provided them with course credit as compensation for their time between November 2022 and March 2023. Given the slightly different design of Study 2, which involved manipulating oneness with all humanity via an article, we aimed for 80 % power to detect an effect size corresponding to the average observed in social psychology research ( $r = 0.21$ ; Richard, Bond, & Stokes-Zoota, 2003) in a multiple linear regression with a sample size of 173 participants. Which would also give us over 95 % power to detect that size effect in a paired  $t$ -test/one-way within-subjects ANOVA, and over 90 % power to detect a within-between interaction of that size in an ANOVA. This was the minimum N we aimed for as stated in the preregistration. Data collection occurred while the student pool was open, and analysis took place after pool closure. We also conducted a Monte Carlo power analysis (Schoemann, Boulton, & Short, 2017) for an indirect effect and the result revealed that our study had 96 % power to detect the indirect effect of condition (oneness vs. control) on willingness to donate to Syrians through oneness with Syrians (H2a) and 84 % power to detect the indirect effect of condition on willingness to donate to Ukrainians via oneness with

Ukrainians (H2b), using population parameters from the correlations observed in Study 2 (see Table 2).

### 8.1.2. Materials

To measure oneness with all humanity, oneness with Syrian refugees, and oneness with Ukrainian refugees, we utilized the same scales as in Study 1. However, in this study, participants were asked to select a pair of circles from five options (vs. the seven used in Study 1) with varying degrees of overlap ranging from 1 (*low oneness*) to 5 (*high oneness*). We varied the order of the three oneness items to match the experimental condition, as outlined below.

To measure willingness to donate to Syrians and Ukrainians, we used the same five-item scale as in Study 1, once focusing on ‘Syrian refugees’ and once focusing on ‘Ukrainian refugees’ ( $\alpha = 0.82$  and  $\alpha = 0.83$ , respectively). Higher scores indicated greater willingness to donate.

To measure behavioural donation tendencies, we used fake response buttons that were adapted from (Yaşa et al., 2023). We presented four buttons to the participants, suggesting that pressing one of them would lead them to a further page where they would make an actual donation. The labels for the buttons were ‘Donate now to Syrian refugees’, ‘Donate now to Ukrainian refugees’, ‘Donate to both’, and ‘I don’t want to donate’ (see Fig. 3). We instructed participants: ‘To make a donation, please click the buttons below this page. You can only click one of them.’ This was the final task in the experiment. When a participant clicked on one of the buttons, they were immediately directed to a debriefing page.

Table 2

Means, standard deviations, and correlations with confidence intervals for Study 2.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Condition	0.51								
2. Oneness with all Humanity	3.19	0.84	0.19** [0.05, 0.33]						
3. Oneness with Syrian Refugees	2.63	1.12	0.27** [0.13, 0.40]	0.34** [0.21, 0.47]					
4. Oneness with Ukrainian Refugees	2.69	1.09	0.22** [0.08, 0.35]	0.34** [0.21, 0.47]	0.72** [0.64, 0.78]				
5. Willingness to Donate to Syrian Refugees	3.77	0.70	−0.02 [−0.16, 0.13]	0.09 [−0.06, 0.23]	0.45** [0.32, 0.56]	0.32** [0.18, 0.44]			
6. Willingness to Donate to Ukrainians Refugees	3.73	0.69	−0.06 [−0.20, 0.09]	0.09 [−0.06, 0.23]	0.27** [0.13, 0.40]	0.39** [0.26, 0.51]	0.82** [0.76, 0.86]		
7. Behavioural Donation to Syrians Refugees	0.59	0.49	0.13 [−0.02, 0.27]	0.07 [−0.08, 0.21]	0.27** [0.12, 0.40]	0.14 [−0.00, 0.28]	0.32** [0.18, 0.44]	0.21** [0.06, 0.34]	
8. Behavioural Donation to Ukrainians Refugees	0.54	0.50	0.08 [−0.07, 0.22]	0.06 [−0.08, 0.21]	0.13 [−0.02, 0.27]	0.17* [0.02, 0.30]	0.21** [0.07, 0.35]	0.25** [0.11, 0.38]	0.79** [0.73, 0.84]

Note.  $df = 174$ . For all other variables,  $df = 175$ . *M* and *SD* are used to represent mean and standard deviation, respectively. Condition coded such that Oneness = 1, Control = 0. Values in square brackets indicate the 95 % confidence interval for each correlation. \*  $p < .05$ , \*\*  $p < .01$ .

To make a donation, please click the buttons below this page.  
You can only click ONE of them.



Fig. 3. Behavioural donation tendencies measurement.

This structure was designed to prevent participants from clicking multiple times or changing their responses. To determine the participants' donation tendencies, we combined the responses to the 'Donate now to Syrian refugees' and 'Donate to both' buttons to create the total score for Behavioural Donation Tendencies to Syrians, and likewise for the 'Donate now to Ukrainian refugees' and 'Donate to both' buttons to create the total score for Behavioural Donation Tendencies to Ukrainians. This means that for each participant we ended up with a behavioural measure for whether they wanted to donate to Syrian refugees (0 = no vs. 1 = yes) and to Ukrainian refugees (0 = no vs 1 = yes).

We included demographic questions (sex, age, ethnicity, nationality, and migration background), some exploratory measures that are not relevant to the hypotheses presented here (see OSF link provided above in the Study 1 methods section for full list of measures), two attention check questions, and one comprehension check question. We removed three participants' data because they failed more than one attention check question (as preregistered).

### 8.1.3. Procedure

Following informed consent, we randomly assigned participants to one of two conditions: *oneness* or *control*. Participants in the oneness condition read an article entitled 'Humans are All More Closely Related Than We Commonly Think', whereas those in the control condition read an article entitled 'All Plants are All More Closely Related Than We Commonly Think' (see OSF for article text). The text was presented as a scientific text and the cover story was that the study was about how well scientists can communicate their knowledge. Participants were told that they would need to pay close attention to the text because their comprehension of the content would be tested, and we included comprehension check questions in line with this cover story. The content of the article in the oneness condition was designed to increase perceived oneness with all humanity, whereas the content of the article in the control condition did not relate to oneness with humanity.

After reading the article, participants in the oneness condition completed the scale for oneness with all humanity to further strengthen the manipulation. This was followed by the scales for oneness with refugees (with the order of the scales for Syrian and Ukrainian refugees counterbalanced), and then participants indicated their willingness to

donate refugees. Participants in the control condition indicated their willingness to donate to refugees immediately after reading the article. They then completed the scales for oneness with the two refugee groups (order counterbalanced), followed by the scale for oneness with all humanity—they completed the oneness scales in this order to prevent priming them with the idea of oneness with all humanity. Finally, all participants completed demographics questions, followed by the behavioural measurement for donation before debriefing. Placing the behavioural measurement before the debriefing was done to ensure participants did not complete a scale after feeling deceived, as this measurement involved deception.

## 8.2. Results and discussion

### 8.2.1. Manipulation check

To assess the effectiveness of the manipulation, we conducted an independent samples *t*-test on the oneness with all humanity scores. The results showed that participants in the oneness condition ( $M = 3.35$ ,  $SD = 0.91$ ) reported significantly higher levels of oneness with all humanity than those in the control condition ( $M = 3.02$ ,  $SD = 0.73$ ),  $t(178) = -2.65$ ,  $p = .009$ ,  $d = 0.41$ , demonstrating that the article had the intended effect. Descriptive statistics and bivariate correlations appear in Table 2.

### 8.2.2. Testing the effect of the manipulation on oneness with refugees

We next performed a 2 (Condition: Oneness, Control)  $\times$  2 (Refugee country of origin: Syria, Ukraine) ANOVA with repeated measures on the second factor to examine the impact of our manipulation on oneness with refugees. Our results showed a significant main effect of the condition,  $F = (1174) = 12.79$ ,  $p < .001$ ,  $\hat{\eta}_G^2$  (generalized eta squared) = 0.06, with participants in the oneness condition scoring higher on oneness with both Syrian refugees (H1a) and Ukrainian refugees (H1b) than those in the control condition, in line with our hypotheses (see Table 3 for means and standard deviations).

This analysis revealed no significant main effect of refugee country of origin on oneness with refugees,  $F = (1174) = 1.28$ ,  $p = .26$ ,  $\hat{\eta}_G^2 = 0.001$  indicating that participants reported the same level of oneness with both Syrian and Ukrainian refugees (contrary to H3). Additionally, there was

**Table 3**

Means and standard deviations for each condition in Study 1 and Study 2.

Variable	Study 1				Study 2			
	Humanity Oneness First		Syrian Oneness First		Oneness		Control	
	M	SD	M	SD	M	SD	M	SD
Oneness with All Humanity	4.73	1.54	4.77	1.48	3.35	0.91	3.02	0.72
Oneness with Syrian Refugees	3.36	1.80	2.69	1.64	2.92	1.14	2.32	1.00
Oneness with Ukrainian Refugees					2.92	1.10	2.46	1.02
Willingness to Donate to Syrian Refugees	3.68	0.75	3.63	0.79	3.76	0.69	3.78	0.71
Willingness to Donate to Ukrainians Refugees					3.69	0.65	3.74	0.71

Note. M and SD are used to represent mean and standard deviation, respectively.

no significant interaction between the two factors,  $F = (1174) = 1.28$ ,  $p = .26$ ,  $\eta_G^2 = 0.001$ .

#### 8.2.3. Oneness with refugees mediating between condition and willingness to donate

We conducted two separate mediation analyses, one for Syrian refugees and another for Ukrainian refugees, to investigate whether condition had an indirect effect on willingness to donate, through oneness with refugees. We found a significant indirect effect for both Syrian refugees,  $ab = 0.18$ ,  $SE = 0.06$ , 95 % CI [0.08, 0.31], and Ukrainian refugees,  $ab = 0.13$ ,  $SE = 0.05$ , 95 % CI [0.04, 0.24], supporting H2a and H2b (see Fig. 4).

#### 8.2.4. Oneness with refugees mediating between measured oneness with all humanity and willingness to donate

Next, we ran two additional separate mediation analyses to test whether there was an indirect effect of measured oneness with all humanity (the manipulation check) on willingness to donate to Syrians and Ukrainians through oneness with these groups. Our results showed a significant indirect effect of measured oneness with all humanity on willingness to donate to Syrians through oneness with Syrian refugees,  $ab = 0.14$ ,  $SE = 0.04$ , 95 % CI [0.07, 0.22], and a significant indirect effect of measured oneness with all humanity on willingness to donate to Ukrainians through oneness with Ukrainian refugees,  $ab = 0.13$ ,  $SE = 0.04$ , 95 % CI [0.06, 0.21], supporting H2b (see Fig. 5).

#### 8.2.5. Oneness with refugees mediating between condition and behavioural donation tendencies

We then conducted two separate unplanned mediation analyses, one for Syrian refugees and another for Ukrainian refugees, to investigate whether the experimental condition had an indirect effect on behavioural donation tendencies through oneness with refugees. For Syrian refugees, our results indicated a significant indirect effect of the condition on behavioural donation tendencies through oneness with them,  $ab = 0.30$ ,  $SE = 0.13$ , 95 % CI [0.09, 0.62] (see Fig. 6A). This is in line with what would be expected on the basis of H2a. However, for Ukrainian refugees, the indirect effect of the condition on behavioural donation tendencies through oneness with them was not significant,  $ab = 0.13$ ,  $SE = 0.09$ , 95 % CI [-0.003, 0.35], this was not expected on the basis of H2b (see Fig. 6B).

#### 8.2.6. Mean level differences between the two refugee groups

As noted above in our ANOVA results, contrary to H3, we found no significant main effect of refugee country of origin on oneness with refugees, indicating that participants reported comparable oneness with both Syrian and Ukrainian refugees.

We also performed a paired *t*-test to examine whether participants were more willing to donate to Ukrainian refugees compared to Syrian refugees (H4). Our results indicated no significant difference in willingness to donate to Syrian ( $M = 3.77$ ,  $SD = 0.70$ ) and Ukrainian refugees ( $M = 3.73$ ,  $SD = 0.69$ ),  $t(179) = 1.49$ ,  $p = .138$ ,  $d = 0.10$ , not supporting H4.

Altogether, our results suggest that we successfully conceptually replicated the results from Study 1 but this time in two separate refugee groups, and not only for self-reported willingness to donate, but also, at least for Syrian refugees, for a measure that taps into actual behavioural donation tendencies.

## 9. General discussion

In the current research, we investigated the role of oneness with all humanity in promoting willingness to donate to refugees. Our results showed that when oneness with all humanity is enhanced and this idea becomes more cognitively accessible, people report heightened oneness with refugees, which in turn predicts willingness to help refugees. This finding suggests that a broad sense of connection and oneness with all humanity can facilitate the development of connections with refugees and encourage prosociality towards them. Importantly, we found those effects for both Syrian and Ukrainian refugees, indicating the generalisability of findings across different refugee groups. The fact that the pattern of the exploratory study was replicated in a second, pre-registered confirmatory study gives further confidence in the results.

Importantly, our research went beyond self-reported willingness to donate and included a measure of behavioural donation tendencies in Study 2. The results showed significant indirect effects of the oneness manipulation on behavioural donation tendencies through oneness with Syrian (but not Ukrainian) refugees. This finding suggests that, to some

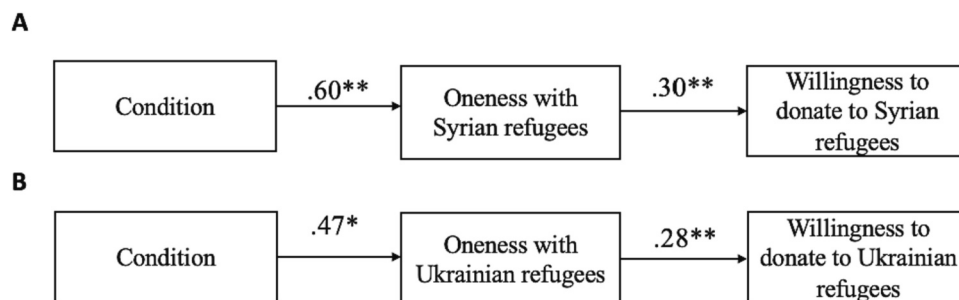


Fig. 4. Mediation for H2a and H2b for Study 2.

Note. Condition coded such that Oneness = 1, Control = 0. \*  $p < .05$ , \*\*  $p < .01$ .

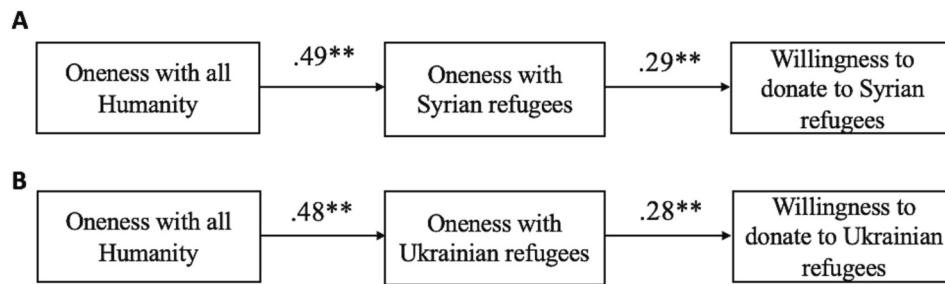


Fig. 5. Mediation for Study 2 using measured oneness with all humanity (rather than condition).

Note. For Condition variable Oneness coded as 1, and Control coded as 0. \* indicates  $p < .05$ . \*\* indicates  $p < .01$ .

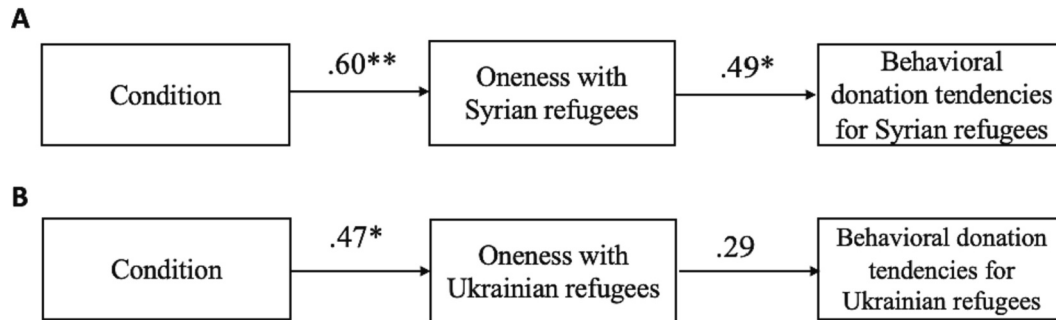


Fig. 6. Mediation for behavioural donation for Syrian and Ukrainian Refugees, Study 2.

Note. \*  $p < .05$ , \*\*  $p < .01$ .

extent, the enhanced sense of oneness translated into actual behavioural shifts, reinforcing the importance of oneness in promoting concrete actions to help refugees. We do not have a plausible explanation for this difference between Syrian and Ukrainian refugees. It is important to note that the measurement of behavioural donation tendencies was not our primary focus, and we placed it right before the debriefing. Additionally, please note that the result for the Ukrainian refugees was marginally significant, indicating that we may not have had sufficient power to detect that effect.

Contrary to our expectation, we did not find a significant difference in feelings of oneness with, and willingness to donate to, Syrian and Ukrainian refugees. This was in contrast to Bilgen et al. (2023), who found that people were more willing to help Ukrainian refugees than Syrian refugees. There could be several reasons behind this. Here, we collected data from undergraduate psychology students whereas Bilgen et al. (2023) collect data from White British adults. Psychology students might be more tolerant towards other groups, pushing all mean levels up for all social outgroups. Second, the previous study was conducted only one month after the start of the Russian-Ukrainian war whereas we collected data one year later. It is possible that the sudden onset of the war and surprise/shock related to this would have pushed up prosocial responses towards Ukrainians in the previous study, but that those effects had dissipated when the present studies were conducted. So, the initial empathy for Ukrainian refugees may have decreased over time.

Overall, our findings have both theoretical and practical implications. In terms of theoretical implications, there are of course many factors that have been shown to affect prosocial reactions (Zagefka & James, 2015), including social identity processes (Vezzali, Cadamuro, Versari, Giovannini, & Trifiletti, 2015), personality characteristics of those offering help (Politi, Van Assche, Caprara, & Phaet, 2021), and beliefs about the people requiring help (Zagefka, 2022 Zagefka & Sun, 2021). This work adds to the existing literature by highlighting the importance of a further powerful predictor of prosociality, i.e. perceived oneness with the target of help. Although perceived oneness has been found to be effective in previous work (Cialdini et al., 1997 Garfield et al., 2014 Leary et al., 2008 McFarland et al., 2012 McFarland et al.,

2013), what had not been demonstrated prior to our work is that by increasing oneness with all of humanity one can increase perceived oneness with a particular outgroup, and through this affect helping decisions. This deepens understanding of the link between feelings of oneness and prosociality and thus constitutes an important theoretical contribution.

The present research is novel and makes an important contribution to existing knowledge in a number of ways. Notably, it is one of the few that experimentally manipulates the concept of oneness with all humanity, enhancing our ability to move closer to inferring causality in the relationship between oneness and helping behaviours. Moreover, in the context of the replication crisis within the social sciences, we demonstrate the robustness of the effects through the preregistration of our study design and analyses, a practice that was not widespread in many of the seminal papers in this literature since most of them were conducted before the replication crisis. Additionally, our study extends beyond self-reported willingness to donate by and includes an actual behavioural measure of helping intentions, thereby offering a more nuanced and practical exploration of prosocial actions. Finally, the replication of results across two distinct groups of refugees—Syrian and Ukrainian—strengthens the generalizability of our findings, suggesting that these effects are not limited to a single group but may be relevant across various populations in need of humanitarian assistance.

In terms of applied relevance, our results can be used for interventions and campaigns aimed at promoting support for refugees by highlighting the interconnectedness and shared humanity among all individuals. Research indicates that refugees are vulnerable to dehumanization (e.g., Azevedo, De Beukelaer, Jones, Safra, & Tsakiris, 2021 Bruneau, Kteily, & Laustsen, 2018). Muslim refugees, in particular, are often subjected to blatant dehumanization by Europeans, which is strongly linked to negative attitudes and actions towards refugees (Bruneau et al., 2018). Our results show that when individuals are primed with the idea that all humans are related and when they feel sense of a connection with all humanity, they are more likely to feel oneness with refugees, encouraging prosociality towards them.

Importantly, the mediation effect demonstrated here cannot



establish with certainty a causal effect of oneness with refugees on helping (evidence for this link was only correlational). By extension, whether the indirect effect of oneness with all humanity on willingness to donate to refugees is indeed causal would require further probing before strong conclusions about causality could be drawn. This suggests that interventions solely based on fostering oneness with all humanity may not be universally effective in increasing willingness to help refugees, particularly if they fail to directly influence helping behaviours in certain individuals. The theoretical patterns confirmed by our results indicate that interventions should perhaps more directly target the cultivation of oneness with specific refugee groups, although as mentioned above the causality of this link could be probed further in future research.

It is worth noting some further limitations of our study. First, our samples consisted of undergraduate students, which may limit the generalizability of the findings to other populations. Future research should aim to replicate these findings in more representative and diverse samples. Additionally, although we used a measurement for behavioural donation tendencies, we cannot be sure that this measurement is a reliable way to measure actual donation because it is hard to know what people exactly thought while clicking the fake buttons. We do not know for certain whether or not they would have gone on to donate (e.g., once prompted to provide payment details or a specific donation amount). However, due to budget constraints and ethical considerations, we could not measure actual donations. Future research can aim to remedy this.

Another limitation arises from our within-subjects design in Study 2, where both Ukrainian and Syrian refugee groups were presented to each participant. This approach might have obscured potential differences in responses to these groups. To address this concern and explore potential double standards or different interactions between self-categorization levels and group conditions, future studies could benefit from employing a between-subjects design, where participants are randomized to one of the two groups.

Additionally, in assessing behavioural donation tendencies, we asked participants to consider donating to both groups simultaneously. However, it is important to acknowledge that this approach may differ significantly from scenarios where participants are presented with a choice regarding donating to one cause. Future research should investigate this aspect further, examining how the nature of the donation request – whether to a single cause or multiple causes – impacts the willingness and behaviour of donors.

There are some interesting avenues for future research. First, since refugees are dehumanized frequently (e.g., Azevedo et al., 2021; Bruneau et al., 2018), future research could test whether our manipulation is effective for reducing dehumanization, in addition to increasing helping. Additionally, exploring the impact of different levels of self-categorization, such as identification with one's community or nation, on oneness with specific groups like Syrians and Ukrainians and willingness to help them could provide valuable insights. It would be intriguing to examine if these varying levels of identification (vs. oneness with all humanity) uniquely influence the sense of oneness and willingness to help different refugee groups. Moreover, future research could explore how long the effect of promoting a feeling of oneness with refugees lasts—this could aid the design of interventions targeted to increase helping behaviour.

In conclusion, our research highlights the importance of promoting feelings of oneness with all humanity as a means of encouraging donations to refugee groups. By fostering a sense of interconnectedness and shared humanity, interventions can effectively promote support for refugees and encourage pro-social behaviour. These findings have important implications for addressing the ongoing refugee crisis and advancing efforts towards a more inclusive and compassionate society.

## Open practices

All data, code, codebook, and materials are publicly available at OSF

and can be accessed at <https://osf.io/s9vb7/>.

The study 2 was preregistered and can be accessed at <https://osf.io/2t3mj/>.

The Rmarkdown version of the method and result sections can also be found in the OSF for readers interested in viewing the code and text simultaneously.

## CRediT authorship contribution statement

**Emine Bilgen:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Visualization, Writing – original draft, Writing – review & editing. **Hanna Zagefka:** Conceptualization, Methodology, Project administration, Supervision, Writing – review & editing. **R. Thora Bjornsdottir:** Methodology, Supervision, Writing – review & editing.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

The data are available on the OSF (<https://osf.io/s9vb7/>).

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