

**Stay humble and enjoy diversity: the interplay between intergroup contact and cultural
humility on prejudice**

Marika Rullo; Emilio Paolo Visintin; Stella Milani; Alessandra Romano; Loretta Fabbri

Abstract

Despite the effectiveness of intergroup contact in reducing prejudice, opportunities for contact are not always associated with positive mutual intergroup perceptions. This might be due, at least partly, to negative contact, i.e., intergroup encounters perceived as unpleasant, and to individual characteristics which might shape reactions to opportunities for contact and to actual contact. Here we considered cultural humility, i.e., a subdomain of humility referring to the ability to have a humble and other-oriented approach to others' cultures. We propose that cultural humility might orient individuals to successfully and non-judgmentally interact with outgroup members. Therefore, cultural humility might be associated with positive contact and with reduced negative contact, and might favor beneficial effects of opportunities for contact in terms of prejudice reduction. In a cross-sectional study conducted among Italian participants considering immigrants and Muslims as outgroups, we found that cultural humility was associated with positive contact and with reduced negative contact. Furthermore, opportunities for contact were associated with negative contact only among respondents with low cultural humility. Cultural humility also moderated the valenced contact-prejudice associations. However, disconfirming our predictions, positive contact was associated with reduced prejudice mainly for people with low cultural humility, while negative contact was associated with more prejudice mainly for people with high cultural humility. Findings will be discussed emphasizing the role of cultural humility for intergroup contact and the possible contribution of cultural humility training to foster harmonious intergroup relations.

Keywords: intergroup contact; cultural humility; prejudice; negative contact; opportunities for contact

Introduction

Since the formulation of the contact hypothesis (Allport, 1954), research has consistently demonstrated that personal knowledge with members of external groups can reduce prejudice and promote intergroup harmony (e.g., Pettigrew & Tropp, 2006). Despite this robust and consistent finding, cultural and ethnic diversity and opportunities for contact do not always translate into positive intergroup attitudes and perceptions. Indeed, while some research found positive associations between opportunities for contact and positive intergroup attitudes (e.g., Wagner et al., 2006 for perceived opportunities for contact; Visintin et al., 2016 for actual opportunities for contact), opportunities for contact have also been related to more prejudice (e.g., Kotzur, & Wagner, 2021; Scheepers et al., 2002) and reduced social capital (e.g., Putnam, 2007). It is therefore crucial to understand factors which shape the effects of diversity on prejudice.

First, opportunities for contact are likely to promote not only positive contact but also negative contact (Kotzur & Wahner, 2021; Laurence et al., 2018), and negative contact is likely to increase prejudice (Barlow et al., 2012). Negative contact effects need therefore to be taken into account when analyzing the effects of opportunities for contact on intergroup attitudes and perceptions.

Second, also individual difference variables might play a role. Following a “person × situation” approach (Turner et al., 2020), we propose to analyze the role of an individual difference variable previously overlooked in intergroup contact research, i.e., cultural humility. Cultural humility is the ability to have a humble, respectful, and other oriented approach toward others’ cultural background(s) (Hook et al., 2013). In this research, we test cultural humility both as a possible antecedent of intergroup contact and as a possible moderator of associations between opportunities for contact and valenced (positive and negative) contact and between valenced contact and intergroup attitudes and perceptions.

Therefore, in this research, we build on recent developments of intergroup contact theory and on literature on cultural humility to propose a model explaining the mixed effects of opportunities for contact on intergroup attitudes and perceptions. Indeed, we propose that opportunities for contact could be associated with both positive and negative contact which are, in turn, related to less and to more prejudice, respectively. Moreover, we introduce cultural humility as a possible antecedent of valenced contact, thus predicting it would be associated more with positive contact and less with negative contact, and as a moderator of associations between opportunities for contact, valenced contact, and prejudice. Specifically, we propose that cultural humility could boost the beneficial effects of opportunities for contact and of positive contact and curb the detrimental effects of negative contact.

Intergroup contact and prejudice

Since its initial formulation (Allport, 1954), the contact hypothesis has received empirical support by a wealth of research which has confirmed the effectiveness of intergroup contact for prejudice reduction across several intergroup contexts (Pettigrew & Tropp, 2006). While the usefulness of intergroup contact for positive outgroup attitudes and perceptions is well established, recent research has pointed out some limitations in the implementation of intergroup contact as a means to reduce prejudice in diverse contexts. Three of such limitations are crucial for the current research.

First, naturally occurring intergroup encounters are not necessarily experienced as pleasant and positive. Indeed, intergroup contact can also be experienced as negative and unpleasant (e.g., Barlow et al., 2012; Visintin et al., 2017). While positive contact generally occurs more often than negative contact (e.g., Graf et al., 2014; Huang et al., 2020), negative contact is likely to have detrimental consequences for intergroup relations, being associated with higher prejudice and negative emotions (e.g., Barlow et al., 2012, 2019). Nevertheless, while the association between negative contact and increased prejudice is now well

established, research investigating predictors of negative contact and how to curb the effects of negative contact on prejudice is still scarce (Schäfer et al., 2021).

Second, while presence of outgroup members is a prerequisite for occurrence of intergroup contact, opportunities for contact do not necessarily translate into the occurrence of actual contact, and segregation might persist despite ethnic and cultural diversity. For example, Al Ramiah, Hewstone, Schmid, and Floe (2015) found segregation between Asian and White students in highly mixed schools. Similarly, research conducted in South Africa consistently showed racial segregation patterns across several contexts (e.g., beaches, university classrooms) despite the removal of legislated segregation (Dixon & Durrheim, 2003; Koen & Durrheim, 2009). It is therefore crucial to understand factors which might promote the transformation of contact opportunities into actual (positive) contact.

Moreover, opportunities for contact can favor both positive and negative contact. For example, Laurence et al. (2018) found that exposure to ethnic minorities, both in the neighborhood and in the workplace, was associated with both positive and negative contact with ethnic minorities among British individuals. Similarly, Kotzur and Wagner (2021) provided longitudinal evidence that opportunities for contact increase both positive and negative contact. Associations of opportunities for contact with both positive and negative contact contribute to explain the mixed effects of diversity on intergroup attitudes and perceptions.

Third, also individual characteristics play a role in promotion of contact and in shaping its associations with prejudice. For example, personality variables such as extraversion, openness to experiences, and agreeableness were found to predict positive intergroup contact (Turner et al., 2014; Vezzali, Turner, Capozza, & Trifiletti, 2018).

Further, it is possible that intergroup contact does not uniformly promote prejudice reduction, and that individual characteristics and dispositions might moderate the positive

contact-prejudice reduction association. For example, research has considered the moderator role of ideologies such as social dominance orientation (SDO), i.e., preference for intergroup inequalities (Sidanius & Pratto, 1999), and right-wing authoritarianism (RWA), i.e., an ideological orientation consisting in strong support for traditional norms, submission to authorities and authoritarian aggression toward deviants (Altemeyer, 1996). Results were mixed, with some research finding stronger effects of contact on prejudice reduction for people with high SDO and RWA (e.g., Hodson, 2011), other research replicating this effect only for RWA (e.g., Asbrock, Christ, Duckitt, & Sibley, 2012), and other research finding stronger contact-reduced prejudice associations for people low in SDO (e.g., Schmid, Hewstone, Küpper, Zick, & Wagner, 2012).

Moreover, individual characteristics might also shape reactions to opportunities for contact. This argument is in line with research by Van Assche, et al. (2014) who found that perceived and objective diversity were associated with prejudice toward immigrants among Dutch respondents with high levels of RWA, but not among low authoritarians.

While SDO and RWA and their interactions with opportunities for contact and with contact on intergroup attitudes and perceptions have received large attention, other individual characteristics might shape the effects of opportunities for contact and of contact on prejudice.

Building on such caveats of intergroup contact theory and research, we proposed an integrated model from opportunities for contact to intergroup attitudes and perceptions, via valenced (positive and negative contact). As we will next argue, we further propose the integration in this model of cultural humility, which could be an antecedent of valenced contact and also a moderator of the effects of contact opportunities and of valenced contact.

Cultural humility

Cultural humility, a subdomain of the broader concept of humility, is defined as the “ability to maintain an interpersonal stance that is other-oriented (or open to the other) in

relation to aspects of cultural identity that are most important to the [person]” (Hook et al., 2013, p. 354; see also AlSheddi, 2020). Cultural humility implies a critical process of self-examination that seeks challenging conversations with others, that helps to reflect critically on systemic biases, privileges, and social structures (Mosher et al., 2017). Such a process begins with humbly acknowledging oneself as a learner when it comes to understanding another’s experience and is “characterized by respect and lack of superiority toward an individual’s cultural background and experience” (Hook et al., 2013, p. 353).

People with cultural humility recognize cultural differences and approach such differences with curiosity. According to the conceptual analysis carried out by Floronda et al. (2016), openness to experience, together with self-reflection, egolessness, self-awareness and supportive interaction, is one of the main attributes of cultural humility. As suggested by a plethora of studies, openness to experience plays a crucial role on intergroup contact and prejudice reduction (e.g., Vezzali et al., 2018; Sparkaman et al., 2016); but openness to experience only represents a facet of cultural humility intended as a cultural humble approach toward cultural difference (Floronda et al., 2016). As a matter of fact, in addition to be open minded toward culturally different perspectives, embodying cultural humility means recognizing how one’s values and beliefs are shaped by cultural identities and systemic structures of power and privilege in order to question stereotypes and learn from others. As a result, embracing cultural humility allows respectful and mutually beneficial relationship with culturally diverse individuals over sustaining a lifelong process of self-examination and learning. Also, cultural humility requires a high level of perspective taking that prompts the understanding of other’s people thoughts and feelings (Galinsky, Ku & Wang, 2005). Indeed recent findings suggest that people high in honesty-humility also have high levels of perspective taking that in turn is positively associated with prosocial behavior (Fang, et al., 2019). However, perspective taking and cultural humility are not the same, as the ability of

seeing things from the point of view of people with other cultural backgrounds does not fully cover the complexity of cultural humility, which also involves other facets such as self-reflection, recognition of status and power imbalances.

Cultural humility can therefore be considered the key to understanding, respecting, and appreciating cultural differences (Hook et al., 2013; Tervalon et al., 1998) in order to develop and maintain respectful relationships based on mutual trust (Yeager & Bauer-Wu, 2013).

The development of cultural humility is nowadays frequent in the context of psychotherapeutic, educational, and health care professions (Chang et al., 2012; Brown et al., 2016; Hook et al., 2017; Kramlich & Romano, 2020), and is incorporated in multicultural competence training as an ability that can be acquired. Moving away from the knowledge acquisition of cultural differences to develop effective relationship within intercultural situations (see Yeager & Bauer-Wu, 2013), a cultural humility approach implies the acknowledgment of power imbalance and systemic oppression and emphasizes the need to engage in a continuous self-reflection on the structural forces that underlie such inequalities (Tervalon and Murray-Garcia, 1988; Fisher-Borne et al., 2015).

Although cultural humility can be trained (see for instance Chang et al., 2012; Juarez et al., 2006), as explained above, it represents a complex construct which also reflects personality facets and individual orientations. As such, it can be conceptualized as an individual difference variable, in that people are likely to vary in the degree they have a humble and other oriented approach. Research has therefore operationalized and analyzed correlates of cultural humility as an individual difference variable.

Research on cultural humility has tested and found that cultural humility can improve intergroup relations, reduce intergroup aggression, and increase tolerance toward religious, ethnic, and sexual minorities outgroups (AlSheddi, 2020; Choe et al., 2019; Hook, Farrell, et

al., 2017; Mosher et al., 2016; Van Tongeren et al., 2016). For instance, Van Tongeren et al. (2016) measured (Study 1) and manipulated (Study 3) cultural humility and found that it was associated with reduced behavioral aggressions and increased tolerance and positive attitudes toward religious outgroup members. Regarding attitudes toward immigrants, Captari et al. (2018) found that self-reported cultural humility was associated with more positive attitudes toward Syrian refugees over and above political orientation and religious commitment. In line with previous findings, Milani and Rullo (2021) provided cross-sectional evidence that cultural humility is negatively associated with Italians' prejudice and dehumanization toward immigrants (see also Visintin & Rullo, 2021).

Hence, by adopting an other-oriented, culturally humble perspective one can live the encounter with diversity as an opportunity for learning. Therefore, cultural humility might feed the curiosity for the manifestations of different cultural identities and perspectives fostering positive cross-cultural relationships and intercultural engagement (Drinane et al., 2017; Hook, et al., 2013).

In this research we advance the idea that cultural humility could facilitate positive intergroup contact and instead reduce negative contact, and that cultural humility could favor beneficial effects of diversity and of contact for positive intergroup attitudes.

Overview and hypotheses

This research has two main aims. First, we test for the first time whether cultural humility is associated with positive intergroup contact (H1) and with reduced negative intergroup contact (H2).

Second, integrating the literature on intergroup contact, cultural humility, and prejudice, we propose a model explaining associations between opportunities for contact and intergroup attitudes and perceptions, which might be mediated by valenced (positive and negative) contact and moderated by cultural humility. While opportunities for contact might

favor both positive and negative contact, such contact opportunities might predict more positive (H3) and less negative contact (H4) for people high in cultural humility. Indeed, a culturally humble approach might promote benefiting from opportunities for contact. Moreover, cultural humility might also shape reactions to positive and negative contact. As a matter of fact, cultural humility might favor closeness and collaboration, helping people to see contact as an opportunity to learn and feed curiosity about cultural differences. Therefore, a culturally humble perspective might boost the effectiveness of positive contact for prejudice reduction (H5). Importantly, high cultural humility might also reduce the detrimental effects of negative contact on prejudice (H6). A culturally humble perspective to intergroup encounters might indeed allow individuals to relativize the importance and impact of negative, unpleasant contact, therefore reducing the importance of negative intergroup encounters for the development of outgroup attitudes and perceptions.

In other words, we propose a moderated mediation model in which opportunities for contact is the predictor, intergroup attitudes and perceptions are the outcome variable, positive and negative contact are the mediators, and cultural humility is the moderator.

We expect opportunities for contact to be positively associated with both positive and negative contact, but associations with positive contact could be boosted (H3) while associations with negative contact could be reduced (H4) by high cultural humility. We also expect positive and negative contact to be associated with prejudice, negatively and positively respectively, but cultural humility might moderate such associations. Specifically, the negative associations between positive contact and prejudice could be stronger (i.e., more negative) among respondents with high cultural humility compared to respondents with low cultural humility (H5). High cultural humility could also decrease the positive association of negative contact with prejudice (H6). Figure 1 represents the hypothesized associations.

As an additional dependent variable, besides prejudice, we included threat perceptions, i.e., perceptions that the outgroup poses threats to ingroup's identity, values, economy, and safety (Stephan et al., 2002). Intergroup threat represents one of the main variables identified by social psychologists associated with prejudice, and a key variable to be considered to understand how to improve intergroup relations (Aberson, 2015; Stephan, 2014; Riek, Mania, & Gaertner, 2006). We therefore tested with exploratory purposes our model by using threat as a dependent variable. In line with the rationale presented in the introductory section, we expect to replicate on threat perceptions the hypothesized associations between valenced contact, cultural humility and prejudice. Specifically, we expect positive contact to be associated with reduced threat, and this association to be stronger among respondents with high cultural humility compared to respondents with low cultural humility (H5), and negative contact to be positively associated with threat, and this association to be weaker among respondents with high cultural humility compared to respondents with low cultural humility (H6). Replicating findings on a proxy of prejudice would provide confidence in the strength of our findings.

The predicted model was tested in a correlational study conducted in Italy. Respondents were invited to answer to one out of two versions of a questionnaire investigating cultural humility, opportunities for contact, valenced contact, prejudice, and threat perceptions. Each questionnaire focused on one of two target groups which are salient in the Italian context, i.e., immigrants and Muslims. We choose to consider two different outgroups because of the desire to generalize the hypotheses across toward two outgroups defined in terms of ethnicity or religious affiliation. Recent literature has shown that hostility toward immigrants in Italy is ethnicity-blind, and is thus not more pronounced toward ethnic groups than toward religious groups such as Muslims (Barisione, 2020). Moreover, considering the theoretical background behind cultural humility, we consider cultural humility

as able to prompt the appreciation of cultural diversity over and above the criteria that defines such diversity (e.g., religious, ethnic diversity). Thus, we expected the effects of cultural humility to generalize across different social groups perceived as culturally different. While we tested whether the predictions are generalizable across the immigrant and the Muslim outgroups, in additional analysis we controlled for possible moderator effects of the target outgroup (immigrants vs. Muslims).

Method

Participants and procedure. Participants were recruited through the Survey Committee of a University in Central Italy. Participants were randomly sampled both from the student population and the administrative staff. Conditions for participation were to be aged 18 or older. Participants were invited to answer a questionnaire about perceptions and attitudes toward intercultural differences. The Survey Committee sent two versions of the questionnaire (immigrant vs Muslim outgroups) to 376 administrative staff (40% of the total population) and to 2998 students (20% of the overall student population). Among administrative staff, 108 returned the questionnaire (28.7% response rate), whereas among students 307 students filled the questionnaire (10.2% response rate)¹.

All the 415 respondents provided informed consent. We excluded from data analysis 10 respondents who declared Muslim as their religious belonging, because Muslims were one of the target outgroups. Therefore, all data analyses were run on the remaining data from the 405 non-Muslim respondents². Among the 405 respondents, 298 were students, and 107 were members of the administrative staff. 252 were females, 124 were males, and 29 preferred to not report their gender³. Nineteen respondents were not born in Italy⁴. Turning to religious belonging, 255 were Christians, 126 were atheists or agnostics, while the remaining 24 indicated other religious belongings.

A sensitivity power analysis using G*Power 3.1 (Faul et al., 2009) with an α level of 0.05, a desired power of 0.80, and 12 parameters for the moderated mediation model, was performed. We thus calculated three linear regressions with two principal predictors and one interaction each. The results of the sensitivity analysis revealed an effect size of $f^2 = 0.04$ that is usually considered a small effect size (Cohen, 1992). In other words, our limited sample size allowed us to detect even small effect such as $f^2 = 0.04$ in a moderated mediation model with 80% of power.

Questionnaire and measures

Respondents first answered to a self-report cultural humility measure, and then answered to a series of questions investigating intergroup contact, threat and prejudice posed by immigrants or by Muslims. Respondents assigned to immigrants as outgroup were asked to think about extra UE immigrants, who have different cultures and who have moved to Italy (for economic, political, or other reasons).

Cultural humility. The measure of cultural humility was adapted from the Cultural Humility Scale (Hook et al., 2013) consisting of twelve items of assessing the degree of humility towards different cultures. Sample items include “is respectful” and “is genuinely interested in learning more.” While the initial formulation of the cultural humility scale proposed external attributions of cultural humility (e.g., patients rated the cultural humility of their therapists), here cultural humility was assessed as self-report. To reduce social desirability effects, we adapted the procedure used by Schwartz et al. (2001) to assess personal values, i.e., asking respondents to rate their similarity toward an individual who expresses a list of characteristics. Therefore, respondents were asked to indicate how similar to them is the person described by each of the twelve statements on a 4-point scale (1 = *Not at all like me*, 4 = *Completely like me*). The full adapted measure is reported in Online Supplementary Materials.

Opportunities for contact. Opportunities for contact were measured with two items adapted from Turner, Hewstone, and Voci (2007): “How many immigrants [Muslims] live in your area?” and “How many immigrants/Muslims do you see in the places you attend?” on a 4-point scale (1 = *Very few*, 4 = *A lot*).

Positive and negative contact. Both positive and negative contact were measured with two questions from Visintin, et al. (2017). The two questions were “How often do you have contact with immigrants [Muslims] you know well and perceive such interactions as positive [negative]?” and “How often do you have brief interactions (e.g., exchange a few words on the street, in a shop, on public transport) with immigrants [Muslims] and perceive these interactions as positive [negative]?” Responses were provided on a 4-point scale (1 = *Never*, 4 = *Very often*).

Outgroup prejudice. We invited respondents to report their attitude toward immigrants [Muslims] on a scale from 0 (*extremely unfavorable*) to 100 (*extremely favorable*). Answers were reverse coded, so that higher scores reflect more prejudice.

Perceived threat. Respondents were asked to rate their agreement or disagreement with 6 items adapted from Stephan et al. (2002) (e.g., “Italian identity is threatened by the presence of immigrants [Muslims] in Italy”), on a 4-point scale (1 = *totally disagree*, 4 = *totally agree*). While the items referred to both realistic and symbolic threat, a preliminary principal component analysis revealed that all the 6 items loaded onto a single factor (Eigenvalue = 3.91) explaining 65% of variance (factor loadings \geq .73).

The questionnaire also included questions about socio-demographic characteristics of respondents and the four-items social dominance orientation (SDO) short scale (Pratto et al., 2013; response scale from 1 = *totally disagree* to 5 = *totally agree*, alpha = .67). While the ethical committee did not allow us to investigate political orientation, we assessed SDO as an ideological orientation toward unequal intergroup relations which was treated as a proxy for

political orientation. Socio-demographic characteristics and SDO were used as control variables in additional analysis.

Results

Preliminary analysis

Before testing the predicted associations synthesized in Figure 1, we tested empirical distinction between variables, by conducting a confirmatory factor analysis in Mplus. For variables assessed by two items, the two items were used as observed variables, while for variables assessed by several items (cultural humility and threat) we used the partial disaggregation approach, which consists in creating subsets of items (Little et al., 2002). Therefore, we created three parcels for threat and three parcels for cultural humility. Finally, prejudice was assessed by a single item.

A model with six latent variables and thirteen observed variables (one indicator for prejudice; two indicators for opportunities for contact, positive contact and negative contact; three indicators for cultural humility and threat) fitted the data well, $\chi^2(51) = 107.85, p < .001$, χ^2/df ratio = 2.11, RMSEA = .052, SRMR = .037, CFI = 0.97. Factor loadings were higher than .70 ($p < .001$). The highest correlation was $|.67|$ (negative correlation between prejudice and threat), showing empirical distinction between constructs.

Next, we calculated reliabilities of measures and all multiple-item measures are reliable (Table 1). Therefore, we created composite scores for each variable, by averaging answers to the respective items. Higher scores reflect higher levels of the assessed concept.

Table 1 reports means, standard deviations, and bivariate correlations between variables. Noteworthy, self-reported cultural humility was high, albeit with some variation. Respondents reported a moderate presence of outgroup members in their areas. As frequently found by previous research (e.g., Barlow et al., 2012; Graf et al., 2014), positive contact was

more frequent than negative contact, $t(404) = 21.67, p < .001$. Prejudice and threat were relatively low.

In line with hypotheses, cultural humility was positively associated with positive contact (H1) and negatively associated with negative contact (H2) and both forms of prejudice. Again corroborating our premises, opportunities for contact were positively associated both with positive and with negative contact, and also with threat perceptions. In turn, positive contact was negatively associated with prejudice and threat, while negative contact correlated positively with prejudice and threat.

Moderated mediation analysis

To test the hypothesized moderated mediation model depicted in Figure 1, we used the Process Macro (Models 1 and 59). Model 1 was used to test and decompose simple interactions (i.e., possible interactions between opportunities for contact and cultural humility on positive and negative contact). Model 59 was instead used to test the overall moderated mediation models, with opportunities for contact as the predictor, positive and negative contact as mediators, cultural humility as moderator, and with prejudice and threat as outcome variables. All predictors (opportunities for contact, positive contact, negative contact, cultural humility) were centered before running the regression analysis. Results are reported in Table 2.

First, we examine associations between opportunities for contact, cultural humility, and positive and negative contact. As expected, both opportunities for contact and cultural humility were associated with positive contact. H1 was therefore confirmed even when controlling for opportunities for contact. Disconfirming H3, we found no interaction between opportunities for contact and cultural humility on positive contact.

Cultural humility was negatively and opportunities for contact were positively associated with negative contact. Thus, we found support for H2, even when controlling for

opportunities for contact. Further, cultural humility moderated the association between opportunities for contact and negative contact. In line with H4, opportunities for contact were positively associated with negative contact only for respondents with low cultural humility (-1SD; $B = 0.24$, $SE = 0.04$, $p < .001$), but not for respondents with high cultural humility (+1SD, $B = 0.04$, $SE = 0.05$, $p = .461$) (see Figure 2).

Next, we turn to predictors of prejudice and threat. We describe separately models predicting prejudice and threat (Table 2), and the indirect effects of opportunities for contact on prejudice and threat via valenced contact for respondents with high vs. low cultural humility (Table 3).

Positive and negative contact were (negatively and positively, respectively) associated with prejudice, and both associations were moderated by cultural humility. Disconfirming H5, the negative association between positive contact and prejudice was stronger for respondents with low cultural humility (-1SD; $B = -13.52$, $SE = 1.47$, $p < .001$) than for respondents with high cultural humility (+1SD, $B = -6.70$, $SE = 1.40$, $p < .001$) (see Figure 3). Disconfirming also H6, the positive association between negative contact and prejudice was stronger for respondents with high cultural humility (+1SD, $B = 14.42$, $SE = 2.46$, $p < .001$) than for respondents with low cultural humility (+1SD, $B = 8.14$, $SE = 1.75$, $p < .001$) (see Figure 4).

Opportunities for contact had both positive and negative indirect effects on prejudice. More specifically, opportunities for contact were positively associated with prejudice via negative contact for respondents with low cultural humility, while they were negatively associated with prejudice via positive contact, this indirect effect stronger for respondents with low (vs. high) cultural humility.

Next, we turn to predictors of threat. Similarly, as for prejudice, positive and negative contact were (negatively and positively, respectively) associated with threat. Only the effects of positive contact on threat were moderated by cultural humility. As for prejudice, positive

contact was associated with reduced threat only for respondents with low cultural humility (-1SD; $B = -0.27$, $SE = 0.04$, $p < .001$) but not for respondents with high cultural humility (+1SD, $B = -0.06$, $SE = 0.04$, $p = .149$) (see Figure 5). H5 and H6 were therefore not supported also when considering threat as outcome variable.

Opportunities for contact had positive indirect effects on threat via negative contact and negative indirect effects on threat via positive contact, but both indirect effects occurred only for respondents with low cultural humility.

Additional analysis

To ensure the robustness of our findings, we conducted additional analyses. First, we re-run analysis including control variables which might impact intergroup contact, prejudice, and threat. Specifically, we re-run all regressions controlling for target outgroup (immigrants vs. Muslims), population (students vs. administrative staff), gender (female vs. male vs. refused to answer), SDO as a proxy of political ideology, and results did not change.

Second, given that respondents born outside Italy might have foreign nationality, all regression analyses were also re-run after excluding respondents born outside Italy ($n = 19$), and results did not change.

Finally, given that in this research we included two target outgroups, and given the heterogeneity of the sample, we tested whether the results pattern changes as a function of variables which might impact the tested associations. Therefore, we tested whether associations vary across target outgroups (Muslims vs. immigrants), across participants' gender, and across participants' professional status (students vs. administrative staff). With this aim, we tested a series of Models 73 with the Process macro, where we added an additional moderator to the moderated mediation model. Full results are reported in Tables 1-3 in Online Supplementary Materials (OSM).

When testing for possible moderation by target outgroup, some moderations by target outgroup emerged (Table 1 in OSM), but the results pattern did not change (although the interaction between negative contact and cultural humility on prejudice became non-significant, $p = .13$).

When testing for possible moderation by participants' gender ($n = 376$ because of the exclusion of participants who preferred not to report their gender), some moderations by gender emerged (Table 2 in OSM), but the results pattern did not change (although the interaction between positive contact and cultural humility on prejudice, $p = .19$, and on threat, $p = .10$, became non-significant).

When testing for possible moderation by participants' professional status, some moderations by professional status emerged (Table 3 in OSM), but the results pattern did not change (although the interaction between opportunities for contact and cultural humility on negative contact became marginally significant, $p = .09$).

Overall, the additional analysis confirmed the robustness of our findings, because results did not change when control variables were included in moderated mediation models, and because the results pattern mostly held when controlling for moderations by target outgroup, population, and respondents' gender⁵.

Discussion

In a correlational study, we found that Italian respondents' cultural humility, i.e., the ability to have a humble and other-oriented approach to others' cultures (Hook et al., 2013), was associated with more positive contact and less negative contact with immigrants and with Muslims in Italy, supporting H1 and H2. Furthermore, we found that cultural humility shaped the associations between opportunities for contact and negative contact: opportunities for contact were associated with more negative contact only for respondents with low cultural humility while opportunities for contact were not associated with negative contact for

respondents with high cultural humility, supporting H4. Instead, cultural humility did not moderate the association between opportunities for contact were and positive contact, refuting H3. Finally, cultural humility moderated the associations between valenced contact and prejudice toward immigrants and Muslims in Italy, but not in the hypothesized (H5 and H6) direction. Specifically, positive contact was associated with reduced prejudice mainly for respondents with low cultural humility, while negative contact was associated with more prejudice mainly for respondents with high cultural humility. Results were similar when considering threat perceptions, which we examined with exploratory purposes given their relevance for prejudice (Stephan, 2014). Replicating findings on threat provides greater confidence in our model, since its effects generalize to an outcome complementary but not identical to prejudice.

This study contributes to existing literature by providing additional evidence of the role of cultural humility for positive perceptions of outgroups (see Captari et al., 2018; Van Tongeren et al., 2016), and extends previous literature which focused on attitudes and behavioral tendencies by considering another correlate of cultural humility, i.e., intergroup contact. Many scholars have investigated the positive role of cultural humility in personal relationships with people from outgroups, but few studies have been conducted to explore its beneficial effects on prejudice reduction toward whole outgroups. Thus, the present findings contribute to the growing effort to explore the benefits of humility (Davis et al., 2013) in promoting positive cross-cultural relationships (Mosher Hook, Farrell, et al., 2017). Indeed, we found that cultural humility was associated not only with reduced prejudice, but also with positive intergroup contact and with reduced negative contact.

Following the call by Turner et al. (2020) to analyze individual difference variables as predictors of (valenced) contact and as moderators of the (valenced) contact effects on prejudice (see also Paolini et al., 2018), we investigated the role of cultural humility. Indeed,

cultural humility, besides being associated with valenced contact, also moderated the associations between contact and prejudice, although not in the expected direction. Positive contact was associated with reduced prejudice and threat mainly for respondents with *low* cultural humility. Similarly to findings for other individual difference variables associated with prejudice (e.g., SDO, RWA; see Hodson, 2011), positive contact appears to be more effective for prejudice reduction among people who might be more prone to prejudice, i.e., those with low cultural humility. Culturally unhumble people are likely to avoid contact if possible, or to enter intergroup situations with skepticism and anxiety. However, when culturally unhumble people do have positive intergroup contacts, such experiences are likely to be important and have the potential to reduce prejudice. Importantly, while our expectation for the role of cultural humility in promoting the beneficial effects of positive contact on prejudice reduction was not supported, positive contact seems to work for prejudice reduction for people who need it the most, i.e., those with low cultural humility.

Turning to negative contact, it was instead associated with more prejudice more strongly for respondents with *high* cultural humility. This effect can be interpreted considering that negative contact is generally associated with high category salience (Paolini et al., 2010). Intergroup salience elicited by negative contact together with attention paid by people with high cultural humility to intergroup encounters might contribute to explain why negative contact was particularly detrimental in terms of prejudice increase for people with high cultural humility.

The overall results pattern of cultural humility moderating associations between valenced contact and prejudice and threat could be interpreted in light of the expectancy-violation theory which proposes that extreme evaluations of a target, either positive or negative, are the results of violated stereotype-based expectations (Jackson et al., 1993; Jussim et al., 1987; Bettencourt et al., 1997). It is plausible that people with high cultural

humility might have positive expectations or beliefs about intergroup encounters that could be violated by negative contact, thus leading to extreme evaluations, and vice versa for people with low cultural humility and positive contact. Supporting this interpretation, Zingora, Vezzali, and Graf (2020) found that contact experiences inconsistent with pre-existing expectations have a stronger impact on attitudes compared to contact experiences consistent with expectations. Therefore, people with high cultural humility might enter the contact situation with positive expectations about intergroup interactions, and generally have positive, pleasant intergroup interactions. However, when they (rarely) have negative interactions, such negative contacts counter expectations and are likely to be particularly remarkable and have a strong effect on prejudice and threat (and vice-versa for low cultural humility and positive contact).

Given the complexity of intergroup dynamics in diverse societies, and the mixed effects of opportunities for contact on intergroup attitudes and perceptions (for beneficial effects see e.g., Wagner et al., 2006; for detrimental effects see e.g., Kotzur & Wagner, 2021), we proposed a model taking into account the possible occurrence of both positive and negative contact following contact opportunities, and the role of the individual difference variable of cultural humility. Our findings confirm the complexity of the effects of opportunities for contact on intergroup attitudes and perceptions. In line with Laurence et al. (2018) and with Kotzur and Wagner (2021), opportunities for contact were associated with both positive and negative intergroup contact, although the association between opportunities for contact and negative contact was reduced for people with high cultural humility. Furthermore, again in line with Laurence et al. (2018), opportunities for contact were associated both with reduced prejudice and threat via positive contact and with increased prejudice and threat via negative contact (Table 3). Interestingly, such indirect effects occurred mainly for people with low cultural humility. There are several explanations for such findings. First, people with high

cultural humility are likely to have low prejudice toward social minorities, even in the absence of opportunities for contact and actual contact. People with low cultural humility are instead more prone to prejudice, and might need both opportunities for contact and positive contact for prejudice reduction to occur. When there are opportunities for contact, people with low cultural humility are also more likely to have negative contacts compared to culturally humble individuals (H4), and therefore contact opportunities can translate into more prejudice via negative contact for culturally unhumble people.

It should be noted that the construct of cultural humility may appear redundant to other psychological constructs, like perspective-taking or openness to experience. However, these concepts are theoretically distinct even though up to now, there is no empirical evidence directly investigating such distinction. On a conceptual level, cultural humility is a complex construct, that in part can also be learned and to which several other constructs, like openness to experience and perspective-taking/empathy, concur (Floronda et al., 2016). On an empirical level, studies investigating cultural humility as a predictor of prejudice revealed that it is indeed associated with prejudice over and above other predictors such as political orientation, social dominance orientation, right-wing authoritarianism (e.g. Captari et al., 2019; Mosher et al., 2019; Visintin & Rullo, 2021).

Limitations and future directions

The present work presents some limitations that future studies should address. First, the cross-sectional nature of the study prevents us from drawing causal conclusions about associations between variables. For example, it is plausible that, in line with recent research (e.g., Vezzali et al., 2018), individual characteristics such as cultural humility might change as a function of intergroup contact experiences. Second, in this research we focused on cultural humility and its role on intergroup contact dynamics, but we did not assess other variables which might share variance with cultural humility, e.g., intercultural competence, perspective

taking, openness to experience, and therefore we could not control the results pattern over and above such related constructs. Third, while we attempted to reduce social desirability on the cultural humility measure by adapting the procedure by Schwartz et al. (2001), the use of self-report measures could increase social desirability effect. Relatedly, while previous literature provided evidence for the association between actual and perceived opportunities for contact (e.g., Pettigrew, et al., 2010), we did not have objective measures of presence of outgroup members to test the effects of actual contact opportunities on contact and attitudes and perceptions. Finally, the survey was administered among university students and administrative staff. Therefore, our sample was likely to be younger and more educated compared to the general population. Further, we examined the point of view of a specific population (Italians) and their attitudes toward and contacts with two outgroups (immigrants and Muslims). Although we expect similar associations in other intergroup contexts, findings should be replicated to confirm generalizability.

Future studies thus should aim at replicating and extending out findings by 1) designing longitudinal or experimental studies to establish causality; 2) including measures of variables which might share variance with cultural humility, to control robustness of findings over and above such variables; 3) relying on behavioral or implicit measures; 4) using objective measures of contact opportunities (e.g., proportion of immigrants by neighborhood, e.g., Schmid et al., 2014); 5) analyzing different populations and intergroup contexts.

Conclusion

Despite growing ethnic and cultural diversity and the effectiveness of positive contact for prejudice reduction, prejudice and discrimination persist. Our research suggests that cultural humility could contribute to the promotion of positive intergroup relations by fostering positive contact and reducing negative contact, and by favoring beneficial effects of contact opportunities (i.e., reduction of negative contact). While cultural humility is included

in training for psychotherapeutic, educational, and health care professions professionals, a further inclusion of cultural humility in school programs or organizational trainings might contribute to reduce prejudice and discrimination for tolerant and egalitarian societies.

Footnotes

1. We compared gender distributions of respondents who answered to the questionnaire vs. those who did not answer. We found significant gender differences in both the administrative staff population, $\chi^2(1) = 4.44, p = .035$, and in the student population, $\chi^2(1) = 6.40, p = .011$, with male invited potential respondents less likely to participate to the research compared to female potential respondents in both subsamples. Therefore, in additional analysis we controlled for gender and checked the possible moderator role of gender. Unfortunately, we did not have other objective information (e.g., age) on the sampled population, and other comparisons could not be made.
2. When running data analysis without excluding Muslim respondents' results were the same.
3. Respondents also reported their age but the Survey Committee used different age categories for students and administrative staff.
4. Because of internal regulations of the Survey Committee, we could not ask respondents their nationality, but only if they were born in Italy or outside Italy. Therefore, we cannot know whether foreign born respondents were Italian nationals or not, and we kept them in main data analysis.
5. While this article focuses on cultural humility as predictor of valenced contact, and as moderator of effects of opportunities for contact and of valenced contact, also treating cultural humility as mediator between valenced contact and prejudice and threat is conceivable. Indeed, intergroup contact can shape individual difference characteristics such as SDO (Dhont, Van Hiel, & Hewstone, 2014), openness to experiences, and agreeableness (Vezzali et al., 2018), and could also shape cultural humility, which could in turn be associated with reduced prejudice and threat. In this vein, we tested indirect effects from valenced contact to prejudice and threat via cultural humility, and

found that positive contact, controlling for negative contact, had negative indirect associations with prejudice ($B = -1.62$, $SE(\text{boot}) = 0.56$, $95\% \text{ CI} = [-2.81, -0.65]$) and threat ($B = -0.08$, $SE(\text{boot}) = 0.02$, $95\% \text{ CI} = [-0.12, -0.04]$) via cultural humility, and that negative contact, controlling for positive contact, had positive indirect associations with prejudice ($B = 2.41$, $SE(\text{boot}) = 0.78$, $95\% \text{ CI} = [1.12, 4.33]$) and threat ($B = 0.12$, $SE(\text{boot}) = 0.04$, $95\% \text{ CI} = [0.06, 0.20]$) via cultural humility

References

- Allport, G. (1954). *The nature of prejudice*, New York, NY: Basic Books.
- AlSheddi, M. (2020). Humility and Bridging Differences: A Systematic Literature Review of Humility in Relation to Diversity. *International Journal of Intercultural Relations*, 79, 36-45. <https://doi.org/10.1016/j.ijintrel.2020.06.002>
- Asbrock, F., Christ, O., Duckitt, J., & Sibley, C. G. (2012). Differential effects of intergroup contact for authoritarians and social dominators: A dual process model perspective. *Personality and Social Psychology Bulletin*, 38(4), 477-490. <https://doi.org/10.1177/0146167211429747>
- Barisione, M. (2020). When ethnic prejudice is political: an experiment in beliefs and hostility toward immigrant out-groups in Italy. *Italian Political Science Review/Rivista Italiana di Scienza Politica*, 50(2), 213-234. .doi:10.1017/ipo.2019.28
- Barlow, F. K., Hornsey, M. J., Hayward, L. E., Houkamau, C. A., Kang, J., Milojev, P., & Sibley, C. G. (2019). Why do we hold mixed emotions about racial out-groups? A case for affect matching. *Psychological Science*, 30(6), 917-929. <https://doi.org/10.1177/0956797619844269>
- Barlow, F. K., Paolini, S., Pedersen, A., Hornsey, M. J., Radke, H. R., Harwood, J., ... & Sibley, C. G. (2012). The contact caveat: Negative contact predicts increased prejudice more than positive contact predicts reduced prejudice. *Personality and Social Psychology Bulletin*, 38(12), 1629-1643. <https://doi.org/10.1177/0146167212457953>
- Bettencourt, B. A., Dill, K. E., Greathouse, S. A., Charlton, K., & Mulholland, A. (1997). Evaluations of ingroup and outgroup members: The role of category-based expectancy violation. *Journal of Experimental Social Psychology*, 33(3), 244-275. <https://doi.org/10.1006/jesp.1996.1323>

- Brown, E. L., Vesely, C. K., & Dallman, L. (2016). Unpacking Biases: Developing Cultural Humility in Early Childhood and Elementary Teacher Candidates. *Teacher Educators' Journal*, 9, 75-96.
- Captari, L. E., Shannonhouse, L., Hook, J. N., Aten, J. D., Davis, E. B., Davis, D. E., ... & Ranter Hook, J. (2019). Prejudicial and welcoming attitudes toward Syrian refugees: The roles of cultural humility and moral foundations. *Journal of Psychology and Theology*, 47(2), 123-139. <https://doi.org/10.1177/0091647119837013>
- Chang, E. S., Simon, M., & Dong, X. (2012). Integrating cultural humility into health care professional education and training. *Advances in health sciences education*, 17(2), 269-278. DOI 10.1007/s10459-010-9264-1
- Choe, E., Srisarajivakul, E., Davis, D. E., DeBlaere, C., Van Tongeren, D. R., & Hook, J. N. (2019). Predicting attitudes towards lesbians and gay men: The effects of social conservatism, religious orientation, and cultural humility. *Journal of Psychology and Theology*, 47(3), 175–186. <https://doi.org/10.1177/0091647119837017>.
- Dixon, J., & Durrheim, K. (2003). Contact and the ecology of racial division: Some varieties of informal segregation. *British Journal of Social Psychology*, 42(1), 1-23. <https://doi.org/10.1348/014466603763276090>
- Dhont, K., Van Hiel, A., & Hewstone, M. (2014). Changing the ideological roots of prejudice: Longitudinal effects of ethnic intergroup contact on social dominance orientation. *Group Processes & Intergroup Relations*, 17(1), 27-44. <https://doi.org/10.1177/1368430213497064>
- Drinane, J. M., Owen, J., Hook, J. N., Davis, D. E., & Worthington, E. L., Jr. (2017). Microaggressions and cultural humility in psychotherapy. In E. L. Worthington, D. E.

- Davis, & J. N. Hook (Eds.), *Handbook of humility: Theory, research, and applications* (pp. 316–328). Routledge.
- Fang, Y., Dong, Y., & Fang, L. (2019). Honesty-humility and prosocial behavior: The mediating roles of perspective taking and guilt-proneness. *Scandinavian journal of psychology*, 60(4), 386-393. <https://doi.org/10.1111/sjop.12551>
- Fisher-Borne, M., Cain, J. M., & Martin, S. L. (2015). From mastery to accountability: Cultural humility as an alternative to cultural competence. *Social Work Education*, 34(2), 165-181. <https://doi.org/10.1080/02615479.2014.977244>
- Foronda, C., Baptiste, D. L., Reinholdt, M. M., & Ousman, K. (2016). Cultural humility: A concept analysis. *Journal of Transcultural Nursing*, 27(3), 210-217. <https://doi.org/10.1177/1043659615592677>
- Graf, S., Paolini, S., & Rubin, M. (2014). Negative intergroup contact is more influential, but positive intergroup contact is more common: Assessing contact prominence and contact prevalence in five Central European countries. *European Journal of Social Psychology*, 44(6), 536-547. <https://doi.org/10.1002/ejsp.2052>
- Hodson, G. (2011). Do ideologically intolerant people benefit from intergroup contact? *Current Directions in Psychological Science*, 20(3), 154-159. <https://doi.org/10.1177/0963721411409025>
- Hook, J. N., Davis, D. E., Owen, J., Worthington, E. L., Jr., & Utsey, S. O. (2013). Cultural humility: Measuring openness to culturally diverse clients. *Journal of Counseling Psychology*, 60(3), 353–366. <https://doi.org/10.1037/a0032595>
- Hook, J. N., Davis, D., Owen, J., & DeBlaere, C. (2017). *Cultural humility: Engaging diverse identities in therapy*. American Psychological Association. <https://doi.org/10.1037/0000037-000>

- Hook, J. N., Farrell, J. E., Johnson, K. A., Van Tongeren, D. R., Davis, D. E., & Aten, J. D. (2017). Intellectual humility and religious tolerance. *The Journal of Positive Psychology, 12*(1), 29-35. <https://doi.org/10.1080/17439760.2016.1167937>
- Huang, F., Shi, K., Zhou, M., Stathi, S., & Vezzali, L. (2020). Can interethnic contact between majority (Han) and minority (Uyghur) people in China influence sense of Chinese national Community? The role of positive and negative direct, extended and vicarious intergroup contact. *International Journal of Intercultural Relations, 77*, 125-139. <https://doi.org/10.1016/j.ijintrel.2020.05.008>
- Jackson, L. A., Sullivan, L. A., & Hodge, C. N. (1993). Stereotype effects of attributions, predictions, and evaluations: No two social judgments are quite alike. *Journal of Personality and Social Psychology, 65*(1), 69-84. <https://doi.org/10.1037/0022-3514.65.1.69>
- Jussim, L., Coleman, L. M., & Lerch, L. (1987). The nature of stereotypes: A comparison and integration of three theories. *Journal of Personality and Social Psychology, 52*(3), 536-546. <https://doi.org/10.1037/0022-3514.52.3.536>
- Juarez, J. A., Marvel, K., Brezinski, K. L., Glazner, C., Towbin, M. M., & Lawton, S. (2006). Bridging the gap: A curriculum to teach residents cultural humility. *FAMILY MEDICINE-KANSAS CITY-*, 38(2), 97. *Fam Med* 2006;38(2):97-102.
- Koen, J., & Durrheim, K. (2010). A naturalistic observational study of informal segregation: Seating patterns in lectures. *Environment and Behavior, 42*(4), 448-468. <https://doi.org/10.1177/0013916509336981>
- Kotzur, P. F., & Wagner, U. (2021). The dynamic relationship between contact opportunities, positive and negative intergroup contact, and prejudice: A longitudinal investigation.

Journal of Personality and Social Psychology, 120(2), 418.

<https://doi.org/10.1037/pspi0000258>

Kramlich, D., & Romano, A. (2020). Leveraging (the potential of) the multiethnic classroom: Using the constructs of cultural humility and safety to provide belonging for Cross Cultural Kid (CCK) refugees. *EDUCATIONAL REFLECTIVE PRACTICES*, 1/2020, pp. 146-178. Doi: 10.3280/ERP2020-001008

Laurence, J., Schmid, K., & Hewstone, M. (2018). Ethnic diversity, inter-group attitudes and countervailing pathways of positive and negative inter-group contact: An analysis across workplaces and neighbourhoods. *Social Indicators Research*, 136(2), 719-749. <https://doi.org/10.1007/s11205-017-1570-z>

Levi, A. (2009). The ethics of nursing student international clinical experiences. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 38(1), 94-99.

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, 9(2), 151-173. https://doi.org/10.1207/S15328007SEM0902_1

Milani, S., & Rullo, M. (2020). Decostruire le differenze culturali: una ricerca esplorativa sulle prospettive dei futuri educatori. *EDUCATIONAL REFLECTIVE PRACTICES*, 2/2020, pp. 86-110. Doi: 10.3280/ERP2020-00200

Mosher, D. K., Hook, J. N., Captari, L. E., Davis, D. E., DeBlaere, C., & Owen, J. (2017). Cultural humility: A therapeutic framework for engaging diverse clients. *Practice Innovations*, 2(4), 221. <https://doi.org/10.1037/pri0000055>

Mosher, D. K., McConnell, J. M., Hook, J. N., Captari, L. E., Hodge, A., Dispenza, F., ... & Van Tongeren, D. R. (2019). Cultural humility of religious communities and well-

- being in sexual minority persons. *Journal of Psychology and Theology*, 47(3), 160-174. <https://doi.org/10.1177/0091647119842409>
- Paolini, S., Hewstone, M., Cairns, E., & Voci, A. (2004). Effects of direct and indirect cross-group friendships on judgments of Catholics and Protestants in Northern Ireland: The mediating role of an anxiety-reduction mechanism. *Personality and social psychology Bulletin*, 30(6), 770-786. <https://doi.org/10.1177/0146167203262848>
- Paolini, S., Harwood, J., & Rubin, M. (2010). Negative intergroup contact makes group memberships salient: Explaining why intergroup conflict endures. *Personality and Social Psychology Bulletin*, 36(12), 1723-1738. <https://doi.org/10.1177/0146167210388667>
- Paolini, S., Harwood, J., Hewstone, M., & Neumann, D. L. (2018). Seeking and avoiding intergroup contact: Future frontiers of research on building social integration. *Social and Personality Psychology Compass*, 12(12), e12422. <https://doi.org/10.1111/spc3.12422>
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90(5), 751-783. <https://doi.org/10.1037/0022-3514.90.5.751>
- Pettigrew, T. F., Wagner, U., & Christ, O. (2010). Population ratios and prejudice: Modelling both contact and threat effects. *Journal of Ethnic and Migration Studies*, 36(4), 635-650. <https://doi.org/10.1080/13691830903516034>
- Pratto, F., Cidam, A., Stewart, A. L., Zeineddine, F. B., Aranda, M., Aiello, A., ... & Henkel, K. E. (2013). Social dominance in context and in individuals: Contextual moderation of robust effects of social dominance orientation in 15 languages and 20

countries. *Social Psychological and Personality Science*, 4(5), 587-599.

<https://doi.org/10.1177/1948550612473663>

Putnam, R.D. (2007). E Pluribus Unum: Diversity and community in the twenty-first century.

The 2006 Johan Skytte Prize Lecture. *Scandinavian Political Studies*, 30(2), 137-174.

<https://doi.org/10.1111/j.1467-9477.2007.00176.x>

Ramiah, A. A., Schmid, K., Hewstone, M., & Floe, C. (2015). Why are all the White (Asian)

kids sitting together in the cafeteria? Resegregation and the role of intergroup

attributions and norms. *British Journal of Social Psychology*, 54(1), 100-124.

<https://doi.org/10.1111/bjso.12064>

Schäfer, S. J., Kauff, M., Prati, F., Kros, M., Lang, T., & Christ, O. (2021). Does negative

contact undermine attempts to improve intergroup relations? Deepening the

understanding of negative contact and its consequences for intergroup contact research

and interventions. *Journal of Social Issues*, 77(1), 197-

216. <https://doi.org/10.1111/josi.12422>

Scheepers, P., Gijssberts, M., & Coenders, M. (2002). Ethnic exclusionism in European

countries. Public opposition to civil rights for legal migrants as a response to

perceived ethnic threat. *European Sociological Review*, 18(1), 17-34.

<https://doi.org/10.1093/esr/18.1.17>

Schmid, K., Hewstone, M., Küpper, B., Zick, A., & Tausch, N. (2014). Reducing aggressive

intergroup action tendencies: Effects of intergroup contact via perceived intergroup

threat. *Aggressive Behavior*, 40(3), 250-262. <https://doi.org/10.1002/ab.21516>

Schmid, K., Hewstone, M., Küpper, B., Zick, A., & Wagner, U. (2012). Secondary transfer

effects of intergroup contact: A cross-national comparison in Europe. *Social*

Psychology Quarterly, 75(1), 28-51. <https://doi.org/10.1177/0190272511430235>

- Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross Cultural Psychology*, 32, 519–542. doi: 10.1177/0022022101032005001
- Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression*. New York, NY: Cambridge University Press.
- Stephan, W. G., Boniecki, K. A., Ybarra, O., Bettencourt, A., Ervin, K. S., Jackson, L. A., ... & Renfro, C. L. (2002). The role of threats in the racial attitudes of Blacks and Whites. *Personality and Social Psychology Bulletin*, 28(9), 1242-1254.
<https://doi.org/10.1177/01461672022812009>
- Sparkman, D. J., Eidelman, S., & Blanchar, J. C. (2016). Multicultural experiences reduce prejudice through personality shifts in Openness to Experience. *European Journal of Social Psychology*, 46(7), 840-853. <https://doi.org/10.1002/ejsp.2189>
- Tam, T., Hewstone, M., Kenworthy, J., & Cairns, E. (2009). Intergroup trust in Northern Ireland. *Personality and Social Psychology Bulletin*, 35(1), 45-59.
<https://doi.org/10.1177/0146167208325004>
- Tervalon, M., & Murray-Garcia, J. (1998). Cultural humility versus cultural competence: A critical distinction in defining physician training outcomes in multicultural education. *Journal of Health Care for the Poor and Underserved*, 9(2), 117-125.
[10.1353/hpu.2010.0233](https://doi.org/10.1353/hpu.2010.0233)
- Turner, R. N., Tam, T., Hewstone, M., Kenworthy, J., & Cairns, E. (2013). Contact between Catholic and Protestant schoolchildren in Northern Ireland. *Journal of Applied Social Psychology*, 43, E216-E228. <https://doi.org/10.1111/jasp.12018>

- Turner, R. N., Dhont, K., Hewstone, M., Prestwich, A., & Vonofakou, C. (2014). The role of personality factors in the reduction of intergroup anxiety and amelioration of outgroup attitudes via intergroup contact. *European Journal of Personality*, *28*(2), 180-192.
<https://doi.org/10.1002/per.1927>
- Turner, R. N., Hewstone, M., & Voci, A. (2007). Reducing explicit and implicit outgroup prejudice via direct and extended contact: The mediating role of self-disclosure and intergroup anxiety. *Journal of Personality and Social Psychology*, *93*(3), 369–388. <https://doi.org/10.1037/0022-3514.93.3.369>
- Turner, R. N., Hodson, G., & Dhont, K. (2020). The role of individual differences in understanding and enhancing intergroup contact. *Social and Personality Psychology Compass*, *14*(6), e12533. <https://doi.org/10.1111/spc3.12533>
- Van Assche, J., Roets, A., Dhont, K., & Van Hiel, A. (2014). Diversity and out-group attitudes in the Netherlands: The role of authoritarianism and social threat in the neighbourhood. *Journal of Ethnic and Migration Studies*, *40*(9), 1414-1430.
<https://doi.org/10.1080/1369183X.2013.876895>
- Van Tongeren, D. R., Stafford, J., Hook, J. N., Green, J. D., Davis, D. E., & Johnson, K. A. (2016). Humility attenuates negative attitudes and behaviors toward religious out-group members. *The Journal of Positive Psychology*, *11*(2), 199-208.
<https://doi.org/10.1080/17439760.2015.1037861>
- Vezzali, L., Turner, R., Capozza, D., & Trifiletti, E. (2018). Does intergroup contact affect personality? A longitudinal study on the bidirectional relationship between intergroup contact and personality traits. *European Journal of Social Psychology*, *48*(2), 159-173.
<https://doi.org/10.1002/ejsp.2313>

- Visintin, E. P., Green, E. G., Bakalova, D., & Zografova, Y. (2016). Identification and ethnic diversity underlie support for multicultural rights: A multilevel analysis in Bulgaria. *International Journal of Intercultural Relations*, 51, 1-13.
<https://doi.org/10.1016/j.ijintrel.2015.12.006>
- Visintin, E. P., Green, E. G., Pereira, A., & Miteva, P. (2017). How positive and negative contact relate to attitudes towards Roma: Comparing majority and high-status minority perspectives. *Journal of Community & Applied Social Psychology*, 27(3), 240-252.
<https://doi.org/10.1002/casp.2309>
- Visintin, E. P., & Rullo, M. (2021). Humble and Kind: Cultural Humility as a Buffer of the Association between Social Dominance Orientation and Prejudice. *Societies*, 11(4), 117. <https://doi.org/10.3390/soc11040117>
- Wagner, U., Christ, O., Pettigrew, T. F., Stellmacher, J., & Wolf, C. (2006). Prejudice and minority proportion: Contact instead of threat effects. *Social Psychology Quarterly*, 69(4), 380-390. <https://doi.org/10.1177/019027250606900406>
- Yeager, K. A., & Bauer-Wu, S. (2013). Cultural humility: Essential foundation for clinical researchers. *Applied Nursing Research*, 26(4), 251-256.
<https://doi.org/10.1016/j.apnr.2013.06.008>
- Zingora, T., Vezzali, L., & Graf, S. (2020). Stereotypes in the face of reality: Intergroup contact inconsistent with group stereotypes changes attitudes more than stereotype-consistent contact. *Group Processes & Intergroup Relations*, 1368430220946816.
<https://doi.org/10.1177/1368430220946816>

Table 1

Reliabilities, means, standard deviations, and correlations between variables

	Reliability	Mean (SD)	1	2	3	4	5
1. Cultural humility	.74 ^a	3.42 (0.36)	-				
2. Opportunities for contact	.71 ^b	2.21 (0.80)	.00	-			
3. Positive contact	.71 ^b	2.50 (0.91)	.28 ^{***}	.30 ^{***}	-		
4. Negative contact	.69 ^b	1.40 (0.55)	-.25 ^{***}	.22 ^{***}	.09	-	
5. Prejudice	-	23.43 (21.37)	-.40 ^{***}	-.05	-.45 ^{***}	.27 ^{***}	-
6. Threat	.89 ^a	1.53 (0.63)	-.51 ^{***}	.13 ^{**}	-.28 ^{***}	.36 ^{***}	.64 ^{***}

Notes. ^a Cronbach's alpha. ^b Spearman-Brown reliability. * $p < .05$. ** $p < .01$. *** $p \leq .001$.

Table 2.

Moderated mediation regression analysis predicting prejudice and threat

	Positive contact	Negative contact	Prejudice	Threat
Intercept	2.50 (0.04)***	1.40 (0.02)***	22.98 (0.89)***	1.50 (0.02)***
Cultural humility	0.70 (0.12)***	-0.34 (0.07)***	-12.60 (2.62)***	-0.57 (0.07)***
Opportunities for contact	0.35 (0.05)***	0.14 (0.03)***	0.73 (1.15)	0.11 (0.03)*
Cultural humility × opportunities for contact	0.08 (0.14)	-0.28 (0.08)***	-3.03 (2.93)	-0.13 (0.08)
Positive contact			-10.11 (1.03)***	-0.16 (0.03)***
Negative contact			11.28 (1.80)***	0.24 (0.05)***
Cultural humility × positive contact			9.38 (2.74)***	0.29 (0.09)***
Cultural humility × negative contact			8.65 (3.14)**	-0.10 (0.09)
R^2	.17	.14	.37	.39
F	28.03	20.98	33.56	36.99
<i>df</i>	3, 401	3, 401	7, 397	7, 397

Notes. Unstandardized coefficients (and standard errors) are reported. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3

Indirect effects of opportunities for contact on prejudice and on threat, separately for respondents with high vs. low cultural humility

Mediator	Moderator	Prejudice		Threat	
		Effect (SE)	95% CI	Effect (SE)	95% CI
Positive contact	Low cultural humility (-1SD)	-4.37 (1.23)	[-6.90, -2.19]	-0.09 (0.03)	[-0.15, -0.04]
	High cultural humility (+1SD)	-2.56 (0.80)	[-4.63, -1.30]	-0.02 (0.01)	[-0.06, 0.001]
Negative contact	Low cultural humility (-1SD)	1.95 (1.01)	[0.37, 4.31]	0.07 (0.03)	[0.03, 0.12]
	High cultural humility (+1SD)	0.50 (0.11)	[-0.76, 2.20]	0.01 (0.01)	[-0.01, 0.03]

Notes. SD = standard deviation. SE = standard error. CI = confidence interval. Bootstrap standard errors and confidence intervals with 1,000 resamples. Significant indirect effects are in bold.

Figure 1.

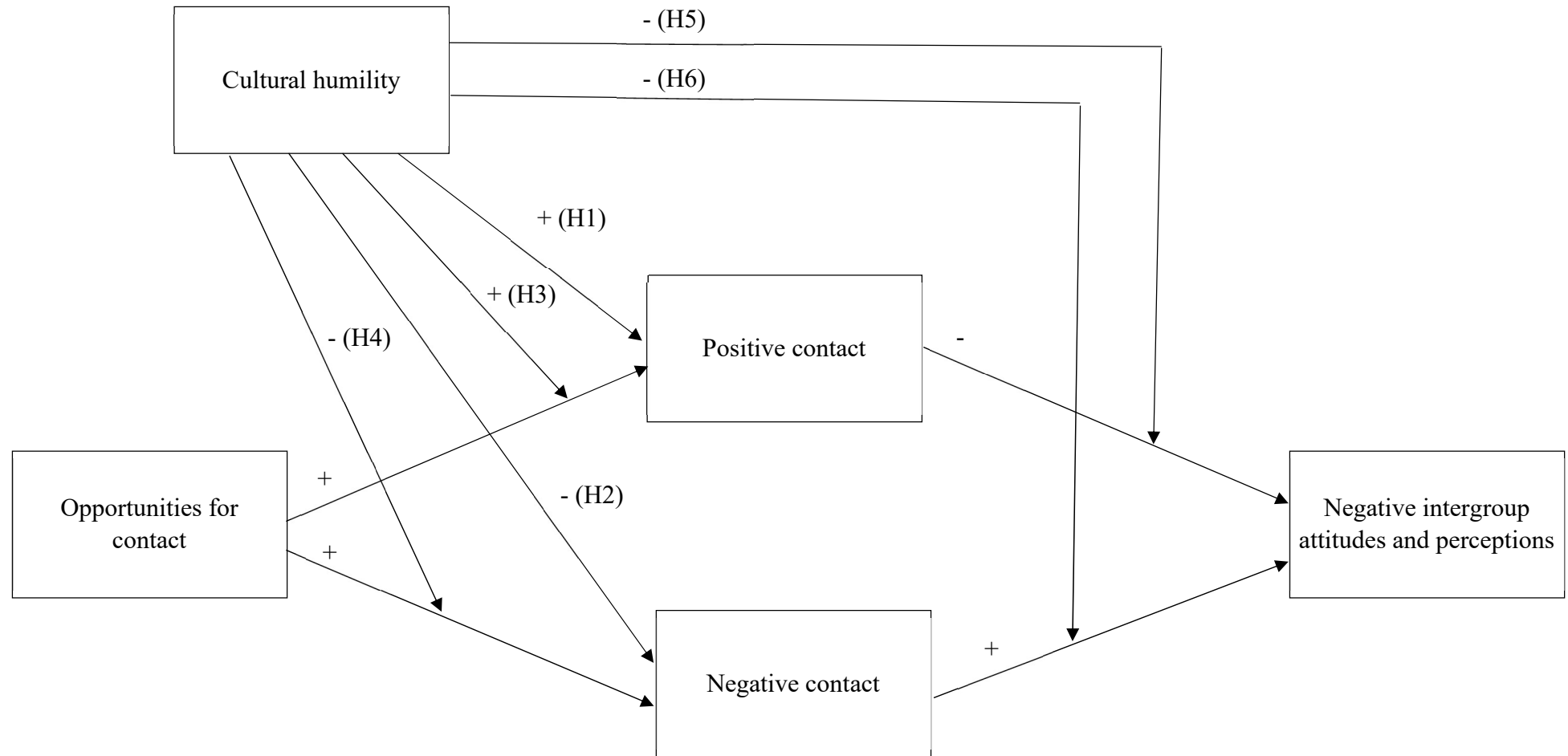


Figure 2. Decomposition of the interaction between opportunities for contact and cultural humility on negative contact

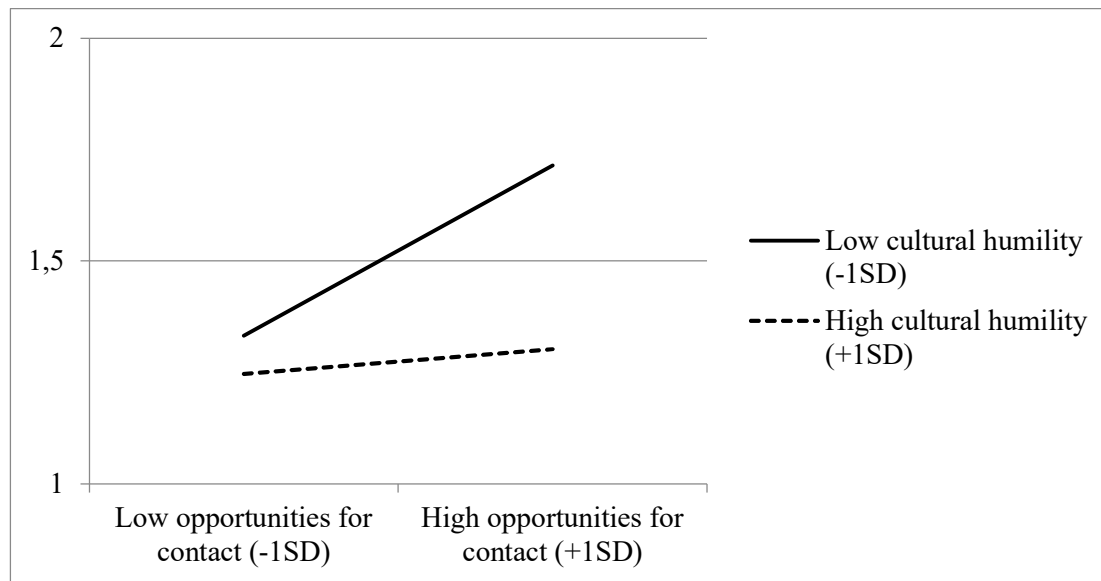


Figure 3. Decomposition of the interaction between positive contact and cultural humility on prejudice

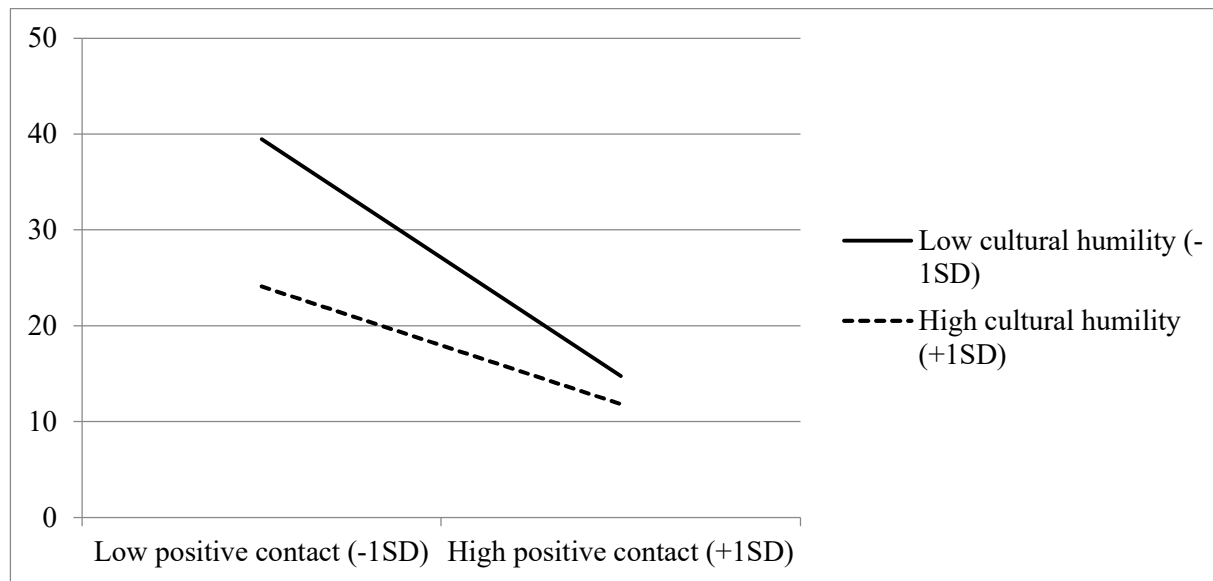


Figure 4. Decomposition of the interaction between negative contact and cultural humility on prejudice

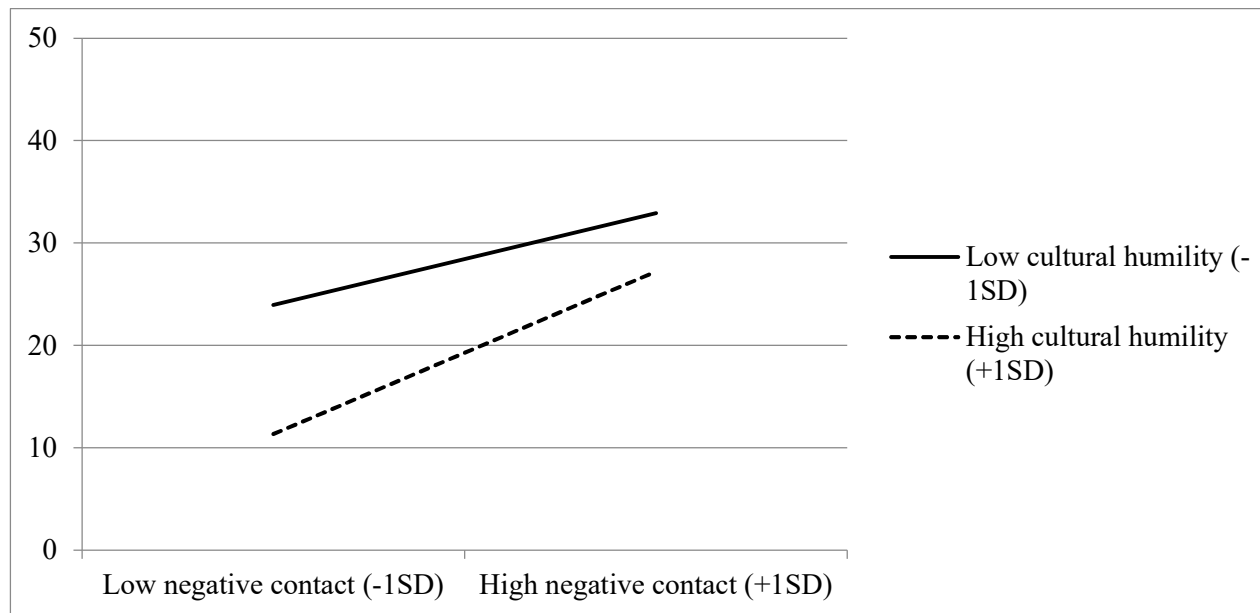


Figure 5. Decomposition of the interaction between positive contact and cultural humility on threat

