

Equality Revisited: A Cultural Meta-Analysis of Intergroup Contact and Prejudice

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Abstract

Across cultures, intergroup contact—interpersonal interaction with out-group members—is associated with less prejudice. Contact research was criticized, however, for bypassing intergroup inequality in the wider society. We propose a cultural psychology approach grounding people's contact experiences in culturally afforded ways of relating to out-groups. Extending Allport's equal-status hypothesis to the culture level, we hypothesized that the contact–prejudice association would be stronger in egalitarian cultures and weaker in more hierarchical cultures. To test this hypothesis, we revisited Pettigrew and Tropp's influential meta-analysis and augmented it with culture-level measures of equality and hierarchy values. Our meta-analysis of intergroup contact and prejudice in 660 samples across 36 cultures suggested that egalitarianism was related to stronger contact–prejudice associations. Cultural hierarchy values and social dominance orientation corresponded with weaker contact–prejudice associations. Cultures of equality made a difference over and above equal status in the contact situation.

Keywords

intergroup relations, prejudice/stereotyping, values, culture/ethnicity, power, social interaction

In 1960, 6-year-old Ruby Bridges became the first Black American student to attend a formerly all-White elementary school in New Orleans. When Ruby walked into her new school, many White American children behaved toward her in a condescending and hostile way. In the early days of school desegregation, daily contact with Black students often reinforced racial prejudice (Trubowitz, 1969; Webster, 1961). As more Black children attended desegregated schools in the following decades, interracial interactions became more equal compared to interaction patterns in the first desegregated schools; and White students' racial prejudice declined in those schools (Glock, 1975; Patchen, Davidson, Hofmann, & Brown, 1977). Allport's (1954) classic contact hypothesis theorized this historical shift in American race relations (Toosi, Babbitt, Ambady, & Sommers, 2012). The hypothesis states that intergroup contact, that is, interpersonal interaction with out-group members, will reduce prejudice. Reflecting historical changes in intergroup relations in the Western world (Inglehart, 1997), a continuing stream of research replicated contact effects across a range of sociocultural contexts (Hodson & Hewstone, 2012; Pettigrew & Tropp, 2013). Evidence that contact reduces prejudice comes from both field and lab studies with both explicit and implicit prejudice measures (Aberson, Shoemaker, & Tomolillo, 2004; Lemmer & Wagner, 2015).

While intergroup contact is applied worldwide as a strategy to curb prejudice, most studies have bypassed the diverse cultural contexts of contact. From a cultural psychology

perspective, cultures afford different contact experiences because they understand and structure intergroup relations differently (Adams, 2012). People thus encounter contact situations that elicit contact appraisals and behaviors in line with culturally accepted ways of relating to out-groups. Accordingly, higher overall prejudice was found in hierarchical countries such as China than in more egalitarian West European countries (Fischer, Hanke, & Sibley, 2012; Van de Vliert, 2010). We ask how cultural differences in prejudice arise from people's contact experiences in various cultural contexts.

As most contact studies focus narrowly on the contact situation, we don't know how cultural context affects the experience of intergroup contact. To fill this gap, we revisited Pettigrew and Tropp's (2006) authoritative meta-analysis of contact studies across cultures and augmented the original analysis with cultural context. As distinct from recent smaller and more narrow meta-analyses (Davies, Tropp, Aron, Pettigrew, & Wright, 2011, focus on intergroup friendship; Lemmer &

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Wagner, 2015, focus on field interventions), Pettigrew and Tropp's analysis covers a range of Western and non-Western cultures. It is widely cited as having demonstrated that contact works (Hodson, Hewstone, & Swart, 2012, p. 262). Our study is the first to systematically test *cultural* affordances of intergroup contact—as distinct from individual differences (Hodson & Dhont, 2015) and situational constraints (Brown & Hewstone, 2005). If cultural affordances moderate Pettigrew and Tropp's well-established findings, this would provide support for the explanatory value of cultural context.

Equality Revisited

When Allport (1954) advanced his contact hypothesis, he was well aware how historical structures of domination shape everyday experiences of intergroup contact. He proposed that for contact to reduce prejudice, contact situations must be structured equally. Indeed, the contact–prejudice association is stronger when partners interact as equals (Pettigrew & Tropp, 2006). Reminiscing Allport's (1954) dictum that “contact in a hierarchical social system . . . [is] harmful rather than helpful” (p. 488), critics argued that mainstream contact research bypassed societal inequalities and that structural changes should precede effective contact (Dixon, Durrheim, & Tredoux, 2005; Finchilescu & Tredoux, 2008). From a cultural psychology perspective, the immediate contact situation cannot be studied in isolation from the wider cultural context. Extending Allport's equal-status hypothesis to the cultural level, our study expects that the contact–prejudice association will be stronger in cultural contexts that promote equality and weaker in contexts that value hierarchy.

Cultures differ in the degree to which equality values are endorsed and enacted in social relations. Egalitarian cultures promote political, social, and economic equality between individuals and groups. Cultural institutions are formally committed to correcting social inequalities, cultural practices prioritize equal status, and people habitually see and treat others as equals (Schwartz, 2009). In line with European egalitarianism, for instance, Dutch youth related to ethnic minority peers as equals and intergroup friendship most strongly predicted less prejudice in Europe (Davies et al., 2011; Verkuyten & Masson, 1995).

Similarly, cultures differ in their acceptance of status inequalities between individuals and groups (Fischer & Schwartz, 2011; Pratto, Sidanius, & Levin, 2006). In hierarchical cultures, political, social, and economic inequalities are the rule; cultural institutions and practices tend to justify interpersonal and intergroup hierarchy; and people are used to hierarchical ways of relating to others (Sidanius & Pratto, 1999). For example, Indian people routinely enact hierarchy in intergroup contact among castes (Desai & Dubey, 2011).

Extending Allport's equal-status hypothesis to the culture level, we therefore hypothesized stronger negative contact–prejudice associations in cultural contexts that promote egalitarianism. Conversely, contact–prejudice associations should

be weaker or absent in cultures where hierarchy is valued. Moreover, we expect that culture-level equality and hierarchy values will predict contact–prejudice associations over and above equal status in the contact situation. Habitual ways of perceiving and treating out-group members in a particular cultural context may affect the accurate appraisal and effective performance of equal contact in contact interventions. In addition, cultural context may influence how readily contact interventions generalize to daily contact situations, to interactions that will likely be less equal.

To test our hypotheses, we replicated Pettigrew and Tropp's (2006) authoritative meta-analysis of contact studies in the United States and in 35 other countries. We assessed culturally valued ways of relating by adding culture-level measures of equality and hierarchy values and ideology. We predicted stronger contact–prejudice associations in more egalitarian cultures (Hypothesis 1) and weaker contact–prejudice associations in the presence of cultural hierarchy values (Hypothesis 2) or hierarchy-enhancing intergroup ideologies (Hypothesis 3), even when the contact situation is equally structured. We also tested whether culture-level prejudice, other cultural values such as collectivism versus individualism, and structural inequality moderated the contact–prejudice link.

Method

Design

To assess cultural equality and hierarchy values, we add a cultural level of analysis to Pettigrew and Tropp's (2005, 2006) meta-analysis of contact research. The original meta-analysis tested cross-cultural generalizability by defining six broad geographical clusters at the study level, contrasting studies in (a) the United States; (b) Europe; (c) Israel; (d) Canada; (e) Australia and New Zealand; and (f) Africa, South America, and Asia (Pettigrew & Tropp, 2006, p. 765). No evidence was found of cultural differences in contact effects among the six clusters. As a rigorous test of cross-cultural variation in contact effects, we define cultural context at the country level (following standard practice in cross-cultural research) in a multilevel design with effect sizes nested within samples, studies, and countries. In keeping with Pettigrew and Tropp's coding, studies are defined at the level of papers and could include one or more study samples. We could unambiguously assign countries of origin to 660 participant samples in 459 contact studies with 186,961 participants in 36 countries including the United States (see Table S2 in Online Supplemental Material for mean effect sizes, number of samples, and combined number of participants by country). By far the most contact studies were conducted in the United States (75% of the studies with 69% of the participants)—spanning over six decades and covering very different intergroup contexts. To account for greater variability between studies within the United States, we estimated within-culture variances separately for the United States and for the 35 other countries. Thus, we avoid that within-culture heterogeneity in

the United States would overshadow real cultural differences between studies from other countries.

Study Sample

Pettigrew and Tropp (2005, 2006) searched for 54 terms related to intergroup contact under “title words,” “key words,” and “subject” in psychology, sociology, political, and educational sciences; dissertations; and general research periodical databases through December 2000. They also looked for additional contact studies in reference lists and requested published and unpublished reports from psychologists (Tropp & Pettigrew, 2005, p. 952). A fail-safe index, a funnel plot, and a comparison of effect sizes in published and unpublished studies indicated no publication bias. The data set included studies of intergroup contact as a predictor and intergroup prejudice as an outcome. Both contact and prejudice referred to group membership; contact referred to actual face-to-face interaction and prejudice was measured at the individual level (Tropp & Pettigrew, 2005, p. 953). As student samples are overrepresented in contact studies, study samples offer a conservative estimate of cultural differences in the general population. We used Pettigrew and Tropp’s effect size calculations and original coding with over .80 interrater reliability (2006, p. 756). We selected all samples of participants that could be assigned one single and unambiguously identifiable country of origin (excluding 54 samples in 38 studies). A detailed description of our coding procedure, a list of country codes assigned, and reasons for exclusion are available in Online Supplemental Material.

Study Measures

Culture-level predictors. For culture-level measures of egalitarianism and hierarchy values, we calculated country mean scores using relevant subscales of the Schwartz Value Surveys (SVS; Schwartz, 1992). The SVS covers a wide range of countries, includes nonstudent samples of teachers in most countries, overlaps in time (1988–2002) with the majority of contact studies in the Pettigrew–Tropp database, and satisfies rigorous standards of cross-cultural construct equivalence (Schwartz, 2009). Participants indicated how important 45 abstract values were as guiding principles in their life on a 9-point scale. Egalitarianism was defined as a cultural value “seeking to induce people to recognize one another as moral equals who share basic interests as human beings” (Schwartz, 2009, p. 176). It was measured by 7 items such as “How important is equality (equal opportunity for all) as a guiding principle in your life?” (Schwartz, 2009, p. 180). Hierarchy values were defined as “seeing unequal distribution of power, roles, and resources as legitimate” (Schwartz, 2009, p. 176). They were measured by 4 items such as “How important is social power (control over others, dominance) as a guiding principle in your life?” (Schwartz, 2009, p. 180). Country scores were aggregated over teacher ($N = 15,975$ in 53 cultures) and student samples ($N = 26,023$ in 63 cultures) with a minimum of 135 participants per country (Vauclair, Hanke, Fischer, & Fontaine,

2011). Egalitarianism and hierarchy values covered 29 cultures with 650 samples in 454 studies in our meta-analysis (see Table S2 in Online Supplemental Material for availability and scores). Higher scores mean higher egalitarianism or hierarchy values in a culture. We also added SVS measures of collectivism, mastery, harmony, intellectual, and affective autonomy values to examine other cultural value differences (Schwartz, 2009).

As a narrow measure of intergroup ideology, country scores for social dominance orientation (SDO) were added to the data set (Pratto et al., 2006). Individual-level SDO denotes “an individual tendency to support group-based hierarchies . . . regardless of whether this implies in-group domination or subordination” (Pratto et al., 2006, p. 282). Participants rated their agreement with statements such as “Superior groups should dominate inferior groups” on a 5-point scale (Pratto et al., 2006). Culture-level SDO captures how strongly majority members on average support group-based hierarchies in each country. Culture-level measures draw on a meta-analysis of SDO studies through 2008, a meta-analysis that averaged responses from all available majority samples ($N = 50,971$) in 27 countries (Fischer et al., 2012). Culture-level SDO scores covered 16 cultures with 603 samples in 423 contact studies (see Table S2 in Online Supplemental Material for availability and scores). Higher cultural SDO scores denote more hierarchical intergroup relations.

We also tested whether country differences in structural inequality moderated the contact–prejudice link. To this end, the GINI index—a widely used measure of income inequality at the country level—was added to the database. GINI scores were available for 31 countries (World Bank, 2017).

Finally, we tested general prejudice as a possible culture-level moderator of the contact–prejudice association. Prejudice was measured by country-level mean attitudes toward immigrants (European Values Study Group & World Values Survey Association, 2006). Our single-item measure correlates meaningfully with culture-level values, and cross-cultural equivalence was established for an extended anti-immigrant prejudice measure in the European Social Survey (Billiet & Meuleman, 2012; Schwartz, 2009). Prejudice scores were available for 20 countries.

Study-level predictors. To measure equal status in the contact situation, we used study-level ratings from Pettigrew and Tropp (2006). A contact situation is categorized as “equal status” (vs. no equal status or status unknown) when a study aimed to implement Allport’s optimal conditions. Optimal contact envisages equal status along with cooperation or common goals between interaction partners and authority sanction of the contact (Pettigrew & Tropp, 2006, p. 757).

As a rigorous test of cultural context effects over and above country differences in study characteristics, we also replicated other study-level moderators in the original Pettigrew–Tropp analysis. Moderators included independent and dependent variable quality, type of contact measures, type of study, type of

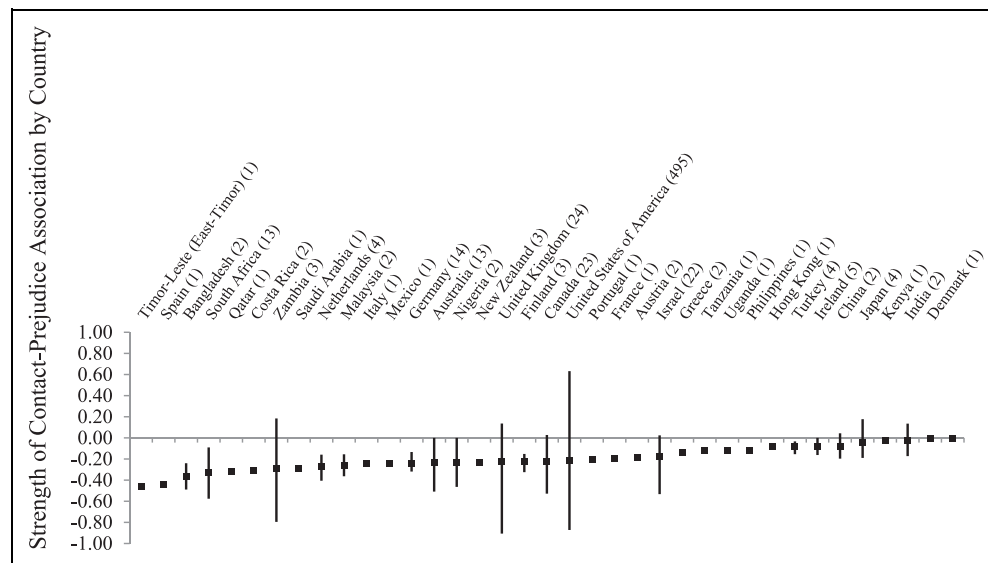


Figure 1. Cultural variability of the contact–prejudice association: country-level mean associations and range of observed associations (Pearson’s r with number of studies per country in parentheses).

control group, publication status of the study, participants’ choice to engage in contact (as a proxy for contact quality), age and gender of participants, target group (ethnic-racial, religious, physically or mentally disabled, mentally ill, sexual minority, or elderly), and contact setting (laboratory, recreational, work, educational, residential, or tourism; Pettigrew & Tropp, 2006, p. 756).

Results

Descriptive Analysis of Cross-Cultural Variation

All effect estimates were converted to Pearson’s correlations r by Pettigrew and Tropp (2006). Negative values of r mean that more contact is related to less prejudice. Values closer to -1 indicate stronger contact–prejudice associations. To obtain an approximately normal sampling distribution, Fisher’s z transformation was used. We replicate Pettigrew and Tropp’s estimated grand mean correlation of contact with prejudice (2006). Across the selected 459 studies covering 660 samples in 36 countries, there was a significant negative correlation between contact and prejudice, $r = -.209^1$, $df = 659$, $t = -89.92$, $p < .0001$, 95% CIs $[-0.214, -0.205]$. Moreover, the strength of contact–prejudice associations varied across cultures: Average associations differed significantly between the 36 countries, $t = -10.820$, $df = 35$, $p < .0001$, ranging from large negative correlations (maximum $r = -.460$) to small correlations or none. Figure 1 shows how observed intergroup contact–prejudice associations varied across cultures. Dots indicate mean contact–prejudice correlations in each country; lines mark the observed range of contact–prejudice correlations. In the Netherlands, as an egalitarian cultural context, for instance, the mean contact–prejudice correlation ($r = -.270$) was fairly high (Verkuyten & Masson, 1995)—in contrast with a near zero mean contact–prejudice correlation

in India ($r = -.020$) as an example of a hierarchical culture (Desai & Dubey, 2011).

Cultural variability should be qualified in two ways, however. First, in spite of the full range of negative, zero, and positive contact–prejudice correlations at the sample level, there was not a single significantly positive mean contact–prejudice correlation at the culture level. Looking across cultures, intergroup contact did not always predict weaker prejudice, but there was no culture where contact was consistently related to stronger prejudice. Second, cultural differences went together with significant and often large within-culture variability in the strength of contact–prejudice associations, as evident from the range of contact–prejudice correlations in each country (vertical line segments in Figure 1). Contact–prejudice associations varied most in the United States, where contact studies span over five decades. Contact–prejudice associations also differed considerably within the UK, Canada, and Israel—countries with a strong tradition of contact research. In countries with fewer and more recent contact studies such as Bangladesh, Finland, or Turkey, within-culture variation was restricted.

Meta-Analysis With Cultural Context

To test our hypotheses, we specified four-level hierarchical models of effect sizes (Level 1), indicating the strength of contact–prejudice associations in 660 samples (Level 2) in 459 contact studies (Level 3) in 36 countries (Level 4; Hox, Moerbeek, & van de Schoot, 2010; Van den Noortgate, López-López, Marín-Martínez, & Sánchez-Meca, 2013). We allowed for estimated effect sizes to vary randomly around the corresponding population values (Level 1), which varied over samples within a study (Level 2), as well as over studies (Level 3) and over countries (Level 4). Significant moderation by

Table 1. Moderator Effects of Equal Status and Cultural Egalitarianism (Model 2), Hierarchy Values (Model 3), and SDO (Model 4) Relative to Baseline Model 1 Without Moderation.

	Model 1	Model 2	Model 3	Model 4
Fixed effects (SE)				
Intercept	−0.21 (0.008)***	0.504 (0.269) [†]	−0.272 (0.081)***	−0.196 (0.048)***
Egalitarianism (Level 4)		−0.125 (0.056)*		
Hierarchy values (Level 4)			0.079 (0.033)*	
SDO (Level 4)				0.003 (0.001)*
Equal status (Level 3)		−0.105 (0.021)***	−0.104 (0.021)***	−0.09 (0.021)***
Variance components				
Between-culture variance (Level 4)	0	0	0	0.0003
Between-study variance (United States/non-United States; Level 3)	0.018/0.011	0.017/0.008	0.018/0.0073	0.017/0.006
Between-sample variance (Level 2)	0.008	0.008	0.008	0.008
Median sampling variance	0.009	0.009	0.009	0.009
AIC/BIC	2,560.3/2560.3	−357.7/−363.7	−357.3/−363.3	−331.3/−339.3

Note. Table shows unstandardized parameter estimates *B* and standard errors *SE* in parentheses. Estimates are based on Fisher's *z* transformed correlations. SDO = social dominance orientation; AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion.

****p* < .001. ***p* < .01. **p* < .05. [†]*p* < .1 (two-tailed).

cultural egalitarianism (Level 4), so that contact–prejudice correlations are stronger in more egalitarian cultures, controlling for equal status in the contact situation (Level 3) would support Hypothesis 1. Significant moderation by culture-level hierarchy values and SDO, so that contact–prejudice associations are weaker in more hierarchical cultures regardless of equal status in the contact situation, would support Hypotheses 2 and 3, respectively. In additional analyses, we replicated the hypothesized culture-level moderation controlling for other influential study characteristics in the original Pettigrew–Tropp's (2006) study. Finally, we tested country-level measures of Schwartz's values of collectivism, mastery, harmony, intellectual and affective autonomy, as well as anti-immigrant prejudice and socioeconomic inequality as alternate culture-level moderators of contact–prejudice associations.

Effects of each culture-level moderator were estimated separately as shown in Table 1. Models with culture-level moderation—controlling for equal status in the situation—were compared to a baseline model without moderation (Model 1 in Table 1). Models included all 36 countries with separate study-level variance estimates for the United States and for the other 35 countries.

In line with Hypothesis 1, higher cultural egalitarianism in a country predicted stronger negative associations between intergroup contact and prejudice (see Figure 2 and Model 2 in Table 1). Moreover, cultural equality values predicted stronger contact–prejudice associations over and above equal status in the situation. Across cultures, the contact–prejudice link was stronger in equally structured contact situations. Yet, it was (even) stronger when equality was supported by the wider cultural context. In support of Hypothesis 2, we found significantly weaker contact–prejudice associations in more hierarchical cultural contexts (see Figure 3 and Model 3 in Table 1); and culture-level hierarchy values predicted weaker contact–prejudice associations even when the contact situation was equal. Finally, in accordance with Hypothesis 3,

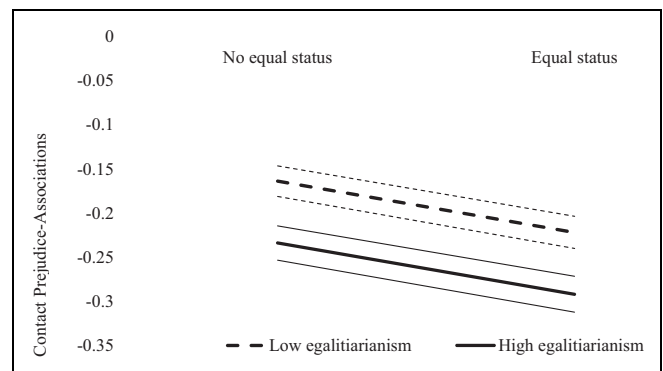


Figure 2. Contact–prejudice associations (Y-axis) as a function of equal status (X-axis) at high (+1 SD) or low (−1 SD) cultural egalitarianism: estimates with 95% confidence intervals.

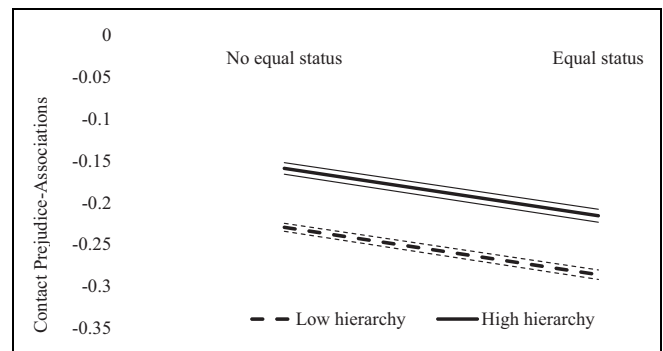


Figure 3. Contact–prejudice associations (Y-axis) as a function of equal status (X-axis) at high (+1 SD) or low (−1 SD) cultural hierarchy values: estimates with 95% confidence intervals.

weaker contact–prejudice associations in more hierarchical cultures were replicated using culture-level SDO as a moderator (see Figure 4 and Model 4 in Table 1). Again, country-level support for intergroup hierarchy predicted weaker

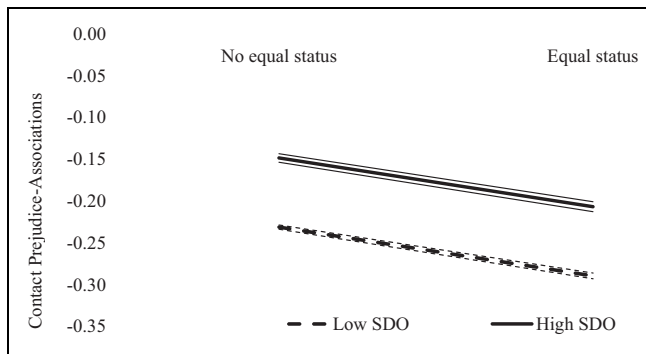


Figure 4. Contact–prejudice associations (Y-axis) as a function of equal status (X-axis) at high (+1 SD) or low (–1 SD) cultural social dominance orientation: estimates with 95% confidence intervals.

contact–prejudice associations also in the presence of equal status. We conclude that culture and situation add up to afford strongest contact–prejudice associations when the immediate contact situation and the wider cultural context are aligned on equality values.

Additional analyses replicated contextual moderation by culture-level egalitarianism and hierarchy values while controlling for other influential study characteristics. Three study characteristics were significant across cultures: dependent variable quality (stronger contact–prejudice associations when dependent measures were more reliable), $F(3, 495) = 6.53$, $p = .011$; study type (stronger contact–prejudice associations in experiments and quasi-experiments than in surveys), $F(2, 555) = 8.56$, $p < .001$; and choice to engage in contact (stronger contact–prejudice associations when participants had either no choice or fully free choice vs. some choice), $F(2, 464) = 10.53$, $p < .001$ (see tests of nonsignificant moderators in Online Supplemental Material). Effects of culture-level egalitarianism, hierarchy values, and SDO remained significant while controlling for these study characteristics (see Models 5–14 in Tables S3, S4, and S5 in Online Supplemental Material). Apparently, the role of cultural context cannot be reduced to the (lesser) quality of contact study measures or designs in less egalitarian or more hierarchical countries. As culture-level data were collected between 1988 and 2008, we also replicated the main analysis excluding contact studies predating 1990 (see Table S6 in Online Supplemental Materials).

Additional analyses examined alternate culture-level predictors (see Online Supplemental Material for statistical tests). There was no evidence that contact–prejudice associations were moderated by country-level prejudice—as indicated by anti-immigrant attitudes. General prejudice in the cultural context was unrelated to how strongly contact predicted individual prejudice. There were no significant effects of country differences in Schwartz’s collectivism, mastery, harmony, intellectual, and affective autonomy values. Nor did country-level income inequality—as measured by the GINI index—moderate contact–prejudice associations—in spite of meaningful overlap with cultural hierarchy values, $r = .557$, $p = .001$, and egalitarianism, $r = -.605$, $p = .001$. We conclude that stronger

contact–prejudice associations are uniquely afforded by equality (vs. hierarchy) values in the cultural context.

Discussion

Allport’s (1954) contact hypothesis inspired extensive lab and field research worldwide. The findings document the erosion of prejudice through interpersonal interactions with out-group members (Pettigrew & Tropp, 2006). Critics of contact research highlight persistent intergroup hierarchies across the globe (Dixon et al., 2005), however, so that contact may fail to reduce prejudice in the presence of structural inequalities. Our study engages with this controversy from a cultural psychology perspective. People routinely relate to out-group members in culturally appropriate ways, so that different contact situations, appraisals, and behaviors across cultures reflect distinct histories and ideologies of intergroup relations (Adams, 2012). Generalizing Allport’s (1954) equal-status condition to the cultural level, we predicted that (negative) contact–prejudice associations would be stronger in egalitarian cultures and weaker in more hierarchical cultures. As a stringent test of cultural variability, we examined the role of cultural values over and above situational equality.

Our analysis replicated Pettigrew and Tropp’s (2006) authoritative meta-analysis of contact research while adding a cultural level. Whereas intergroup contact predicted weaker prejudice in most countries, contact–prejudice associations evinced significant and meaningful cultural variability. As expected, contact predicted low prejudice better in more egalitarian cultures and less well in more hierarchical cultural contexts. Moreover, cultural values made a difference over and above equal status in the contact situation. Also in hierarchical cultures, however, equally structured contact predicted less prejudice better than contact that was not equally structured. Lastly, general prejudice levels, other cultural values such as individualism–collectivism, and actual socioeconomic inequality did not account for cultural variation in the contact–prejudice link.

On a cautionary note, multilevel analysis cannot empirically determine causality. Yet, contextual effects of external culture-level value measures are less vulnerable to competing explanations than individual-level correlations of personal values with contact and prejudice. Furthermore, we were able to exclude competing culture-level explanations using other aggregate measures of cultural values, prejudice, and inequality. Likewise, we cannot know with certainty whether contact reduces prejudice and/or prejudice reduces contact. In support of contact effects on prejudice, we replicated Pettigrew and Tropp’s (2006) findings of stronger contact effects in experiments and in the absence of choice (not) to engage in contact; and these study characteristics did not account for cultural variability in contact effects. Also in view of longitudinal evidence that contact does indeed reduce prejudice controlling for prior prejudice (e.g., Binder et al., 2009), our results suggest that contact most effectively reduces prejudice in egalitarian cultural contexts.

Our research foregrounds the cultural context of intergroup contact. It supplements a predominant research focus on individual-level experiences and attitudes, and it broadens the social context of prejudice beyond the contact situation (Hodson et al., 2012). Robust additive effects of cultural equality values and equal treatment in intergroup contact situations highlight that contact–prejudice dynamics are multilayered. On the one hand, our findings add to mainstream contact research, which has largely neglected the cultural constitution of equal contact. By taking into account culturally valued ways of relating, future contact research may more accurately reflect intergroup relations and more effectively tailor intergroup interventions across the globe. On the other hand, the findings qualify critiques of contact research; critiques concerned that all friendly contact may inadvertently reinforce intergroup hierarchy (Wright & Lubensky, 2009). These critiques may underestimate the potential to create equal contact situations and to subvert intergroup hierarchies from the bottom up. Relatedly, recent collective action research suggests that intergroup collaboration can empower minorities (van Zomeren & Louis, 2017). As only 12% of equally structured interventions in our database were implemented in non-Western settings, however, more experimental intervention studies are needed in hierarchical cultural contexts.

In addition, our multilevel findings complement recent research on individual differences in prejudice (Hodson & Dhont, 2015). While positive contact most effectively reduces prejudice in high-prejudice individuals, contact–prejudice associations were unrelated to culture-level prejudice in our analysis. Similarly, despite the evidence of stronger contact effects for high-SDO individuals, culture-level SDO predicted weaker contact–prejudice associations. Clearly, individual-level and culture-level constructs have different psychological meanings (Van de Vijver, Van Hemert, & Poortinga, 2015). More research is needed to articulate the interplay between individual and cultural values in intergroup contact.

Finally, our findings open up cross-cultural prejudice research to culture change (Fischer et al., 2012). From a cultural psychology approach, culture is not static, so that people's contact experiences may consolidate or erode historical intergroup hierarchies (Markus & Kitayama, 2010). For instance, in spite of persistent racial inequalities in the United States, the quality of interracial interactions has improved in more recent decades compared to historical interaction patterns (Toosi et al., 2012). Additional analyses of North American contact studies in our data showed a similar positive though nonsignificant trend toward stronger contact effects in more recent times, $F(1, 316) = 3.47, p = .064$. Looking beyond culture change in the Western world, there is evidence from India, for instance, that contact across castes has become more equal following decades of affirmative action (Desai & Dubey, 2011; Hasan & Bagde, 2013). Interestingly, egalitarian cultural values predicted contact–prejudice associations better than a related measure of socioeconomic equality. Although inequalities persist in spite of egalitarian ideals, these findings suggest

that shared equality values afford contact experiences that may ultimately undermine unequal structures.

Authors' Note

Judit Kende developed the study concept. All authors contributed to the study design. Coding was performed by Judit Kende and Aycan Kara. Judit Kende performed the data analysis and interpretation with the help of Karen Phalet, Wim Van den Noortgate, and Ronald Fischer. Judit Kende and Karen Phalet drafted several versions of the paper and the other authors added their critical comments and suggestions. All authors approved the final version of the manuscript for submission.

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Supplemental Material

The supplemental material is available in the online version of the article.

Note

1. To report mean effect sizes, z scores were transformed back to r values.

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