

Strengthening Purity: Moral Purity as a Mediator of Direct and Extended Cross-Group Friendships on Sexual Prejudice

Loris Vezzali, Marco Brambilla, Dino Giovannini & Francesco Paolo Colucci

To cite this article: Loris Vezzali, Marco Brambilla, Dino Giovannini & Francesco Paolo Colucci (2017) Strengthening Purity: Moral Purity as a Mediator of Direct and Extended Cross-Group Friendships on Sexual Prejudice, Journal of Homosexuality, 64:6, 716-730, DOI: 10.1080/00918369.2016.1196998

To link to this article: <http://dx.doi.org/10.1080/00918369.2016.1196998>



Accepted author version posted online: 07 Jun 2016.
Published online: 07 Jun 2016.



Submit your article to this journal [↗](#)



Article views: 73



View related articles [↗](#)



View Crossmark data [↗](#)

Strengthening Purity: Moral Purity as a Mediator of Direct and Extended Cross-Group Friendships on Sexual Prejudice

Loris Vezzali^a, Marco Brambilla^b, Dino Giovannini^a, and Francesco Paolo Colucci^b

^aDepartment of Education and Human Sciences, University of Modena and Reggio Emilia, Reggio Emilia, Italy; ^bDepartment of Psychology, University of Milano-Bicocca, Milano, Italy

ABSTRACT

The present research investigated whether enhanced perceptions of moral purity drive the effects of intergroup cross-group friendships on the intentions to interact with homosexuals. High-school students ($N = 639$) reported their direct and extended cross-group friendships with homosexuals as well as their beliefs regarding the moral character of the sexual minority. Participants further reported their desire to interact with homosexuals in the future. Results showed that both face-to-face encounters and extended contact with homosexuals increased their perceived moral purity, which in turn fostered more positive behavioral intentions. Results further revealed the specific role of moral purity in this sense, as differential perceptions along other moral domains (autonomy and community) had no mediation effects on behavioral tendencies toward homosexuals. The importance of these findings for improving intergroup relations is discussed, together with the importance of integrating research on intergroup contact and morality.

KEYWORDS

Extended contact; homosexuals; indirect contact; intergroup contact; intergroup relations; morality; moral purity; prejudice

Prejudice toward homosexuals (i.e., sexual prejudice) endures throughout society although its expression is often publicly condemned (Herek, 2007; Herek & McLemore, 2013). Opinion surveys have revealed that a substantial number of U.S. and European citizens feel hostility toward sexual minorities (Eurobarometer, 2008; Wilcox & Norrander, 2002), and the media has reported that anti-homosexual hate crimes worldwide are alarmingly high (Herek, 2007). A good deal of work has shown that such a hostility toward gay men and lesbians involves the notion of moral contamination and moral impurity (Cottrell, Richards, & Nichols, 2010; Dasgupta, DeSteno, Williams, & Hunsinger, 2009; Herek, 2000; Madon, 1997). Indeed, gay men and lesbians are perceived as violating values about “appropriate” sexual behavior and as a threat to traditional religious and family values (Brambilla & Butz, 2013; Herek & McLemore, 2013; Vescio & Biernat, 2003). This perceived threat to moral purity evokes disgust and behavioral reactions aimed at reducing the spread of the ostensible

contaminant (Cottrell & Neuberg, 2005; Inbar, Pizarro, & Bloom, 2012; Inbar, Pizarro, Knobe, & Bloom, 2009). In line with these findings, it has also been shown that imagining an interaction with a gay man increases the need for physical cleaning to wash away the impurity (Golec de Zavala, Walzdus, & Cyprianska, 2014).

Although a large body of research has shown that threats to moral purity foster sexual prejudice, research has almost neglected to investigate the ways that might reduce the perception of moral impurity ascribed to homosexuals. In a similar vein, no prior work has investigated whether enhancing the perception of the moral purity of homosexuals might reduce prejudice and hostility toward them. The present research sought thus to address these gaps, by investigating whether friendships with homosexuals, both direct and extended, might positively affect perceptions of moral purity ascribed to gay men and lesbians, leading in turn to more positive behavioral intentions toward them.

Direct and extended intergroup contact

Intergroup contact theory is one of the most powerful approaches for reducing prejudice. According to the contact hypothesis, face-to-face encounters between members of opposing groups may lead to more harmonious intergroup relations, if they are characterized by optimal conditions: equal status, cooperation, common goals, and institutional support (Allport, 1954). Over the past 60 years, a good deal of work has supported the contact hypothesis across a variety of settings and social groups also in absence of Allport's optimal conditions (Hodson & Hewstone, 2013; Pettigrew & Tropp, 2006, 2011). However, direct, face-to-face contact is not always easy to achieve because of practical and organizational reasons. For instance, heterosexual individuals may not personally know any homosexual person.

Addressing this limitation of direct contact strategies, recent research has provided evidence that direct contact is not necessary to achieve positive effects on intergroup relations. Indeed, the mere knowledge that an ingroup member has a close relationship with an outgroup member can reduce prejudice (i.e., extended contact; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997; see also Dovidio, Eller, & Hewstone, 2011). A recent review uncovering more than 90 studies revealed that extended contact has widespread effects spanning across several outcome variables, target groups, contexts, and age groups, thus supporting its role as an effective strategy to reduce prejudice (Vezzali, Hewstone, Capozza, Giovannini, & Wölfer, 2014). Notably, both direct (Fingerhut, 2012; Heinze & Horn, 2009; Lemm, 2006; Vezzali & Giovannini, 2012; West & Hewstone, 2012) and extended (Capozza, Falvo, Trifiletti, & Pagani, 2014; Hodson, Harry, & Mitchell, 2009; Mereish & Poteat, *in press*; Sharp, Voci, & Hewstone, 2011) contact have been shown to be effective means to improve attitudes toward homosexuals. However, none of these prior studies on intergroup contact has tested moral purity as a

mediator of the effects of contact with sexual minorities despite the centrality of moral purity in shaping attitudes toward homosexuals (Cottrell & Neuberg, 2005; Dasgupta et al., 2009; Inbar et al., 2009, 2012).

Moral purity as a mediator of contact effects

Research over the past 15 years has identified several mediators of direct and extended contact. In particular, research on direct contact has focused mostly on affective mediators such as intergroup anxiety (see Brown & Hewstone, 2005; Pettigrew & Tropp, 2008), whereas research on extended contact has considered mainly cognitive mediators such as ingroup and outgroup norms (see Vezzali et al., 2014).

More recently, it has been shown that morality has a leading role in shaping outgroup impressions (for a review, see Brambilla & Leach, 2014). Morality is generally conceptualized as principles concerning the distinction between right and wrong or good and bad behavior (for a discussion, Haidt & Ksebir, 2010). In this sense, establishing whether an outgroup member is moral is key in order to define whether she or he poses a threat to ingroup members. This, in turn, predicts approach and avoidance behaviors (Brambilla, Sacchi, Pagliaro, & Ellemers, 2013).

Surprisingly, despite the relevance of morality in social judgment and in shaping outgroup attitudes, research on intergroup contact has almost completely neglected the examination of morality perceptions as a mediator of intergroup contact. The only exception was provided by Brambilla, Hewstone, and Colucci (2013), who examined the relationship between Italians and immigrants from the point of view of Italian student and nonstudent adults. Results revealed that direct contact (i.e., quantity of contact with outgroup acquaintances and friends) increased perceptions that immigrants endorse traits of competence, sociability, and morality. However, only increased perceived morality—conceived as trustworthiness and honesty—mediated the effects of contact on intentions to engage in actions promoting immigrants' rights.

The present research sought to extend prior work by investigating whether moral perceptions might trigger the effects of an especially powerful form of direct contact—direct cross-group friendships—as well as the effects of extended cross-group friendships. Crucially, we aimed to go beyond the notion of morality in terms of honesty and trustworthiness by taking into account the purity aspects associated to moral character. Considering moral purity perceptions may be especially important when examining sexual prejudice. Since prejudice toward homosexuals is based largely on moral impurity attributed to gay men and lesbians (e.g., Cottrell & Neuberg, 2005; Dasgupta et al., 2009), it follows that reducing such perceptions may be crucial in order to foster positive outgroup attitudes. Specifically, we aimed to investigate whether direct and extended friendships with homosexuals

might reduce the perception of moral impurity associated to gay men and lesbians, leading in turn to more positive behavioral intentions toward them. Indeed, personally knowing homosexuals (i.e., having homosexual friends), or also knowing that ingroup friends have homosexual friends, should disconfirm negative expectations and allow individuals to understand that homosexuals are as “morally pure” as heterosexuals. Moreover, since moral impurity is associated with greater distance from homosexual targets (Inbar et al., 2009, 2012), increasing purity perceptions should foster a stronger desire of closeness (i.e., greater intentions to interact with homosexual individuals).

The present research

Complementing and extending prior work that has investigated the effects of intergroup contact on attitudes toward homosexuals with adult populations (e.g., Hodson et al., 2009; West & Hewstone, 2012), we considered a high-school teen sample. Indeed, it has been shown that harassment and bullying of homosexual adolescents perpetrated by their heterosexual peers worldwide is widespread (for a discussion, see Herek & McLemore, 2013). Against this background, high schools seem an appropriate context for testing our predictions. Indeed, fostering the desire to know homosexual individuals in high school should contribute to limiting the phenomenon of bullying and should increase among homosexuals the perception of being accepted.

It is important to note that purity is a key component of morality, but the notion of morality is much broader and comprises different aspects. Indeed, research on moral cognition has shown that morality involves autonomy, community, and divinity/purity concerns (Shweder, Much, Mahapatra, & Park, 1997; see also Graham, Haidt, & Nosek, 2009; Haidt, Koller, & Dias, 1993; Rozin, Lowery, Imada, & Haidt, 1999). Moral autonomy refers to fairness and care: in this sense, an individual is moral if she or he does not harm others and respects the rights and freedoms of other individuals (Cushman, Young, & Hauser, 2006; Turiel, Hildebrandt, & Wainryb, 1991). Morality also involves community concerns, essentially referring to loyalty, patriotism, and self-sacrifice for the group (Guerra & Giner-Sorolla, 2010). Finally, morality involves notion of purity and spirituality. An individual is moral when she or he respects the sacredness of God and does not engage in behaviors that might contaminate his or her spiritual identity (Rozin, Haidt, & McCauley, 2000). While a good deal of work has shown that all these aspects are relevant to define the moral domain (see Haidt & Kesebir, 2010), it has been revealed that homosexuality makes particularly salient the purity concerns (Cottrell & Neuberg, 2005; Cottrell et al., 2010; Dasgupta et al., 2009; Herek, 2000; Madon, 1997; Vescio & Biernat, 2003).

Thus to provide a severe test for our hypotheses, we considered the three components of morality, that is, moral purity, autonomy, and community (Shweder et al., 1997). We expected that enhanced perceptions of moral purity would mediate the effects of direct and extended cross-group friendships on reduced sexual prejudice (i.e., stronger intentions to engage in contact with homosexuals). Moreover, given the relevance of this aspect of morality in shaping attitudes toward homosexuals (e.g., Cottrell & Neuberg, 2005), we predicted that the other moral domains should have a less relevant mediational role.

Method

Participants and procedure

Participants were 639 students (52% males) from seven high schools located in northern Italy. Mean age was 17.27 years ($SD = 1.20$). Participants were administered a questionnaire during classes, after which they were thanked and fully debriefed.

Questionnaire

Direct cross-group friendships

Five items were used (see Turner, Hewstone, & Voci, 2007; Turner, Hewstone, Voci, & Vonofakou, 2008; Vezzali, Saguy, Andrighetto, Capozza, & Giovannini, 2016; see also Lolliot et al., 2015): “Do you have homosexuals friends?”; “How many homosexual friends do you have?”; “How many homosexual friends do you have at school?”; “How many homosexual friends do you have in the neighborhood?”; and “How many homosexual friends do you spend time with in your free time?” The 5-step scale ranged from 1 (*none*) to 5 (*a lot*) for the first item. For the remaining items the 5-step degrees were 1 = *none*; 2 = 1 or 2; 3 = 3 or 4; 4 = 5 or 6; 5 = more than 6. Items were combined in a single index of direct cross-group friendships ($\alpha = .80$).

Extended cross-group friendships

Extended cross-group friendships were assessed with five items (see Christ et al., 2010; Dhont & Van Hiel, 2011; Tam, Hewstone, Kenworthy, & Cairns, 2009, Study 2; see also Lolliot et al., 2015): “Do you have heterosexual friends who have homosexuals friends?”; “How many of your heterosexual friends have homosexual friends?”; “How many of your heterosexual friends at school have homosexual friends?”; “How many of your heterosexual friends in the neighborhood have homosexual friends?”; and “How many of your heterosexual friends you spend time with in your free time have homosexual friends?” The 5-step scale was anchored by 1 (*none*) and 5 (*a lot*) for the first item. For the other four items

the 5-step scale ranged from 1 = *none* to 5 = *more than 6*; the other degrees were 2 = 1 or 2; 3 = 3 or 4; 4 = 5 or 6 ($\alpha = .90$).

Autonomy, community, and purity characteristics

Participants rated homosexuals on traits related to moral autonomy (i.e., sincere, fair; $r = .81$, $p < .001$), moral community (i.e., respectful, altruistic; $r = .73$, $p < .001$), and moral purity (i.e., pure, spiritual; $r = .68$, $p < .001$). Responses were made on 5-point scales (1 = *not at all*; 5 = *very much*).¹ We then created composite scores for the three dimensions of morality by averaging respective items.

Outgroup behavioral intentions

Behavioral intentions toward the outgroup were assessed with the following three items, adapted from Crisp and Husnu (2011; see also Ratcliff et al., 1999): “Thinking about the next time you find yourself in a situation where you could interact with a homosexual person (e.g., with friends in a café),” “How likely do you think it is that you would strike up a conversation?,” “How interested would you be in striking up a conversation?,” and “How much do you think you’d like to strike up a conversation?” For all items the 5-step scale ranged from 1 (*not at all*) to 5 (*very much*). Items were combined in a single index of behavioral intentions toward homosexuals ($\alpha = .93$), with higher scores reflecting a stronger desire to meet homosexual people.

Before running analyses, we conducted a confirmatory factor analysis to test whether our constructs were empirically distinct by using the software LISREL 8.7 (Jöreskog & Sörbom, 2004). The goodness-of-fit of the model was assessed using the chi-square test, the root-mean-square-error of approximation (RMSEA), the standardized root-mean-square residual (SRMR), and the comparative fit index (CFI). An acceptable fit to the data is indicated by a χ^2/df ratio of less than 3, an RMSEA and an SRMR equal or less than .08, and a CFI equal or greater than .95 (Hu & Bentler, 1999).

A model with six latent variables was tested, corresponding to the following variables: direct cross-group friendships, extended cross-group friendships, purity, autonomy, community, and outgroup behavioral intentions. In the factor model, each morality dimension (purity, autonomy, community) was measured by two indicators, corresponding to the two original items. For each of the other variables, we computed two parcels, following the procedure of item-to-construct balance (Little, Cunningham, Shahar, & Widaman, 2002). The model fitted the data well: $\chi^2(39) = 74.37$, $p = .00055$; $\chi^2/df = 1.91$; RMSEA = .038; SRMR = .016; CFI = 1.00. However, results revealed that community and autonomy were not distinct from one another, $r = .99$, $p < .001$.

We therefore decided to run a second confirmatory factor analysis, where both factors were collapsed into a single latent variable measured by four

indicators (corresponding to the four original items). The model fitted the data well: $\chi^2(44) = 79.56$, $p = .00082$; $\chi^2/df = 1.81$; RMSEA = .035; SRMR = .017; CFI = 1.00. Results revealed that all correlations were different from 1, $p < .05$. Thus, despite our prior pilot test showed that the selected items captured the three moral domains¹, the results of the confirmatory factor analysis showed that autonomy and community moral characteristics are not empirically distinct in the present sample. Therefore, we considered two morality dimensions: purity and a single factor combining autonomy and community characteristics ($\alpha = .93$). This change does not alter our initial hypothesis that purity should mediate the effects of cross-group friendships on outgroup behavioral intentions to a greater extent when compared with other moral characteristics.

Results

Missing data were replaced by means of multiple imputation procedures (LISREL 8.7; Jöreskog & Sörbom, 2004). Means, standard deviations, and correlations are presented in Table 1.

To test our hypothesis, we conducted a path analysis with latent variables, by using the variables identified with the confirmatory factor analysis (LISREL 8.7; Jöreskog & Sörbom, 2004). In the model, direct and extended cross-group friendships were entered as independent variables; purity and autonomy–community were the mediators; outgroup behavioral intentions was the dependent variable. Correlations between the two mediator variables were allowed. The model is presented in Figure 1.

The model fitted the data well: $\chi^2(46) = 113.01$, $p \approx .00$; $\chi^2/df = 2.46$; RMSEA = .046; SRMR = .046; CFI = 0.99. As can be seen in Figure 1, both direct and extended cross-group friendships were positively associated with purity. Moreover, extended cross-group friendships were also positively associated with autonomy–community. In turn, purity, but not autonomy–community, was positively associated with outgroup behavioral intentions.

To test if the mediation effects were significant, bootstrapping analyses were conducted. With bootstrapping procedures, a 95% confidence interval is computed around the path from the predictor to the criterion variable through the mediator. In line with expectations, both direct and extended cross-group friendships exerted their effects on outgroup behavioral intentions via purity (BC CIs ranging from .025 to .704, and from .115 to 1.03, respectively). Mediation for both direct and extended cross-group friendships was instead nonsignificant for autonomy–community (BC CIs ranging from $-.089$ to .065, and from $-.629$ to .102, respectively).

Table 1. Means, standard deviations, and correlations among variables.

| | 1 | 2 | 3 | 4 | 5 |
|-------------------------------------|--------|--------|--------|--------|------|
| 1. Direct cross-group friendships | - | | | | |
| 2. Extended cross-group friendships | .67*** | - | | | |
| 3. Purity | .27*** | .28*** | - | | |
| 4. Autonomy–community | .26*** | .31*** | .74*** | - | |
| 5. Outgroup behavioral intentions | .34*** | .34*** | .52*** | .51*** | - |
| <i>M</i> | 1.32 | 1.73 | 2.87 | 3.41 | 2.18 |
| <i>SD</i> | 0.47 | 0.78 | 1.09 | 1.04 | 1.11 |

Note. For all variables, response scale ranged from 1 to 5.

* $p < .05$. ** $p < .01$. *** $p < .001$.

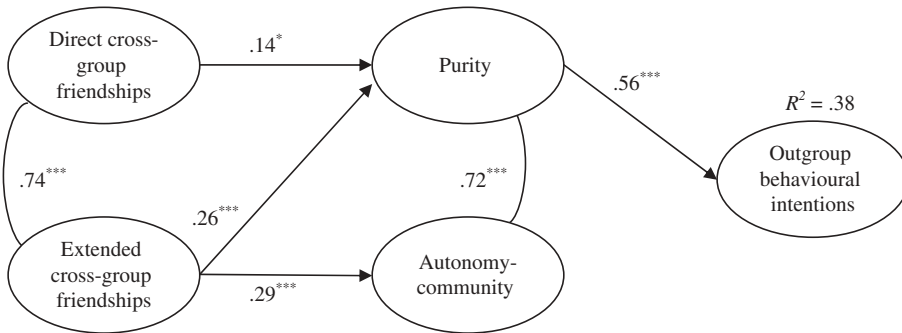


Figure 1. Tested path model (standardized regression coefficients are reported). Only significant paths are reported. * $p < .05$. ** $p < .01$. *** $p < .001$.

Discussion

Despite the centrality of moral purity and contamination in shaping attitudes toward homosexuals, no prior research has addressed the relationship between friendships with homosexuals and perceptions of moral purity. More generally, research on intergroup contact has been detached from research on morality (for an exception concerning direct contact, see Brambilla et al., 2013). This study extends prior research by showing that morality could be a key factor to consider to promote prejudice reduction. Specifically, we investigated with a large sample of high school students whether direct and extended friendships with homosexuals might reduce the perception of moral impurity associated to gay men and lesbians, leading in turn to more positive behavioral intentions toward them. Results supported predictions, by showing that moral purity mediated the effects of both direct and extended cross-group friendships on intentions to approach homosexuals in the future.

These findings showed that, when the relation between heterosexuals and homosexuals is considered, moral purity becomes extremely relevant, even more relevant than other moral domains. Findings obtained for our measure of behavioral intentions may lead to optimistic conclusions on the

development of positive relations between heterosexuals and homosexuals. This assertion is consistent with the theory of planned behavior (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1974), stating that intentions represent the most proximal predictor of actual behavior (Ajzen, 1991; Godin & Kok, 1996; Vallacher & Wegner, 1987).

On a theoretical level, our findings extend previous research in several ways. First, they are in line with results by Brambilla et al. (2013), replicating the mediation effects for morality in the relationship between direct contact and outgroup behavioral intentions. Moreover, they show for the first time that morality perceptions also qualify as mediators of extended cross-group friendships effects. To the extent that morality represents a key factor driving the formation of outgroup attitudes (Brambilla & Leach, 2014; Brambilla et al., 2013), finding that cross-group friendships, even in their indirect form, can increase the intention to meet deeply stigmatized individuals such as homosexuals by changing morality perceptions provides strong support for the effectiveness of strategies based on cross-group friendships.

Notably, extending previous results, we investigated for the first time which specific component of morality drives the effects of cross-group friendships. In line with expectations, we found that only moral purity accounted as the mediator for both direct and extended cross-group friendships. By contrast, a combined measure capturing moral autonomy and moral community did not play any mediational role. We believe that that this result may depend on the specific target group considered in the present study. Previous research has shown that prejudice toward homosexuals largely depends on perceptions that homosexuals are impure (Golec de Zavala et al., 2014), thus motivating the intentions to avoid them (Herek, 2000). Thus, moral purity accounts as an especially relevant moral component when considering homosexual targets, and we showed that cross-group friendships improve contact intentions precisely because they act on this component. However, the other moral components may be similarly or more relevant when other target groups are considered. For instance, it has been shown that determining whether someone is honest and trustworthy largely predicts responses toward a wide range of social targets (Brambilla & Leach, 2014; see also Goodwin, 2015). Thus, while moral purity is especially relevant for determining attitudes toward sexual minorities, community and autonomy concerns are highly relevant for other social targets, such as racial groups (Haidt & Kesebir, 2010). Future studies should test which morality components mediate contact effects depending on the target group considered.

These findings have important practical implications. Interventions within educational contexts should promote positive norms regarding friendships with homosexuals. However, to the extent that direct cross-group friendships may be unlikely, practitioners could take advantage of indirect contact

strategies, based, for instance, on reading stories concerning friendship between heterosexuals and homosexuals (for similar interventions based on extended contact principles conducted within educational settings, see, Cameron & Rutland, 2006; Liebkind, Mahonen, Solares, Solheim, & Jasinskaja-Lahti, 2014; Vezzali, Stathi, & Giovannini, 2012). Such interventions may also be effective for developing positive social norms toward contact with homosexuals, thus potentially acting in the sense of limiting the phenomenon of bullying gay men and lesbians (Paluck, 2011).

We acknowledge some limitations. First, data are correlational. However, evidence from experimental and longitudinal studies has demonstrated that direct and extended contact have causal effects on reduced prejudice (e.g., Binder et al., 2009; Christ et al., 2010, Study 2; Munniksmä, Stark, Verkuyten, Flache, & Veenstra, 2013). Second, although we measured behavioral intentions toward contact with homosexuals, this is not a measure of “real” behavior; future studies should consider measures of actual cross-group friendships formation to test whether behavioral intentions translate into approach behaviors (for an evidence, see Vezzali, Stathi, Giovannini, Capozza, & Visintin, 2015). Third, we considered homosexuals as a whole target outgroup. Future studies might extend our findings by differentiating between gay men and lesbians. To the extent that previous studies have shown that perceptions of moral impurity are higher for gay men (for a discussion see, Golec de Zavala et al., 2014), one might expect that the effects we found will be stronger for gay men than for lesbians. Based on our findings, a future step would be to test how contact and the perception of moral (im)purity relate to other relevant psychological factors fostering sexual prejudice, such as a more general perception of threat to the ingroup value system (i.e., symbolic threat) or religiosity (Herek, 2000).

In conclusion, our study shows that morality perceptions—and, in particular, moral purity—may be the key factor driving the effects of direct and extended cross-group friendships on intentions to meet homosexual people. It also demonstrates that contact research can be fruitfully integrated with research on morality to understand how to improve attitudes and behaviors toward stigmatized groups such as homosexuals.

Note

1. Traits were selected on the basis of a pretest. Specifically, 26 students (not involved in the main study) were asked to rate 45 traits on their autonomy-, community-, and purity-relatedness. For each trait, participants indicated which aspect of morality was more appropriate (for a similar procedure, see Rozin et al., 1999). Definition for each moral domain was provided. For moral autonomy, we selected two items for which the

score on the autonomy-relatedness ($M = 0.71$, $SE = 0.07$) was higher than that on the community-relatedness ($M = 0.36$, $SE = 0.07$) and on the purity-relatedness ($M = 0.14$, $SE = 0.06$), $p < .001$. For community, we considered two items for which the score on the community-relatedness ($M = 0.82$, $SE = 0.04$) was higher than that on the autonomy-relatedness ($M = 0.32$, $SE = 0.07$) and on the purity-relatedness ($M = 0.07$, $SE = 0.04$), $p < .001$. For purity, we included two items for which the score on the purity-relatedness ($M = 0.84$, $SE = 0.06$) was higher than that on the autonomy-relatedness ($M = 0.19$, $SE = 0.05$) and on the community-relatedness ($M = 0.03$, $SE = 0.02$), $p < .001$. A second group of 40 students evaluated the global favorability of the selected traits using a scale ranging from -5 (*very unfavorable*) to 0 (*neutral*) to 5 (*very favorable*). Results showed that purity traits were rated as less positive ($M = 1.01$, $SE = 0.18$) than autonomy ($M = 3.92$, $SE = 0.17$) and community items ($M = 3.88$, $SE = 0.18$), $p < .001$. Although these findings showed that traits differed on valence, they also rule out the alternative explanation that the hypothesized effect might be due to a greater favorability of purity traits compared with the traits referred to other aspects of morality.

Acknowledgments

We would like to thank the Institutes Blaise Pascal, Einaudi, Filippo Re, Ipsia Lombardini, Motti, Scaruffi Levi Tricolore, for their collaboration and for allowing us to collect data. We also wish to thank the students enrolled in educational academic courses at the University of Modena and Reggio Emilia who helped with data collection and coding.

Author contributions: M. Brambilla and L. Vezzali conceived the study idea. L. Vezzali ran the study. M. Brambilla and L. Vezzali conducted the data analysis. The first two authors drafted the first version of the manuscript, while D. Giovannini and F. P. Colucci read and commented on it.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211. doi:[10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*. Englewood Cliffs, NJ: Prentice Hall.
- Allport, G. W. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.
- Binder, J., Zagefka, H., Brown, R., Funke, F., Kessler, T., & Mummendey, A. (2009). Does contact reduce prejudice or does prejudice reduce contact? A longitudinal test of the contact hypothesis among majority and minority groups in three European countries. *Journal of Personality and Social Psychology*, 96, 843–856. doi:[10.1037/a0013470](https://doi.org/10.1037/a0013470)
- Brambilla, M., & Butz, D. A. (2013). Intergroup threat and outgroup attitudes: Macro-level symbolic threat increases prejudice against gay men. *Social Psychology*, 44, 311–319. doi:[10.1027/1864-9335/a000127](https://doi.org/10.1027/1864-9335/a000127)
- Brambilla, M., Hewstone, M., & Colucci, F. P. (2013). Enhancing moral virtues: Increased perceived outgroup morality as a mediator of intergroup contact effects. *Group Processes & Intergroup Relations*, 16, 648–657. doi:[10.1177/1368430212471737](https://doi.org/10.1177/1368430212471737)
- Brambilla, M., & Leach, C. W. (2014). On the importance of being moral: The distinctive role of morality in social judgment. *Social Cognition*, 32, 397–408. doi:[10.1521/soco.2014.32.4.397](https://doi.org/10.1521/soco.2014.32.4.397)

- Brambilla, M., Sacchi, S., Pagliaro, S., & Ellemers, N. (2013). Morality and intergroup relations: Threats to safety and group image predict the desire to interact with outgroup and ingroup members. *Journal of Experimental Social Psychology*, 49, 811–821. doi:[10.1016/j.jesp.2013.04.005](https://doi.org/10.1016/j.jesp.2013.04.005)
- Brown, R., & Hewstone, M. (2005). An integrative theory of intergroup contact. *Advances in Experimental Social Psychology*, 37, 255–343.
- Cameron, L., & Rutland, A. (2006). Extended contact through story reading in school: Reducing children's prejudice toward the disabled. *Journal of Social Issues*, 62, 469–488. doi:[10.1111/j.1540-4560.2006.00469.x](https://doi.org/10.1111/j.1540-4560.2006.00469.x)
- Capozza, D., Falvo, R., Trifiletti, E., & Pagani, A. (2014). Cross-group friendships, extended contact, and humanity attributions to homosexuals. *Procedia – Social and Behavioral Sciences*, 114, 276–282. doi:[10.1016/j.sbspro.2013.12.698](https://doi.org/10.1016/j.sbspro.2013.12.698)
- Christ, O., Hewstone, M., Tausch, N., Wagner, U., Voci, A., Hughes, J., & Cairns, E. (2010). Direct contact as a moderator of extended contact effects: Cross-sectional and longitudinal impact on outgroup attitudes, behavioral intentions, and attitude certainty. *Personality and Social Psychology Bulletin*, 36, 1662–1674. doi:[10.1177/0146167210386969](https://doi.org/10.1177/0146167210386969)
- Cottrell, C. A., & Neuberg, S. L. (2005). Different emotional reactions to different groups: A sociofunctional threat-based approach to “prejudice.” *Journal of Personality and Social Psychology*, 88, 770–789. doi:[10.1037/0022-3514.88.5.770](https://doi.org/10.1037/0022-3514.88.5.770)
- Cottrell, C. A., Richards, D. A. R., & Nichols, A. L. (2010). Predicting policy attitudes from general prejudice versus specific intergroup emotions. *Journal of Experimental Social Psychology*, 46, 247–254. doi:[10.1016/j.jesp.2009.10.008](https://doi.org/10.1016/j.jesp.2009.10.008)
- Crisp, R. J., & Husnu, S. (2011). Attributional processes underlying imagined contact effects. *Group Processes & Intergroup Relations*, 14, 275–287. doi:[10.1177/1368430210390721](https://doi.org/10.1177/1368430210390721)
- Cushman, F. A., Young, L., & Hauser, M. D. (2006). The role of reasoning and intuition in moral judgments: Testing three principles of harm. *Psychological Science*, 17, 1082–1089. doi:[10.1111/j.1467-9280.2006.01834.x](https://doi.org/10.1111/j.1467-9280.2006.01834.x)
- Dasgupta, N., DeSteno, D. A., Williams, L., & Hunsinger, M. (2009). Fanning the flames of prejudice: The influence of specific incidental emotions on implicit prejudice. *Emotion*, 9, 585–591. doi:[10.1037/a0015961](https://doi.org/10.1037/a0015961)
- Dhont, K., & Van Hiel, A. (2011). Direct contact and authoritarianism as moderators between extended contact and reduced prejudice: Lower threat and greater trust as mediators. *Group Processes & Intergroup Relations*, 14, 223–237. doi:[10.1177/1368430210391121](https://doi.org/10.1177/1368430210391121)
- Dovidio, J. F., Eller, A., & Hewstone, M. (2011). Improving intergroup relations through direct, extended, and other forms of indirect contact. *Group Processes & Intergroup Relations*, 14, 147–160. doi:[10.1177/1368430210390555](https://doi.org/10.1177/1368430210390555)
- Eurobarometer. (2008). *Discrimination in European Union: Perceptions, experiences and attitudes* (publication no. 296). Brussels, Belgium: European Commission.
- Fingerhut, A. W. (2012). Straight allies: What predicts heterosexuals' alliance with the LGBT community? *Journal of Applied Social Psychology*, 41, 2230–2248. doi:[10.1111/j.1559-1816.2011.00807.x](https://doi.org/10.1111/j.1559-1816.2011.00807.x)
- Fishbein, M., & Ajzen, I. (1974). Attitudes towards objects as predictors of single and multiple behavioural criteria. *Psychological Review*, 81, 59–74. doi:[10.1037/h0035872](https://doi.org/10.1037/h0035872)
- Godin, G., & Kok, G. (1996). The theory of planned behaviour: A review of its applications to health related behaviours. *American Journal of Health Promotion*, 11, 87–98. doi:[10.4278/0890-1171-11.2.87](https://doi.org/10.4278/0890-1171-11.2.87)
- Golec de Zavala, A., Waldzus, S., & Cyprianska, M. (2014). Prejudice towards gay men and a need for physical cleansing. *Journal of Experimental Social Psychology*, 54, 1–10. doi:[10.1016/j.jesp.2014.04.001](https://doi.org/10.1016/j.jesp.2014.04.001)

- Goodwin, G. P. (2015). Moral character in person perception. *Current Directions in Psychological Science*, 24, 38–44. doi:[10.1177/0963721414550709](https://doi.org/10.1177/0963721414550709)
- Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, 96, 1029–1046. doi:[10.1037/a0015141](https://doi.org/10.1037/a0015141)
- Guerra, V. M., & Giner-Sorolla, R. (2010). Community, autonomy, and divinity scale (CADS): Development of a theory-based moral codes scale. *Journal of Cross-Cultural Psychology*, 41, 35–50. doi:[10.1177/0022022109348919](https://doi.org/10.1177/0022022109348919)
- Haidt, J., & Kesebir, S. (2010). Morality. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (5th ed., pp. 797–832). Hoboken, NJ: Wiley.
- Haidt, J., Koller, S., & Dias, M. (1993). Affect, culture, and morality, or is it wrong to eat your dog? *Journal of Personality and Social Psychology*, 65, 613–628. doi:[10.1037/0022-3514.65.4.613](https://doi.org/10.1037/0022-3514.65.4.613)
- Heinze, J. R., & Horn, S. S. (2009). Intergroup contact and beliefs about homosexuality in adolescence. *Journal of Youth and Adolescence*, 38, 937–951. doi:[10.1007/s10964-009-9408-x](https://doi.org/10.1007/s10964-009-9408-x)
- Herek, G. M. (2000). The psychology of sexual prejudice. *Current Directions in Psychological Science*, 9, 19–22. doi:[10.1111/1467-8721.00051](https://doi.org/10.1111/1467-8721.00051)
- Herek, G. M. (2007). Confronting sexual stigma and prejudice: Theory and practice. *Journal of Social Issues*, 63, 905–925. doi:[10.1111/j.1540-4560.2007.00544.x](https://doi.org/10.1111/j.1540-4560.2007.00544.x)
- Herek, G. M., & McLemore, K. A. (2013). Sexual prejudice. *Annual Review of Psychology*, 64, 309–333. doi:[10.1146/annurev-psych-113011-143826](https://doi.org/10.1146/annurev-psych-113011-143826)
- Hodson, G., Harry, H., & Mitchell, A. (2009). Independent benefits of contact and friendship on attitudes toward homosexuals among authoritarians and highly identified heterosexuals. *European Journal of Social Psychology*, 39, 509–525. doi:[10.1002/ejsp.558](https://doi.org/10.1002/ejsp.558)
- Hodson, G., & Hewstone, M. (Eds.). (2013). *Advances in intergroup contact*. New York, NY: Psychology Press.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55. doi:[10.1080/10705519909540118](https://doi.org/10.1080/10705519909540118)
- Inbar, Y., Pizarro, D. A., & Bloom, P. (2012). Disgusting smells cause decreased liking of gay men. *Emotion*, 12, 23–27. doi:[10.1037/a0023984](https://doi.org/10.1037/a0023984)
- Inbar, Y., Pizarro, D. A., Knobe, J., & Bloom, P. (2009). Disgust sensitivity predicts intuitive disapproval of gays. *Emotion*, 9, 435–439. doi:[10.1037/a0015960](https://doi.org/10.1037/a0015960)
- Jöreskog, K. G., & Sörbom, D. (2004). *LISREL 8.7 for Windows* [Computer software]. Lincolnwood, IL: Scientific Software International.
- Lemm, K. M. (2006). Positive associations among interpersonal contact, motivation, and implicit and explicit attitudes toward gay men. *Journal of Homosexuality*, 51, 79–99. doi:[10.1300/J082v51n02_05](https://doi.org/10.1300/J082v51n02_05)
- Liebkind, K., Mahonen, T. A., Solares, E., Solheim, E., & Jasinskaja-Lahti, I. (2014). Prejudice-reduction in culturally mixed classrooms: The development and assessment of a theory-driven intervention among majority and minority youth in Finland. *Journal of Community and Applied Social Psychology*, 24, 325–339. doi:[10.1002/casp.2168](https://doi.org/10.1002/casp.2168)
- 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, 151–173. doi:[10.1207/S15328007SEM0902_1](https://doi.org/10.1207/S15328007SEM0902_1)
- Lolliot, S., Fell, B., Schmid, K., Woelfer, R., Swart, H., Voci, A., ... Hewstone, M. (2015). Measures of intergroup contact. In G. Boyle, D. H. Saklofske, & G. Matthews (Eds.), *Measures of personality and social psychological constructs* (pp. 652–683). San Diego, CA: Academic Press.

- Madon, S. (1997). What do people believe about gay males? A study of stereotype content and strength. *Sex Roles*, 37, 663–685. doi:[10.1007/BF02936334](https://doi.org/10.1007/BF02936334)
- Mereish, E., & Poteat, V. P. (in press). Effects of heterosexuals' direct and extended friendships with sexual minorities on their attitudes and behaviors: Intergroup anxiety and attitude strength as mediators and moderators. *Journal of Applied Social Psychology*. doi:[10.1111/jasp.12284](https://doi.org/10.1111/jasp.12284)
- Munniksma, A., Stark, T. H., Verkuyten, M., Flache, A., & Veenstra, R. (2013). Extended intergroup friendships within social settings: The moderating role of initial outgroup attitudes. *Group Processes & Intergroup Relations*, 16, 752–770. doi:[10.1177/1368430213486207](https://doi.org/10.1177/1368430213486207)
- Paluck, E. L. (2011). Peer pressure against prejudice: A high school field experiment examining social network change. *Journal of Experimental Social Psychology*, 47, 350–358. doi:[10.1016/j.jesp.2010.11.017](https://doi.org/10.1016/j.jesp.2010.11.017)
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90, 751–783. doi:[10.1037/0022-3514.90.5.751](https://doi.org/10.1037/0022-3514.90.5.751)
- Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology*, 38, 922–934. doi:[10.1002/ejsp.504](https://doi.org/10.1002/ejsp.504)
- Pettigrew, T. F., & Tropp, L. R. (2011). *When groups meet: The dynamics of intergroup contact*. New York, NY: Psychology Press.
- Ratcliff, C. D., Czuchry, M., Scarberry, N. C., Thomas, J. C., Dansereau, D. F., & Lord, C. G. (1999). Effects of directed thinking on intentions to engage in beneficial activities: Actions versus reasons. *Journal of Applied Social Psychology*, 29, 994–1009. doi:[10.1111/j.1559-1816.1999.tb00136.x](https://doi.org/10.1111/j.1559-1816.1999.tb00136.x)
- Rozin, P., Haidt, J., & McCauley, C. R. (2000). Disgust. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (2nd ed., pp. 637–653). New York, NY: Guilford Press.
- Rozin, P., Lowery, L., Imada, S., & Haidt, J. (1999). The CAD triad hypothesis: A mapping between three moral emotions (contempt, anger, disgust) and three moral codes (community, autonomy, divinity). *Journal of Personality and Social Psychology*, 76, 574–586. doi:[10.1037/0022-3514.76.4.574](https://doi.org/10.1037/0022-3514.76.4.574)
- Sharp, M., Voci, A., & Hewstone, M. (2011). Individual difference variables as moderators of the effect of extended cross-group friendship on prejudice: Testing the effects of public self-consciousness and social comparison. *Group Processes & Intergroup Relations*, 14, 207–221. doi:[10.1177/1368430210391122](https://doi.org/10.1177/1368430210391122)
- Shweder, R. A., Much, N. C., Mahapatra, M., & Park, L. (1997). The “big three” of morality (autonomy, community, divinity) and the “big three” explanations of suffering. In A. Brandt & P. Rozin (Eds.), *Morality and health* (pp. 119–169). New York, NY: Routledge.
- Tam, T., Hewstone, M., Kenworthy, J. B., & Cairns, E. (2009). Intergroup trust in Northern Ireland. *Personality and Social Psychology Bulletin*, 35, 45–59. doi:[10.1177/0146167208325004](https://doi.org/10.1177/0146167208325004)
- Turiel, E., Hildebrandt, C., & Wainryb, C. (1991). Judging social issues: Difficulties, inconsistencies, and consistencies. *Monographs of the Society for Research in Child Development*, 56(2, Serial no. 224). doi:[10.2307/1166056](https://doi.org/10.2307/1166056)
- 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, 369–388. doi:[10.1037/0022-3514.93.3.369](https://doi.org/10.1037/0022-3514.93.3.369)
- Turner, R. N., Hewstone, M., Voci, A., & Vonofakou, C. (2008). A test of the extended contact hypothesis: The mediating role of intergroup anxiety, perceived ingroup and

- outgroup norms, and inclusion of the outgroup in the self. *Journal of Personality and Social Psychology*, 95, 843–860. doi:[10.1037/a0011434](https://doi.org/10.1037/a0011434)
- Vallacher, R. R., & Wegner, D. M. (1987). What do people think they're doing? Action identification and human behavior. *Psychological Review*, 94, 3–15. doi:[10.1037/0033-295X.94.1.3](https://doi.org/10.1037/0033-295X.94.1.3)
- Vescio, T. K., & Biernat, M. (2003). Family values and antipathy toward gay men. *Journal of Applied Social Psychology*, 33, 833–847. doi:[10.1111/j.1559-1816.2003.tb01927.x](https://doi.org/10.1111/j.1559-1816.2003.tb01927.x)
- Vezzali, L., & Giovannini, D. (2012). Secondary transfer effect of intergroup contact: The role of intergroup attitudes, intergroup anxiety, and perspective-taking. *Journal of Community and Applied Social Psychology*, 22, 125–144. doi:[10.1002/casp.1103](https://doi.org/10.1002/casp.1103)
- Vezzali, L., Hewstone, M., Capozza, D., Giovannini, D., & Wölfer, R. (2014). Improving intergroup relations with extended and vicarious forms of indirect contact. *European Review of Social Psychology*, 25, 314–389. doi:[10.1080/10463283.2014.982948](https://doi.org/10.1080/10463283.2014.982948)
- Vezzali, L., Saguy, T., Andrighetto, L., Capozza, D., & Giovannini, D. (2016). *When direct contact is not enough: Extended contact and desire for equality*. Under review.
- Vezzali, L., Stathi, S., & Giovannini, D. (2012). Indirect contact through book reading: Improving adolescents' attitudes and behavioral intentions toward immigrants. *Psychology in the Schools*, 49, 148–162. doi:[10.1002/pits.20621](https://doi.org/10.1002/pits.20621)
- Vezzali, L., Stathi, S., Giovannini, D., Capozza, D., & Visintin, E. P. (2015). “And the best essay is...”: Extended contact and cross-group friendships at school. *British Journal of Social Psychology*, 54, 601–615. doi:[10.1111/bjso.12110](https://doi.org/10.1111/bjso.12110)
- West, K., & Hewstone, M. (2012). Culture and contact in the promotion and reduction of anti-gay prejudice: Evidence from Jamaica and Britain. *Journal of Homosexuality*, 59, 44–66. doi:[10.1080/00918369.2011.614907](https://doi.org/10.1080/00918369.2011.614907)
- Wilcox, C., & Norrander, B. (2002). Of moods and morals: The dynamics of opinion on abortion and gay rights. In B. Norrander & C. Wilcox (Eds.), *Understanding public opinion* (pp. 121–147). Washington, DC: CQ Press.
- Wright, S. C., Aron, A., McLaughlin-Vope, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross-group friendship and prejudice. *Journal of Personality and Social Psychology*, 73, 73–90. doi:[10.1037/0022-3514.73.1.73](https://doi.org/10.1037/0022-3514.73.1.73)