



Friendship trumps ethnicity (but not sexual orientation): Comfort and discomfort in inter-group interactions

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An experience sampling study tested the degree to which interactions with out-group members evoked negative affect and behavioural inhibition after controlling for level of friendship between partners. When friendship level was statistically controlled, neither White nor Black participants reported feeling more discomfort interacting with ethnic out-group members compared to ethnic in-group members. When partners differed in sexual orientation, friendship level had a less palliating effect. Controlling for friendship, both gay and straight men – but not women – felt more behaviourally inhibited when interacting with someone who differed in sexual orientation, and heterosexual participants of both genders continued to report more negative affect with gay and lesbian interaction partners. However, gay and lesbian participants reported similar levels of negative affect interacting with in-group (homosexual) and out-group (heterosexual) members after friendship level was controlled. Results suggest that much of the discomfort observed in inter-ethnic interactions may be attributable to lower levels of friendship with out-group partners. The discomfort generated by differences in sexual orientation, however, remains a more stubborn barrier to comfortable inter-group interactions.

Interactions between strangers who differ on core social identities can be psychologically uncomfortable (Frable, Blackstone, & Scherbaum, 1990; Mendes, Blascovich, Lickel, & Hunter, 2002; Shelton & Richeson, 2006; Stephan & Stephan, 1985). Less is known about the role of friendship in inter-group interaction (though see Page-Gould, Mendoza-Denton, & Tropp, 2008). Because people often feel uncertain about how new acquaintances will evaluate them (Vorauer, 2006) and this uncertainty may be heightened by the relative rarity of inter-group friendship (Levin, van Laar, & Sidanius, 2003), the discomfort

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of inter-group interactions may primarily be attributable to differences in friendship rather than to essential differences in social identity. Do differences in ethnicity, sexual orientation, or other social identities continue to predict inter-group discomfort even after accounting for variability due to friendship? Surprisingly little research addresses this question, which is important for developing a more complete understanding of inter-group interaction, particularly in the real-life encounters that characterize people's everyday interaction experiences.

Two lines of reasoning suggest that friendship can remove discomfort as a defining characteristic of inter-group interactions. First, evaluative uncertainty – the idea that inter-group interactions create an unpleasant uncertainty about how one is viewed – is thought to be a large source of the discomfort that comes from inter-group interactions (Vorauer, 2006). Because people are less likely to have inter-group friends (Levin *et al.*, 2003), evaluative uncertainty may initially be higher with out-group members. As people get to know each other, uncertainty should be reduced, diminishing or eliminating this source of discomfort. Second, friendship can blur the boundary between self, in-group, and out-group (Aron *et al.*, 2004), making initially salient social identity differences less relevant to comfortable social interaction.

However, other research suggests that inter-group boundaries should endure as a source of discomfort. Inter-group interactions can trigger distrust over an identity's devalued status (Tropp, 2006; Tropp & Pettigrew, 2005), and friendship does not erase this status difference in the larger social context. The study reported here investigates whether the discomfort of inter-group interactions endures after accounting for variability in friendship level between partners, providing information on the persistence of inter-group boundaries as a salient feature of interactions.

Our study also investigates whether any decline in inter-group discomfort applies equally when people differ on ethnicity versus sexual orientation. The literature on inter-group interaction and contact has focused more on ethnicity than sexual orientation (for some exceptions, see Herek & Capitanio, 1996, 1997). There are reasons to expect differences. When members of a privileged ethnic group interact with members of an ethnic minority group, much of the former's discomfort emanates from meta-perceptions that they will be seen as prejudiced (see Shelton & Richeson, 2006). In contrast, heterosexuals' discomfort in interactions with gays and lesbians may have a more direct basis. Homosexuality, unlike ethnicity, is sometimes considered a choice (Crocker, Major, & Steele, 1998) and conflicts with the values of many religions (Negy & Eisenman, 2005). Moreover, homosexuality is frequently seen as an affectively unpleasant violation of gender norms (Ambady, Hallahan, & Conner, 1999; Whitley, 2001), particularly by heterosexual males (Cohen, Hall, & Tuttle, 2009; Herek, 1988, 2002). In short, majority members' discomfort in inter-ethnic interactions may stem primarily from evaluative uncertainty, whereas their discomfort in interactions with gays and lesbians may derive more directly from negative evaluations of homosexuality.

The response patterns of gays and lesbians versus ethnic minorities may differ due to differences in concealability. Gays and lesbians may not know if interaction partners are aware of their identity or how they would react to knowing. Even when their sexual orientation is known, gays and lesbians might inhibit behaviours that violate gender norms to help facilitate smooth interactions with heterosexuals. This may be particularly true for gay men, who face a greater risk of ostracism when they are perceived as feminine (Cohen *et al.*, 2009). If gays and lesbians feel constrained, their majority partners' experiences may be negatively affected as well (West, Shelton, & Trail, 2009). Hence, we hypothesize that from both the majority and minority perspectives,

sexual orientation should be a more enduring source of discomfort than ethnicity in contemporary inter-group interactions in the United States.

Prior out-group contact

The discomfort people feel when interacting with out-group members will likely vary based on prior out-group contact. For members of majority groups,¹ positive, non-threatening contact can lessen inter-group prejudice (Pettigrew & Tropp, 2006), decrease anxiety about inter-group interactions (e.g., Paolini, Hewstone, Cairns, & Voci, 2004), and reduce the physiological threat of interacting with out-group strangers (Blascovich, Mendes, Hunter, Lickel, & Kowai-Bell, 2001). Taken together, this suggests that higher levels of prior out-group contact should predict more comfortable inter-group interactions by lowering the baseline level of discomfort from which a new inter-group interaction begins. Even when people have out-group friends, if their overall level of prior out-group contact is limited to a few out-group friends, evaluative concerns should be elevated because of their relative unfamiliarity with the out-group. Thus, after controlling for friendship, we expected prior out-group contact to moderate the discomfort of out-group interactions for majority members, such that lower overall contact would predict greater discomfort.

We did not expect comfort to vary with prior out-group contact for minority group members in our study, due to ceiling effects for prior out-group contact in a predominantly White state and because contact has been found to affect inter-group attitudes less for minority group members (Tropp & Pettigrew, 2005).

Overview of the present research

The research reported here investigates the degree to which interactions with out-group members evoke negative affect and behavioural inhibition after controlling for level of friendship between partners. We conceptualise the potential discomfort of inter-group interaction in line with Vorauer's (2006) information search model, which proposes that evaluative concerns trigger negative affect, prevention orientation, and behavioural constraint, used to reduce uncertainty. This constellation of outcomes fits within the broader inhibition framework (Gray, 1987, 1994; Keltner, Gruenfeld, & Anderson, 2003). Inhibition is an alarm-threat system (Keltner *et al.*, 2003) characterized by similar outcomes as the information search model (Vorauer, 2006). Thus, we view the discomfort of inter-group interaction as part of a broader response network of inhibition. In the current study, we measure behavioural inhibition and negative affect, two correlated, but conceptually distinct components of inhibition (Keltner *et al.*, 2003).

Our research uses an experience sampling design, eliciting participants' responses with personal digital assistants immediately after naturally occurring social interactions. This naturalistic methodological approach provides an important complement to social interaction data collected in the laboratory. While laboratory research offers unparalleled experimental control, the setting differs fundamentally from people's natural environments (Bronfenbrenner, 1977; Smyth & Stone, 2003) and lacks many complexities involved in real-life inter-group interaction. Because it can reasonably be assumed that context affects the outcomes and processes of inter-group social interactions (e.g., Hebl

¹Majority refers to the particular identity being discussed; some majority members also have a minority identity.

& Dovidio, 2005), there is a need for research that investigates inter-group interactions in a naturalistic context (Bronfenbrenner, 1977). More practically, this method provides data on interaction experiences with a range of interaction partners whose variation in ethnicity, sexual orientation, and degree of friendship is difficult to capture in the laboratory.

Based on the reasoning above, we had three hypotheses about inter-ethnic interactions. First, we hypothesized that evaluative uncertainty would cause both majority and minority group members to feel greater inhibition than they did in same-ethnicity interactions. Second, after accounting for friendship, we expected ethnic *majority* members' feelings of inhibition with ethnic minority partners to be indistinguishable from their feelings with same-ethnicity partners. For ethnic *minority* participants, it seemed plausible that enduring awareness of status differentials might prevent the dissolution of group boundaries. Third, we expected prior out-group contact to moderate the discomfort of inter-ethnic interactions for ethnic majority participants but not ethnic minority participants.

Given the relative paucity of research examining inter-group interaction based on sexual orientation, our hypotheses were more exploratory. First, we expected heterosexual participants to report greater inhibition when they interacted with gays and lesbians, but because of enduring affective and moral responses to homosexuality, we did not expect friendship to completely eliminate this difference. Second, we expected inhibition to be higher for heterosexual males than for heterosexual females when interacting with gays and lesbians (Cohen *et al.*, 2009; Herek, 1988, 2002). Third, we expected greater prior contact with gays and lesbians to predict increased interaction comfort for heterosexual participants.

Among gay and lesbian participants, we hypothesized that even after accounting for friendship, behavioural inhibition as a protective strategy would remain a feature of interactions with heterosexuals, particularly for gay men, for whom violations of gender norms increase the risk of ostracism (Cohen *et al.*, 2009). Because gays and lesbians are likely to have extensive practice interacting with heterosexuals (usually beginning with the family of origin), we expected behavioural inhibition in inter-group interactions to become relatively common and thus disassociated from negative affect. Consistent with this reasoning, we hypothesized that even after controlling for level of friendship, gays and lesbians' behavioural inhibition would remain elevated in inter-group interactions, but their negative affect would not.

Method

Participants and procedure

University of Oregon students (approximately 72% White and 2% Black; Oregon University System Office of Institutional Research, 2009) and residents of surrounding Eugene, OR (approximately 88% White and 1% Black; U.S. Census Bureau, 2010) were recruited for participation using flyers, word-of-mouth, and announcements that directed people to an online questionnaire to determine eligibility. Online recruitment efforts included posting to local 'bulletin boards' (e.g., Craigslist) and social networking sites (e.g., Facebook). Announcements noted the study duration and its focus on social interaction. No specific restrictions were noted, beyond indicating a 'particular need' for specific subgroups. Everyone who completed the questionnaire was eligible for a raffle drawing, regardless of their eligibility or decision to participate in the experience sampling study.

Respondents who reported being native English speakers and either White and heterosexual, White and gay or lesbian, or Black and heterosexual were invited to be trained to participate in a week-long experience sampling study in exchange for \$50 and a profile describing their responses. When the respondents arrived for training, participants were given detailed instructions. They were asked to complete a minimum of five surveys per day from a broad sample of their interactions with other adults and to complete surveys immediately following these social interactions (see Cook, Arrow, & Malle, 2011).

The final sample consisted of 64 university and community participants ranging in age from 18 to 44 ($M = 23.98$; $SD = 6.10$). The heterosexual White sample ($n = 22$) had one more participant than the other two samples. Although the two White samples each had 10 female participants, the Black sample had 17, due to difficulties recruiting Black men. We attribute this difficulty to the lower college attendance rates for Black men as compared to Black women (The JBHE Foundation, 2006), reducing the already-sparse pool of possible Black male recruits. This resulted in an unequal gender distribution among the three samples, $\chi^2(2, N = 64) = 6.88, p = .03$. The three samples also differed in age, $F(2, 61) = 3.89, p = .03$, such that gay and lesbian participants ($M = 26.33, SD = 7.66$) were older than Black participants ($M = 21.33, SD = 2.44$), though neither group differed from heterosexual White participants ($M = 24.27, SD = 6.12$). Because of these differences, participant gender and age were statistically controlled in all analyses. The three groups did not differ in socio-economic status (SES; $p = .98$) (see Cook *et al.*, 2011) or in the proportion who were students ($p = .61$).

Materials

Background questionnaire

Demographics. Demographic questions were used to screen out non-native English speakers, people who were neither White nor Black, and those reporting a sexual orientation other than 'straight' or 'gay/lesbian'. We also collected data on gender, age and participants' occupation, income, and education (for calculating SES).

Prior out-group contact. Participants were asked how often they interacted 'in general' and 'in any given week' with people who were White, Black, heterosexual, and homosexual, using a four-point scale from 0 (*rarely*) to 3 (*frequently*). Answers to these two questions were averaged (all $\alpha s > .90$), and used to create two variables for out-group contact prior to the experience sampling study based on ethnicity and sexual orientation, respectively.

Experience sampling survey

Interaction demographics. After each interaction, participants recorded the number of people with whom they interacted; only information from dyadic interactions is presented here. Two other questions were used as covariates to help account for expected variability in interaction discomfort. The first, *interaction type*, compared social interactions (79.5%) to others (e.g., professional or financial), while the second, *status*, compared participants' self-report of their status as lower or higher than their partner's in each interaction². No group differences emerged for either variable ($p s \geq .25$).

²Status was not defined or qualified.

Partner demographics and friendship level. Information about participants' interaction partners during the 1-week experience sampling study was collected only once for each partner. At the beginning of each survey, participants indicated whether they had already reported an interaction with their partner. If the current interaction was the first reported with a particular partner, participants provided a nickname and answered several demographic and friendship questions about the partner (described below). In subsequent interactions, participants simply selected the appropriate name from an automatically updated list and proceeded directly to items about the interaction. Consequently, most assessment items were about interactions, not partners.

Participants indicated whether each partner's ethnicity and sexual orientation were the same as or different from their own, or whether they were unsure. Participants also reported each partner's gender. We used responses to generate three dichotomous variables for whether partners were the same or different on ethnicity, sexual orientation, and gender (different and unsure or other responses were combined). Gay and lesbian participants were also asked whether each partner knew their sexual orientation, with possible responses of yes, no, and unsure. No and unsure responses were combined to form a single *partner knowledge* variable.

For each interaction partner, participants indicated how similar, different, and close the person was to them, and how much they liked the person. After reverse scoring the 'different' responses, these four items were averaged to create a composite friendship level variable ($\alpha = .82$)³.

Negative affect and behavioural inhibition. Thirteen items measured negative affect and behavioural inhibition, which capture correlated but conceptually distinct aspects of the inhibition system (see Keltner et al., 2003). After each interaction, participants reported on nine emotions (self-conscious, cautious, relaxed, inhibited, nervous, confident, alienated, comfortable, and insecure) (e.g., 'how *relaxed* did you feel during the interaction?') on a fully anchored scale from *not at all* (1) to *very* (5), with a scale midpoint of *somewhat*. Four questions about behavioural choices in the interaction: 'how much personal information did you reveal in the interaction?', 'how free did you feel (or would you have felt) to express emotion?', 'how free did you feel (or would you have felt) to express disagreement?', and 'how genuine were you in the interaction?' used the same responses. Both scales had adequate reliability ($\alpha = .88$ and $.75$ for negative affect and behavioural inhibition, respectively), and a principal components analysis supported a two-component solution.

Results

Descriptive data

Black heterosexuals, White heterosexuals, and White gays and lesbians differed significantly in frequency of prior out-group contact and proportion of out-group partners during the study (see Table 1). Black participants reported significantly more prior contact with ethnic out-group members; a higher proportion of ethnic out-group

³Data were centered within subjects before calculating reliability (Bolger, Davis, & Rafaeli, 2003; Cranford et al., 2006). A 'not enough information' option for similarity and difference items means reliability reported for partner friendship level is based on 86% of partner ratings with complete data. Average reliability based on five imputed datasets created with NORM 2.03 (Schafer, 1999) was similar ($\alpha = .84$), suggesting a random pattern of missingness. The partner friendship scale was computed from the subset of available items.

Table 1. Participant prior out-group contact and partner characteristics

	White		White		Black	
	heterosexual ^a		homosexual ^b		heterosexual ^b	
	M	SD	M	SD	M	SD
Prior contact – Ethnicity	1.30 _c	0.92	1.38 _c	0.99	2.69 _d	0.56
Prior contact – Sexual orientation	1.57 _c	0.79	2.90 _d	0.30	1.29 _c	0.87
Different ethnicity partners	0.19 _c	0.20	0.21 _c	0.13	0.59 _d	0.26
Different orientation partners	0.24 _c	0.18	0.84 _d	0.13	0.21 _c	0.16
Different ethnicity interactions	0.19 _c	0.20	0.15 _c	0.11	0.58 _d	0.28
Different orientation interactions	0.15 _c	0.12	0.74 _d	0.18	0.17 _c	0.16

Note. Prior out-group contact was rated on a scale from 0 (*rarely*) to 3 (*frequently*). Means for different ethnicity/orientation *partners* represent the proportion of partners whose ethnicity/sexual orientation differed. Means for different ethnicity/orientation *interactions* represents the proportion of participants' individual interactions with people whose ethnicity/sexual orientation differed. Within rows, means with different subscripts differ significantly, $p < .05$.

^a $n = 22$.

^b $n = 21$.

partners; and more interactions with out-group partners than did the two White groups, which did not differ from each other. These data suggest that Black participants disproportionately sought out other members of their ethnic group. As seen in Table 1, 59% of Black participants' interaction partners had a different ethnicity. Consequently, 41% shared their ethnicity, considerably more than would be expected from the proportion of Black individuals living in the surrounding geographical area⁴.

White gay and lesbian participants indicated significantly more prior out-group contact (defined by sexual orientation) than the two heterosexual groups, with all but two gay and lesbian participants reporting the highest possible frequency. Gay and lesbian participants also had a significantly higher proportion of out-group partners and interactions with these partners than did Black and White heterosexuals, who did not differ from one another (see Table 1). Gay and lesbian participants did not appear to seek out same-group partners disproportionately, reporting that 84% of their partners differed in sexual orientation. However, gay and lesbian participants did have a higher *interaction frequency* with gays or lesbians than the heterosexual samples did, $t(61) = 2.32, p = .02$. This indicates that gay and lesbian participants limited their same-orientation interactions to a relatively small number of partners with whom they interacted repeatedly⁵.

Analysis strategy

To test for the effect of partner ethnicity and sexual orientation on negative affect and behavioural inhibition, we used multilevel analyses to account for the data's nested structure. This structure consists of interaction-level data (level-1) (e.g., ratings of negative affect and behavioural inhibition in each interaction), nested within interaction partners

⁴A 'student status' variable (*yes/no*), created to test for differences between the community and university samples, had no effect on its own or with participant group.

⁵Gay and lesbian students had more different-orientation partners than non-students ($p = .02$) (participant-group \times student status, $p = .10$).

(level-2) (e.g., partner race, sexual orientation, and friendship level), nested within participants (level-3) (e.g., participant age, gender, and combined sexual orientation and ethnicity). We used the software HLM 6 (Raudenbush, Bryk, Cheong, & Congdon, 2004) with full maximum likelihood and allowed all effects to vary randomly.

The first set of models tests the effect of partner ethnicity and the second set separately tests the effect of partner sexual orientation. One alternative strategy would have been to test a single model with a combined 'group status' variable. Unfortunately, this approach would obscure whether partners differed on race or sexual orientation. An out-group partner of a gay or lesbian participant, for example, could refer to partner ethnicity or partner sexual orientation and the distinction would be lost. Alternatively, a single multilevel model that included separate terms for partner ethnicity and sexual orientation would have been difficult to interpret given the large number of estimated parameters (Hox, 2002). Even when testing partner ethnicity and partner sexual orientation individually, our statistical models are complex. Because a combined model with even more parameters could negatively affect the precision of estimation and clarity of interpretation (Dedrick *et al.*, 2009; Hox, 2002), we opted for separate models for ethnicity and sexual orientation⁶.

Within each set of analyses (i.e., ethnicity and sexual orientation), the analysis strategy followed three general steps. In the first step, the only level-2 predictor was partner out-group status to test for a benchmark main effect in the absence of additional partner-level predictors. In the second step, we added level of friendship as a partner-level covariate to determine whether partner ethnicity or sexual orientation would continue to explain variance after accounting for expected variation due to friendship. Finally, because level of friendship between partners could plausibly moderate the effect of partner out-group status, in the third step we added the interaction between partner group status and partner friendship. At each step, blocks of variables were tested using likelihood-ratio tests of model deviance (Raudenbush & Bryk, 2002).

In all three-level models, interaction type and status were grand-mean centred and included as level-1 covariates. At level-2, the primary predictor variables were partner out-group status (ethnicity or sexual orientation), which was contrast-coded (-1 = same group; $+1$ = different group), and partner friendship, which was group-mean centred. Both variables were also included as predictors of the intercept at level-3 (see Raudenbush & Bryk, 2002). Tests of moderation included the interaction of these two variables.

At level-3, variables included participant age and gender, which were centred, and two orthogonal contrasts to account for participant group status (Black heterosexual, White heterosexual, or White gay/lesbian). For partner ethnicity models, the first contrast compared the Black sample (coded $+2$) to the combined White sample (coded -1) and the second contrast compared the two White samples on sexual orientation ($+1$ for gays and lesbians and -1 for heterosexuals). For sexual orientation models, the first contrast compared the gay and lesbian sample ($+2$) to the combined heterosexual sample (-1) and the second contrast compared Black heterosexuals ($+1$) to White heterosexuals (-1). Age, gender, and the participant-group contrasts were included as predictors of

⁶Despite these concerns, we tested a combined model with friendship level controlled to address any possibility that separate models were leading to spurious findings. The pattern of results was identical. Testing a combined moderator model was deemed unwise because of the 78 estimated parameters that would be required.

both the intercept (average levels of inhibition) and as moderators of level-2 intercept coefficients (e.g., partner friendship and out-group status).

In the description of results that follow, covariates are excluded except where they contribute to the effect of partner ethnicity or sexual orientation. Tests of fixed effects use robust standard errors (except for reduced-sample analyses; see Maas & Hox, 2004) and unstandardized effect sizes are presented (Baguley, 2009; Wilkinson & APA Task Force on Statistical Inference, 1999).

The relation between partner out-group status and partner friendship

Results of a preliminary, two-level model revealed a significant inverse relation between partner ethnicity and ratings of partner friendship, $\beta = -0.28$, $t(59) = -6.74$, $p < .001$. That is, participants were less likely to report high levels of friendship with people whose ethnicity differed from their own. The effect was stronger for Black participants than for White participants, $\beta = -0.07$, $t(59) = -2.23$, $p < .001$.

The model for partner sexual orientation revealed a similar pattern. Participants were less likely to report high levels of friendship with people whose sexual orientation differed from their own, $\beta = -0.45$, $t(59) = -11.53$, $p < .001$. The effect was stronger for heterosexual participants, $\beta = 0.07$, $t(59) = 3.36$, $p = .002$.

Discomfort associated with partner ethnicity

Before controlling for friendship level.

As expected, participants felt more negative affect, $\gamma = 0.03$, $t(59) = 2.00$, $p = .05$, and behavioural inhibition, $\gamma = 0.07$, $t(59) = 2.73$, $p = .01$, with partners whose ethnicity differed. However, the second participant-group contrast (White heterosexuals versus White gays and lesbians) moderated the partner ethnicity effect on both negative affect, $\gamma = 0.05$, $t(59) = 2.31$, $p = .03$, and behavioural inhibition, $\gamma = 0.09$, $t(59) = 2.52$, $p = .02$. In addition, the first participant-group contrast (White versus Black) marginally moderated the partner ethnicity effect on behavioural inhibition, $\gamma = 0.03$, $t(59) = 1.80$, $p = .08$. Simple effects analysis revealed that partner ethnicity did not impact negative affect or behavioural inhibition for White heterosexual participants ($\gamma s \leq |0.05|$, $ps \geq .19$). In contrast, White gay and lesbian participants reported more negative affect, $\gamma = 0.06$, $t(59) = 2.11$, $p = .04$, and behavioural inhibition, $\gamma = 0.13$, $t(59) = 2.07$, $p = .04$, with ethnic out-group partners. For gay and lesbian participants, over 90% of their non-White partners were heterosexual, thus constituting a 'double' out-group. Black heterosexuals and White gays and lesbians did not differ from each other on the effect of partner ethnicity for either negative affect or behaviour inhibition ($ps \geq .50$). Thus, before controlling for friendship, both Black participants and White gay and lesbian participants reported feeling more discomfort with partners whose ethnicity differed, but White heterosexual participants did not.

After controlling for friendship level.

Adding friendship level to the models significantly contributed to predicting both negative affect and behavioural inhibition ($ps < .001$)⁷. Once variation in friendship

⁷Friendship level itself was strongly and significantly associated with reduced inhibition in every model (for both sexual orientation and ethnicity), ranging from $|\gamma| = 0.19$ to 0.21 for negative affect and $|\gamma| = 0.45$ to 0.49 for behavioural inhibition.

level was controlled, the main effect of partner ethnicity became non-significant for *negative affect* ($p \geq .25$), but significant in the opposite direction for *behavioural inhibition*, $\gamma = -0.04$, $t(59) = -2.07$, $p = .04$, suggesting *less* behavioural inhibition with out-group partners. However, these patterns differed by participant identity, as the second participant-group contrast continued to reveal differences between the two White samples. This contrast was marginally significant for negative affect, $\gamma = 0.03$, $t(59) = 1.66$, $p = .10$, and significant for behavioural inhibition, $\gamma = 0.05$, $t(59) = 2.03$, $p = .05$. Simple effects tests revealed that after controlling for friendship level, White heterosexual participants reported feeling *less* negative affect, $\gamma = -0.05$, $t(59) = -2.39$, $p = .02$, and behavioural inhibition, $\gamma = -0.12$, $t(59) = -3.31$, $p = .002$, with ethnic out-group partners. However, partner ethnicity ceased to predict negative affect and behavioural inhibition for gay and lesbian participants ($ps \geq .50$), who did not differ from Black participants ($ps \geq .50$). Thus, when friendship levels were controlled, both Black participants and White gay and lesbian participants showed no increase in discomfort with partners whose race differed, while White heterosexual participants actually reported *less* discomfort⁸. Adding prior out-group contact and its interaction with group membership as a moderator did not contribute to the explanatory power of the model ($ps \geq .35$). Adding the interaction of partner friendship and partner ethnicity and the corresponding level-3 predictors of the interaction term also did not improve overall model fit ($ps \geq .50$).

Discomfort associated with partner sexual orientation

Before controlling for friendship level.

Interacting with people whose sexual orientation differed evoked increased negative affect, $\gamma = 0.11$, $t(59) = 4.70$, $p < .001$, and greater behavioural inhibition, $\gamma = 0.20$, $t(59) = 6.31$, $p < .001$. However, participant sexual orientation moderated the inhibiting effect of partner sexual orientation on negative affect, $\gamma = -0.04$, $t(59) = -3.35$, $p = .002$. Simple effects tests revealed that negative affect did not vary as a function of partner sexual orientation for gay and lesbian participants, $\gamma = 0.03$, $t(59) = 1.36$, $p = .18$. In contrast, negative affect was higher with out-group partners (based on sexual orientation) for Black heterosexual participants, $\gamma = 0.18$, $t(59) = 3.71$, $p = .001$, who did not differ from White heterosexual participants ($p = .43$). Participant sexual orientation did not moderate the effect of partner sexual orientation on behavioural inhibition ($p = .42$).

After controlling for friendship level.

Adding friendship level significantly contributed to the models for both negative affect and behavioural inhibition ($ps < .001$). Even after friendship level was controlled, however, the main effect of partner sexual orientation remained significant for both negative affect, $\gamma = 0.04$, $t(59) = 2.36$, $p = .02$, and behavioural inhibition, $\gamma = 0.05$, $t(59) = 1.99$, $p = .05$, indicating that interacting with a partner whose sexual orientation differed remained relatively uncomfortable. When the outcome was *negative affect*, participant sexual orientation continued to moderate the inhibiting effect of partner

⁸For negative affect, this pattern was largely limited to heterosexual White students. Although model fit did not improve ($p \geq .35$), student status, when added, moderated the second participant-group contrast ($p = .03$). Only heterosexual White students reported lower negative affect in inter-ethnic interactions ($p = .001$).

sexual orientation, $\gamma = -0.03$, $t(59) = -2.87$, $p = .01$. Simple effects tests revealed that negative affect did not vary as a function of partner sexual orientation for gay and lesbian participants, $\gamma = -0.01$, $t(59) = -0.74$, $p = .46$. However, negative affect remained higher with out-group partners (based on sexual orientation) for Black heterosexual participants, $\gamma = 0.11$, $t(59) = 2.38$, $p = .02$, who did not differ from White heterosexual participants ($p = .23$)⁹.

The effect of partner sexual orientation on *behavioural inhibition* was moderated by participant gender, $\gamma = 0.12$, $t(59) = 3.23$, $p = .002$. Simple effects tests revealed that once friendship level was controlled, partner sexual orientation predicted increased behavioural inhibition for men, $\gamma = 0.11$, $t(59) = 1.96$, $p = .06$, but not women, $\gamma = -0.01$, $t(59) = -0.13$, $p = .90$. To see if this interaction might further depend on participants' sexual orientation, we tested the three-way interaction of participant gender, participant sexual orientation, and partner sexual orientation. The interaction did not improve model fit ($p \geq .50$), suggesting that gender differences in the reaction to an out-group partner did not depend on participant sexual orientation¹⁰. There was no moderation of partner sexual orientation on behavioural inhibition by participant sexual orientation or ethnicity ($ps \geq .45$). Thus, friendship eliminated partner sexual orientation as a source of behavioural inhibition for females, but not males.

Adding the interaction of partner friendship and partner sexual orientation and the corresponding level-3 predictors of the interaction term did not contribute to overall model fit for behavioural inhibition ($p \geq .40$), but marginally affected the model for negative affect ($p = .10$). Results for negative affect revealed a three-way interaction between participant age, partner sexual orientation, and partner friendship, $\gamma = 0.01$, $t(59) = 3.06$, $p = .004$. Follow-up analysis revealed that participant age attenuated the effect of partner out-group status for low-friendship partners (i.e., one standard deviation below the mean in friendship), $\gamma = -0.01$, $t(59) = -2.66$, $p = .01$, but not for high-friendship partners (i.e., one standard deviation above the mean in friendship) ($p = .47$). The two-way partner friendship by partner ethnicity interaction term was not significant on its own ($p = .24$) and was not moderated by the block of variables representing participant gender and group status ($p \geq .50$).

To summarize, both before and after controlling for friendship, gays and lesbians' report of *negative affect* did not differ based on whether an interaction partner shared their sexual orientation. In contrast, heterosexual participants (both male and female) felt significantly more negative affect with out-group partners, even controlling for friendship. A different pattern emerged for *behavioural inhibition*. All groups felt more behaviourally inhibited in out-group interactions defined by sexual orientation before accounting for friendship. After accounting for friendship, this difference vanished for women but not for men.

⁹Among Black participants, elevated negative affect with out-group partners was largely limited to students. Although model fit did not improve ($p = .16$), student status, when added, interacted with the second participant-group contrast ($p = .01$). Only Black students felt more negative affect with out-group partners ($p = .002$).

¹⁰Perhaps, the interaction of participant gender \times partner sexual orientation further depends on partner gender. We tested an exploratory model that additionally included partner gender and the interaction of partner gender and partner sexual orientation. This 'full' model also included moderation of these added partner effects by participant age, gender, and group. Considering the large number of variance, covariance, and fixed effects being estimated (65), this model may have strained the practical limits of statistical inference with a sample size of 64. Still, there was no evidence that partner gender or partner gender by partner sexual orientation affected inhibition and the full model fit the data no better than the reduced model ($p \geq .50$). The aforementioned gender moderator of partner sexual orientation remained, however. Further adding the interaction of participant gender \times participant stigma group to the prediction of the level-2 effects also did not improve model fit ($p \geq .50$).

Moderators of discomfort.

For our final analyses, we investigated two variables likely to moderate inhibition in inter-group interaction. First, among the gay and lesbian sample we investigated whether partner knowledge of participants' sexual orientation moderated inhibition. The partner knowledge analysis was limited to gay and lesbian participants' interactions with *heterosexual* partners. This is because all but four of gay and lesbian participants' *in-group* partners knew their sexual orientation, so knowledge and partner sexual orientation were confounded. Among the heterosexual sample, we investigated whether prior out-group contact moderated the effect of partner orientation. The prior-contact moderator analysis is limited to heterosexual participants because gay and lesbian participants had such uniformly high levels of prior inter-group contact.

In out-group interactions, when partners knew their sexual orientation, gay and lesbian participants reported less negative affect, $\gamma = -0.08$, $t(18) = -2.59$, $p = .02$, and behavioural inhibition, $\gamma = -0.32$, $t(18) = -7.05$, $p < .001$ ¹¹. The decrease in negative affect with disclosure was somewhat smaller for older participants, $\gamma = 0.01$, $t(18) = 1.78$, $p = .09$, but age did not moderate the effect of partner knowledge on behavioural inhibition ($p = .23$). A separate model confirmed that knowledge of sexual orientation was highly related to friendship, $\gamma = 0.62$, $t(18) = 11.77$, $p < .001$. Thus, disclosure of sexual orientation, common as friendship develops, eases discomfort in gay and lesbians' out-group interactions.

For heterosexual participants, adding prior out-group contact with gays and lesbians and its interaction with participant gender to the level-2 slopes (partner friendship and partner sexual orientation) significantly contributed to the model for negative affect ($p = .03$), but not behavioural inhibition ($p \geq .50$). Controlling for friendship, a prior contact by participant gender by partner sexual orientation interaction emerged on negative affect, $\gamma = -0.27$, $t(37) = -2.59$, $p = .01$. Figure 1 displays predicted means. For low prior-contact males (i.e., one standard deviation below the mean in prior out-group contact), interacting with out-group partners was associated with more negative affect, $\gamma = 0.39$, $t(37) = 3.35$, $p = .002$, whereas for high prior-contact males (i.e., one standard deviation above the mean in prior out-group contact), negative affect did not vary between in-group and out-group interactions ($p \geq .50$). Heterosexual females reported greater negative affect with out-group partners, $\gamma = 0.10$, $t(37) = -2.72$, $p = .01$, regardless of prior contact ($p \geq .50$)¹².

Discussion

Discomfort associated with ethnicity

Interacting with someone from a different ethnic group can be uncomfortable, regardless of one's ethnicity. However, results from the present study suggest this discomfort is not an inevitable feature of out-group interactions. Instead, it may be more a function of people's lower levels of closeness and friendship with people who differ in ethnicity. Once partner friendship levels were statistically controlled, participants' discomfort with ethnic out-group partners was reduced to the point that partner ethnicity did not predict

¹¹ Knowledge was contrast coded: $-1 =$ 'unaware' partner and $+1 =$ 'aware' partner.

¹² Because of the reduced sample of heterosexual participants and the small number of Black males, we did not test for interactions of gender and contact with stigma group (Black versus White), but we included stigma group as a covariate. It was not significant.

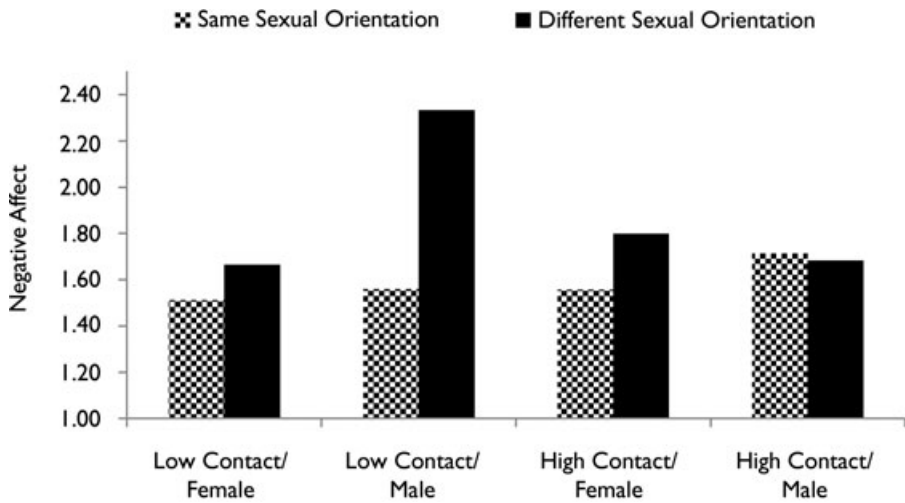


Figure 1. Effect of partner sexual orientation on negative affect among heterosexual males and females as a function of prior out-group contact. Predicted values were computed at one standard deviation below and above the mean for prior contact and statistically control for the effect of friendship level between partners.

discomfort for White gay and lesbian participants or for Black participants. Moreover, friendship did not appear to moderate the effect of partner ethnicity. This suggests that the discomfort of inter-ethnic interactions may reflect low levels of friendship. Increased contact between specific out-group members, if it fosters friendship, should reduce this discomfort.

After controlling for friendship, White heterosexual participants actually reported less inhibition in inter-ethnic interactions than in interactions with other Whites, an effect more pronounced among students (see note 8). Why? We suspect that White heterosexual participants saw inter-ethnic interactions as an opportunity to demonstrate their egalitarian, unprejudiced beliefs, which may be particularly attractive to university students. By behaving in an outgoing and revelatory manner, White heterosexuals may have hoped to signal their status as what Goffman (1963) called 'the wise', out-group members who accept the minority group and expect to be accepted as a courtesy in-group member. Demonstrating that one is not prejudiced to a historically marginalized out-group could be both self-affirming (Sherman & Cohen, 2006; Steele, 1988) and evidence of one's positive inter-ethnic attitudes (Bem, 1972), which would also explain White heterosexual participants' positive affect when interacting with ethnic out-group members. Although we cannot rule out the possibility of response bias as an alternative explanation (e.g., Vanman, Paul, Ito, & Miller, 1997), we believe this unlikely. Both momentary assessment and the repetitive completion of assessments reduce the possibility of self-presentation biases (Christensen, Barrett, Bliss-Moreau, Lebo, & Kaschub, 2003; Reis & Gable, 2000; Smyth & Stone, 2003). Moreover, because demographic information about partners was only collected once, interaction characteristics, which were the focus of the assessments, should have been more salient than partner characteristics.

The differences in inhibition between White heterosexuals and White gays and lesbians is most likely due to the latter's minority status with respect to sexual orientation; over 90% of gay and lesbian participants' ethnic minority partners were heterosexual. For White gays and lesbians, awareness of their own minority status likely continued to be

a compelling concern, especially given our results on sexual orientation as an enduring inter-group boundary. Consequently, White gays and lesbians showed the hypothesized pattern of greater discomfort in ethnic out-group interactions before controlling for friendship, but not after.

Unexpectedly, prior out-group contact, which has been associated with reduced prejudice (Pettigrew & Tropp, 2006; Tropp & Pettigrew, 2005), did not moderate the effect of partner ethnicity for White participants. For our sample of young adults in a politically liberal community, overall levels of racial prejudice may have been low enough that evaluative concerns about being seen as prejudiced did not vary much as a function of prior out-group contact, particularly after controlling for friendship.

Discomfort associated with sexual orientation

For sexual orientation, results suggest deeper inter-group divisions. Before accounting for friendship, all groups expressed more behavioural inhibition in interactions with individuals whose sexual orientation differed. Even after accounting for friendship, men (irrespective of sexual orientation) remained behaviourally inhibited in these inter-group interactions, although women did not. From the heterosexual perspective, this finding is consistent with research showing gender gaps in views about homosexuality. Heterosexual men have more negative attitudes about homosexuality, are less likely to support equal rights for gay men and lesbians, and are less likely to endorse adoption rights than heterosexual women (Herek, 1988, 2002). Heterosexual men who interact with gay men or lesbians may also fear they will be misclassified as gay (Bosson, Taylor, & Prewitt-Freilino, 2006) either by their partners or by onlookers. These attitudes and concerns are likely responsible for heterosexual men's enduring feelings of uncertainty and discomfort when interacting with gays and lesbians, an uncertainty that persists even when friendship and prior out-group contact are statistically controlled.

For gay men, awareness that attitudes towards them are negative and that homosexuality is often seen as a violation of gender norms is the most likely explanation for continuing behavioural inhibition, even with friendship controlled. Gay men are likely aware that perceptions of likeability and masculinity are positively correlated, at least for heterosexual male perceivers (Cohen *et al.*, 2009), and thus may deliberately behave with greater restraint in inter-group interactions to avoid rejection and facilitate positive interactions. Interestingly, this restraint was not associated with negative affect. We suggest that behavioural restraint in the company of heterosexuals becomes well-rehearsed and consequently disassociated from negative feelings that might otherwise accompany this strategy.

Heterosexual participants did express more negative affect when interacting with gay and lesbian partners, although this was moderated by the interaction of prior out-group contact with gender. As expected, heterosexuals with lower prior contact expressed more negative affect with out-group members, even after accounting for friendship, but this effect was limited to males. In fact, for males with high prior contact, negative affect did not differ based on partner sexual orientation. In contrast, women, whose *behavioural inhibition* did not vary with partner sexual orientation when friendship was controlled, continued to have greater *negative affect* with out-group partners regardless of prior contact. Because the most dramatic difference in negative affect as a function of prior contact was for heterosexual men, who are also the most likely to hold negative views of homosexuality, it is encouraging to find that prior contact may be particularly beneficial for this group.

One source of uncertainty for gay men and lesbians is whether heterosexual interaction partners are aware of their sexual orientation. When gay men and lesbians

interacted with heterosexual partners who were not aware of their sexual orientation, they reported increased behavioural inhibition. Partner awareness was confounded with friendship, as gay and lesbian participants had typically disclosed their sexual orientation to friends. The combination of friendship and disclosure clearly makes out-group social interactions more comfortable for gays and lesbians.

Limitations

As with all studies that use non-probability samples, generalizability may be limited. This limitation may be mitigated by our inclusion of both students and community participants and by the finding of no SES difference between samples. Results controlled for small differences in age and gender. To the extent that those who are most disenfranchised chose not to participate, inter-group boundaries may be more enduring than reported here.

Conclusion

Our results offer several hopeful findings about the potential for comfortable social interactions with out-group members. When people make friends with others who have a different ethnic identity, friendship appears to largely convey the same interpersonal comfort experienced among in-group friends. Sexual orientation may entail more enduring barriers to comfortable inter-group interactions, particularly for males, but here too we found grounds for optimism. Even with friends, both heterosexual and gay men remained behaviourally inhibited in out-group interactions, and heterosexuals of both genders continued to experience negative affect. However, higher levels of prior out-group contact did ease heterosexual males' negative affect with gays and lesbians. Given that heterosexual males tend to have the most negative attitudes towards homosexuality, we suspect that as gays and lesbians become more visible and inter-group contact increases, friendship may eventually trump sexual orientation as well.

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