Intergroup Differences in Intergroup Anxiety:

How Majorities' Self-Focused Anxiety Disrupts Intergroup Contact

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Abstract

During intergroup contact, people may feel anxious about their own competence or behaviors (self-focused anxiety) or about the perceptions, experience, and actions of their interaction partner (other-focused anxiety). Four studies examined the focus of intergroup anxieties, how anxiety of each type affects intergroup contact, and why the anxiety-contact link emerges. In both an American (Study 1, $N = 84$) and a German (Study 2, $N = 113$) sample, majorities (vs. minorities) were more self-focused in their anxieties. Majorities' self-focused (but not other-focused) anxiety predicted less frequent and lower-quality intergroup contact (Studies 2-3), and an approach to an in-lab intergroup contact situation in a way unlikely to foster intimacy (Study 4). Studies 3 and 4 showed why such effects emerged: Majorities high in self-focused anxiety assumed that their minority interaction partner would be high in other-focused anxiety. This belief—that the minority interaction partner would also be worried about how the majority group participant would perform—was the proximal predictor of poor contact. Study 3 ($N = 198$) supported this mediational pathway correlationally. Study 4 ($N = 41$) manipulated majority participants' beliefs experimentally and found that when majority participants were led to believe that their minority interaction partner was high in other-focused (vs. self-focused) anxiety, majority-group participants communicated with their minority interaction partner in a less engaged manner. Implications for understanding the dynamics and consequences of intergroup contact are discussed, and a novel method for enhancing the benefits of intergroup contact is suggested.

Keywords: intergroup anxiety, prejudice, intergroup contact, intergroup interaction

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Although social anxieties permeate daily life, intergroup contact raises unique concerns about how one should act and how one is perceived (Blascovich, Mendes, Hunter, & Lickel, 2000; Gudykunst, 1985). Intergroup interactions are characterized by much higher levels of anxiety than are exchanges between members of the same group (Stephan & Stephan, 1985, 2000). Moreover, this anxiety is particularly pernicious because it makes the interaction more cognitively and emotionally taxing (Trawalter, Richeson, & Shelton, 2009) and leads to greater guardedness and vigilance to threat (Vorauer, 2006). Feelings of anxiety in anticipation of interaction lead members of majority and minority groups to enter intergroup interactions with negative expectations (Mallett, Wilson, & Gilbert, 2008; Shapiro, Baldwin, Williams, & Trawalter, 2011), to disengage from the interaction, or to avoid intergroup contact altogether (Plant, 2004; Plant & Butz, 2006). In the present paper, we posit that to better understand the way that intergroup anxiety relates to successful intergroup contact and prejudice, it is necessary to move beyond the question of *how much* one is anxious to instead examine on whom people's anxieties focus—themselves or their interaction partner.

Research on intergroup contact has continued to use anxiety measures (often variations from Stephan & Stephan, 1985) that assess diffuse reports of anxiety and apprehensiveness, but that do not home in on what one is anxious or apprehensive *about* (Gómez, Tropp, & Fernández, 2011; Turner, Hewstone, Voci, & Vonofakou, 2008; Vorauer & Turpie, 2004; for a related critique, see Blair, Park, & Bachelor, 2003; cf. Greenland, Xenias, & Maio, in press). In expressing anxiety about contact, one may say "I am anxious that *I* will…", or that "I am anxious that *s/he* will…" By our terminology, such statements reflect *self-focused* and *other-focused* anxiety, respectively. Furthermore, we hypothesize that majorities and minorities differ in their

focus of anxiety. More specifically, we propose that majority group members are relatively self-focused in their intergroup anxieties, whereas minorities are relatively other-focused. As we outline below, we believe that understanding intergroup anxiety not merely in terms of its level but also in terms of its focus is useful in predicting *when* and understanding *why* intergroup contact is frequent and of high quality, or is infrequent and of low quality.

The Focus of Intergroup Anxiety: How Majorities and Minorities May Differ

Even well-meaning majority group members find intergroup contact to be uncomfortable and anxiety-provoking (Crocker, Major, & Steele, 1998; Gaertner & Dovidio, 1986; Stephan & Stephan, 2000; Trawalter, Richeson, & Shelton, 2009). Majority group members are worried about appearing prejudiced (Dovidio & Gaertner, 2004; Richeson & Shelton, 2003, 2010). This concern could manifest itself in both a self-focused way ("I would be anxious that *I* would say something offensive") and in an other-focused way ("I would be anxious that *they* feel belittled or offended."). In both cases, though, the source of potential offense seems to reside in the majority group member. Given this concern with their own behavior, we expected that majority group members' anxiety will be focused largely (albeit not exclusively) on themselves and their own behaviors.

Several lines of work suggest that minorities have a greater other-focus, an orientation that may seem to confer some advantages (superior memory; Frable, Blackstone, & Scherbaum, 1990), but one that leaves minorities anxious about the thoughts, perceptions, and actions of their interaction partners. Minorities' anxiety and arousal has been shown to relate to vigilance in detecting bias (Vorauer, 2006) and anticipation of prejudice and discrimination (Hyers & Swim, 1998). More generally, the status and power differential in intergroup contact between majorities and minorities leaves minorities feeling more dependent on their majority-group counterpart than vice versa (Binder et al., 2009). Given that people attend to others to the extent that their

outcomes are dependent on them (Berscheid et al., 1976; Fiske, 1993), it seems plausible that minorities would be more other-focused in their anxieties. Even when majority group members do not literally control the resources of minorities, there is evidence that minorities put great stock in (and thus have anxiety about) the perceptions that majorities have of them (Kramer & Messic, 1998; Vorauer, 2006). As such, minorities are especially sensitive to cues that their interaction partners are devaluing them in terms of social identity (Murphy, Steele, & Gross, 2007; Murphy & Steele, 2008; Purdie et al., 2008).

In a recent theoretical paper that interpreted interracial interactions in light of the stress, threat, and coping literatures, Trawalter et al. (2009) wrote, "Because whites and racial minorities tend to have different prejudice-related interpersonal concerns during interracial contact, they are likely to have a different focus during their interactions" (p. 249). Although we concur with Trawalter et al. (2009) that there can be different prejudice-related concerns in interracial contexts (or, different-status groups more generally), we note one key difference in our conceptualizations. Trawalter and colleagues refer to focus in the sense of attention allocation. They discuss focus as referring to whom one is monitoring. This places focus along a continuum from self-focused to other-focused. Within this context, it makes sense why Trawalter et al. (2009) discuss interventions or shifts that move one's attention from the self onto others. However, from our perspective, self-focused and other-focused anxiety are theoretically orthogonal. People can have anxieties of both types, and those anxieties can each be large or small.

Intergroup Anxiety and Intergroup Contact

Previous research has focused on intergroup anxiety in the context of the contact-prejudice link. It is well established that intergroup contact reduces the prejudice of majorities (though typically not minorities). Some evidence suggests that a reduction in intergroup anxiety

may be an important mediator of such effects (Binder et al., 2009; Brown & Hewstone, 2005; Islam & Hewstone. 1993; Pettigrew & Tropp, 2008). Anxiety reduction even plays a mediating role in the beneficial effects of imagined or mentally simulated contact (Turner, Crisp, & Lambert, 2007).But instead of focusing on anxiety as a possible mediator, we instead ask whether majorities' *self-focused* anxiety is an impediment to having high-quality contact. We focus on effects on majority contact given its ability to reduce prejudice. But as we explain below, the association between minorities and other-focused anxiety will be particularly important in understanding *why* majorities' self-focused anxiety can be so disruptive.

Several lines of work converge in suggesting that anxiety may be a barrier to contact. The actual or anticipated stress of intergroup contact leads people to avoid or break off contact when given the chance (Blascovich, Mendes, Hunter, Lickel, & Kowai-Bel, 2001; Crosby, Bromley, & Saxe, 1980; Mallet, Wilson, & Gilbert, 2008; Plant & Devine, 2003; Stephan & Stephan, 1985; West, Shelton, & Trail, 2009). Furthermore, these anxieties leak out during a contact situation (Dovidio, Hebl, Richeson, & Shelton, 2006; see also Shelton, West, & Trail, 2010), which can disrupt quality contact. And even when displays of anxiety are not blatant, subtle anxious cues may be enough to disrupt contact, especially given that intergroup interaction partners tend to interpret others' ambiguous behaviors as reflecting prejudice, disinterest, or other disaffiliative dispositions (Dovidio, Pearson, Smith-McLallen, & Kawakami, 2005; Schlenker & Leary, 1982; Shelton & Richeson, 2005).

Compared to past work, our hypothesis is more specific. We suggest that majorities' self-focused anxiety may be especially disruptive to contact. In describing interracial contact, it has been suggested that well-meaning Whites may worry that they will behave in a stereotypical way, which could prompt counterproductive attempts to avoid confirming stereotypes (Poskocil, 1977; Stephan & Stephan, 1985). This fear induces a situational threat that can lead to intergroup

distancing (Goff, Steele, & Davies, 2008). Thus, previous research points to the prediction that greater self-focused anxiety would primarily lead to worse contact outcomes and thus maintained prejudice.

Greenland, Xenias, and Maio (in press) would seem to offer one exception to this prediction. They show that a worry that one's interaction partner—a schizophrenic or a street gang member—will be rude and disruptive is related to prejudice against them. Although in this case, the other-focused anxiety is (a) operationalized as a concern that the other person will behave inappropriately, and (b) directed toward groups that many people may (legitimately or not) fear as dangerous and unpredictable. Because of the concern that schizophrenics and street gang members are likely to behave nonnormatively, disruptively, and harmfully, it is not surprising that people will also have corresponding negative feelings toward these groups. Although this process may be less likely to apply to the intergroup contexts we focus on (e.g., interracial), Greenland et al.'s (in press) findings nonetheless serve as the basis for an alternative hypothesis – that *other-focused* anxiety may instead be the primary disrupter of contact.

In understanding why majorities' self-focused anxiety would disrupt contact, it is necessary to reincorporate minorities' focus of anxiety. Note that when majorities show self-focused anxiety and minorities display other-focused anxiety, both are actually directed at the same person—the majority-group member. Thus, majorities' worry about their own behavior ("I don't know that I can do this") may then be projected onto one's interaction partner ("S/he probably thinks I can't do this"). In other words, regardless of whether majorities' self-focused anxiety actually triggers other-focused anxiety in minority interaction partners, the robust phenomenon of projection (Critcher & Dunning, 2009; Ross, Greene, & House, 1977) may lead anxious, self-focused majorities to feel the added burden of thinking their interaction partner has a parallel concern.

There are two hints that majorities who assume that their partners are high in other-focused anxiety will have worse contact outcomes. Concerns about evaluation by others can be especially disruptive to one's own behavior and interfere with the intimacy-building behaviors of majority group members (Vorauer &Turpie, 2004). Pearson et al. (2008) provide a more specific hint that it may be majority group members' belief that their minority interaction partners have an other-focused anxiety that is particularly disruptive. They found that the pressure that comes from potentially validating one's interaction partner's fears may promote a desire to disengage from a contact situation. In total, our reasoning suggests an extended meditational pathway: Majorities' high self-focused anxiety may lead them to assume that minority interaction partners would be high in other-focused anxiety, which may discourage high-quality contact.

In contrast, it is not clear why majorities' other-focused anxiety would hurt their contact, or why majorities' belief that their interaction partner has self-focused anxiety would have a negative impact either. Of course, if majorities have little confidence in their own ability to handle a contact situation with aplomb (a self-focused anxiety), this may lead them to worry the contact situation will be more unpleasant for their interaction partner (an other-focused anxiety). This fact alone leads us to expect that the two types of anxiety may be highly correlated. But other-focused concerns may also reflect a general positive, empathic orientation. Given both points, we would predict that self-focused anxiety should uniquely predict majorities' poor contact outcomes, which should affect prejudice.

Overall, our logic has connections to reasoning that has been advanced in the stereotype threat literature. Research on stereotype threat reveals that a worry that one might confirm a performance stereotype in the eyes of others may lead one to disidentify from the relevant performance domain (Steele & Aronson, 1995). This concern with one's own performance can prompt anxious arousal (Murphy, Steele, & Gross, 2007) and vigilance toward others for

information about whether they have concluded that one has confirmed the stereotype (Steele, Spencer, & Aronson, 2002). Such anxieties may ultimately be performance debilitating (Inzlicht & Ben-Zeev, 2000; Johnson, Richeson, & Finkel, 2011). This parallels our reasoning: A worry about one's own performance fuels a concern that others share this suspicion, which ultimately disrupts performance.

Overview of the Present Research

The present research consisted of four studies that tested whether: (a) majorities are more self-focused in their anxiety than are minorities, (b) this effect emerges across different contact groups in different cultural contexts, (c) majorities' self-focused anxiety leads them to have lower-quality, less frequent intergroup contact, and (d) whether majorities' self-focused anxiety disrupts contact because it piques the worry that one's interaction partner has high other-focused anxiety. In Study 1, Americans from different majority and minority groups (e.g., racial, religious, sexual minorities) listed their primary anxieties about intergroup contact. These responses were coded for whether they reflected self- or other-focus. In Study 2, German nationals and German immigrants saw the anxieties that had been most frequently listed by our American sample. We tested again whether majorities and minorities differed in their focus of anxiety. Also, we tested whether majorities' self- (but not other-) focused anxiety predicted their tendency to engage in frequent, high-quality contact, which (to replicate past research) was expected to predict lower prejudice. Study 3 attempted to replicate the same mediational model with an American sample. Also, we tested whether majorities' self-focused anxiety disrupts contact because it leads to a fear that one's minority interaction partner has high other-focused anxiety. Study 4 moved beyond the self-reported contact measures of Studies 2 and 3 to actually measure quality-promoting contact behaviors. This permitted us to test whether majorities high in self-focused anxiety engaged in quality-disruptive behavior. Also, we manipulated participants'

beliefs about the minority interaction partner's focus of anxiety. This permitted a test of whether a belief that one's interaction partner is other-focused actually *causes* a disruption in one's own positive contact behaviors.

Study 1

In our first study, we aimed to test whether majorities and minorities differ in the focus of their intergroup anxieties. To avoid limiting ourselves to any particular minority group, we used minorities who were racial minorities, socioeconomic minorities, religious minorities, and sexual minorities. Minority participants were asked to imagine that they were going to coffee with a member of the corresponding majority group. They indicated the content of their worries, concerns, anxieties, and nervousness. Majority participants (those who indicated they had no minority status) imagined they were going to coffee with a member of one of these minority groups. They also indicated their worries, concerns, anxieties, and nervousness. We predicted that majorities and minorities would differ in the relative self-focus versus other-focus of their anxieties. That is, we believed that majorities' anxieties would be more self-focused than would be minorities' anxiety.

Method

Participants. Eighty-four students at a private American university completed a study on "the anxieties that majorities and minorities experience." Thirty-one participants were Caucasian, heterosexual, of moderate or high socioeconomic status, and reported having no other "minority identities." Fifty-three participants had at least one minority identity (66% racial, 9% socioeconomic, 8% sexual, 17% other). If participants had multiple minority identities, they selected which "most meaningfully applied to [them]." Thirty-five (66%) selected racial minority; four (8%), sexual minority; five (9%), socioeconomic minority; nine (16%) selected other.[1]

Materials and procedure. Participants were asked to imagine that they were going to have coffee with a complete stranger who was also a student at their university. Minority participants were asked to imagine that their coffee partner was a member of the corresponding majority group. For example, low socioeconomic status students imagined having coffee with someone of their same race and sexual orientation, but of a high socioeconomic status. In contrast, majority participants were asked to imagine that their coffee was with a member of a minority group. Majority participants indicated with which type of minority (racial, sexual, or socioeconomic) they would experience the most anxiety. Thirteen (42%) chose a racial minority; eight (26%), a sexual minority; ten (32%), a socioeconomic minority.

All participants read that people often approach these types of interactions—those between a majority and a minority group member—with certain types of anxieties: "People may feel anxious for different reasons. What sorts of anxieties would you have during the interaction? What would you be worried about?" Participants were given four prompts, and were asked to complete those for which they had genuine anxieties: "I would be concerned that…", "I would be anxious about…", "I would be worried that…", and "I would be nervous that…" After completing the sentences, participants returned to the statements and placed a check mark next to the one that captured their "biggest concern."

Lastly, we described to participants that they may possess *self-focused* or *other-focused* anxieties. "Some anxieties are worries you have about yourself and your own behavior. These lead you to focus on yourself. Other anxieties are about the other person, their behavior or what they are thinking. These lead you to focus on the other person." Participants coded each of their listed anxieties as self-focused or other-focused. Three coders—all unaware of the participant's majority condition, two of whom were unaware of the hypotheses—recoded each of the responses. Coders agreed that 189 of 221 (86%) had been self-coded correctly. For 28 of the 221

(13%) responses, all three coders agreed the statement had been misclassified by the participant. These "corrected" codings were used in the analyses reported below. To the extent there was any rater disagreement (in 4 of 221 cases; 2%), we relied on participants' own classifications.

Results

On average, participants completed 2.60 (SD = 1.21) of the 4 anxiety statements. This rate did not differ between majorities and minorities, $t(82) = 1.21$, $p > .23$.

To assess whether majorities were relatively more self-focused in their anxieties, we submitted the number of anxieties participants listed to a 2(group status: majority or minority) X 2(focus of anxiety: self or other) mixed-model ANOVA, with the second factor measured within-subjects. The predicted group status X focus of anxiety interaction emerged, $F(1, 82) = 13.73$, $p < .001$. As predicted, majorities listed more self-focused (M = 1.48, SD = 1.03) than other-focused (M = 0.90, SD = 0.91) anxieties, $t(29) = 2.19$, $p = .04$. In contrast, minorities listed more other-focused (M = 1.75, SD = 1.16) than self-focused (M = 0.96, SD = 0.92) anxieties, $t(51) = 4.14$, $p < .001$.

Next, we performed a logistic regression to assess whether the focus of the anxiety the participant labeled as most important showed the same pattern. A main effect of group status indicated that the focus of participants' most important concern differed by group status, χ^2 (1, N = 75) = 10.62, $p = .001$. Replicating the results seen with number of anxieties, majorities' primary anxiety was more likely to be self-focused (70%) than other-focused (30%), χ^2 (1, N = 27) = 4.48, $p = .03$. Showing the reverse pattern, minorities' primary anxiety was more likely to be other-focused (72%) than self-focused (28%), χ^2 (1, N = 48) = 8.70, $p = .003$.

The coders also counted how many times each concern was listed. Ambiguities about whether concerns listed by different participants (with slightly different wordings) were

equivalent were resolved through discussion. The eight most frequently listed anxieties of each type are listed in Appendix.

Discussion

Although majorities and minorities listed just as many anxieties about intergroup contact, the focus of these anxieties differed. Majorities listed more self-focused anxieties—worrying that they might say or do something that would offend their minority interaction partner, or that they would have trouble thinking of something to say. In contrast, minorities listed more other-focused anxieties—fearing that the majority group member would judge him or her harshly or in a stereotypical manner. An alternative account of these findings is that majorities and minorities do not truly differ in the focus of their intergroup anxieties. Perhaps when they are forced to try to generate up to four anxieties, it is easier for majorities and minorities to invent anxieties that are self-focused or other-focused, respectively. Two points speak against this alternative. First, participants tended to leave 1.4 of the 4 stems (35%) blank, calling into question the assumption that people felt compelled to invent anxieties to complete the stems. Second, the analysis of participants' most pressing concern (thus, not any they invented to complete more stems) showed the same pattern of results. To more fully obviate this concern, participants in Study 2 indicated to what extent they possessed each of the anxieties that were most frequently listed by participants in Study 1.

Study 2

Study 2 extended Study 1 in three ways. First, we shifted from an American to a German sample. Although one strength of Study 1 was that participants included majorities and minorities from different groups, moving to a new cultural context permitted us to diversify our sample further. Second, instead of having participants list their anxieties like in Study 1, participants rated the extent to which they possessed each of sixteen anxieties—eight self-focused anxieties

and eight other-focused anxieties. These anxieties were those listed in Appendix—the self- and other-focused anxieties listed most frequently by participants in Study 1. If a similar pattern emerged, it would establish a certain uniformity to the types of anxieties that majorities and minorities possess, even in different cultural contexts. Third, we also included measures of intergroup contact and prejudice. This permitted our first test of whether anxiety, and in particular self- or other-focused anxiety, may affect contact outcomes for majority group members. Although our data permitted a test of both majorities and minorities, our hypotheses lead us to focus on predictors of majority contact, especially given that contact reduces prejudice particularly for majorities (e.g., Voci & Hewstone, 2003). We expected that majorities' self-focused (but not necessarily their other-focused) anxiety would predict disrupted contact, which would predict maintained prejudice.

Method

Participants. One hundred thirteen students at a German university completed the study in exchange for candy. Participants included ninety German nationals (majority group) and twenty-three international students (minority group). Participants completed all measures in a single sitting. In this and in subsequent studies, slight variations in degrees of freedom across analyses are explained by partial missing data from some participants.

Materials and procedure. As in Study 1, participants imagined going for coffee with a stranger. Participants who were German nationals imagined having coffee with a same-sex international student. Participants who were international students imagined having coffee with a same-sex German national.

Focus of anxiety. Instead of having participants write out their anxieties as in Study 1, participants indicated how much they anticipated experiencing a specific eight self-focused and eight other-focused anxieties in the interaction situation. The items were the eight most

frequently listed self-focused anxieties and the eight most frequently listed other-focused anxieties of those in the matching group. Thus, majority [minority] group members in Study 2 indicated whether they anticipated the anxieties most frequently listed by majority [minority] participants in Study 1. The specific items are listed in the Appendix.[2] Participants indicated whether they anticipated that the anxieties listed would apply to their own intergroup contact experience. Responses were made on seven-point scales anchored at -3 (*would not apply at all*) and +3 (*would apply very much*). To prevent negative scores, these responses were rescaled to a 1 to 7 scale for all analyses.

Contact. The items to assess the quantity of high-quality intergroup contact were taken mostly unchanged from previous research (e.g., Binder et al., 2009). Three items assessed the quantity of contact: "How many friends do you have among international [German] students?" (1 = *none*, 7 = *11 or more*), "How often do you spend time with your international friends?" (-3 = *seldom*, +3 = *often*), and "How much contact do you have in general with international students?" (-3 = *a few*, +3 = *a lot*). A single item assessed the quality of contact: "My international student [German] friends are close (versus distant) to me" (-3 = *distant*, +3 = *close*). After rescaling all responses to 1 to 7 point scales, we followed the guidelines of past research and multiplied the average of the three quantity items by the single quality item to get a single index of frequent, high-quality contact (Brown, Eller, Leeds, & Stace, 2007; Voci & Hewstone, 2003).

Intergroup Prejudice. Six items assessed intergroup prejudice. First, participants completed the widely used feeling thermometer (Campbell, 1971; Gómez et al., 2011; Haddock, Zanna, & Esses, 1993; Turner et al., 2008), indicating how warmly they felt toward the outgroup (0° = *extremely cold*, 50° = *neither cold nor warm*, 100° = *extremely warm*). Next, participants completed an adapted version of the General Evaluation Scale (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). Participants were asked to describe how they felt about the outgroup on

five bipolar, seven-point scales: *negative-positive*, *unpleasant-pleasant*, *hostile-friendly*, *contempt-respect*, and *suspicious-trusting*. We standardized the six items and averaged them to create a single measure of intergroup attitudes (α = .79), with higher scores reflecting greater prejudice.

Results

A correlation matrix showing the relationship between measured variables is provided in Table 1. We note that because both self- and other-focused anxiety are both forms of social discomfort that arise from the same source, intergroup exchange, it is not surprising that they are significantly correlated. Despite this degree of association, we expected these two measures of anxiety to show distinctive effects.

Focus of Anxiety. We first tested whether majorities' and minorities' focus of anxiety differed. For each participant, we summed ratings for the eight self-focused items and the eight other-focused items to create two indices: self-focused anxiety and other-focused anxiety. We submitted these scores to a 2(group status: majority or minority) X 2(focus of anxiety: self or other) mixed-model ANOVA. The predicted group status X focus of anxiety interaction emerged, $F(1, 108) = 5.15$, $p = .03$. As in Study 1, majorities were more self-focused ($M = 3.40$, $SE = 0.11$) than other-focused ($M = 2.83$, $SE = 0.10$), $t(88) = 7.86$, $p < .001$. Minorities were equally self-focused and other-focused (Ms = 3.73 and 3.55, SEs = 0.23 and 0.21), $t(20) = 1.10$, $p > .28$.

Contact. Based on prior findings that contact reduces prejudice for majorities more than it does for minorities (Binder et al., 2009; Feddes et al., 2009; Tropp & Pettigrew, 2005), we expected contact to be a more important predictor of prejudice for majorities than for minorities. We regressed prejudice on contact, group status (-1 = minority, +1 = majority), and the contact X group status interaction. Almost replicating past results, the interaction was marginally significant, ß = -.25, $t(104) = 1.78$, $p = .08$. But more important, simple-slopes analyses found

that there was a significant contact-prejudice link for majority group members, ß = -.34, $t(104) = 3.19$, $p = .002$, but not for minority group members, ß = .19, $t < 1$.

How do self- and other-focused anxiety impact contact? Given the importance of high-quality contact for reducing majority group member's prejudices (but not minorities' prejudices), we tested whether majorities' self-focused or other-focused anxiety served as an impediment to high-quality contact (and thus prejudice reduction). First, we regressed contact on self- and other-focused anxiety simultaneously. Self-focused anxiety was seen to disrupt high-quality contact, ß = -.44, $t(81) = 2.59$, $p = .01$, whereas other-focused anxiety actually (marginally) increased high-quality contact, ß = .31, $t(81) = 1.81$, $p = .07$. Second, we regressed intergroup prejudice on self-focused anxiety and other-focused anxiety simultaneously. Only self-focused anxiety was associated with greater prejudice, ß = .41, $t(86) = 2.56$, $p = .01$. Majorities' other-focused anxiety did not predict prejudice, ß = -.14, $t < 1$. These analyses indicated that contact could mediate the link between self-focused anxiety and prejudice. And indeed, when regressing prejudice on the two types of anxiety and contact, contact predicted less prejudice, ß = -.31, $t(80) = 2.96$, $p = .004$, whereas the influence of self-focused anxiety dropped to marginal significance, ß = .29, $t(80) = 1.75$, $p = .08$.[4]

Was it the case that majority's self-focused anxiety influenced prejudice by way of their contact? Following the guidelines of Preacher and Hayes's (2008) bootstrapping technique (10,000 resamples), the indirect effect of majority's self-focused anxiety through contact on prejudice was significant. That is, the 95% confidence interval of this indirect effect did not include 0, [-.029, -.002]. In combination, these analyses indicate that self-focused (but not other-focused) anxiety stands in the way of majorities' ability to have high-quality contact, thereby leading to maintained prejudice. Figure 1 depicts a path model that provides consistent results with those summarized here.[5]

Discussion

Study 2 both replicated and extended the results of Study 1. The intergroup anxieties of both Americans (Study 1) and Germans (Study 2) were parallel—both groups emphasized self-focused concerns that centered on one's own behavior. Minorities were more other-focused. Although minorities were significantly more other-focused than self-focused in Study 1, they endorsed both sets of items equally in Study 2. It is unclear whether this slight difference should be attributed to cultural or methodological difference between the two studies. Regardless, the relative difference in foci of majorities or minorities emerged in both studies.

Furthermore, the focus of anxiety distinction was important for predicting when anxiety undermined contact. Although self-focused and other-focused anxiety were highly correlated (reflecting a general tendency to endorse or not endorse anxiety items), self-focused anxiety was unique in showing a zero-order correlation with poor contact and unique in predicting poor contact when self-focused and other-focused anxieties were entered as simultaneous predictors.

Three points are noteworthy. First, because the two measures were not negatively correlated, we see empirically confirmed that the experience of self-focused and other-focused anxiety are not mutually exclusive experiences akin to Trawalter et al.'s (2009) conception of self and other attentional focus. Second, although participants do show some general tendency to be more willing or less willing to endorse anxiety items in general, it was necessary to consider the two types of anxiety separately in order to understand how anxiety disrupts contact. Third, given that our first two studies showed that majorities are especially self-focused in their anxiety, it follows that majorities' typical anxieties are especially detrimental with respect to frequent, high-quality contact. Based on the present findings, we focused on majorities' self-focused anxieties in Study 3, but also tried to understand why majorities' self-focused anxiety disrupted contact.

Study 3

The final two studies focused on majorities, in order to more clearly understand how their intergroup anxiety impacts contact situations. Study 3 builds on the earlier studies in three ways. First, we wanted to replicate the mediational pathway observed in Study 2 using an American sample. This would provide further evidence that majorities' self-focused anxiety leads to less-frequent and lower-quality contact, which in turn maintains prejudice.

Second, we wanted to better understand exactly why majorities' self-focused anxiety has this effect. Although minorities' type of anxiety was not seen to impact contact, we reasoned that majorities' perception of minorities' anxieties might. After all, a majority member's fear that s/he may not perform well in an intergroup contact situation may only fuel her/his fear that the minority may be anxious as well. That is, majorities may project their own anxiety onto their minority interaction partner. As we have argued, majorities' belief that their interaction partner is anxious about the majorities' behavior may be the proximal predictor of poor contact outcomes. Thus, in addition to measuring majorities' self-focused anxiety, we measured how much majorities assumed that minorities have self-focused and other-focused anxieties. This permitted us to test whether majorities' self-focused anxiety fuels a fear that minorities have other-focused anxieties, which then undermines contact.

Third, we wanted to establish that these effects of anxiety on intergroup contact operated independently of two recently-identified intergroup concerns that—similar to our findings—differ in importance to majorities and minorities. Bergsieker, Shelton, and Richeson (2010) found that majorities and minorities differ in their desire to be liked versus respected. Majorities are more concerned with being liked, and minorities are more concerned about whether they are respected. It seemed possible that majorities' self-focused anxiety reflected a concern that they behave in a likeable way, whereas minorities' other-focused anxiety might reflect a concern about whether their interaction partner respected them. Thus, we measured majorities' own desire

to be liked versus respected as well as their perceptions of minorities' desire to be liked versus respected. Because Bergsieker et al. (2010) did not test whether majorities (or minorities) had insight into the differences between their own and the outgroups' concerns, we were not certain whether majorities would correctly intuit that majorities and minorities differ in their concerns. But more important, this permitted us to test whether the focus of anxiety measures on which we rely are merely redundant with these already-identified concepts.

Method

Participants. One hundred ninety-eight White students at a private American university participated as part of a longer web-based experiment. The sample was taking part in a multi-wave longitudinal study on an unrelated topic.

Measures and procedure. Participants were asked to imagine that they were having coffee with a fellow student they did not already know. Their coffee partner was said to be Black and Latino.

Self-focused anxiety. Participants indicated to what extent they would have each of the eight self-focused anxieties used in Study 2 on seven-point scales (1 = *not at all*, 7 = *very much*).

Assumed Minority Anxiety. Participants were asked to imagine what anxieties their coffee partner would bring to the interaction. They then saw the sixteen items used in Study 2 to measure minorities' self- (α = .85) and other-focused anxiety (α = .90). Participants answered the items as they assumed their coffee partner would. Responses were expressed on 1 (*not at all*) to 7 (*very much*) scales.

Desire to be Liked versus Respected. Adapted from the materials of Bergsieker et al. (2010), participants were asked to what extent they would want that the other person view them in different ways. Four items related to liking (a good person, fair, open-minded, kind). Three items related to respect (intelligent, competent, capable). These responses were given on seven-

point scales (1 = *not at all*, 7 = *very much*). We averaged the scores to create a desire to be liked (α = .88) and a desire to be respected index (α = .88).

Assumed Desire to be Liked versus Respected. Participants completed the same items, but answered them as they thought their coffee partner would answer them. We created an assumed desire to be liked (α = .85) and an assumed desire to be respected (α = .86) index.

Contact. We used different contact items from those used in Study 2. Once again we used separate items to assess quantity and quality of intergroup contact. Four items assessed quantity of contact with "Blacks and Latinos." Participants indicated how much contact they had with Blacks and Latinos: at meetings or events, just chatting with them, overall in social situations, and among their circle of friends. Each response was made on a 5-point scale from 1 (*never / none at all*) to 5 (*a great deal* / *very often*). Six items assessed quality of contact with Blacks and Latinos. Participants indicated whether their contact situations are typically cooperative (versus competitive), intimate (versus superficial), extremely positive (versus extremely negative), very pleasant (versus very unpleasant), a contact situation between unequals (yes or no), and whether the contact situation is a meeting between individuals (versus between members of different groups). All items were made on seven-point scales. Again, a product score (quantity X quality) was used for the contact index.

Prejudice. Six, seven-point semantic differentials assessed prejudice toward "Blacks and Latinos." Participants were asked to indicate their "general feelings toward" and "characterizationsof" the groups: cold-warm, extremely negative-extremely positive, friendly-hostile, generous-selfish, honest-dishonest, insensitive-sensitive. Items were summed such that higher numbers indicate greater prejudice (α = .68).

Results

Table 2 presents a correlation matrix showing the relationships between measured variables.

Self-focused anxiety, contact, and prejudice. We first tested whether we could replicate the mediational pathway observed in Study 2. Once again, self-focused anxiety was associated negatively with contact, ß = -.23, $t(186) = -3.28$, $p = .001$, and positively with maintained prejudice, ß = .20, $t(182) = 2.79$, $p = .01$. In addition, we replicated the oft-observed link between frequent, high-quality contact and reduced prejudice, ß = -.35, $t(184) = 5.00$, $p < .001$. When regressing prejudice on self-focused anxiety and quality contact on prejudice, quality contact continued to predict prejudice, ß = -.33, $t(178) = -4.65$, $p < .001$, but self-focused anxiety did not, ß = .13, $t(178) = 1.88$, $p = .06$. As in Study 2, we used Preacher and Hayes's (2008) boostrapping procedure to test the mediation model. The 95% confidence interval for the indirect effect of majorities' self-focused anxiety on prejudice through contact did not include 0: [.013, .071]. In combination, this suggests that poor contact fully mediated the relationship of self-focused anxiety on maintained prejudice.

Why does self-focused anxiety corrupt contact? First, we tested whether majorities' self-focused anxiety leads them to expect anxiety in their interaction partners. We regressed each type of assumed anxiety on each of the majority members' own self-focused anxiety, all while controlling for the other type of assumed anxiety. In this way, we test not merely the extent to which self-focused anxiety is projected (leading majorities to expect more anxiety in their minority interaction partner). Instead, we test whether self-focused anxiety predicts assumed anxiety that is uniquely self-focused versus uniquely other-focused. And indeed, majorities' self-focused anxiety predicted assumed anxiety of each type. Those with higher self-focused anxiety expected their minority interaction partner to possess more self-focused anxiety, ß = .19, $t(173) = 3.50$, $p = .001$, and more other-focused anxiety, ß = .19, $t(173) = 3.38$, $p = .001$. [6]

Second, we assessed whether these expectations were associated with undermined contact. We regressed contact on assumed self-focused anxiety and assumed other-focused anxiety. The expectation that one's interaction partner would have other-focused anxiety predicted disrupted contact, ß = -.31, $t(175) = -2.65$, $p = .01$, whereas an expectation of self-focused anxiety had no effect, ß = -.06, $t < 1$.

Third, to determine whether assumed other-focused anxiety was the proximal predictor of disrupted contact, we regressed contact on self-focused anxiety, assumed self-focused anxiety, and assumed other-focused anxiety. Only assumed other-focused anxiety continued to predict poor contact, ß = -.34, $t(169) = -2.76$, $p = .01$.

Finally, we regressed prejudice on self-focused anxiety, assumed self- and assumed other-focused anxiety, and contact. Contact was the only predictor of prejudice, ß = -.30, $t(163) = 3.99$, $p < .001$, and all other predictors were non-significant. Figure 2 depicts a path model that presents consistent results and thus summarizes well the relationships discussed here. We once again used Preacher and Hayes's (2008) bootstrapping procedure to test the (now-longer) indirect effect of majority self-focused anxiety on prejudice through assumed minority other-focused anxiety and intergroup contact. The 95% confidence interval of this indirect effect did not include 0: [.007, .059]. Thus, majority group members with more self-focused anxiety worried that their interaction partners would have other-focused anxiety (i.e., anxiety about the majority group member's thoughts and behavior), which undermined contact, and then maintained prejudice.

Desire to be liked versus respected. Much like our anxiety (and assumed anxiety) measures, the desire to be liked and respected were highly correlated ($r = .67$ for majorities desire; $r = .67$ for assumed minority desires), though previous research has established their discriminant validity (Bergsieker et al., 2010). A 2(target: self or other) X 2(desire: liked or respected) mixed-model ANOVA revealed a target by desire interaction, $F(1, 197) = 40.21$, $p <$

.001. Although majority group members were equally concerned with being liked (M = 6.14, SE = 0.06) and respected (M = 6.08, SE = 0.06), $t(197) = 1.11$, $p > .26$, they expected their minority contact partners to be more concerned with being respected (M = 5.94, SE = 0.07) than liked (M = 5.57, SE = 0.06), $t(197) = 7.09$, $p < .001$. Thus, majority group members are aware of the different concerns that minorities bring with them to a contact situation.

The measures were almost entirely independent of our anxiety measures. The only significant correlation showed that the more participants assumed their interaction partners had a desire to be liked, the less they assumed their partners had other-focused anxiety, $r(186) = .16$, $p = .03$. Controlling for the assumed desire to be liked, assumed other-focused anxiety continued to predict low quality contact and shared unique variance with self-focused anxiety (ps < .01).

Discussion

Study 3 replicated the key elements of Study 2 with an American sample and extended the findings in several ways. In addition to replicating the finding that majorities' self-focused anxiety predicts less-frequent, lower-quality contact, a plausible mediator of this effect was identified. Majorities' self-focused anxiety predicted their tendency to believe that minorities have other-focused anxiety, which predicted poor contact. There was no similar pathway through assumed self-focused anxiety. Majorities' own self-focused anxiety is complementary to an assumption that a minority interaction partner has other-focused anxiety. Both anxieties are focused on the majority group members themselves. Majorities correctly intuited that minorities' anxieties are more other-focused, but such accurate perceptions were a recipe for low-quality, infrequent contact. Furthermore, majorities correctly recognized (based on the findings of Bergsieker et al., 2010) that minorities have a relative desire to be respected as opposed to liked. This in itself is a new finding suggesting that majorities have good insight into minorities' different desires. But crucially, majorities' own desires, and the desires they assumed that

minorities possessed, were independent of the contact anxieties that majorities themselves had or those they assumed minorities possessed.

Study 4

Although Studies 1 through 3 repeatedly establish a difference in the focus of majorities' and minorities' anxiety, show that majorities' self-focused anxiety disrupts contact, and demonstrate that greater assumed other-focused anxiety mediates this relation, a clear limitation remains. In these studies, participants reported on anxieties they tended to have or would have in a hypothetical interaction, and they rely on participants' self-reports of the quality and quantity of their contact. Furthermore, although the mediational model identified in Study 3 makes assumed other-focused anxiety a plausible cause of disrupted contact, an experimental approach could more conclusively establish this causal effect (Spencer, Zanna, & Fong, 2005). Study 4 attempts to fill these voids.

In Study 4, we actually placed White participants in a situation in which they expected to interact with an outgroup member, an African American student. We then assessed whether they engaged in behavior that would set the stage for lower-quality contact—the topics of conversation they chose for their interaction. Aron, Melinat, Aron, Vallone, and Bator (1997) developed two sets of questions—one that promotes the development of intimacy, one that is more impersonal. Intimacy-promoting questions involve self-disclosure, which can increase affinity between interaction partners (Collins & Miller, 1994), and can be particularly beneficial in promoting quality intergroup contact (Bettencourt, Brewer, Croak, & Miller, 1992; Ensari & Miller, 2002). Failures to self-disclose have been associated with poor performance during intergroup contact (Vorauer & Turipe, 2004). Given our previous findings that majorities' self-focused anxiety was associated with worse contact outcomes, we predicted that majorities low in self-focused anxiety would select the more adaptive, intimacy-promoting questions.

If majorities' self-focused anxiety ultimately disrupts contact because it leads majorities to enhance their assumption that minorities possess other-focused anxiety, then this implies that manipulated assumed other-focused anxiety should disrupt the quality of contact. To test this idea, some participants received a questionnaire that had supposedly been completed by their African American interaction partner. From this page, the participant learned that the minority participant's main concerns for the upcoming interaction were either almost entirely self-focused or other-focused. A third group of participants received no such feedback. All participants recorded an "introductory video" that was then supposedly shown to their interaction partner. Later, the video was coded for how warm and engaged the participant seemed. We predicted that majorities who assumed their interaction partner had mostly self-focused anxieties (and thus no other-focused anxiety) would send the warmest, most friendly introduction. In contrast, we expected that majorities who assumed their interaction partner would have mostly other-focused anxieties would record the least friendly video. These would experimentally confirm with a behavioral and expectation measure what Study 3 suggested correlationally with self-report: that assumed other-focused anxiety disrupts quality contact.

Method

Participants and Design. Forty-one Caucasian undergraduates at a public American university participated in exchange for extra credit in an introductory marketing class. Participants were randomly assigned to a *minority self-focused, minority other-focused,* or *control* condition.

Procedure. The night before participants' experimental session, they received an e-mail explaining to them that they would participate in a study in which they would get to know a student who was African American. Participants completed both the majority self-focus of

anxiety and the minority other-focus of anxiety measures. Participants indicated "how much [they] would bring each of the following concerns or anxieties to the interaction."

When participants arrived at the specified experimental room, they were reminded that they would be interacting with another student who was African American. The experimenter noted that they could not get started until the other participant arrived. As such, the experimenter had the participant complete two short, unrelated studies that, he said, were usually completed at the session's end. While the participant worked on the study, the experimenter left, supposedly to see if the other participant had arrived at a specified meeting point. The other (fictitious) participant supposedly arrived while the participant was completing the second short study.

At that point, the experimenter informed the participant that he or she would prepare to have an in-person interaction with a participant. To enhance the believability of the cover story, the experimenter explained that it was necessary to make certain that the two participants were not already friends. He asked male and female participants whether they already knew Darrius Brown or Jacinda Brown, respectively—two names that are stereotypically African American. All participants (as expected) indicated they were not already acquainted with Darrius or Jacinda.

Intimacy-building questions. The experimenter indicated that during the in-person interaction, the two participants would take turns asking each other questions. He then provided participants with a list of fourteen questions. Supposedly, the other participant had already received a different list of 14 questions. Participants were to read all 14 questions before circling the 7 questions they wanted to ask during the interaction. Unbeknownst to participants, seven of the questions had been randomly sampled from Aron, Melinat, Aron, Vallone, and Bator's (1997) closeness manipulation (e.g., "If you could change anything about the way you were raised, what would that be?"), with the other seven questions coming from their small-talk control condition (e.g., "What foreign country would you most like to visit, and what attracts you to this place?").

As Aron et al. (1997) showed, two strangers left an interaction significantly closer after discussing the closeness-generating questions compared to the small-talk control questions. To assess whether participants were preparing for the interaction in a way that would promote a high-quality, intimacy-building interaction, we counted how many of the 7 questions selected were from Aron et al.'s (1997) closeness-generating set.

Minority's Anxiety Manipulation. In the two experimental conditions, participants were told that they were assigned to a condition in which—unbeknownst to the minority participant—the real participant would be able to see one of the measures the minority participant had already completed. The experimenter handed an envelope to the participant, explaining that, "I will not look at the other participant's responses, so please remove their sheet from this envelope, read over the whole sheet, and then return it to the envelope."

What participants found was a page titled "Minority Participant In-Lab Material #1" that had actually been completed by the experimenter. The first section asked the minority participant to indicate his or her ethnicity. A box labeled "African American" was checked. To enhance the perceived realism, the participant had supposedly jotted a short margin note indicating one of the words in the instructions was misspelled.

In the next section, six possible anxieties were listed, and the minority participants were to circle which three anxieties they most had going into the interaction with the real participant. Three of the anxieties were items we had used before to assess self-focused minority anxiety. Three of the anxieties were items we had used before to assess other-focused minority anxiety. (The exact items used were those that were most highly correlated with the other items on their respective scales.) Depending on the condition (minority self-focused vs. minority other-focused), the minority participant had either circled the three self-focused anxieties or the three other-focused anxieties.

At the bottom of the page, a short blurb explained the difference between self-focused and other-focused anxiety: "Self-focused anxieties are worries we have about our own behaviors and thoughts during an interaction. Other-focused anxieties are worries we have about how other people will think about and behave toward us." The minority participant was to indicate on a 1 (entirely other-focused) to 10 (entirely self-focused) scale how they would characterize their own anxieties about the interaction. When the minority was supposedly self-focused, a 9 had been circled; when the minority was supposedly other-focused, a 2 had been circled.

For participants in the control condition, they received the same page, but it had not been completed by the experimenter. Instead, they were told that the other participant had already completed this page, and that they should try and guess how the other participant had responded to the questions.

Introduction Video. The experimenter then explained that before they met in person, the participants would each record a video in which they would introduce themselves to the other participant. The experimenter showed participants how to use a laptop computer's web-camera to record the video. The only instructions were to "say hello and a little about yourself, feel free to say as much as you want, but don't feel compelled to talk for more than a minute." He then left the room while the participant recorded himself or herself.

Results

Because the manipulation of the minority's focus of anxiety came partway through the dependent measures, we first tested for the impact of participants' own dispositional anxieties (self- and other-focused) on the measure taken before the manipulation (the selection of intimacy-building questions). Given Study 3 showed that majorities' expectations of the minority's focus of anxiety exerted the proximal impact on quality of interaction, we then assessed whether the

minority focus of anxiety manipulation impacted the measure that came after this manipulation (the introductory video):

Closeness-generating questions. We regressed the number of closeness-generating questions participants planned to ask on their degree of self-focused anxiety and other-focused anxiety. Majority participants who were more self-focused chose fewer closeness-generating questions, ß = -.60, $t(37) = 1.99$, $p = .05$, whereas other-focused anxiety did not impact this behavior, ß = .28, $t < 1$. The mean number of closeness-generating questions for those high and low in each type of anxiety is depicted in Figure 3. Although Studies 2 and 3 showed that self-reported quality of contact was undermined by self-focused anxiety, this provides a direct behavioral demonstration that self-focused anxiety leads to quality-deteriorating behaviors.

Minority Focus of Anxiety. For participants in the minority self-focused and minority other-focused conditions, perceptions of the minority's focus of anxiety were manipulated instead of measured. But for those in the control condition, they assumed the other participant would circle more other-focused ($M = 1.93$, $SD = 0.73$) than self-focused ($M = 1.07$, $SD = 0.73$) anxieties as their central concerns about the interaction, $t(13) = 2.20$, $p = .05$. Conceptually replicating a result found in Study 3, this merely shows that majorities intuit that minorities' primary anxieties are other-focused.

Introductory video. Three coders who were blind to condition and hypotheses watched the 41 videos. Each coder rated the video on how *engaged*, *agreeable*, *warm*, *fluent*, and *nervous* (reverse-scored) each participant was. Each rating was provided on a 1 to 9 scale. The three raters' average ratings converged, demonstrating reasonable inter-coder reliability (α= .72). The means by condition are listed in Table 3. Higher scores on the composite reflect a higher-quality, high engagement video.

To test for the impact of the minority anxiety manipulation, we constructed two orthogonal contrast codes. The first ordering allowed us to test the linear effect that would be consistent with the mediational results of Study 3: other-focused anxiety (-1), control (0), self-focused anxiety (+1). We included the orthogonal contrast that tested for whether feedback that the minority was experiencing anxiety (of any type) would produce similar effects on participants: other-focused anxiety (+1), control (-2), self-focused anxiety (+1). If, as Study 3 suggested, assumptions of the minority's focus of anxiety fully mediate the link between dispositional self-focused anxiety and quality of contact, we would not expect dispositional self-focused anxiety to predict the quality of the video introductions (given that the mediator was manipulated directly). In case the mediation is not full, we included self-focused anxiety as a covariate.

As expected, majority participants who thought their interaction partner was experiencing other-focused anxiety were less warm and engaged in their introductoryvideos than were majority participants who thought their partner was instead experiencing self-focused anxiety, ß = .31, $t(37) = 2.00$, $p = .05$. The second contrast was non-significant, ß = -.01, $t < 1$. The impact of dispositional self-focused anxiety was not significant, ß = .13, $t < 1$.

Discussion

Study 4 provided experimental and behavioral evidence that complemented the correlational and self-report data of the previous studies. Majorities with high self-focused anxiety (but not other-focused anxiety) prepared for an upcoming intergroup interaction in a way that would not be most conducive to building rapport and intimacy. This supports the findings in Studies 2 and 3 that majorities' self-focused anxiety predicts a disruption in the quality of intergroup contact. Study 3 suggested that this disruption takes place because majorities with self-focused anxiety assume that their minority interaction partners will have other-focused

anxiety. This belief was found to be the proximal predictor of disrupted contact. And indeed, when the assumed focus of one's minority interaction partner's anxiety was manipulated experimentally, the quality of contact was affected. Leading majorities to believe that the African American with whom they would interact was especially other-focused in his or her anxiety affected the quality of their contact.

General Discussion

Previous research has examined the role of intergroup anxiety in intergroup interaction (Pettigrew & Tropp, 2008; Plant & Devine, 2003; Stephan & Stephan, 1985). The present research expands on these findings by moving beyond a focus on how much generalized anxiety is present to instead examine the focus of that anxiety. Differentiating self-focused from other-focused anxiety was shown to be important for capturing the different anxiety experiences of majorities and minorities, for identifying what type of anxiety hinders contact experience, and for understanding the mechanism that underlies this quality-disrupting effect.

The present studies provide support for the four hypotheses we sought to test. Even though majorities and minorities generated just as many anxieties about intergroup contact (Study 1), the focus of those anxieties differed (Studies 1 and 2). Majorities' anxieties focused on themselves (self-focused), whereas minorities' anxieties were relatively more focused on their majority interaction partners (other-focused). This difference of focus emerged in the anxieties that participants spontaneously generated (Study 1) and in participants' ratings of how much they experienced different self- and other-focused anxieties (Study 2). The pattern held in both an American (Study 1) and a German (Study 2) sample that examined majorities and minorities from a variety of groups (e.g., racial, ethnic, national, sexual, religious).

The distinction between self and other focused anxiety not only helped to capture descriptive differences between majorities' and minorities' concerns, but was able to predict

consequential contact outcomes (Studies 2-4). Majorities' self-focused anxiety predicted high-quality, frequent contact, which in turn predicted reduced prejudice (Studies 2 and 3). Majorities' self-focused anxiety led to poor outcomes because majorities' concerns about their own contact behavior (self-focused anxiety) fueled a concern that their minority interaction partner would also be anxious about the majority group member's behavior (assumed other-focused anxiety), which in turn hurt contact and maintained prejudice (Study 3). The effects of self- and other-focused anxiety could not be explained by concerns (or concerns assumed to exist in one's interaction partner) about being liked versus respected, two worries recently identified as important in intergroup contact (Bergsieker et al., 2010).

Study 4 moved beyond self-reported contact measures and placed participants in a contact situation that required White participants to plan for and send an audiovisual message to a minority interaction partner. Majorities with high self-focused anxiety (but not other-focused anxiety) planned to steer the conversation toward topics that were less likely to build intimacy, showing one route by which high self-focused anxiety may undermine contact. Furthermore, experimentally manipulating participants' beliefs about the anxieties of their interaction partner provided causal (and behavioral) support for the relationship observed in Study 3. Majority participants led to believe their minority interaction partner had other-focused anxieties sent a message to their partner that was less warm and more disengaged.

In combination, Studies 2 through 4 show how majorities' self-focused anxiety can be toxic for positive contact: Majorities' self-focused anxiety fueled a concern that one's interaction partner is also anxious about the majorities' behavior, which leads to behaviors that set the stage for suboptimal contact. When these anxieties are diminished, majority group members showed more of an approach orientation to intergroup contact—pursuing conversational routes that were likely to promote intimacy, coming across as warm and friendly, and entering an interaction with

optimism. Such approach-oriented behaviors have been identified as key precursors for positive intergroup contact (Plant, Devine, & Peruche, 2010).

Quantity vs. quality of contact

When we measured how majorities' anxiety, and majorities' assumptions about minorities' anxiety influenced contact, we used a composite that combined both quality and quantity of contact. But past research that has measured both quality and quantity of contact has at times found an asymmetry in the extent to which quality or quantity is the important element of contact. For example, Binder et al. (2009) found that the effects of quality of contact were more powerful than the effects of quantity—an asymmetry consistent with a number of other studies (Gómez et al., 2011; Greenland & Brown, 1999; Stephan, Diaz-Loving, & Duran, 2000). Other studies have shown that both quality and quantity are important (Brown et al., 1999; Harwood, Hewstone, Palini, & Voci, 2005). Of course, this past research has examined consequences of contact, whereas we are primarily concerned with contact as a dependent variable. And given that anxiety can lead to avoidance of intergroup interaction (Pancer, McMullen, Kabatoff, Johnson, & Pond, 1979), it was possible that quantity would be the most important component of contact.

We returned to Studies 2 and 3 to reanalyze our data for quality and quantity of contact separately. Recall that in both Studies 2 and 3, we found that contact mediated the link between majorities' self-focused anxiety and prejudice. Recall also that in Study 3, we also found that assumed minority other-focused anxiety mediated the link between majorities' self-focused anxiety and contact. We re-conducted these analyses using quality and quantity of contact separately.

The analyses were all directionally equivalent using both quantity and quality of contact. In both studies, both quality and quantity of contact significantly predicted prejudice reduction, consistent with past research that has shown both are important for consequences of contact. In

Study 2, majorities' self-focused anxiety predicted quantity, but not quality of contact. But in Study 3, both majorities' self-focused anxiety and assumed minority other-focused anxiety predicted quality, but not quantity of contact. We think this difference is probably attributable to a change in measurement between Studies 2 and 3. Although there was precedent for each measure, the contact measure in Study 2 essentially presupposed high-quality contact—asking about amount of time spent with outgroup *friends*. Thus, we suspect that majorities' self-focused anxiety may disrupt contact more by interfering with the quality of that contact. This is supported by our findings in Study 4, which were clearly measures of quality of contact.

Relation to similar research

Why things go awry. By our account, understanding not just majority group members' level of anxiety but the focus of that anxiety is important in understanding when contact suffers, and why this occurs. Majorities' concerns about their own behavior (majority self-focused anxiety) feed a concern that the minority will be especially worried about the thoughts and behavior of the majority (assumed minority other-focused anxiety), which serves as the proximal disrupter of contact. Although this sequence has neither been specifically proposed nor tested in past research, there are connections between the present research and previous findings that both support the legitimacy of our proposal and help refine current understandings of why contact goes awry. We note three below:

First, our research identified an exception to the general rule that perspective taking is good for intergroup interaction (Galinsky & Moskowitz, 2000; Paese, & Yonker, 2001; cf. Epley, Caruso, & Bazerman, 2006). That is, majorities with a better understanding of minorities and their other-focused anxiety actually had worse contact outcomes. In this way, our findings parallel Vorauer and Sasaki (2009), who found that empathy for an outgroup member can be bad if it prompts one to consider that the outgroup member may hold negative stereotypes about one's

group (see also Vorauer & Kumhyr, 2001). Future research should find how best to achieve a balance between caring about one's outgroup interaction partner without instigating contact-debilitating anxieties about the outgroup member's worries. The solution may be rooted in our distinction between other-focused anxiety versus assumed anxieties of the other. Other-focused anxiety can reflect caring and concern about the other person and their feeling of comfort in a situation, but such concern is distinct from how much one assumes one's partner is anxious. In our studies, only an assumption that one's minority interaction partner was anxious (and in particular, other-focused in that anxiety) was associated with poor contact.

Second, our research stressed that majorities' anxieties can influence what anxieties they observe in their minority interaction partner. West, Shelton, and Trail (2009)—in a longitudinal study of interethnic college roommates—showed that one college roommate's anxiety on one day was predictive of his roommate's anxiety the next day. This anxiety transfer was also accompanied by a lack of interest in living together (i.e., a desire for less contact). Whether our own finding that majorities' self-focused anxiety predicts assumed other-focused anxiety reflects a real or merely a perceived transfer of anxiety is a question for future research. But what our data do show is that it is the mere perception of anxiety in one's interaction partner that is sufficient to hurt contact. In Study 4, merely being led to believe that a minority interaction partner had other-focused anxieties pushed majorities to approach intergroup contact in a less engaged manner.

Third, our research suggests a way that self-focused anxiety can undermine subsequent contact (which then has negative implications for prejudice maintenance), which complements evidence that a self-focus can disrupt the link that connects contact to prejudice (Vorauer, 2008). That is, for people to generalize from a positive contact experience with an outgroup member to positive feelings toward the outgroup more generally, people must not be too self-focused in their

interpretation of the interaction. Such self-focus could lead people to conclude that the positive intergroup interaction spoke more to their own interpersonal competencies than to the worthiness of their outgroup interaction partner (or the outgroup more generally).[7]

Why things go well. The key lesson from our findings is that majorities' self-focused anxiety is bad for contact, so contact can be improved by reducing it. But research from Stathi and Crisp (2008) would seem to suggest that self-focus is good for prejudice reduction. They reasoned that the salience of the self may prompt people to project one's self-views (which tend to be especially positive) onto members of outgroups (Ames, 2004; Clement & Krueger, 2002). Two differences between Stathi and Crisp's (2008) research and the present research likely explain the divergence. First, Stathi and Crisp (2008) did not examine consequences on real, in-person contact, but on *imagined* contact that was described as interesting and positive. Thus, there was no actual contact to be disrupted. Instead, participants were simply to rely on the experimenters' descriptions of the contact as "interesting" and "positive." Second, it is important to differentiate self-focus more generally from our more narrow consideration: self-focused anxiety. Stathi and Crisp (2008) manipulated self-focus by having participants rate themselves before (as opposed to after) rating the outgroup. This self-salience is clearly different from a self-focus of anxiety.

Also, our perspective may be useful in considering a recent proposal for improving intergroup contact. Murphy, Richeson, and Molden (2009) proposed that majorities' adoption of learning goals (vs. performance goals) may assist them in contact situations. Learning goals lead majorities to concentrate on learning about their interaction partner. In contrast, performance goals stem from a concern about appearing prejudiced. Whites with learning goals showed signs of greater engagement during a contact situation. If self-focused anxiety leads majorities to adopt

performance goals, then adoption of a learning goal may be one route to reducing self-focused anxiety.

Implications for improving intergroup contact

One interpretation of our results is that we have pushed the causal question of how to reduce prejudice two steps backward. If majorities have positive contact when they don't think that their minority interaction partners are anxious about the majority's behavior (i.e., low assumed minority other-focused anxiety), which stems from majorities' lack of a worry about the same thing (i.e., low majority self-focused anxiety), then what determines how much self-focused anxiety majorities bring to a contact situation? Stephan and Stephan (1985) conceived of intergroup anxiety as stemming from prior experience, intergroup cognitions, and situational factors—which then give rise to behavioral, cognitive, and affective consequences. From this perspective, they emphasized that prior positive contact should reduce anxiety. This highlights the potential for a positive or a destructive anxiety-contact cycle. When contact goes well, anxiety may be reduced, which then sets the stage for more positive continued contact. If anxiety leads contact to go poorly, further disruptive contact may pile on. Thus, what can be done to reduce anxiety, particularly majorities' self-focused anxiety?

One possibility is for people to exploit the benefits that come from extended contact—knowledge that ingroup members have outgroup members as friends (Wright et al., 1997). Extended contact has been shown to improve attitudes toward refugees (Cameron, Rutland, Brown, & Douch, 2006) and other stigmatized groups (Cameron & Rutland, 2006). Three previous findings suggest it may be particularly beneficial in disrupting the anxiety-contact link we observed. First, Turner et al. (2008) showed that extended intergroup contact reduced prejudice by reducing intergroup anxiety. Because the contact was extended, anxiety did not have a chance to disrupt it, but the anxiety-reducing benefits of positive contact that Stephan and

Stephan (1985) predicted were still realized. Second, Mazziotta, Mummendey, and Wright (2011) found that observing successful intergroup interactions increased observers' sense that they had the ability to realize positive intergroup contact. If improving one's sense of self-efficacy reduces self-focused anxieties, this again suggests that extended contact may help instigate the positive-contact pathway we identified. Third, Gómez et al. (2011) found that extended contact changes perceptions of outgroup norms, leading people to see outgroups as more interested and more comfortable in an interaction. This suggests that extended contact reduces the assumed other-focused anxiety of one's interaction partner, which is the proximal disrupter of contact. Future research should test whether positive extended contact can reduce majorities' self-focused anxieties, their beliefs about minorities' other-focused anxiety, and thereby pave the way for better direct contact and lower prejudice.

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FOOTNOTES

1. It was specified gender or sex was not a minority identity.

2. Three bilingual speakers translated the items from English to German.

3. We wanted to see if some self-focused items tended to correlate more with the other-focused items, and vice versa. That is, just because the anxieties split conceptually into self-focused and other-focused items, perhaps empirically the division would be less clean. If so, retaining all items in our scales—although a particularly conservative data analytic strategy—might hinder our ability to examine the subscales' discriminant validiy. Aggregating across all data we have collected, we conducted a confirmatory factor analysis, which showed that our division showed acceptable fit. That is: Majority scales: $\chi^2(87, N = 449) = 379.26$, $p < .001$; RMSEA = .085; sRMR = .021; CFI = .97; Minority scales: $\chi^2(93, N = 379) = 303.17$, $p < .001$; RMSEA = .075; sRMR = .039; CFI = .95. The analyses we report in the text are on these complete scales, defined purely by whether each anxiety was self-focused or other-focused. Fit was improved by removing the seven items asterisked in Table 1—these items correlated as strongly (and in some samples more strongly)—with the opposite subscale. In this case, Majority scales: $\chi^2(56, N = 451) = 222.24$, $p < .001$; RMSEA = .080; sRMR = .017; CFI = .98; Minority scales: $\chi^2(51, N = 383) = 109.56$, $p < .001$; RMSEA = .054; sRMR = .028; CFI = .98.We reran all analyses in all of our studies using subscales that excluded these items. All analyses reported in Studies 2 and 3 remained statistically significant (and typically strengthened) with the reduced scales. Although Study 4 included an experimental manipulation, the measure that preceded this manipulation continued to significantly correlate with both the full and reduced scale.

4. Although our primary motivation was to assess the determinants of quality contact for majorities (given contact does not impact prejudice for minorities), we conducted an exploratory analysis to see if minorities' anxieties predicted frequent, high-quality contact. Neither self-

focused anxiety, ß = -.31, not other-focused anxiety predicted contact, ß = -.24, *t*s< 1, though this test may have been underpowered. Though note from Table 1 that the zero-order correlation between self-focused anxiety and poor contact is significant, though there is no carry-through effect to prejudice. We conducted a follow-up study with a non-Caucasian, American sample (n = 100). They completed measures of self-focused anxiety, other-focused anxiety, and contact. With this better-powered sample, it was found that minorities' self-focused anxiety, ß = -.42, $t(97) = 3.21$, $p = .002$, but not other-focused anxiety, ß = -.07, *t*< 1, predicted worse contact. Neither influenced prejudice, *t*s < 1. In short, self-focused anxiety may hurt contact for both majorities and minorities, but the consequences for prejudice (consistent with past work) are unique to majorities.

5. Note that the coefficients in this path model (and the path model in Study 3) do not perfectly match the coefficients from the individual regressions reported in the main text on account of the slightly different (though convergent) analytic strategy.

6. Although not central to the mediation analyses, majority group members assumed that a minority would be more other-focused in her anxiety ($M = 2.87$, $SE = 0.03$) than self-focused ($M = 2.78$, $SE = 0.03$), paired $t(181) = 2.04$, $p = .04$.

7. To assess empirically whether our self- and other-focused anxiety measure connect with the lessons from Vourauer (2008), we reanalyzed the data in Studies 2 and 3 to see if majorities' link between contact and prejudice was moderated by participants' self-focus of anxiety. That is, although we demonstrated that majorities higher in self-focused anxiety had disrupted contact, did self-focused anxiety also disrupt the link between contact and prejudice? In Study 2, we did observe a self-focused anxiety X contact interaction, ß = .40, $t(78) = 2.03$, $p = .05$, but not an other-focused anxiety X contact interaction, ß = -.24, $t(78) = 1.30$, $p > .19$. In Study 2, simple slopes analyses showed that majorities who were one standard deviation above the mean in self-

focused anxiety did not show a significant relationship between contact and prejudice, ß = -.14, $t < 1$. In contrast, majorities who were one standard deviation below the mean in self-focused anxiety showed a strong relationship between contact and prejudice, ß = -.54, $t(78) = 3.37$, $p = .001$. In Study 3, the same interaction was observed in trend only, ß = -.11, $t(175) = 1.51$, $p > .13$. This interaction may have been weaker because we did not measure (and thus could not control for) majorities' other-focused anxiety. Although assessing moderators of the contact-preduce link was not the focus of our efforts, these findings nicely converge with Vorauer's (2008) reasoning and suggest that future research may profit from using the focus of anxiety not only for predicting the frequent, high-quality contact (that on which our studies have focused), but also what moderates the contact—prejudice link.

Table 1

Study 2: Correlations between self-focused anxiety, other-focused anxiety, contact, and prejudice for majorities and minorities

	Self-focused anxiety	Other-focused anxiety	Contact	Prejudice
Self-focused anxiety	XXX	.71***	-.51*	.09
Other-focused anxiety	.71***	XXX	-.41	.19
Contact	-.25*	.00	XXX	.14
Prejudice	.34***	.21*	-.38***	XXX

Note. Correlations to the left of the diagonal are for majorities (German nationals). Correlations to the right of the diagnoal are for minorities (International students). *p< .05, ***p< .001

Table 2

Study 3: Correlations between self-focused anxiety, other-focused anxiety, contact, and prejudice for majorities and minorities

	SFA	A-SFA	A-OFA	Contact	Prejudice	D-Liked	D-Respect	A-D-Liked
SFA	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
A-SFA	.61***	XXX	XXX	XXX	XXX	XXX	XXX	XXX
A-OFA	.61***	.74***	XXX	XXX	XXX	XXX	XXX	XXX
Contact	-.19**	-.22**	-.32***	XXX	XXX	XXX	XXX	XXX
Prejudice	.20**	.27***	.30***	-.29***	XXX	XXX	XXX	XXX
D-Liked	.04	-02	-.10	.18*	-.25***	XXX	XXX	XXX
D-Respect	-.10	-.04	-.12	.10	-.24***	.67***	XXX	XXX
A-D-Liked	.00	.02	-.15*	.18*	-.17*	.57***	.44***	XXX
A-D-Respect	.03	.10	.01	.09	-.11	.53***	.49***	.67***

Note. *p< .05, **p< .01, ***p< .001. SFA = Majority Self-focused Anxiety, A-SFA = Assumed minority self-focused anxiety, A-OFA: Assumed minority other-focused anxiety; D-Liked: Majoities' Desire to be liked; D-Respect: Majorities' Desire to be respected; A-D-Liked: Assumed minority diesre to be liked; A-D-Liked: Assumed minority desire to be respected

Table 3

Study 4:Coders' Evaluation of the Introductory Video

	Minority's Focus of Anxiety Condition		
	Other-Focused	No information (Control)	Self-Focused
Introductory Video (Composite)	5.25 (0.75)$_a$	5.58 (1.11)$_{ab}$	5.93 (0.57)$_b$
Engaged	5.33 (1.30)	5.50 (1.26)	5.80 (0.77)
Agreeable	5.77 (1.18)	6.14 (1.40)	6.49 (0.68)
Warm	5.37 (1.22)	5.60 (1.78)	6.06 (0.77)
Verbally Fluent	5.30 (1.00)	5.60 (1.06)	5.92 (0.80)
Nervous	5.50 (0.97)	4.95 (1.14)	4.75 (0.94)

Note. Means in the row that do not share the same letter subscripts differ at the $p < .05$ level.

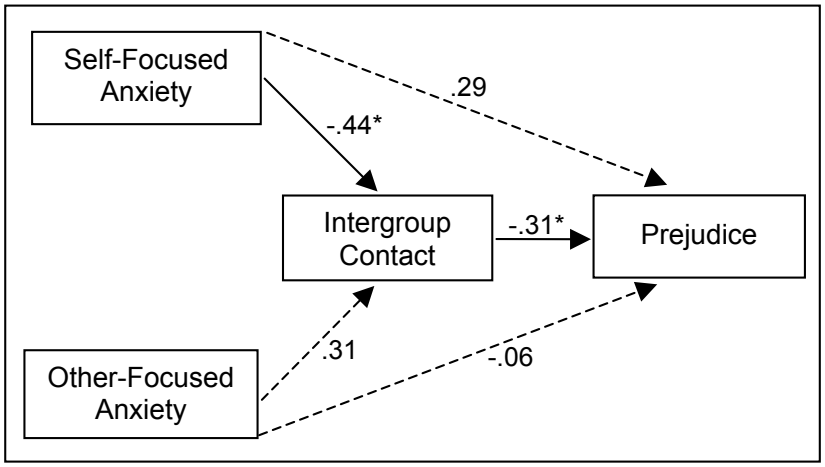

Figure 1. Path model of the relation between the different anxiety foci and prejudice in Study 2, showing mediation viaintergroup contact. *Note*. (*) $p < .05$. Coefficients are standardized regression weights.

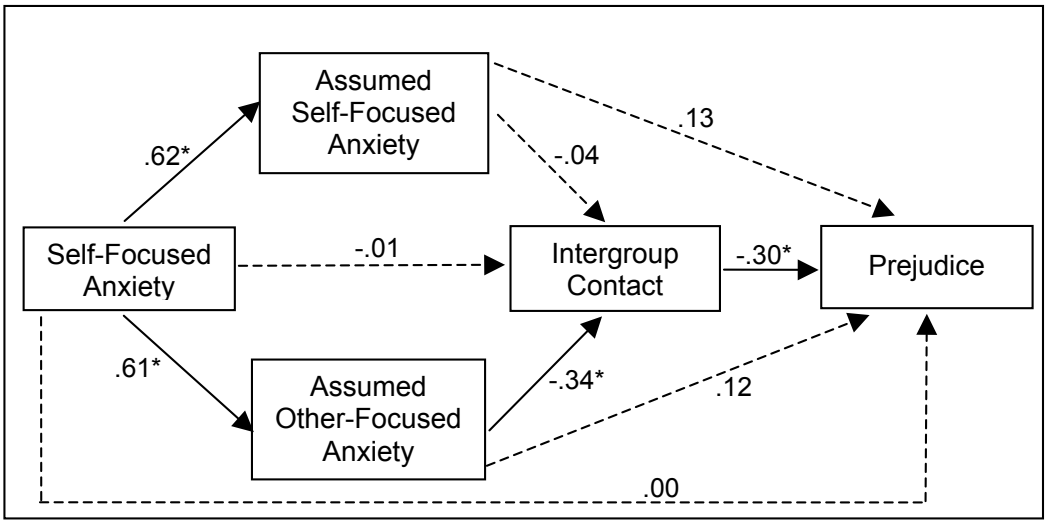

Figure 2. Path model of the relation between self-focused anxiety and prejudice in Study 3, showing sequential mediation via assumed other-focused anxiety and intergroup contact. *Note*. (*) $p < .05$. Coefficients are standardized regression weights.

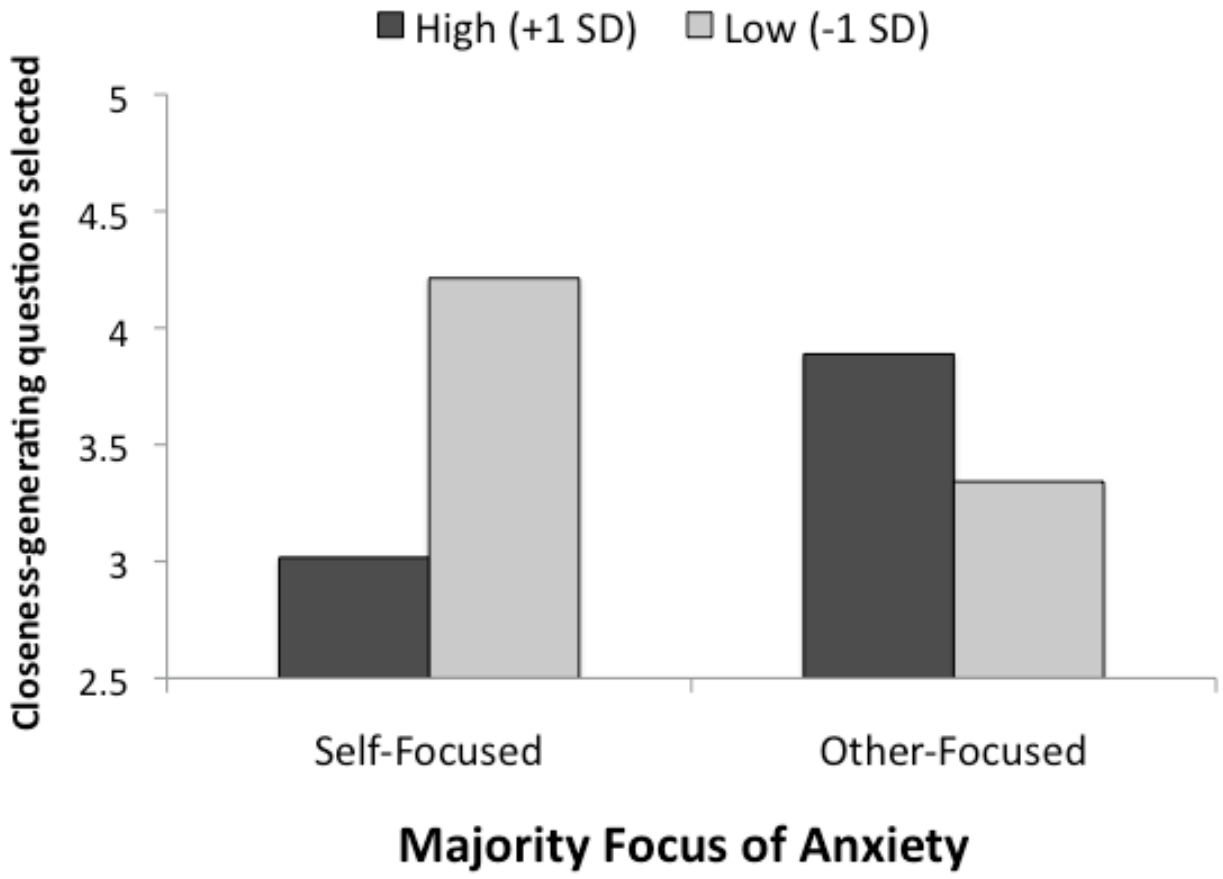

Figure 3. Of the 7 questions selected for the interaction in Study 4, the number that were closeness-generating questions, as a function of majorities' self-focused and other-focused anxiety. The plotted values are those predicted at one standard deviation above (high) and below (low) the sample mean.

APPENDIX

Majority—Self Focus (Study 2: α = .71)
1. I would be concerned that what I said or did might offend them.
2. I would be concerned that I could say something that might be misconstrued as condescending.
3. I would be anxious about doing something to make them uncomfortable.
4. I would be worried that I would not talk to them in a normal manner, that I might be an imperfect communicator.
5. I would be nervous that I could not effectively steer the conversation.
6. I would be nervous that I would not have much to say given we might not have much in common.
*7. I would be worried that I might come across as prejudiced.
8. I would be anxious about my coming across as uninformed or unknowledgeable.

Majority—Other Focus (Study 2: α = .85)
1. I would be worried that they would resent me for my majority status.
2. I would be concerned that they would judge me as naïve.
*3. I would be anxious that they would be offended by something I said.
*4. I would be nervous about their perceptions of me.
5. I would be anxious about whether they like me or get the wrong impression of me.
6. I would be nervous that the person would be judging me, seeing me as rude.
7. I would be concerned the other person would get upset by the situation.
8. I would be worried that they would reverse discriminate or aggress against me.

Minority—Self Focus (Study 2: α = .82; Study 3: α = .92)
*1. I would be anxious that I might have to discuss or justify my own identity.
2. I would be nervous that I would not be able to fill an awkward silence.
3. I would be nervous about my coming across well, making a good impression.
4. I would be nervous that I would be out of place, not able to be my true self.
5. I would be concerned that I would stumble over my words and say something stupid.
6. I would be nervous that I would not have much in common with the person, making it hard for me to find common ground with him.
7. I would be anxious about my saying the right thing to make the other person feel comfortable.
*8. I would be concerned about my coming across as trying to act like the majority group.

Minority—Other Focus (Study 2: α = .82)
1. I would worry that they might judge me negatively based on stereotypes instead of paying attention to individuating information about me.
*2. I would be nervous about what they are thinking of me, if they are judging me.
3. I would be concerned about whether they are treating me the same as they would treat majority group members.
4. I would be anxious that they would say something inappropriate, insulting, offensive, or condescending.
*5. I would be concerned that they would not like me.
6. I would be anxious that they would not respect me or take me seriously.
7. I would be worried that they would bring to the interaction a lot of preconceived notions or stereotypes.

8. I would be worried that they would just focus on any ways in which I confirm my group's stereotype.