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Why Women Apologize More Than Men: Gender Differences in Thresholds for Perceiving Offensive Behavior

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Abstract

Despite wide acceptance of the stereotype that women apologize more readily than men, there is little systematic evidence to support this stereotype or its supposed bases (e.g., men's fragile egos). We designed two studies to examine whether gender differences in apology behavior exist and, if so, why. In Study 1, participants reported in daily diaries all offenses they committed or experienced and whether an apology had been offered. Women reported offering more apologies than men, but they also reported committing more offenses. There was no gender difference in the proportion of offenses that prompted apologies. This finding suggests that men apologize less frequently than women because they have a higher threshold for what constitutes offensive behavior. In Study 2, we tested this threshold hypothesis by asking participants to evaluate both imaginary and recalled offenses. As predicted, men rated the offenses as less severe than women did. These different ratings of severity predicted both judgments of whether an apology was deserved and actual apology behavior.

Keywords

apology, gender differences, interpersonal relationships, interpersonal communication

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> In the American context, there is ample evidence that women are more inclined to offer expressions of contrition than men. (Tannen, 1999, p. 67)

According to various academic and popular writers, women apologize readily for their transgressions, whereas men do not. Some commentators suggest that women are too apologetic, but most presume that men are insufficiently contrite (Engel, 2001; Lazare, 2004; Tannen, 1996, 2001). These commentators offer a set of related explanations for the gender difference, the basic tenet being that men associate apologies with weakness. For example, Engel (2001) argued that men refuse to apologize because they have difficulty admitting they are wrong. She suggested that for men, admitting wrongdoing is like "losing a power struggle," and apologizing therefore hurts men's "delicate egos" (p. 49). Adopting a different argument, Tannen (1996) reasoned that women readily apologize because they are more concerned than men are with showing courtesy to other people. Whatever the interpretation, the bottom line is exemplified by the title of comedian Jim Belushi's (2006) book on manhood: *Real Men Don't Apologize*.

Despite widespread acceptance of the idea that there exists a gender difference in apology behavior, there is no compelling evidence of such a difference. Authors often support their claims with amusing anecdotes rather than with systematic research. For example, Lazare (2004) reported that when he asked his audiences who apologizes more, the women waved their hands eagerly and shouted out "Women!" while the men remained silent (p. 28). Tannen (2001) recounted a story of a little boy who disliked Yom Kippur—the Jewish Day of Atonement—because "you have to say you're sorry" (p. 95). The boy's mother reported being shocked that her son was so much like his father. Although intriguing, these anecdotes fail to provide evidence of systematic gender differences in apology behavior or the mechanisms (e.g., fragile egos) that supposedly underlie these gender differences.

Several commentators (e.g., Lazare, 2004; Tannen, 2001) have referenced a study by Holmes (1989) as the primary empirical evidence for gender differences in apology behavior. Holmes asked research assistants to record apologies they witnessed. Women offered 75% of the 183 reported apologies. It

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is difficult to draw strong conclusions from Holmes's findings, however. Interactions among women may have been oversampled, as most of the research assistants were women. In addition, the research assistants ignored any offenses that did not prompt an apology. Consequently, there are at least two alternative explanations for why women offered more apologies. First, perhaps women offered more apologies because they committed more offenses. Second, men might have a higher threshold for what constitutes an offense. If men regard fewer behaviors as objectionable, they would less frequently feel the need to apologize. Information concerning the base rate of offenses is therefore crucial for understanding whether men are less willing to apologize for objectionable behavior or whether they are committing or perceiving fewer offenses than women do.

Why should psychologists care whether men apologize less frequently than women do? One answer is that apologies matter—they reduce anger and aggression and promote forgiveness and relationship well-being (Darby & Schlenker, 1982; McCullough, Worthington, & Rachal, 1997; Ohbuchi, Kameda, & Agarie, 1989). Although apologies are not all-powerful, their general effectiveness suggests that gender differences in apology behavior could have significant implications for interpersonal interactions. In light of these implications, as well as the almost blind faith in the presumed gender difference and its theoretical interpretations, we conducted the current studies to examine whether gender differences in everyday apology behavior occur and, if so, why.

In Study 1, we assessed gender differences in both the frequency and the content of everyday apologies. A comprehensive apology contains as many as eight distinguishable elements: remorse, acceptance of responsibility, admission of wrongdoing, acknowledgment of harm, promise to behave better, request for forgiveness, offer of repair, and explanation (Bavelas, 2004; Lazare, 2004). More comprehensive apologies tend to be more effective at improving evaluations of the transgressor and promoting forgiveness (Scher & Darley, 1997; Schmitt, Gollwitzer, Forster, & Montada, 2004). Although apologies for very severe harms typically contain most of these eight elements (Schumann & Ross, 2010), we expected apologies for everyday offenses to be much less comprehensive. Nevertheless, one might anticipate that if men are less willing to apologize, they might offer more perfunctory apologies than women. Indeed, various social commentators have suggested that male apologies tend to be insultingly "half-hearted" (e.g., Cribb, 2010, para. 6).

In Study 1, participants completed daily diaries. Male and female diarists reported offenses that they committed (transgressor perspective) and experienced (victim perspective). We included both perspectives to provide a preliminary test of several explanations for gender differences in apology behavior. If men apologize less often because they are unwilling to admit wrongdoing (Engel, 2001), then male transgressors should report committing fewer offenses than female transgressors do. A reluctance to admit wrongdoing would not readily explain a gender difference in the frequency of offenses reported by victims, however. An alternative explanation—that men have a higher threshold for what constitutes an offense—would suggest that males would report fewer offenses than females from both the transgressor and the victim perspectives. In their daily diaries, participants reported both offenses that were and offenses that were not accompanied by apologies. Using this method, we could examine whether, relative to men, women reported (a) apologizing more often, (b) apologizing for a greater proportion of offenses, and (c) offering more comprehensive apologies.

Study 1

Method

Participants. Thirty-three female and 33 male students recruited from the University of Waterloo psychology department's participant pool received $3.00 for their first diary entry and $2.00 for each subsequent entry. Participants' ages ranged from 18 to 44 (M = 20.67 years, SD = 3.76).

Procedure. Participants were asked to complete two sections of an online questionnaire every evening for 12 consecutive nights. For the transgressor section, participants described up to three instances that day in which "you apologized to someone or did something to someone else that might have deserved an apology (regardless of whether or not you apologized)." For the victim section, participants described up to three instances that day in which "someone else apologized to you or did something to you that might have deserved an apology (regardless of whether or not he or she apologized)." The order of the transgressor and victim sections was counterbalanced across participants. If participants could not recall an event for the first section, they proceeded to the second section. If they were unable to remember an event for the second section, they terminated the session.

For each event, participants reported what occurred, who was involved (including gender information), and whether they had apologized or received an apology. Participants reported the exact wording of the apologies to the best of their abilities. Two independent coders (one male and one female) who were blind to participants' gender coded the apologies for the presence of each of the eight apology elements (κ = .92). Discrepancies between coders were resolved through discussion. We summed the number of elements in each apology to represent its comprehensiveness.

Finally, two independent coders categorized the offenses into four types, adapted from the offense types described by Holmes (1989): (a) relational (e.g., insulting someone), (b) failed obligation (e.g., failing to complete chores), (c) inconvenience (e.g., calling a wrong number), and (d) physical or material (e.g., bumping into someone, damaging someone's belongings). Interobserver reliability was high (κ = .94).

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Results

Participants completed the diary questionnaire an average of 9.46 of the 12 possible days ($SD = 2.80$). All participants were included in the analyses reported here; the results did not change when we excluded those who completed the fewest entries. Men ($M = 9.78$, $SD = 2.29$) and women ($M = 9.14$, $SD = 2.65$) completed a similar number of entries, $t(64) = 1.08$, $p = .28$. Participants reported an average of 1.39 offenses ($SD = 0.87$) each day, for a total of 869 offenses. Participants reported more daily offenses from the transgressor perspective ($M = 0.74$, $SD = 0.49$) than from the victim perspective ($M = 0.65$, $SD = 0.49$), $t(66) = 2.04$, $p = .05$. Women and men did not differ in the proportion of offenses they reported as transgressors versus victims, $t < 1$.

Most offenses occurred between friends (46.94%), with the following contexts occurring in decreasing frequency: strangers (20.71%), romantic partners (9.43%), colleagues (7.92%), acquaintances (7.87%), and family members (7.13%). Men and women did not differ in the proportion of offenses they reported in the various relationship categories (χ^2s < 1), except for offenses occurring between romantic partners. Women reported more offenses occurring between them and a romantic partner (13.21%) than men reported (4.24%), $\chi^2(1, N = 66) = 18.14$, $p < .001$. Participants did not differ in the number of offenses they reported from the transgressor and victim perspectives within each relationship type (χ^2s < 1).

The types of offenses reported, in order of frequency, were failed obligations (28.77%), inconveniences (28.12%), relational offenses (23.31%), and physical or material offenses (19.80%). The proportion of each offense type reported did not differ as a function of gender or perspective, χ^2s < 1.

Transgressor perspective. Women reported offering more apologies (217) than men did (158), $\chi^2(1, N = 66) = 9.28$, $p = .002$. Women also reported committing more offenses (267) than men did (196), $\chi^2(1, N = 66) = 10.89$, $p = .001$. Linear mixed modeling (LMM) analyses (which we used because events were nested within and unbalanced across participants) revealed that men ($M = .81$, $SD = .39$) and women ($M = .81$, $SD = .37$) did not differ in the proportion of offenses for which they apologized, parameter estimate = .01 ($SE = .04$), $t(461) = 0.18$, $p = .86$. Transgressor's gender did not significantly interact with the gender of the victim to affect the number of apologies reported or the proportion of offenses for which participants apologized.

LMM analyses indicated that men and women also did not differ in how they apologized. Men and women were equally likely to include each of the elements in their apologies, all ps > .20. In addition, men ($M = 2.01$, $SD = 1.15$) and women ($M = 1.97$, $SD = 0.97$) offered similarly comprehensive apologies, parameter estimate = .06 ($SE = .11$), $t(373) = 0.49$, $p = .62$. No interactions with victim's gender emerged.

Victim perspective. Women reported receiving more apologies (142) than men reported receiving (111), $\chi^2(1, N = 66) = 3.80$, $p = .05$. Women also reported being the victims of more offenses (242) than men did (164), $\chi^2(1, N = 66) = 10.89$, $p = .001$. LMM analyses revealed that men ($M = .68$, $SD = .47$) received apologies for a marginally significant greater proportion of offenses than women did ($M = .59$, $SD = .49$), parameter estimate = –.09 ($SE = .05$), $t(404) = -1.84$, $p = .07$. No interactions with transgressor's gender emerged.

Discussion

This diary study provided support for the claim that women apologize more frequently than men do in everyday life. Compared with males, female transgressors reported offering more apologies across the 12 days of data collection. After taking into account that women reported committing more offenses than men did, however, we found that the gender difference in frequency of apologies disappeared. Female and male transgressors apologized for an equal proportion of their offenses (approximately 81%). Moreover, there was no gender difference in how men and women apologized. It appears that once men and women categorized a behavior as offensive, they were equally likely to apologize for it, and their apologies were similarly effusive.

It is possible that male transgressors reported committing fewer offenses because they were more reluctant than women to admit wrongdoing. Men could perhaps rationalize their unwillingness to apologize by perceiving fewer offenses. This explanation would not explain the gender difference in the frequency of offenses reported from the victim perspective, however. The results for victims exactly paralleled those for transgressors, with males reporting substantially fewer offenses than females.

The diary findings both raise doubts about the validity of the claim that men actively resist apologizing and help explain the source of this claim. In their everyday lives, people witness women apologizing more than men and presumably attribute this discrepancy to gender differences in willingness to apologize. In doing so, they perhaps fail to consider the proportion of apologies to perceived offenses, information that is essential in understanding the bases of frequency differences. A tendency to ignore the base rates of perceived offenses when estimating the frequency of apologies is consistent with people's general tendency to neglect base rates when forming probability judgments (Kahneman & Tversky, 1973). Also, the popular tendency to ascribe men's lower rates of apologizing to their unwillingness to apologize might stem, in part, from a propensity to prefer dispositional explanations (e.g., fragile egos) over situational ones (e.g., evaluations of the severity of the offense; Ross, 1977).

The diary data suggest that women offer more apologies than men do because women have a lower threshold for what constitutes offensive behavior. If so, gender differences in the perceived severity of offenses may lead men and women to have different views about whether or not an apology is warranted. As both transgressors and victims, women are more likely than men to judge offenses as meriting an apology.

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We conducted a second study to test more directly the hypothesis that gender differences in thresholds for what constitutes offensive behavior account for gender differences in frequency of apologizing. First, we asked men and women to imagine committing various offenses. To optimize our control over possible confounding variables, we manipulated the gender of the victim in the imagined events to be either the same as or opposite the gender of the participant, and we asked all participants to imagine that they had committed these offenses against a friend. We selected friends as the relational partners because participants in Study 1 reported more offenses involving friends than involving people from other relationship types. We conducted mediation analyses to assess whether the relation of gender to judgments of apology deservedness was mediated by differences in perceived severity of the offense.

Second, we tested the threshold hypothesis using transgressions that participants reported committing. Participants recalled a recent episode in which they had harmed a friend. We examined whether the effect of gender on participants' likelihood of offering an apology was mediated by differences in the perceived severity of the offenses.

Study 2

Method

Participants. Sixty-three female and 57 male undergraduates (ages 17–27 years, M = 19.62, SD = 1.98) participated in exchange for course credit.

Materials and procedure. Participants imagined that they were in three conflict scenarios with a friend. Half imagined a friend of the same gender as themselves, and half imagined a friend of the opposite gender. In one scenario, participants imagined that they were 2 days late sending their section of a joint class assignment to their friend. Because of the delay, their friend had to postpone studying for a midterm. In a second scenario, participants imagined snapping at their friend after returning home grumpy from school. In a third scenario, participants imagined accidentally waking their friend at 3:00 a.m. Because of the disturbance, the friend attended a job interview the next morning after only a few hours of sleep. The order of the three scenarios was counterbalanced across participants.

For each scenario, participants indicated on 7-point scales how severe their offense was (from 1, *not at all severe*, to 7, *extremely severe*), the extent to which they believed their friend deserved an apology (from 1, *not at all*, to 7, *very much*), and how likely they would be to apologize to their friend (from 1, *not at all likely*, to 7, *extremely likely*). Ratings of how much an apology was deserved and the likelihood of apologizing were highly correlated and were therefore combined to create an index of judgments of apology deservedness (α = .87).

After responding to the scenarios, participants were asked to recall an occasion in the past 3 months when they had offended a friend of either the same or opposite gender. The gender of the friend was the same as the gender of the victim to which they had been randomly assigned in the hypothetical scenarios. Participants indicated on 7-point scales how severe their offense was and how much their friend had deserved an apology from them. Participants also indicated whether they had apologized to their friend for that particular offense.

Results and discussion

Imagined offenses. No effects of the order of the scenarios emerged; all analyses reported were collapsed across this variable. To examine whether effects were consistent across scenarios, we conducted preliminary analyses predicting judgments of offense severity and apology deservedness, with participant's gender, victim's gender, and scenario as factors. No interactions with scenario type emerged, all ps > .22. Therefore, judgments of severity and apology deservedness were each averaged across the three scenarios in the analyses reported. In addition, there were no effects of victim's gender, all ps > .65. We therefore collapsed across this variable in all analyses.

Women judged the offenses to be more severe (M = 5.10, SD = 0.63) than men did (M = 4.75, SD = 1.02), $t(118) = 2.29$, p = .02. Relative to men (M = 6.23, SD = 0.81), women also indicated that the friend was more deserving of an apology (M = 6.58, SD = 0.44), $t(118) = 2.90$, p = .005.

Our main goal in Study 2 was to determine whether gender differences in perceptions of apology deservedness were mediated by judgments of offense severity. We used a bias-corrected bootstrap mediation model to assess indirect effects (Preacher & Hayes, 2004). In our analyses, we used a conventional number (5,000) of bootstrap resamples with a 95% confidence interval (CI). As predicted, perceived offense severity mediated the effect of transgressor's gender on judgments of apology deservedness, 95% CI = .02–.19, p = .02 (see Fig. 1).

Recalled offense. Women (M = 3.69, SD = 1.59) evaluated their offenses as more severe than men did (M = 2.92, SD = 1.85), $t(118) = 2.44$, p = .02. Relative to men (M = 4.74, SD = 1.90), women also indicated that the victim deserved an apology marginally more (M = 5.41, SD = 1.82), $t(112) = 1.93$, p = .06. There were no effects of victim's gender (all ps > .14). Women reported apologizing for more of their offenses than men did (79% vs. 74%, respectively), but this gender difference was not significant, $t < 1$. Because both men and women recalled a time when they had harmed a friend (and thus should have reported only behavior they considered offensive), the influence of transgressor gender on whether an apology was given is likely to be subtle and require high power to detect.

Recent discussions of mediation (Hayes, 2009; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Shrout & Bolger, 2002) have supported testing for indirect effects through intervening variables in the absence of a relation between the predictor and predicted variable when the power to detect this

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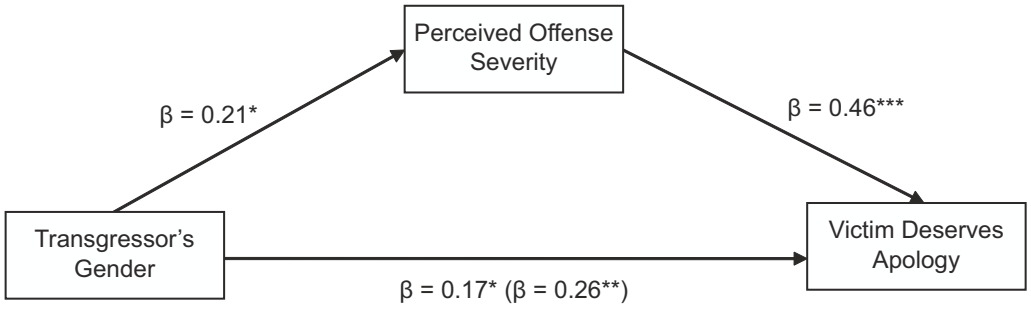

Fig. 1. Results for imagined offenses in Study 2: mediation of the effect of transgressor's gender on judgments of apology deservedness. Males were coded as 0, and females as 1. The parenthetical number indicates the beta value before including the mediator in the model. Asterisks indicate the significance of the coefficients (*$p < .05$, **$p < .01$, ***$p < .001$).

relation may be inadequate. Thus, we conducted bootstrap analyses to examine whether participants' gender indirectly influenced whether they offered an apology by affecting their judgments of offense severity and apology deservedness. As in the case of the imagined scenarios, the effect of transgressor's gender on judgments of apology deservedness was mediated by offense severity, 95% CI = .00–.12, $p = .05$ (see Fig. 2). We then included in the model whether or not participants apologized to their friend. The indirect effect of transgressor's gender on whether an apology was given was significant, 95% CI = .01–.18, $p = .02$.

Discussion

In Study 2, women perceived three imagined offenses and their own recalled offenses as more severe than men did, and perceived severity predicted judgments of apology deservedness. In the recall data, judgments of apology deservedness further predicted whether or not participants reported apologizing for their offense.

General Discussion

Using daily diaries and imagined offenses, we found support for the common stereotype that women apologize more frequently than men do. However, contrary to common interpretations of this gender difference, we found that men were no less willing than women were to apologize for their behavior once they categorized it as offensive. Rather, our data suggest that men apologize less frequently than women do because they have higher thresholds for what constitutes offensive behavior. In addition to perceiving fewer offenses than women did as both transgressors and victims in Study 1, men rated identical hypothetical offenses and their own past transgressions as less severe than women did in Study 2.

One alternative explanation for our findings is that men rationalize an unwillingness to apologize by minimizing their perception of the severity and frequency of their transgressions. The victim data from Study 1 cast doubt on this rationalization account. From the victim perspective, males, who presumably had little motivation to rationalize offenses committed against them, reported significantly fewer transgressions than females did. Also, when judging the severity of offenses in the first scenario they imagined in Study 2, participants were unaware that questions regarding apologies were forthcoming. Nonetheless, men rated these offenses as less severe than women did, $t(118) = 1.87$, $p = .06$. Finally, participants' accounts of their apologies in their daily diaries failed to indicate that men were more reluctant to apologize. Contrary to popular speculations (e.g., Cribb, 2010), men's apologies were as detailed as those offered by women. We presume that transgressors sometimes rationalize withholding an apology by downplaying the severity of their offenses. The present studies provide no evidence, however, that male transgressors

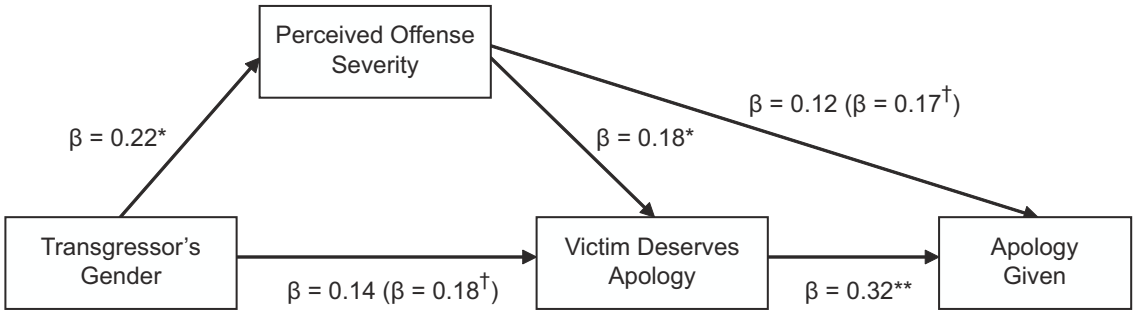

Fig. 2. Results for recalled offenses in Study 2: mediation of the effect of transgressor's gender on judgments of apology deservedness and whether an apology was given. Males were coded as 0, and females as 1. The parenthetical numbers indicate the beta values before including the mediator in the model. Asterisks indicate the significance of the coefficients (†$p < .10$, *$p < .05$, **$p < .01$).

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are more likely than female transgressors to engage in such rationalizations.

There is little previous research on gender differences in perceptions of the severity of transgressions. In a study that examined teasing within couples, women reported more negative emotions in response to being teased than men reported. This finding suggests that women might be more sensitive to being offended, even if the offense is delivered in a humorous or loving manner (Keltner, Young, Heerey, Oemig, & Monarch, 1998). In the present research, women also judged offenses as more severe when they were the transgressors than men did. Thus, women are not simply more sensitive to being harmed.

What is the psychological basis of gender differences in perceptions of the severity and frequency of offenses? One possibility is that women might perceive more offenses because they are more focused on the experiences of other people and on maintaining harmony in their relationships (Gilligan, 1994; J.B. Miller, 1984). Consistent with this idea, previous research has demonstrated that, relative to men, women report more guilt after committing transgressions (Bybee, 1998; Lutwak & Ferrari, 1996), greater empathy for victims (Eisenberg & Lennon, 1983), and more willingness to forgive their transgressors (A.J. Miller, Worthington, & McDaniel, 2008).

A second possibility is that men have a higher threshold for both physical and social pain. MacDonald and Leary (2005) argued that physical and social pain share common physiological mechanisms. Conceivably, if men are more resilient to physical pain, they might also have a higher threshold for social forms of pain. A substantial body of research has demonstrated that men report experiencing less intense and less frequent physical pain than women report experiencing (e.g., Unruh, 1996), as well as being less emotional than women (Barrett, Robin, Pietromonaco, & Eyssell, 1998). Further, a meta-analytic review of sex differences in coping behavior revealed that women rated stressors as more severe than men in the majority of studies that assessed stressor appraisals (Tamres, Janicki, & Helgeson, 2002). None of the reviewed studies reported that women rated stressors as less severe than men did.

Whatever the basis of the gender differences in judgments of the severity or even the existence of offenses, these discrepant perceptions might have unfortunate consequences for mixed-gender interactions. For example, if women perceive offenses that their male romantic partners do not notice, women might interpret an absence of an apology as evidence that their partners are indifferent to their well-being. Similarly, men may regard their female partners as overly sensitive and emotional. Unlike previous interpretations that emphasized a gender difference in willingness to apologize, however, our interpretation does not imply that one gender is at fault for potential disagreements about whether an apology should be offered. Rather, we suggest that men and women unwittingly disagree at an earlier stage in the process: identifying whether or not a transgression has even occurred.

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The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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References

Barrett, L.F., Robin, L., Pietromonaco, P.R., & Eyssell, K.M. (1998). Are women the "more emotional" sex? Evidence from emotional experiences in social context. *Cognition & Emotion*, *12*, 555–578.

Bavelas, J.B. (2004). *An analysis of formal apologies by Canadian churches to First Nations* (Occasional Paper No. 1). (Available from the Centre for Studies in Religion and Society, University of Victoria, Box 1700 Stn CSC, Victoria, BC, Canada V8W 2Y2)

Belushi, J. (2006). *Real men don't apologize*. New York, NY: Hyperion.

Bybee, J. (1998). The emergence of gender differences in guilt during adolescence. In J. Bybee (Ed.), *Guilt and children* (pp. 113–125). San Diego, CA: Academic Press.

Cribb, R. (2010). *When 'sorry' is harder than the hardest word*. Retrieved March 18, 2010, from http://www.thestar.com/living/article/780853--when-sorry-is-harder-than-the-hardest-word

Darby, B.W., & Schlenker, B.R. (1982). Children's reactions to apologies. *Journal of Personality and Social Psychology*, *43*, 742–753.

Eisenberg, N., & Lennon, R. (1983). Sex differences in empathy and related capacities. *Psychological Bulletin*, *94*, 100–131.

Engel, B. (2001). *The power of apology*. New York, NY: Wiley.

Gilligan, C. (1994). *In a different voice: Women's conceptions of self and of morality*. New York, NY: Garland.

Hayes, A.F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, *76*, 408–420.

Holmes, J. (1989). Sex differences and apologies: One aspect of communicative competence. *Applied Linguistics*, *10*, 194–213.

Kahneman, D., & Tversky, A. (1973). On the psychology of prediction. *Psychological Review*, *80*, 237–251.

Keltner, D., Young, R.C., Heerey, E.A., Oemig, C., & Monarch, N.D. (1998). Teasing in hierarchical and intimate relations. *Journal of Personality and Social Psychology*, *75*, 1231–1247.

Lazare, A. (2004). *On apology*. New York, NY: Oxford University Press.

Lutwak, N., & Ferrari, J.R. (1996). Moral affect and cognitive processes: Differentiating shame from guilt among men and women. *Personality and Individual Differences*, *21*, 891–896.

MacDonald, G., & Leary, M.R. (2005). Why does social exclusion hurt? The relationship between social and physical pain. *Psychological Bulletin*, *131*, 202–223.

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MacKinnon, D.P., Lockwood, C.M., Hoffman, J.M., West, S.G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, *7*, 83–104.

McCullough, M.E., Worthington, E.L., Jr., & Rachal, K.C. (1997). Interpersonal forgiving in close relationships. *Journal of Personality and Social Psychology*, *73*, 321–336.

Miller, A.J., Worthington, E.L., Jr., & McDaniel, M.A. (2008). Gender and forgiveness: A meta-analytic review and research agenda. *Journal of Social & Clinical Psychology*, *27*, 843–876.

Miller, J.B. (1984). *The development of women's sense of self* (Working Paper No. 12). Wellesley, MA: Stone Center for Developmental Services and Studies.

Ohbuchi, K., Kameda, M., & Agarie, N. (1989). Apology as aggression control: Its role in mediating appraisal of and response to harm. *Journal of Personality and Social Psychology*, *56*, 219–227.

Preacher, K.J., & Hayes, A.F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, *36*, 717–731.

Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10, pp. 173–220). New York, NY: Academic Press.

Scher, S.J., & Darley, J.M. (1997). How effective are the things people say to apologize? Effects of the realization of the apology speech act. *Journal of Psycholinguistic Research*, *26*, 127–140.

Schmitt, M., Gollwitzer, M., Forster, N., & Montada, L. (2004). Effects of objective and subjective account components on forgiving. *Journal of Social Psychology*, *144*, 465–485.

Schumann, K., & Ross, M. (2010). The antecedents, nature and effectiveness of political apologies for historical injustices. In D.R. Bobocel, A.C. Kay, M.P. Zanna, & J.M. Olson (Eds.), *The Ontario Symposium: Vol. 11. The psychology of justice and legitimacy* (pp. 299–324). New York, NY: Psychology Press.

Shrout, P.E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, *7*, 422–445.

Tamres, L.K., Janicki, D., & Helgeson, V.S. (2002). Sex differences in coping behavior: A meta-analytic review and an examination of relative coping. *Personality and Social Psychology Review*, *6*, 2–30.

Tannen, D. (1996). *I'm sorry, I won't apologize*. Retrieved January 13, 2010, from https://www9.georgetown.edu/faculty/tannend/nyt072196.htm

Tannen, D. (1999, April/May). Contrite makes right. *Civilization*, *6*, 67–70.

Tannen, D. (2001). *You just don't understand: Women and men in conversation*. New York, NY: William Morrow.

Unruh, A.M. (1996). Gender differences in clinical pain experience. *Pain*, *65*, 123–167.

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