

When and Why Women Apologize More than Men

by

Karina Schumann

A thesis

presented to the University of Waterloo

in fulfillment of the

thesis requirement for the degree of

Doctor of Philosophy

in

Psychology

Waterloo, Ontario, Canada, 2011

© Karina Schumann 2011

Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

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. In the present research, I explored whether gender differences in apology behaviour occur and, if so, why they occur. In Study 1, I used daily diaries to assess everyday apologies and found that women indeed apologized more frequently than men did. I found no difference in the proportion of offenses for which men and women apologized, however, suggesting that women may apologize more often than men do because they have a lower threshold for what constitutes offensive behaviour. In Studies 2 and 5, I replicated a gender difference in apology behaviour using hypothetical offenses and obtained evidence that this difference is mediated by different judgments of offense severity. In Study 3, I adapted a signal detection paradigm and demonstrated that women exhibit a more liberal response bias in the direction of remembering an apology. In Study 4, I found that women and men similarly associate apologies with positive outcomes, and that only women endorse the stereotype that women apologize more often than men do. Finally, in Study 6, I conducted a daily diary study with romantic couples and found that, as in Study 1, women and men apologized for a similar proportion of the offenses they reported. Together, these studies suggest that a gender difference in apology frequency is caused by different judgments of severity rather than by a difference in willingness to apologize.

Acknowledgements

I gratefully acknowledge the generous financial support from the Social Sciences and Humanities Research Council of Canada, the University of Waterloo, the Department of Psychology, and my supervisors. My experience in graduate school was immensely enriched by the guidance of the faculty in Social Psychology. I feel deeply privileged to have been a part of such an incredible learning community, where both excellence and collaboration are cultivated through hard work, camaraderie, and a true love for the science. It has been my great honour to work with Dr. Michael Ross over the past five years. His integrity, wisdom, and generosity exceed all expectations. He has been an extraordinary mentor to me, and I feel exceptionally fortunate to have been taught the ropes by such a remarkable researcher (who happens to be an even better man). I also thank Drs. Mark Zanna and John Holmes for their valuable contributions to this dissertation and their support and advice throughout my graduate career.

My time at Waterloo would not have been the same without my wonderful colleagues. I thank them for all the help, delicious potlucks, and random adventures throughout the years. I send a special thank you to my dear friend and workout partner, Mandy, for helping me stay strong in body and spirit. I also send my love and gratitude to my two other Guelph musketeers, Elizabeth and Jen. I am so lucky to have such brilliant, supportive, and beautiful friends.

I am eternally grateful to my family for raising me in an environment of unconditional love and encouragement. Because of them, I have never once felt alone or disheartened. I thank them for teaching me to stay balanced, and for standing by me throughout my entire journey. Finally, I dedicate this dissertation to my husband, Omid, who inspires me to dream bigger and treat life as an adventure. He is my best friend and the best man I know. I thank him for his endless support and faith in me, and for filling my life with everything I could ever hope for.

Table of Contents

| | |
|-------------------------------------------------------------------------------------|------|
| List of Figures | vii |
| List of Tables | viii |
| Introduction..... | 1 |
| The Stereotype | 1 |
| Past Research on Gender Differences in Apology Behaviour | 2 |
| The Importance of Apologies | 4 |
| Overview of the Present Studies | 5 |
| Study 1: Gender Differences in Apology Behaviour for Everyday Offenses..... | 7 |
| Method | 8 |
| Results..... | 9 |
| Discussion | 15 |
| Study 2: Gender Differences in Thresholds for Offensive Behaviour..... | 18 |
| Method | 18 |
| Results..... | 19 |
| Discussion | 22 |
| Study 3: Gender Differences in Memories for Apologies | 26 |
| Method | 27 |
| Results..... | 29 |
| Discussion | 31 |
| Study 4: Gender Differences in Beliefs Regarding Apology Behaviour..... | 34 |
| Method | 34 |
| Results..... | 35 |
| Discussion | 37 |
| Study 5: Replicating Gender Differences in Thresholds for Offensive Behaviour | 38 |
| Method | 38 |
| Results..... | 39 |
| Discussion | 40 |
| Study 6: Apology Behaviour in Romantic Relationships..... | 41 |
| Method | 43 |
| Results..... | 46 |
| Discussion | 53 |
| General Discussion | 58 |
| Potential Psychological Bases of Differential Thresholds..... | 59 |
| Other Gender Differences in Thresholds | 62 |
| Potential Alternative Explanation | 63 |

| | |
|------------------------------------------------------------|----|
| Limitations | 64 |
| Future Research | 65 |
| Implications..... | 67 |
| References..... | 69 |
| Appendices..... | 80 |
| Appendix A: Imagined Scenarios (Study 2) | 80 |
| Appendix B: Vignettes (Studies 3 and 4) | 81 |
| Appendix C: Individual Difference Measures (Study 6) | 85 |
| Appendix D: Full Daily Diary Questionnaire (Study 6)..... | 88 |
| Appendix E: Matched Sample of Offenses (Study 6)..... | 93 |

List of Figures

Figure 1. Number of apologies reported as a function of gender and perspective in Study 113

Figure 2. Number of offenses reported as a function of gender and perspective in Study 113

Figure 3. Proportion of offenses with apology as a function of gender and perspective in Study 114

Figure 4. Apology comprehensiveness as a function of gender and perspective in Study 1.. ...15

Figure 5. Mediation of the effect of participant gender on judgments of apology deservingness for imagined offenses in Study 2.....20

Figure 6. Mediation of the effect of participant gender on judgments of apology deservingness and presence of an apology for recalled offenses in Study 222

Figure 7. Endorsement of “women apologize more than men” and “men apologize more than women” as a function of participant gender in Study 4.....36

Figure 8. Mediation of the effect of participant gender on judgments of apology deservingness in Study 5.....39

Figure 9. Number of apologies reported as a function of gender and perspective in Study 648

Figure 10. Number of offenses reported as a function of gender and perspective in Study 649

Figure 11. Proportion of offenses with apology as a function of gender and perspective in Study 650

Figure 12. Apology comprehensiveness as a function of gender and perspective in Study 651

Figure 13. Forgiveness as a function of apology presence and relationship quality in Study 652

List of Tables

Table 1a. Transgressor-reported offenses as a function of gender and relationship type in Study 110

Table 1b. Victim-reported offenses as a function of gender and relationship type in Study 110

Table 2a. Transgressor-reported offenses as a function of gender and offense type in Study 111

Table 2b. Victim-reported offenses as a function of gender and offense type in Study 111

Table 3. Proportion of apologies including apology elements as a function of gender and perspective in Study 114

Table 4. Correlations between dependent variables in Study 3 for male and female participants31

Table 5a. Transgressor-reported offenses as a function of gender and offense type in Study 647

Table 5b. Victim-reported offenses as a function of gender and offense type in Study 647

Table 6. Proportion of apologies including apology elements as a function of gender and perspective in Study 651

Table 7. Perspective differences as a function of gender in Study 6 (Appendix E)94

Introduction

“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; Holmes, 1989; Lazare, 2004; Tannen, 1996; 2001). These commentators offer a set of related explanations for the gender difference, the basic tenet being that men are unwilling to apologize because they associate apologies with weakness. For example, Engel (2001) argued that men refuse to apologize because they have difficulty admitting they are wrong. Equating admitting wrongdoing with “losing a power struggle,” Engel suggested that apologizing hurts men’s “delicate egos” (p. 49). Tannen similarly reasoned that “men are attuned to the symbolic power of an apology to advertise defeat” (1999, p. 68), and further argued that women readily apologize because they are more concerned than men are with showing courtesy to others (1999). 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*.

The Stereotype

Conventional wisdom says that women apologize more than men do. This stereotype is consistent with literatures suggesting gender differences in various other relationship promoting emotions and behaviours, such as feelings of guilt after committing transgressions (Bybee, 1998; Lutwak & Ferrari, 1996), the experience of empathy for victims (Eisenberg & Lennon, 1983), willingness to forgive transgressors (Miller, Worthington Jr., & McDaniel, 2008), the decoding of non-verbal cues (Hall, 1978), and the use of compliments and linguistic politeness (Holmes,

1995; Lakoff, 1975). Apologies themselves are often considered acts of politeness, as they theoretically help both the apologizer and the apology recipient save face following an injustice (Brown & Levinson, 1978; Goffman, 1971; Holmes, 1995). It is thus not surprising that women, who are stereotypically considered to be more polite and relationally concerned than men, are also commonly believed to be more apologetic.

Beyond assuming that women apologize more readily than men do, multiple scholars put forth speculations regarding the origins of this alleged gender difference. Tannen (1996) argued that, whereas women embrace apologizing because apologies reinforce connections, men actively avoid apologizing because apologies symbolize defeat: “Like a wolf baring its neck or a dog rolling over on its back, an apologizer is taking a one-down position. And the socialization of boys teaches them to avoid that posture, as it could be exploited by an opponent in the future” (Tannen, 1999, p. 68). Engel (2001) offered a similar explanation, and further suggested that women are more willing than men are to take responsibility for their part in a dispute. According to Engel, “men need to take responsibility for working past their resistance to apologies and for being able to put their pride aside for the sake of the relationship” (p. 187). Although both Tannen and Engel also admitted that women may sometimes over-apologize, their explanations more strongly emphasize men’s *unwillingness* to apologize. This interpretation not only suggests that men intentionally withhold valued apologies when they have done something wrong, but that the onus should be on men to change their apology behaviour.

Past Research on Gender Differences in Apology Behaviour

Despite widespread acceptance of the stereotype that women apologize more than men do, there is little compelling evidence of a gender difference in apology behaviour. Authors often support their claims with amusing anecdotes rather than systematic research. For example,

Lazare (2004) observed that women far outnumber men on his lectures on apology. When he asked his audiences who apologizes more, the women waved their hands eagerly and shouted out “Women!” whereas the men remained silent (p. 28). Tannen (2001) recounts 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 behaviour or the mechanisms (e.g., fragile egos) that supposedly underlie these alleged differences.

One experimental investigation using an in-lab staged transgression found that women offered lengthier responses with more concessionary elements (e.g., acknowledgements, expressions of regret or embarrassment) than men offered (Gonzales, Pederson, Manning, & Wetter, 1990). However, the transgression in this study was clearly accidental: a nearby cup of soda inexplicably fell into an open backpack sitting directly below it. This study might therefore tell us more about men and women’s tendency to offer conciliatory gestures following an accident than about their willingness to apologize for offenses they knowingly committed.

Several commentators (e.g., Lazare, 2004; Tannen, 2001) reference a study by Holmes (1989) as the primary empirical evidence for gender differences in apology behaviour. Holmes asked research assistants to record the first 20 apologies they witnessed. Women offered 75% of the 183 reported apologies. It is difficult to draw strong conclusions from Holmes’s findings, however. Conceivably, female interactions were oversampled, as most of the research assistants were women. In addition, the research assistants ignored any offenses that did not receive an apology. Consequently, there are at least two alternative explanations for why women offered more apologies. First, it is possible that women offered more apologies because they committed

more offenses. Second, women might have a lower threshold for what constitutes an offense. If women regard more behaviours as objectionable, they would perceive a greater need to apologize. Information concerning the base rate of offenses is therefore crucial for understanding whether women are more willing to apologize for objectionable behaviour, or whether they are perceiving or committing more offenses than men are.

The Importance of Apologies

Why should psychologists care whether men apologize less frequently than women do? One answer is that we should care because apologies matter. Scholars regard apologies as “powerful” (Tannen, 1999, p. 67) and “spectacular moral phenomena” (Smith, 2008, p. 2), and invest them with “almost miraculous qualities” (Tavuchis, 1991, p. 6). Several decades of research on the effects of apologies have demonstrated that apologies contribute to conflict resolution and relationship well-being (Gibney, Howard-Hassman, Coicaud, & Steiner, 2008; Goffman, 1971; Tavuchis, 1991). Apologies increase victim forgiveness, reduce anger and aggression toward the transgressor, improve evaluations of the transgressor, and validate the perceptions of the victim (e.g., Bennett & Earwaker, 1994; Darby & Schlenker, 1982; Eaton, 2006; Exline, DeShea, & Holeman, 2007; McCullough, Worthington, & Rachal, 1997; Ohbuchi, Kameda, & Agarie, 1989). Although apologies are not all-powerful (e.g., they are less beneficial when victims perceive the offense as intentional; Struthers, Eaton, Santelli, Uchiyama, & Shirvani, 2008), their general effectiveness suggests that gender differences in apology behaviour could have significant implications for interpersonal interactions. For example, if women use apologies regularly as a way of showing concern for another person, they are likely to interpret the absence of an apology as evidence that the transgressor does not care for their wellbeing. This interpretation might consequently add insult to injury and impede the resolution

process. In contrast, men may regard their apologizing female partners as overly sensitive or submissive. In light of these implications as well as the almost blind faith in the presumed gender difference and its theoretical interpretations, I conducted the current studies to examine whether gender differences in everyday apology behaviour occur and, if so, why they occur and with what consequences.

Overview of the Present Studies

In the present research, I explored the validity of the stereotype that women apologize more frequently than men do. In Study 1, I used daily diaries to assess whether, relative to men, women reported (a) apologizing more often, (b) apologizing for a greater proportion of offenses, and (c) offering more comprehensive apologies. In Study 2, I investigated the hypothesis that women apologize more often than men do because they have a lower threshold for what constitutes offensive behaviour. Using both hypothetical and remembered offenses, I tested my prediction that judgments of the severity of the offense would mediate gender differences in ratings of apology deservingness.¹

In Study 3, I used a signal detection paradigm to assess more subtly women and men's tendencies to presume that potentially offensive behaviours will be followed by apologies. In Study 4, I examined gender differences in attitudes toward apologies and endorsement of the stereotype that women apologize more than men do. In Study 5, I re-tested the threshold hypothesis using an adult sample and a different set of hypothetical offenses. Finally, in Study 6, I returned to a diary method, this time collecting responses from romantic couples to obtain both transgressor and victim perspectives on everyday disputes in intimate relationships. In this final study, I also examined how the quality of the pre-existing relationship between the transgressor and victim affected whether and how transgressors apologized, as well as how victims responded

¹ Sections of Studies 1 and 2 were previously published in *Psychological Science* (Schumann & Ross, 2010a).

to those apologies. Together, the results of these diverse studies converge to provide a more detailed understanding of when and why women may apologize more than men do.

Study 1: Gender Differences in Apology Behaviour for Everyday Offenses

Participants completed daily diaries. Female and male diarists reported offenses that they committed (transgressor perspective) and were committed against them (victim perspective). I included both perspectives to provide a preliminary test of several explanations for gender differences in apology behaviour. 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 and should apologize for a smaller proportion of the offenses they report committing. 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 both male transgressors and male victims would report fewer offenses than their female counterparts.

I also examined gender differences in 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, forbearance (a 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, 2010b), 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 “half-hearted” (e.g., Cribb, 2010, para. 6; Tannen, 1996).

In their daily diaries, participants reported both offenses that were and were not accompanied by apologies, as well as the content of the apologies they offered and received. Using this method, I 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.

Method

Participants. Thirty-three female and 33 male students recruited from the psychology department 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 ($SD = 3.76$).

Materials and 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 today where 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 today where 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, 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 observers blind to participant gender coded the apologies for presence of the eight apology elements ($K = .92$). Discrepancies between coders were resolved through discussion. I summed the number of elements in each apology to represent its comprehensiveness.

In addition, transgressors and victims rated the severity of the offense on a 5-point scale (1 = *Not at all*, 5 = *Very*). Victims also indicated the extent to which they had forgiven the transgressor on a 5-point scale (1 = *Not at all*, 5 = *Completely*). Finally, two independent observers categorized the offenses into four types, adapted from Holmes (1989): (1) relational (e.g., insulting someone), (2) failed obligation (e.g., failing to complete chores), (3) inconvenience (e.g., calling a wrong number), and (4) physical/possession (e.g., bumping into someone; damaging someone's belongings). Inter-observer reliability was high ($K = .94$).

Results

Participants completed the diary an average of 9.22 of the 12 possible days ($SD = 2.80$). All participants were included in the analyses; the results do not change if those who completed the fewest entries are excluded. 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 1.38 ($SD = .87$) offenses each day for a total of 869 offenses. Participants reported more daily offenses from the transgressor's perspective ($M = .73$, $SD = .49$) than from the victim's perspective ($M = .65$, $SD = .49$), $t(66) = 2.04$, $p = .05$. Women and men did not differ in the proportion of offenses they reported as transgressors and victims, $t < 1$.

Most offenses occurred between friends (46.94%), followed by 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 various

relationship categories (χ^2 s < 1), except for offenses occurring between romantic partners.

Women reported a higher proportion of offenses with a romantic partner (13.21%) than men reported (4.24%), $\chi^2(1, 66) = 18.14, p < .001$. Transgressors and victims did not differ in the number of offenses they reported in the various relationships, χ^2 s < 1 (see Tables 1a and 1b).

Table 1a

Transgressor-reported offenses as a function of gender and relationship type in Study 1

| Relationship Type | Men | | Women | |
|---------------------|------------------------|-------------------|------------------------|-------------------|
| | Number of Offenses (%) | % Offered Apology | Number of Offenses (%) | % Offered Apology |
| Friend | 105 (53.6) | 78.1 | 112 (41.9) | 79.5 |
| Stranger | 40 (20.4) | 77.5 | 55 (20.6) | 87.3 |
| Romantic Partner | 9 (4.6) | 100.0 | 37 (13.9) | 91.9 |
| Colleague/Classmate | 13 (6.6) | 100.0 | 18 (6.7) | 72.2 |
| Acquaintance | 17 (8.7) | 76.5 | 22 (8.2) | 68.2 |
| Family Member | 12 (6.1) | 83.3 | 23 (8.6) | 78.3 |

Table 1b

Victim-reported offenses as a function of gender and relationship type in Study 1

| Relationship Type | Men | | Women | |
|---------------------|------------------------|--------------------|------------------------|--------------------|
| | Number of Offenses (%) | % Received Apology | Number of Offenses (%) | % Received Apology |
| Friend | 73 (44.5) | 74.0 | 118 (48.8) | 65.3 |
| Stranger | 39 (23.8) | 64.1 | 46 (19.0) | 43.5 |
| Romantic Partner | 6 (3.7) | 50.0 | 30 (12.4) | 63.3 |
| Colleague/Classmate | 17 (10.4) | 58.8 | 21 (8.7) | 57.1 |
| Acquaintance | 16 (9.8) | 75.0 | 13 (5.4) | 46.2 |
| Family Member | 13 (7.9) | 53.8 | 14 (5.8) | 57.1 |

Failed obligations comprised 28.77% of the offenses, followed by inconveniences (28.12%), relational offenses (23.31%), and physical/possession offenses (19.80%). The proportion of each offense type reported did not differ as a function of gender or perspective, χ^2 s < 1 (see Tables 2a and 2b). Collapsed across all relationship and offense types, participants were more likely to report an apology as being present when they were the transgressors ($M = .81$) than when they were the victims ($M = .62$), parameter estimate = $-.18 (.03)$, $t = -6.39$, $p < .001$. Transgressors ($M = 1.99$, $SD = 1.00$) also rated offenses as less severe than victims rated them ($M = 2.35$, $SD = 1.21$), parameter estimate = $.34 (.07)$, $t = 4.88$, $p < .001$.

Table 2a
Transgressor-reported offenses as a function of gender and offense type in Study 1

| Offense Type | Men | | Women | |
|---------------------|------------------------|-------------------|------------------------|-------------------|
| | Number of Offenses (%) | % Offered Apology | Number of Offenses (%) | % Offered Apology |
| Failed Obligation | 65 (33.2) | 80.0 | 66 (24.8) | 83.3 |
| Inconvenience | 48 (24.5) | 83.3 | 75 (28.2) | 86.7 |
| Relational | 44 (22.4) | 72.7 | 69 (25.9) | 63.8 |
| Physical/Possession | 39 (19.9) | 87.2 | 56 (21.1) | 92.9 |

Table 2b
Victim-reported offenses as a function of gender and offense type in Study 1

| Offense Type | Men | | Women | |
|---------------------|------------------------|--------------------|------------------------|--------------------|
| | Number of Offenses (%) | % Received Apology | Number of Offenses (%) | % Received Apology |
| Failed Obligation | 40 (24.4) | 60.0 | 73 (30.2) | 58.9 |
| Inconvenience | 61 (37.2) | 70.5 | 66 (27.3) | 56.1 |
| Relational | 31 (18.9) | 54.8 | 58 (24.0) | 48.3 |
| Physical/Possession | 32 (19.5) | 84.4 | 45 (18.6) | 75.6 |

Transgressor's perspective. Women reported offering more apologies (217) than men did (158), $\chi^2(1, 66) = 9.28, p = .002$ (see Figure 1). Women also reported committing more offenses (267) than men did (196), $\chi^2(1, 66) = 10.89, p = .001$ (see Figure 2). Linear mixed modeling (LMM) analyses, which take into account that events are nested within and unbalanced across participants, revealed that women ($M = .81, SD = .37$) and men ($M = .81, SD = .39$) apologized for the same proportion of offences, $t < 1$ (see Figure 3). Transgressor gender did not interact significantly with the gender of the victim to affect the proportion of offenses for which participants apologized ($t < 1$).

LMM analyses indicated that women and men also did not differ in how they apologized. Women and men were equally likely to include each of the elements in their apologies, all $ps > .20$ (see Table 3). In addition, women ($M = 1.83, SD = .86$) and men ($M = 1.88, SD = .84$) offered similarly comprehensive apologies, $t < 1$ (see Figure 4). Finally, women ($M = 1.95, SD = 1.01$) and men ($M = 2.04, SD = 1.00$) did not differ in their judgments of the severity of their offenses, $t < 1$. No significant interactions with victim gender emerged, $ps > .29$.

Victim's perspective. Women reported receiving more apologies (142) than men reported receiving (111), $\chi^2(1, 66) = 3.80, p = .05$ (see Figure 1). Women also reported being the victims of more offenses (242) overall than men did (164), $\chi^2(1, 66) = 10.89, p = .001$ (see Figure 2). 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 = $-.09 (.05), t = -1.84, p = .07$ (see Figure 3). No significant interactions with transgressor gender emerged, $ps > .08$.

LMM analyses also indicated that women and men reported receiving similar apologies. Women and men were equally likely to report each of the elements in the apologies they

received, all $ps > .20$ (see Table 3). In addition, women ($M = 1.77, SD = .81$) and men ($M = 1.75, SD = .78$) reported receiving similarly comprehensive apologies, $t < 1$ (see Figure 4). Finally, women ($M = 2.33, SD = 1.20$) and men ($M = 2.39, SD = 1.22$) did not differ in their judgments of offense severity, $t < 1$. No significant interactions with victim gender emerged ($ps > .09$).

Figure 1. Number of apologies reported as a function of gender and perspective in Study 1.

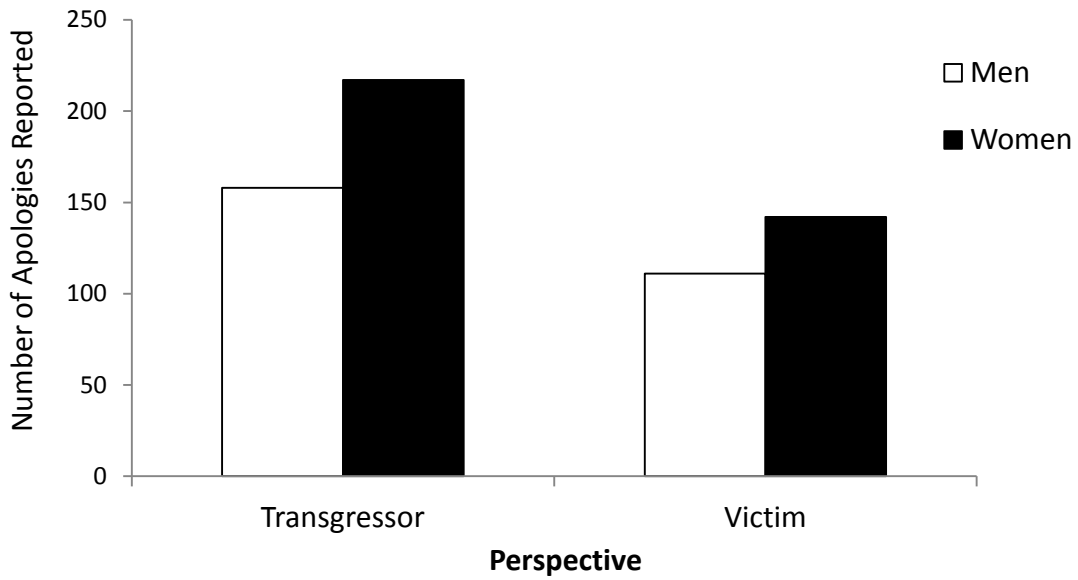


Figure 2. Number of offenses reported as a function of gender and perspective in Study 1.

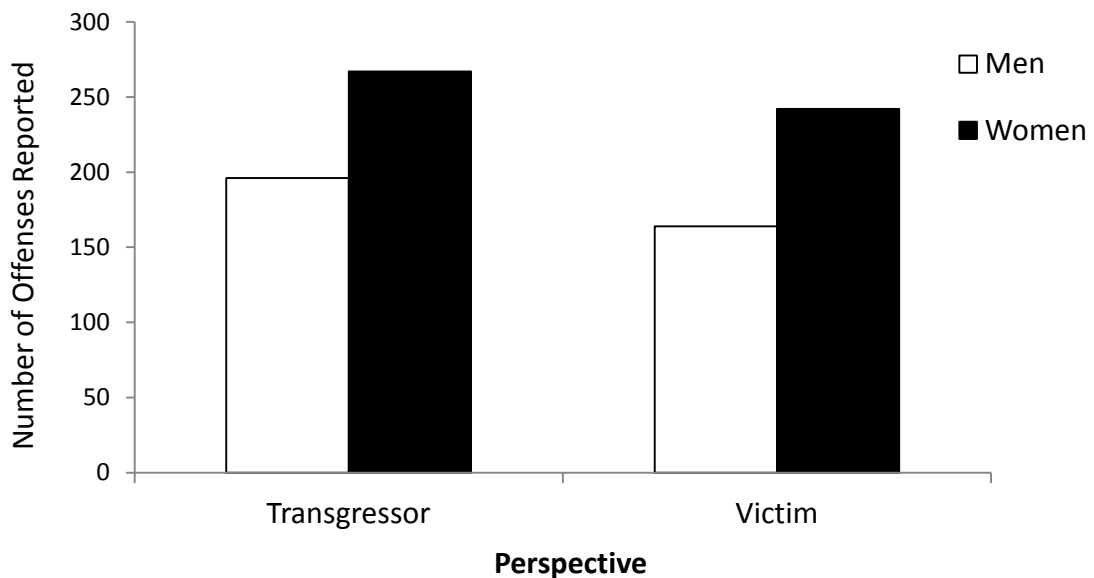


Figure 3. Proportion of offenses with apology as a function of gender and perspective in Study 1.

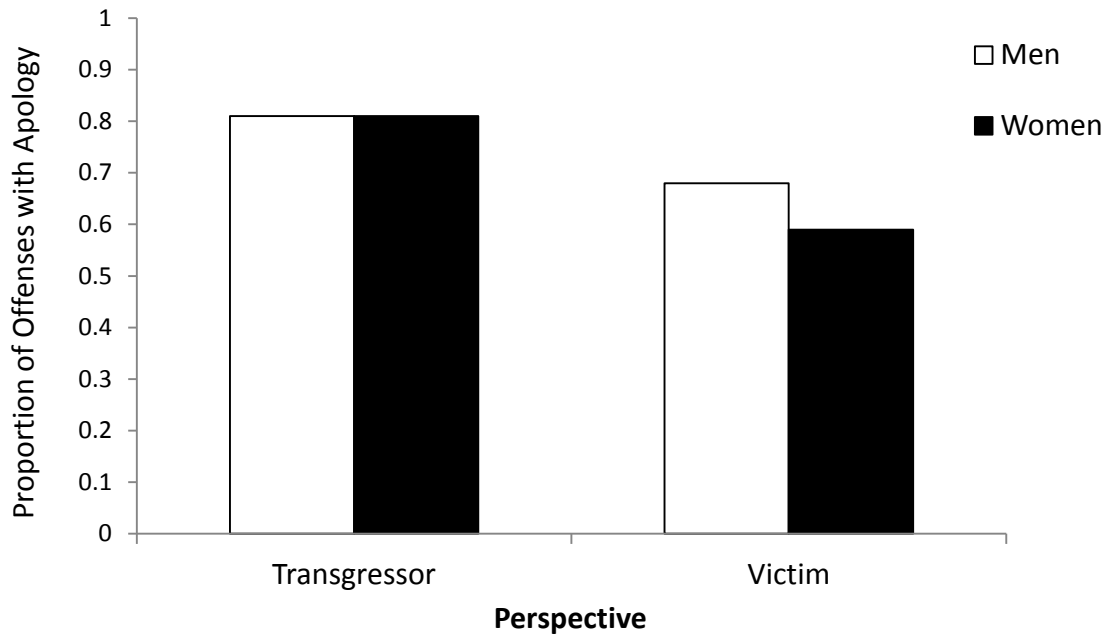
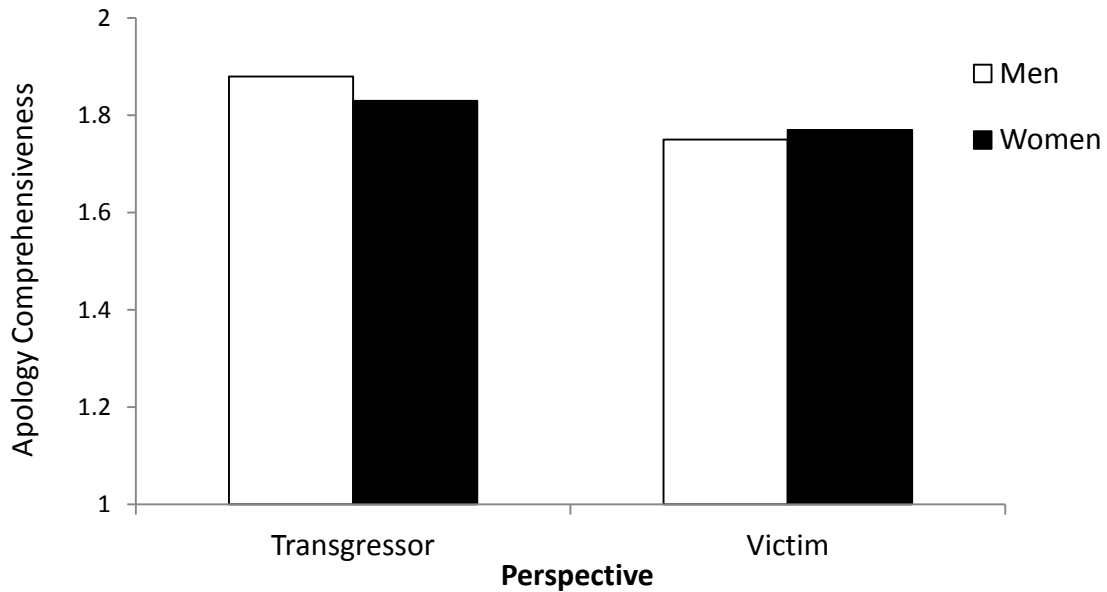


Table 3

Proportion of apologies including apology elements as a function of gender and perspective in Study 1

| Element | Transgressor Perspective | | Victim Perspective | |
|-------------------------|--------------------------|-------|--------------------|-------|
| | Men | Women | Men | Women |
| Remorse | .99 | .98 | .96 | .96 |
| Explanation | .47 | .42 | .41 | .42 |
| Responsibility | .29 | .26 | .15 | .25 |
| Acknowledgement of Harm | .07 | .05 | .11 | .05 |
| Offer of Repair | .04 | .09 | .08 | .06 |
| Forbearance | .01 | .02 | .05 | .01 |
| Admission of Wrongdoing | .00 | .00 | .00 | .00 |
| Request for Forgiveness | .00 | .00 | .00 | .00 |

Figure 4. Apology comprehensiveness as a function of gender and perspective in Study 1.



Apology outcomes. LMM analyses indicated that offenses that received an apology ($M = 4.42$, $SD = .94$) were associated with greater victim forgiveness than offenses that did not receive an apology ($M = 3.11$, $SD = 1.25$), parameter estimate = 1.22 (.15), $t = 7.90$, $p < .001$. Apologies were associated with increases in forgiveness for both women (parameter estimate = 1.02 (.20), $t = 5.20$, $p < .001$) and men (parameter estimate = 1.47 (.22), $t = 6.66$, $p < .001$).

Apology comprehensiveness was significantly associated with decreased forgiveness, (parameter estimate = -.21 (.10), $t = 2.10$, $p = .04$). However, more comprehensive apologies were offered for more severe offenses (parameter estimate = .17 (.04), $t = 3.96$, $p < .001$), and greater offense severity was associated with decreased forgiveness (parameter estimate = -.51 (.06), $t = -8.86$, $p < .001$). The negative association between apology comprehensiveness and forgiveness disappeared after I controlled for offense severity, $t < 1$.

Discussion

This diary study provided support for the stereotype that women apologize more frequently than men do in everyday life. Compared to men, female transgressors reported

offering more apologies across the twelve days of data collection. After taking into account that women reported more offenses overall than men did, however, I found that the gender difference disappeared. Female and male transgressors apologized for the same 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 behaviour as offensive, they were equally likely to apologize for it and their apologies were similarly effusive. Apologies were also associated with increased forgiveness for both men and women, suggesting that men and women value and derive similar benefits from apologies.

The diary findings 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 often 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 (Heider, 1958; Ross, 1977).

Conceivably, male transgressors reported committing fewer offenses because they were more reluctant than women to admit wrongdoing, as suggested by Engel (2001). Men could perhaps rationalize their unwillingness to apologize by perceiving fewer offenses. This explanation would not readily explain the gender difference in the frequency of offenses reported by victims, however. The results for victims exactly paralleled those for transgressors, with male

victims reporting substantially fewer offenses than female victims reported. Although the psychology of victims is quite different from the psychology of transgressors (Baumeister & Catanese, 2001), the results for victims offer some additional support for the interpretation that women apologize more frequently because they perceive more offenses.

In Study 2, I directly tested the hypothesis that women offer more apologies than men do because women have a lower threshold for what constitutes offensive behaviour. If women do exhibit a lower threshold, gender differences in the perceived severity of offenses² may lead men and women to possess different views about whether or not an apology is warranted. As both transgressors and victims, women would be more likely than their male counterparts to judge offenses as meriting an apology.

² In this study we found no gender difference in ratings of offense severity. However, participants were asked to report behaviours that they categorized as offensive (i.e., offenses that already crossed their “thresholds”), and offenses varied widely across participants. In order to assess gender differences in perceptions of severity, the content of the offenses need to be held constant (as they are in Study 2).

Study 2: Gender Differences in Thresholds for Offensive Behaviour

I conducted a second study to directly test the hypothesis that gender differences in thresholds for offensive behaviour account for gender differences in frequency of apologizing. In Study 1, I assessed gender differences in the frequency of naturally occurring offenses and apologies, without attempting to hold constant the content of the offenses across gender. In Study 2, I asked men and women to respond to identical descriptions of three different offenses. In so doing, I could examine whether men and women perceive offenses that are identical at the manifest level as different at the psychological level.

To optimize control over possible confounding variables, I manipulated the gender of the victim in the imagined events to be either the same or opposite gender of the participant, and asked all participants to imagine they had committed these offenses against a friend. I selected friends as the relational partner because they comprised the largest category of relationships in the diary study. I conducted mediation analyses to assess whether the relation of gender to judgments of apology deservingness was mediated by differences in perceived offense severity.

Finally, I tested the threshold hypothesis in another way, using transgressions that participants reported committing. Participants recalled a recent episode in which they had harmed a friend. I examined whether the relation of gender to participants' likelihood of offering an apology was mediated by gender differences in the perceived severity of the offenses.

Method

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

Materials and procedure. Participants imagined they were in three conflict scenarios with a friend (see Appendix A). Half imagined a friend of the same gender as themselves and

half imagined a friend of the opposite gender. In one scenario, participants imagined they were two days late sending their section of a joint paper 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 awaking their friend at 3:00 am. 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, the extent to which they believed their friend deserved an apology, and how likely they would be to apologize. Ratings of how much an apology was deserved and likelihood of apologizing were highly correlated ($r = .78, p < .001$), and were combined to create an index of judgments of apology deservingness.

After responding to the scenarios, participants recalled an occasion in the last three 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 specific offense.

Results

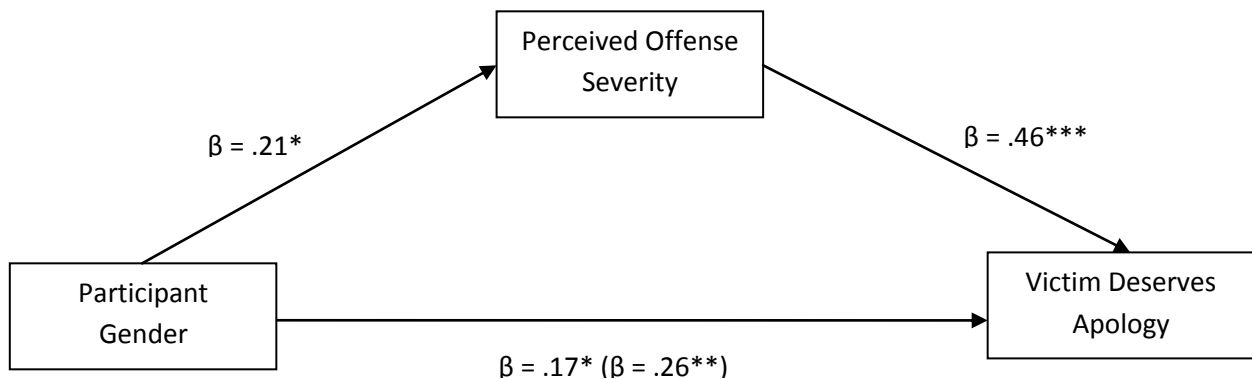
Imagined offenses. No effects of the order of the scenarios emerged; all results are collapsed across this variable. To examine whether effects were consistent across scenarios, I conducted preliminary analyses of offense severity and judgments of apology deservingness with participant gender, victim gender, and scenario type as factors. No interactions with scenario

type emerged, all $ps > .22$. Both judgments of offense severity and judgments of apology deservingness were thus averaged across the three scenarios in the analyses reported below. In addition, there were no effects of the gender of the victims in the scenarios, all $ps > .65$. I collapsed across this variable in all analyses below.

Women judged the offenses to be more severe ($M = 5.10, SD = .63$) than men did ($M = 4.75, SD = 1.02$), $t(118) = 2.29, p = .02$. Relative to men ($M = 6.23, SD = .81$), women also indicated that their friend was more deserving of an apology ($M = 6.58, SD = .44$), $t(118) = 2.90, p = .005$.

My main goal in Study 2 was to determine whether gender differences in perceptions of apology deservingness were mediated by judgments of offense severity. I used a bias-corrected bootstrap mediation model to assess indirect effects (Preacher & Hayes, 2004). In all analyses, I specified a conventional number of 5000 bootstrap re-samples with a confidence interval of 95%. As predicted, perceived offense severity mediated the effect of transgressor gender on judgments of apology deservingness, $CI = .02$ to $.19, p = .02$ (see Figure 5).

Figure 5. Mediation of the effect of participant gender on judgments of apology deservingness for imagined offenses in Study 2. *Note:* Males coded as 0; females coded as 1. β indicates the standardized beta weight associated with the effect. The parenthetical number indicates beta before including the mediator. *** $p < .001$; ** $p < .01$; * $p < .05$.



I also tested for reverse causation by designating apology deservingness as the mediator and offense severity as the outcome variable in the model. Apology deservingness significantly mediated the association between gender and offense severity, $CI = .04$ to $.24$, $p = .002$.³

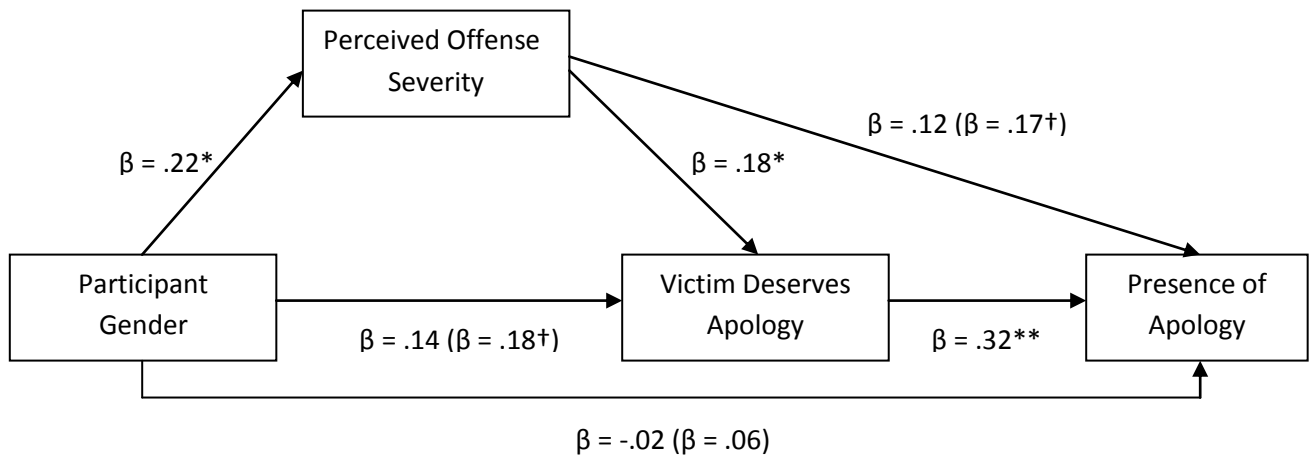
Recalled offense. Women ($M = 3.69$, $SD = 1.59$) evaluated their offenses as more severe than men did ($M = 2.92$, $SD = 1.85$), $t(118) = 2.44$, $p = .02$. Relative to men ($M = 4.74$, $SD = 1.90$), women also indicated that their victim deserved an apology marginally more ($M = 5.41$, $SD = 1.82$), $t(112) = 2.44$, $p = .06$. There were no effects of victim 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 only reported behaviour they considered offensive), the influence of gender on the presence of an apology 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 X and Y when the power to detect this relation may be inadequate. Thus, I conducted bootstrap analyses to examine whether gender indirectly influenced whether transgressors offered an apology by affecting judgments of offense severity and apology deservingness. As with the imagined scenarios, the effect of transgressor gender on judgments of apology deservingness was mediated by offense severity, $CI = .00$ to $.12$, $p = .05$ (see Figure 6). I then included whether or not participants apologized to their friend in the model. Offense severity was marginally associated with apology presence, and this association was marginally mediated by ratings of apology deservingness, $CI = -.00$ to $.17$, $p = .06$. The

³ The reverse causation model is also significant in study 5, where I test the mediating role of offense severity in the gender—apology deservingness link.

indirect effect of transgressor gender on presence of an apology through ratings of both offense severity and apology deservingness was significant, $CI = .01$ to $.18$, $p = .02$.

Figure 6. Mediation of the effect of participant gender on judgments of apology deservingness and presence of an apology for recalled offenses in Study 2. *Note:* Males coded as 0; females coded as 1. β indicates the standardized beta weight associated with the effect. The parenthetical numbers indicate beta before including the mediator. $**p < .01$; $*p < .05$; $^\dagger p < .10$.



Discussion

In this second study, women regarded three imagined offenses and their own recalled offenses as more severe than men did, which then predicted judgments of apology deservingness. In the recall data, judgments of apology deservingness further predicted whether or not participants reported apologizing for their offense.

This study provides further support for the common stereotype that women apologize more frequently than men do, as women indicated being more likely to apologize than men indicated. However, contrary to common interpretations of this gender difference, Study 2 suggests that men are not less willing to apologize than women are; rather, the data indicate that men apologize less frequently than women do in part because they have higher thresholds for

what constitutes offensive behaviour. Unlike previous interpretations that emphasized a gender difference in willingness to apologize, the threshold interpretation does not imply that one gender is at fault for potential disagreements about whether an apology should be offered. Rather, I suggest that men and women unwittingly disagree at an earlier stage in the process: whether or not a transgression has even occurred.

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. Thus, women are not simply more sensitive to being harmed. 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.

One alternative explanation for the findings in the present study is that men rationalize an unwillingness to apologize by minimizing the severity and frequency of their transgressions. This interpretation finds support in the significance of the reverse mediation model, where judgments of apology deservingness mediated the association between gender and judgments of offense severity. Although this reverse direction of causality is viable, the predicted direction of causality has been previously hypothesized (e.g., Brown & Levinson, 1987; Exline et al., 2007; McLaughlin, Cody, & O'Hair, 1983) and demonstrated (Itoi, Ohbuchi, & Fukuno, 1996; Schlenker & Darby, 1981). For example, in studies in which the severity of hypothetical offenses

was manipulated, participants were much more likely to say they would apologize for more severe harms (Itoi et al., 1996; Schlenker & Darby, 1981). Although these experimental investigations do not rule out that judgments of apology deservingness sometimes influence evaluations of severity, they do provide support for the predicted direction of causality.

The temporal order in which severity and apology deservingness were measured also reduces the plausibility of the rationalization interpretation. 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 still tended to rate these offenses as less severe than women did, $t(118) = 1.87, p = .06$. The victim data from Study 1 also cast doubt on this rationalization account. Male victims, who presumably had little motivation to rationalize offenses committed against them, reported significantly fewer transgressions than female victims. In addition, 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 fulsome as those offered by women. Presumably, transgressors sometimes rationalize withholding an apology by downplaying the severity of their offenses. The present studies provide no evidence, however, that male transgressors are more likely than female transgressors to engage in such rationalizations. Nevertheless, I subject this rationalization interpretation to further tests in Studies 3 and 4.

It is possible that demand characteristics or socially desirable responding could explain the findings from Study 2. Conceivably, for example, men and women chose to respond to the scenarios in ways consistent with their gender stereotypes regarding apology behaviour, or that women were more concerned with appearing compassionate or empathic (and therefore indicated greater likelihood of apologizing) than men were. In Study 3, I used a more indirect test of the

threshold hypothesis to reduce the possible contributions of rationalizations, demand characteristics or social desirability.

Study 3: Gender Differences in Memories for Apologies

Participants read and attempted to remember scenarios describing a variety of potentially offensive behaviours for which an apology had or had not been given. Following a filler task, participants completed a recognition test for whether or not an apology had been offered for each scenario. The difficulty of this recognition test required participants to make a substantial number of informed guesses. I predicted that participants' beliefs regarding the necessity of apologies would guide their guesses. If men and women possess different beliefs about whether offenses are sufficiently severe to warrant an apology, they may use these beliefs to fill in gaps in their memories regarding whether an apology had been offered.

The design of this study enabled me to assess hits (correctly indicating that an apology had been offered), misses (incorrectly indicating that an apology had not been offered when it had been), correct rejections (correctly indicating that an apology had not been offered), and false positives (incorrectly indicating that an apology had been offered when it hadn't been) on the recognition test. Using signal detection analyses, I assessed whether men and women differ in their response bias (β), that is, their tendency to associate an apology with an offense. If women have a lower threshold than men have for behaviours that warrant an apology, I would expect them to have a lower criterion for supposing that an apology was offered following an offense. This lower criterion might increase their likelihood of making hits when apologies had been offered, but also increase their likelihood of remembering apologies that had not been offered (i.e., false positives). Conversely, if men have a higher criterion, they might have increased chances of making correct rejections at the expense of increases in misses.

The signal detection paradigm also enabled me to assess discriminability (d'). A higher d' indicates greater ability to accurately discriminate offenses for which an apology had been

offered from offenses for which an apology had not been offered. I did not have specific predictions regarding whether men and women would differ in their d' scores, though some research indicates that women show slight advantages in verbal episodic memory and face recognition (Herlitz & Rehnman, 2008; Rehnman & Herlitz, 2007).

In addition to assessing men and women's memories for apologies, I explored participants' explicit prescriptive beliefs regarding whether apologies should be offered in the various situations. To the extent that women score higher than men score on these prescriptive beliefs, women should be more likely to associate apologies with the behaviours in the vignettes. I also assessed participants' ratings of the severity of each of the offenses to determine the associations between participants' evaluations of severity and their prescriptive beliefs. I expected a positive association between participants' judgments of offense severity and their prescriptive beliefs. I also expected to replicate the gender difference in judgments of offense severity found in Study 2, with women rating offenses as more severe relative to men.

Method

Participants. Fifty female and 50 male undergraduates (17-42 years of age, $M = 19.95$, $SD = 3.50$) participated in exchange for course credit.

Materials and procedure. Participants were told that the purpose of the study was to assess their memory for various life events. All participants were given five minutes to read through a list of 40 vignettes. I selected this time period because pilot testing revealed that, on average, five minutes enabled participants to read through each vignette only once. The 40 vignettes described various characters committing a variety of potentially offensive behaviours (half of the transgressors were men; see Appendix B for vignettes). Half of the offenses were followed by an apology from the transgressor, and half did not receive an apology. For example,

participants read “David is at a colleague’s party, and he accidentally spills his cranberry juice on the carpet. When his colleague sees the spill, David asks him for a paper towel. David doesn’t apologize.”

The vignettes occur between 40 different vignette characters and their various relationship partners: friends, colleagues, romantic partners, family members, and acquaintances. Each of the five relationship types was represented in the vignettes eight times. The gender of the transgressor was crossed with the gender of the victim across the 40 vignettes, for a total of 10 vignettes occurring between each of the four possible gender pairings (male offends a male; female offends a male; male offends a female; female offends a female). The vignettes included offences of differing severity (e.g., cutting in line, betraying a confidence), intentional and unintentional offenses (e.g., accepting credit for a colleague’s work vs. accidentally spilling juice on someone’s carpet), and various types of offenses, such as physical offenses (e.g., stepping on someone’s toe), relational offenses (e.g., insulting outfit), inconveniences (e.g., not replacing the toilet paper roll), and failed obligations (e.g., breaking a promise to clean the house).

After reading the vignettes, participants completed a seven-minute filler task. Participants worked on a package of puzzles, including word search and trail-making tasks. This filler task was designed to be engaging but simple. After completing the filler task, participants completed a recognition test on the vignettes. In the test booklet the 40 vignettes were presented to participants in random order and with the apology information removed (e.g., “David is at a colleague’s party, and he accidentally spills his cranberry juice on the carpet. When his colleague sees the spill, David asks him for a paper towel”). Participants responded true or false to a statement indicating that an apology had been offered for the offense (e.g., “David apologized to his colleague”). Half of the statements regarding whether an apology had been offered were true

and half were false. Participants were instructed to provide an answer for each vignette, even if they had to guess. The offenses were presented in random order.

Once they completed the recognition test, participants read through the 40 vignettes once more, but without the information regarding whether or not an apology had been offered. For each vignette, participants indicated their agreement with the statements “an apology should be given in this situation” (a measure of their prescriptive beliefs) and “this offense is very severe.” Participants indicated their agreement with these items on 7-point scales anchored at 1 (*Strongly Disagree*) and 7 (*Strongly Agree*). Participants’ 40 ratings of whether an apology should be given were combined to create a reliable index of prescriptive beliefs regarding apologies, $\alpha = .94$. Similarly, participants’ ratings of severity were combined to create a reliable index of the seriousness of the offenses, $\alpha = .94$.

Results

Memory test. Seven participants produced a false positive or miss rate of zero. Because d' is not computable when there is perfect accuracy, I switched to the recommended non-parametric analog A' for assessing discriminability, and to the corresponding B''_D for assessing response bias (Neath, 2008; Snodgrass, Levy-Berger, & Haydon, 1985). A' varies from 0 to 1 with 0.5 indicating chance performance; B''_D values greater than 0 indicate a conservative bias (i.e., less willingness to assert that an apology had been offered for an offense), values less than 0 indicate liberal bias (i.e., greater willingness to assert that an apology had been offered for an offense).

As predicted, women ($M = -.28$, $SD = .48$) exhibited a more liberal response bias (B''_D) than men exhibited ($M = -.03$, $SD = .43$), $t(98) = 2.72$, $p = .008$. Relative to men, women were more likely to say that an apology had been offered. Women ($M = .85$, $SD = .09$) also showed

greater discriminability (A') than men showed ($M = .79$, $SD = .16$), $t(98) = -2.14$, $p = .04$.

Relative to men, women were more likely to correctly indicate whether or not an apology had been offered.

Prescriptive beliefs regarding apologies. On average, participants indicated that apologies should be offered in the various situations, $M = 5.61$, $SD = .72$. Collapsed across all 40 vignettes, women ($M = 5.80$, $SD = .68$) were more likely than men ($M = 5.42$, $SD = .73$) to indicate that an apology was necessary, $t(98) = 2.65$, $p = .009$.

Offense severity. The mean rated severity of offenses that received an apology ($M = 3.94$, $SD = .87$) did not differ from that of offenses that did not receive an apology ($M = 3.89$, $SD = .87$), $t(99) = 1.21$, $p = .29$. Collapsed across all 40 vignettes, women ($M = 4.04$, $SD = .88$) showed a non-significant tendency to rate the offenses as more severe than men did ($M = 3.78$, $SD = .79$), $t(98) = 1.52$, $p = .13$.

Correlations. Participants' prescriptive beliefs and ratings of severity predicted neither discriminability (A') nor response bias (B''_D ; see Table 4).⁴ Participants' prescriptive beliefs and ratings of offense severity were positively associated among both men and women. Although the relation between prescriptive beliefs and ratings of severity appeared to be stronger among women than men, the difference between these two correlations was only marginally significant, $z = 1.73$, $p = .08$.

⁴ I also separately calculated men's and women's correlations between accuracy of response, prescriptive belief rating, and offense severity rating for each of the 40 scenarios to obtain greater sensitivity. I then transformed the correlations into z scores using Fisher's z transformation (as recommended by Silver & Dunlap, 1987), calculated a mean z , then back-transformed to obtain a mean r . None of the mean correlations was significant, all $ps > .48$.

Table 4

Correlations between dependent variables in Study 3 for male and female participants

| | CR | H | PB | OS |
|-----------------------------|------|------|------------------|------|
| Male Participants | | | | |
| Correct Rejection Rate (CR) | 1.00 | | | |
| Hit Rate (H) | .32* | 1.00 | | |
| Prescriptive Beliefs (PB) | .19 | .11 | 1.00 | |
| Offense Severity (OS) | .10 | .08 | .27 [†] | 1.00 |
| Female Participants | | | | |
| Correct Rejection Rate (CR) | 1.00 | | | |
| Hit Rate (H) | .14 | 1.00 | | |
| Prescriptive Beliefs (PB) | -.12 | .05 | 1.00 | |
| Offense Severity (OS) | .02 | .00 | .56*** | 1.00 |

Discussion

In Study 3, I found support for my prediction that women would evidence a lower criterion than men for remembering that an apology had been offered. I reasoned that women's greater tendency to regard an apology as warranted in the various situations may have biased their reconstructions or guesses in the direction of remembering an apology. However, although women were more likely than men to report that apologies *should* be given across a variety of situations, their prescriptive beliefs did not predict their degree of bias. This lack of correlation may have occurred for several reasons. First, it is possible that my measure of prescriptive beliefs did not successfully tap into the influencing variable. For example, rather than asking whether an apology *should* be given (which likely assessed norms regarding apology behaviour), perhaps I should have asked whether an apology was warranted or deserved in the situation. Second, it is possible that assessing prescriptive beliefs after the recognition test weakened the association. Upon completing the measure of prescriptive beliefs, participants had already read

through the 40 vignettes twice and may have been fatigued. Also, it is possible that participants' memories were influenced by more automatic associations with apologies than what we assessed following the recognition test. Finally, it is possible that my hypothesis was wrong. Perhaps women's bias toward remembering apologies did not reflect their lower thresholds. For example, it is possible that women generally exhibit a more liberal response bias than men do. Although this interpretation has received some support in the literature (e.g., Gardner, Urrutia, Morrell, Watson, & Sandoval, 1990; Marquié & Baracat, 2000), multiple studies have also demonstrated no gender differences in response bias (e.g., Brown, Kosslyn, Breiter, Baer, & Jenike, 1994; Classen & Netter, 1985; Pixton, 2011), or even the reverse pattern, with women exhibiting a more conservative response bias than men (e.g., Beyer, 1998; Beyer & Bowden, 1997). These studies examined gender differences in response bias across very different contexts (e.g., recognition of word lists, drug types, emotion faces, self-perceptions), all of which were quite different from the context of the present study.

In Study 3, women also demonstrated greater accuracy than men did. Women were better able than men were to identify whether or not an apology had been given. This finding is consistent with research demonstrating that women are more accurate at recognizing faces (Rehnman & Herlitz, 2007), and have more vivid memories for relationship events than men have (Harvey, Flanary, & Morgan, 1986; Ross & Holmberg, 1992). Memory research suggests that experts (such as master chess players, radiologists, computer programmers, and basketball players) are superior to non-experts at remembering meaningful material from their domain of expertise (e.g., Allard, Graham, & Paarsalu, 1980; Evans, Cohen, Tambouret, Horowitz, Kreindel, & Wolfe, 2011; Frey & Adesman, 1976; McKeithen, Reitman, Rueter, & Hirtle, 1981). If women are more communal and relationally focused than men are (Cross & Madson, 1997;

Eagly, 2009; Gilligan, 1994; J.B. Miller, 1984), women may perform as “relationship experts” do, exhibiting superior memory for relational events. In the current study, for example, it is conceivable that women would have demonstrated greater memory accuracy for other non-apology aspects of the interpersonal scenarios, such as the content of the offenses, the gender of the transgressor and victim, and so forth.

In Study 3 I also found that, though trending, men and women did not significantly differ in their ratings of offense severity. Consequently, I did not replicate the gender difference in judgments of offense severity found in Study 2. Because participants rated the severity of the offenses on their third time through 40 vignettes, it is possible that this lack of gender difference in ratings of severity occurred because of fatigue or desensitization to the offenses. In Study 4, participants rated the severity of the same 40 offenses on a first pass through the vignettes. In this follow-up study I also assessed participants’ attitudes toward apologies and beliefs regarding gender differences in apology behaviour.

Study 4: Gender Differences in Beliefs Regarding Apology Behaviour

Study 4 had two objectives. The first objective was to assess whether women indeed evaluate the offenses used in Study 3 as more severe than men do. This gender difference in perceived severity was obtained in Study 2 and is key to my threshold interpretation. The second objective was to examine men and women's attitudes toward apologies and their beliefs regarding which gender apologizes more. If men are just as likely as women are to apologize when they believe they have committed an offense and are similarly effusive in their apologies (Study 1), men and women likely hold equally positive attitudes toward apologies. I thus predicted no gender difference in ratings of how helpful apologies are. I was less certain about how gender might predict beliefs regarding gender differences in apology behaviour. On the one hand, both men and women may report that women apologize more than men do either because they have more experience with women apologizing (due to women's higher frequency of apologizing) or are aware of the stereotype that women apologize more readily. On the other hand, if men are just as likely as women are to apologize when they regard their behaviour as offensive, men might infer that there is no gender difference in apology behaviour on the basis of their own personal experiences. In contrast, women may presume a gender difference on the basis of *their* personal experiences. Women may recall more situations when male interaction partners have failed to offer a deserved apology (in their opinion). I tested these alternative predictions in Study 4 by asking participants whether men or women apologize more often.

Method

Participants. Thirty female and 30 male undergraduates (18-43 years of age, $M = 20.64$, $SD = 4.19$) participated in exchange for course credit.

Materials and procedure. Participants completed all measures online. They were told the purpose of the study was to assess interpersonal interactions. Participants first evaluated the

severity of each of the 40 vignettes used in Study 3. The vignettes were presented without any apology information, exactly as they were when participants rated the severity of the offenses in Study 3 (e.g., “David is at a colleague’s party, and he accidentally spills his cranberry juice on the carpet. When his colleague sees the spill, David asks him for a paper towel”). Participants indicated on a 7-point scale the extent to which they thought the offense was severe. These 40 severity ratings were combined to create a reliable index of offense severity, $\alpha = .92$.

Participants then indicated on 7-point scales their agreement with four statements assessing attitudes toward apologies: “Apologies are usually very helpful,” “Apologies don't really make people feel better,” “In general, I feel better after I've apologized for something I've done wrong,” and “In general, I feel better after receiving an apology.” The three positively-keyed items created a reliable index of general positive apology attitudes, $\alpha = .80$. Including the reverse-keyed item (“Apologies don't really make people feel better”) reduced the composite reliability to .67; this item was therefore excluded from the index of positive apology attitudes.⁵

Finally, participants indicated on 7-point scales their agreement with two items assessing their perceptions regarding gender differences in apology behaviour: “On average, women apologize more than men do”; “On average, men apologize more than women do”. These items were significantly negatively associated ($r = -.69, p < .001$).

Results

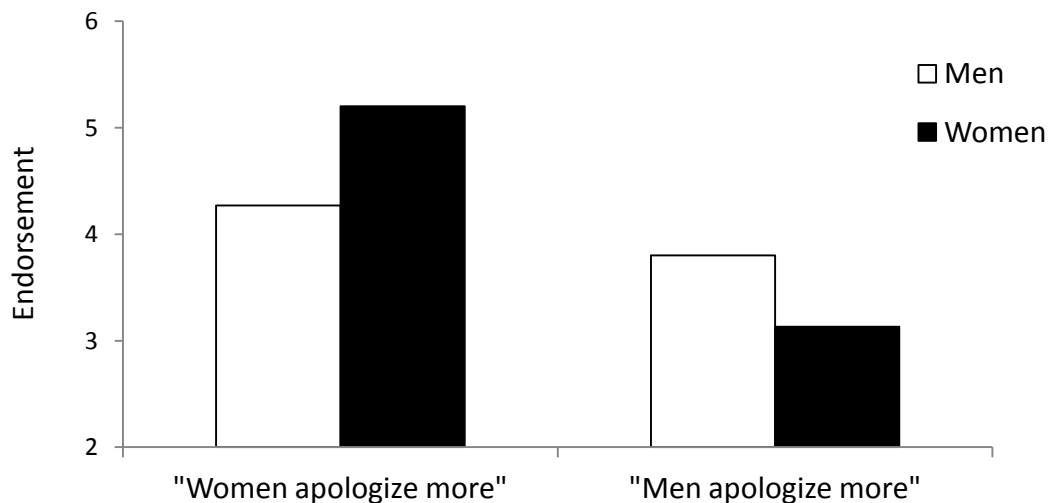
Offense severity. Consistent with the findings from Study 2, women ($M = 3.92, SD = .75$) rated the offenses described in the 40 vignettes as more severe than men did ($M = 3.54, SD = .57$), $t(58) = 2.17, p = .03$.

Positive apology attitudes. Women ($M = 5.71, SD = 1.12$) and men ($M = 5.59, SD = 1.13$) did not differ in the extent to which they reported positive attitudes toward apologies, $t < 1$.

⁵ Results on this criterion do not change when this less reliable item is included in the index.

Beliefs regarding gender differences in apology behaviour. A 2 (participant gender: women vs. men; between subjects) X 2 (item: “women apologize more than men” vs. “men apologize more than women”; within subjects) repeated measures ANOVA revealed a main effect of item, $F(1, 58) = 12.83, p = .001$. The item “on average, women apologize more than men do” was endorsed to a greater degree ($M = 4.73, SD = 1.67$) than the item “on average, men apologize more than women do” ($M = 3.47, SD = 1.42$). However, this main effect was qualified by the predicted interaction between participant gender and item, $F(1, 58) = 5.12, p = .03$ (see Figure 7). Women ($M = 5.20, SD = 1.52$) were significantly more likely than men ($M = 4.27, SD = 1.70$) were to endorse the stereotype that women apologize more than men do, $F(1, 58) = 5.03, p = .03$. In contrast, men ($M = 3.80, SD = 1.45$) were marginally more likely than women ($M = 3.13, SD = 1.33$) were to indicate that men apologize more than women do, $F(1, 58) = 3.44, p = .07$. Further, women were significantly more likely to indicate that women apologize more than men do than they were to indicate that men apologize more than women do, $F(1, 58) = 17.09, p < .001$. Men endorsed the “women apologize more than men” and “men apologize more than women” items to a similar extent, $F < 1$.

Figure 7. Endorsement of “women apologize more than men” and “men apologize more than women” as a function of participant gender in Study 4.



Discussion

In Study 4, I obtained further support for the threshold hypothesis. Women judged hypothetical offenses committed by various hypothetical characters to be more severe than men judged them to be. This finding further reduces the plausibility of the rationalization interpretation, as participants were likely not motivated to rationalize the behaviour of hypothetical characters, and, more importantly, received no information regarding the presence or absence of apologies in the scenarios.

Study 4 also revealed that men and women evaluate apologies as being similarly beneficial. This is consistent with our finding that men and women seem just as likely to apologize when they perceive that they have committed an offense and offer similarly comprehensive apologies, as well as our finding that apologies are associated with increased forgiveness among both men and women (Study 1). In combination, these findings suggest that gender differences in apology behaviour do not reflect differing evaluations of the benefits of apologies.

In Study 4, only women endorsed the stereotype that women apologize more than men do. This finding suggests that for men, women and men appear equally likely to apologize for a behaviour they consider offensive. For women, however, offenses that might cross their “threshold” for deserving an apology sometimes do not receive an apology from male interaction partners (who have a higher threshold). These personal experiences might then confirm the stereotype that women apologize more (or more readily) than men do.

Unlike Study 2, the designs of Studies 3 and 4 did not permit tests of whether judgments of offense severity mediated the association between gender and apology behaviour. In Study 5, I tested for mediation by adapting the 40 vignettes used in Studies 3 and 4.

Study 5: Replicating Gender Differences in Thresholds for Offensive Behaviour

The purpose of Study 5 was to assess the threshold model formulated in Study 2 using an adult sample and a different set of vignettes. In Studies 1 through 4, I collected samples comprised exclusively of undergraduate students. To increase generalizability to non-student populations, I tested the threshold model on a sample of U.S. adults with a greater range in ages. In addition, I adapted the 40 vignettes used in Studies 3 and 4 by asking participants to imagine themselves as the transgressor of the offenses. In so doing, I could examine whether participants' gender influenced their judgments of apology deservingness, and whether their evaluations of the severity of the offenses mediated the association between gender and apology deservingness.

Method

Participants. Sixty-three female and 48 male⁶ (18-70 years of age, $M = 30.77$, $SD = 11.39$) U.S.-based participants were recruited through Amazon Mechanical Turk. This online participant recruitment system has been shown to produce reliable, high quality data (see Buhrmester, Kwang, & Gosling, in press; Paolacci, Chandler, Ipeirotis, 2010). Participants received \$0.50 compensation for completing the study.

Materials and procedure. Participants completed all measures online and were told the purpose of the study was to assess interpersonal interactions. Participants first read through the 40 vignettes used in Studies 3 and 4. These vignettes were adapted so that participants imagined themselves as the offending character (e.g., "You are at a colleague's party, and you accidentally spill your cranberry juice on the carpet. When your colleague sees the spill, you ask him for a paper towel"). They received no apology information in the vignette. In response to each vignette, participants indicated on 7-point scales how severe they thought the offense was, how much the other character in the vignette deserved an apology from them, and how likely they

⁶ Fourteen additional participants began the study but did not complete it.

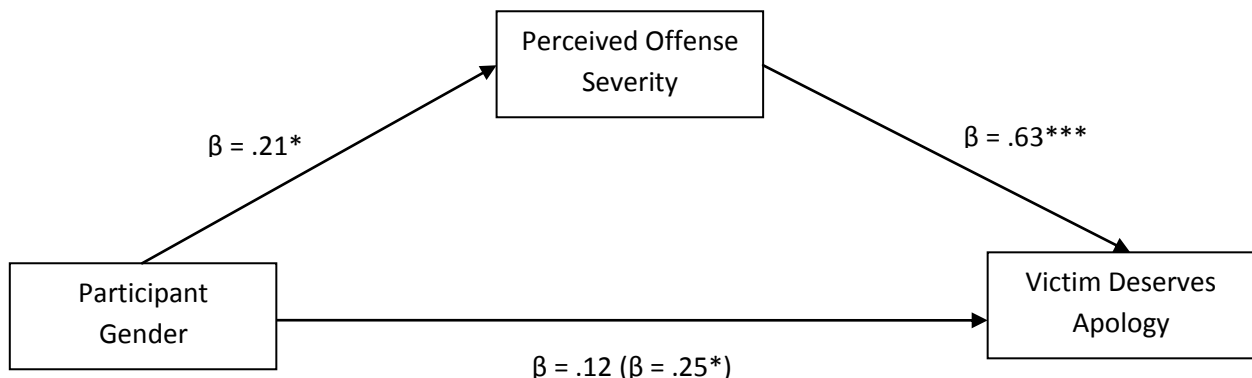
would be to apologize to this person. The 40 severity ratings were combined to create a reliable index of offense severity, $\alpha = .95$. The 40-rating composites of apology deservingness ($\alpha = .95$) and likelihood of apologizing ($\alpha = .96$) were highly correlated ($r = .66, p < .001$) and were therefore combined to create a reliable ($\alpha = .98$) index of apology deservingness (as in Study 2).

Results

Offense severity. Replicating the previous studies, women ($M = 4.10, SD = .83$) judged the offenses to be significantly more severe than men judged them to be ($M = 3.71, SD = 1.08$), $t(109) = 2.19, p = .03$.

Apology deservingness. Women ($M = 5.25, SD = .95$) also rated the victims in the vignettes as being more deserving of an apology than men did ($M = 4.74, SD = 1.06$), $t(109) = 2.64, p = .01$. Next, I used a bias-corrected bootstrap mediation model (5000 re-samples; CI = 95%) to assess whether gender differences in perceptions of apology deservingness were mediated by judgments of offense severity. As predicted, perceived offense severity mediated the effect of gender on judgments of apology deservingness, CI = .01 to .25, $p = .03$ (see Figure 8).

Figure 8. Mediation of the effect of participant gender on judgments of apology deservingness in Study 5. *Note:* Males coded as 0; females coded as 1. β indicates the standardized beta weight associated with the effect. The parenthetical number indicates beta before including the mediator. *** $p < .001$; * $p < .05$.



Discussion

The results from Study 5 supported the threshold model developed in Study 2 using a different sample of adults and a more diverse set of hypothetical offenses. This study thus provides further evidence that, relative to men, women regard identical offenses as more severe and consequently more deserving of an apology. But what are the consequences of the observed gender differences in judgments of offense severity and apology deservingness? When women do not receive an apology for behaviour they regard as offensive, they may make negative relational attributions for its absence (e.g., lack of caring or respect). These attributions, in turn, could perpetuate the conflict at hand. Such negative consequences may occur most dramatically in heterosexual romantic relationships, where men and women have repeated interactions with each other and individuals are highly sensitive to signs of their partner's regard for them (Murray, Holmes, & Griffin, 2000). In Study 6, I used a daily diary method to take a closer look at apologies and their consequences in romantic relationships.

Study 6: Apology Behaviour in Romantic Relationships

Study 6 had three objectives. The first objective was to replicate Study 1 with married and cohabiting couples. Because I used a daily diary design similar to that used in Study 1, I could address parallel questions. For example, relative to men, do women perceive that they have committed more offenses against their romantic partners and offer more apologies? Do men and women apologize for a similar proportion of the offenses they commit against their romantic partners? Are their apologies similar? Do men and women differ in the number of offenses and apologies they report from the victim's perspective? These questions are particularly intriguing in the context of committed romantic relationships, where individuals are highly motivated to resolve conflicts that could be potentially damaging to their relationship (Kearns & Fincham, 2005; Murray & Holmes, 1993; Murray et al., 2000).

The second objective of Study 6 was to examine how the nature of the pre-existing relationship between the transgressor and victim influences apology behaviour and the consequences of apologies. Most studies of apologies examine apologies between strangers or for hypothetical offenses, but real-world apologies often occur in the context of ongoing relationships that vary in their relationship history and quality. Several past studies suggest that such pre-existing relationship factors influence whether transgressors apologize. In two studies on remembered offenses, participants were more likely to have apologized to victims they rated as close to them than victims they rated as less close to them (Exline et al., 2007). Another study of remembered offenses revealed that victims were more likely to indicate that they had received an apology from transgressors they were close to than from transgressors they were less close to (McCullough et al., 1998). In the present study, I examined whether the quality of the pre-existing relationship predicted whether and how transgressors apologized to their spouses.

I also examined how pre-existing relationship quality influenced the benefits of everyday apologies in romantic relationships. More specifically, I sought to explore whether pre-existing relationship quality moderated the relation of apologies to forgiveness. Several past studies suggest that pre-existing relationship quality influences responses to conflict within relationships. Partners are more willing to forgive one another for transgressions in high quality romantic relationships—that is, relationships that are characterized by high satisfaction, closeness, and commitment (Kearns & Fincham, 2005; McCullough et al., 1998). In one study using remembered offenses, closeness to one's partner predicted the extent to which the victim empathized with their partner, which then positively predicted forgiveness (McCullough et al., 1998). In another study of remembered offenses, high relationship quality was associated with more benign interpretations of a transgression, which in turn predicted greater forgiveness (Kearns & Fincham, 2005). Similarly, Murray and Holmes (1993) found that individuals in more positive relationships construct stories that put a positive spin on their partner's potential flaws.

Consistent with this past work, I predicted that apologies would be more effective at promoting forgiveness within higher quality relationships relative to lower quality relationships. Moreover, because individuals in higher quality relationships have a tendency to perceive their partner's behaviour in a positive light, I predicted that when apologies occur, assessments of apology sincerity would mediate the association between relationship quality and forgiveness. Past research has demonstrated that apologies that are identified as sincere are more successful at increasing reconciliation than apologies that are identified as insincere (Tomlinson, Dineen, & Lewicki, 2004). Further, factors that promote insincere interpretations of the apology (e.g., pre-apology reputation; post-apology behaviour) have been shown to reduce forgiveness and acceptance of apologies (Risen & Gilovich, 2007; Zechmeister, Garcia, Romero, & Vas, 2004).

I therefore anticipated that apologies would be more strongly associated with increased forgiveness in higher quality relationships because individuals in these satisfying, close relationships are more likely to see their partner's apologies as sincere expressions of remorse.

The third objective of Study 6 was to obtain both transgressor and victim perspectives of everyday offenses and apologies. In Study 1, I collected a sample of offenses experienced from each perspective, but acquired only one perspective of any given offense. By collecting daily diaries from both members of the dyad in Study 6, I had the ability to track the number of offenses that overlapped (i.e., both members reported the offense) and the number of offenses that did not overlap (i.e., only the transgressor or only the victim reported the offense). I expected that men would report fewer non-overlapping offenses as both transgressors and victims than women would report. This gender difference would again suggest that men perceive fewer offenses than women perceive because they have a higher threshold for offensive behaviour.⁷

Method

Participants. Sixty women and 60 men (21-41 years of age, $M = 27.06$, $SD = 4.07$) from 60 married or cohabiting couples participated in exchange for \$25 gift certificates to Amazon.ca. Married or cohabiting couples were recruited using a graduate student listserv from the University of Waterloo; at least one member from each couple was a graduate student. Thirty-five (58.33%) of the couples were married, seven (11.67%) were in common-law relationships, seven (11.67%) were engaged, and eleven (18.33%) were cohabiting (i.e., described themselves as living together but not married, common-law, or engaged). The mean relationship length was 4.93 years, ($SD = 2.89$ years, range = 9 months to 14 years).

⁷ I also planned to compare transgressors' and victims' psychological experiences of the incidents they both reported, such as their perceptions of severity and apology sincerity. However, due to a low proportion of overlapping offenses, I do not report these perspective comparisons in the main body of the thesis (see Appendix E).

Materials and procedure. Participants completed all materials online. Upon signing up for a study on managing conflict in romantic relationships, participants completed a questionnaire assessing various individual differences (see Appendix C), the primary one being the relationship quality scale (Marigold, Holmes, & Ross, 2007). This 19-item measure assesses three aspects of relationship quality: felt security (e.g., “My partner loves and accepts me unconditionally”), commitment (e.g., “I am very committed to my relationship”), and satisfaction (e.g., “I have a very strong relationship with my partner”). Participants responded to each item on a 7-point scale (1 = *Not at all true*, 7 = *Completely true*). These 19 items combined to create a reliable index of relationship quality, $\alpha = .92$.

Upon completing the pre-diary questionnaire, participants were assigned a personal username and password to sign in to their daily diaries. Participants were asked to complete two sections of an online diary every evening for seven consecutive nights. They were instructed to complete their entries in private, avoid discussing the content of their entries with their partner, and sign in to the diary even if they had no events to report.

For the transgressor section of the diary, participants were instructed to report any incidents from that day in which they did something to their romantic partner that might have been considered “negative.” For the victim section, participants were instructed to report any incidents from that day in which their romantic partner did something to them that might have been considered “negative.” The order of the transgressor and victim sections was randomly counterbalanced within and across participants.

For each event from the transgressor’s perspective, participants reported what happened, how severe the offense was, and whether they had apologized. If so, they described what they

said in their apology and rated its sincerity.⁸ For each event from the victim's perspective, participants reported what happened, how severe the offense was, how much they had forgiven their partner and the extent to which they thought the incident was resolved. Finally, they reported whether or not they received an apology. If so, they described the apology and rated its sincerity. All rating scale responses were provided on 7-point scales.

If participants reported more than one event from each perspective, they continued to a second page with the same questions for a second event. If participants could not recall another (or an initial) event for the first section, they clicked a button to proceed to the section for the other perspective. If they were unable to think of an event for the second section, participants terminated the session.

After their seventh evening, participants completed demographics (e.g., gender, age, relationship status and length), received a feedback letter and information sheet on successful communication and apology strategies, as well as their \$25 gift certificate to Amazon.ca. In addition, participants who completed all seven days of diary entries were entered into one of three draws for \$100 in gift certificates to Amazon.ca.

Two independent observers, blind to participant gender, coded the apologies for presence of the eight apology elements. Inter-observer reliability was high ($K = .89$); discrepancies between coders were resolved through discussion. I summed the number of elements in each apology to represent its comprehensiveness. Two independent observers also categorized the offenses into the four types reported in Study 1 (relational, failed obligation, inconvenience, physical/material). Inter-observer reliability was high ($K = .91$).

⁸ Additional measures that were not the focus of this thesis were collected. See Appendix D for full diary measures.

Results

Participants signed on to complete a diary entry an average of 6.67 of the 7 possible days ($SD = .95$). Men ($M = 6.70, SD = .94$) and women ($M = 6.63, SD = .96$) completed a similar number of entries, $t < 1$. Participants reported an average of .72 ($SD = .46$) offenses each day for a total of 571 offenses. Participants reported a similar number of daily offenses from the transgressor ($M = .37, SD = .25$) and victim's perspectives ($M = .35, SD = .28$), $t < 1$. Women and men did not differ in the proportion of offenses they reported as transgressors and victims, $t < 1$. Self-reported relationship quality was high ($M = 6.07, SD = .72$) and did not differ between men and women, $t < 1$. Relationship quality was negatively associated with the number of events participants reported from both the transgressors' perspective ($r = -.30, p = .001$) and victims' perspective ($r = -.40, p < .001$).

Of the 571 offences, 317 (55.52%) were reported by only one member of the dyad (unmatched) and 202 (35.38%) were reported by both members of the dyad from complementary perspectives (matched).⁹ Though trending, relationship quality was not significantly associated with the proportion of offenses that were matched ($r = .14, p = .15$). The remaining 52 (9.11%) offenses were reported by both members of the dyad from non-complementary perspectives: 30 offenses were reported from both members of the dyad as victims and 22 offenses were reported from both members of the dyad as transgressors. Because there were duplicate reports of these latter 52 events within the same perspective, these data were dropped from the analyses reported below.¹⁰

⁹ Because of the low proportion of matching offenses, I examine transgressor and victim perspective differences within this sample of matching offenses in Appendix E. In addition, many analyses could only be conducted on the full sample of offenses. Where parallel analyses could be done on the matched sample, similar results were obtained unless otherwise noted.

¹⁰ The pattern of significant and non-significant findings does not change if these events are included in any of the analyses below. There were no significant differences between these 52 non-complementary events and the remaining 519 events on any of the variables assessed (e.g., severity, forgiveness, apology presence), all $ps > .16$.

A large majority (73.60%) of the events participants reported were coded as relational offenses (e.g., being irritable; failing to spend time with partner), followed by failed obligations (12.52%; e.g., neglecting chores; forgetting to call), inconveniences (11.56%; e.g., requesting favour at last minute; distracting partner from work), and physical/possession offenses (2.31%; e.g., bumping into partner; spending money without partner's approval; see Tables 5a and 5b). Participants were more likely to report an apology as present when they were transgressors ($M = .46$) than when they were victims ($M = .32$), parameter estimate = $-.15$ (.05), $t = -3.11$, $p = .002$.

Table 5a

Transgressor-reported offenses as a function of gender and offense type in Study 6

| Offense Type | Men | | Women | |
|---------------------|------------------------|-------------------|------------------------|-------------------|
| | Number of Offenses (%) | % Offered Apology | Number of Offenses (%) | % Offered Apology |
| Failed Obligation | 25 (19.7) | 68.0 | 13 (9.0) | 53.8 |
| Inconvenience | 15 (11.8) | 60.0 | 13 (9.0) | 61.5 |
| Relational | 85 (66.9) | 38.8 | 116 (80.6) | 43.1 |
| Physical/Possession | 2 (1.6) | 100.0 | 2 (1.4) | 0.0 |

Table 5b

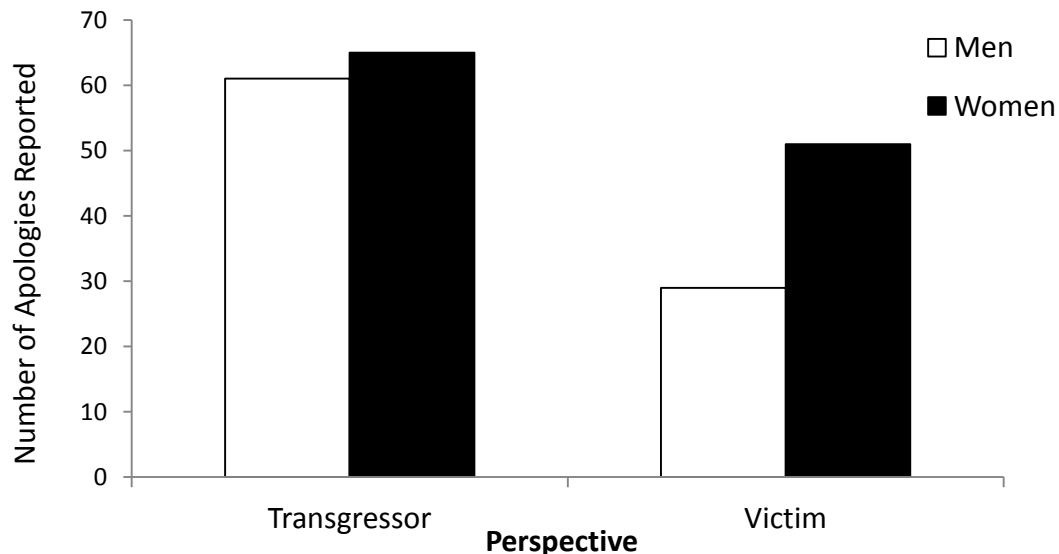
Victim-reported offenses as a function of gender and offense type in Study 6

| Offense Type | Men | | Women | |
|---------------------|------------------------|--------------------|------------------------|--------------------|
| | Number of Offenses (%) | % Received Apology | Number of Offenses (%) | % Received Apology |
| Failed Obligation | 6 (5.7) | 0.0 | 21 (14.7) | 47.6 |
| Inconvenience | 19 (18.1) | 26.3 | 13 (9.1) | 7.7 |
| Relational | 77 (73.3) | 31.2 | 104 (72.7) | 36.5 |
| Physical/Possession | 3 (2.9) | 0.0 | 5 (3.5) | 40.0 |

Transgressors ($M = 2.85$, $SD = 1.40$) also rated offenses as less severe than victims rated them ($M = 3.30$, $SD = 1.49$), parameter estimate = .35 (.13), $t = 2.74$, $p = .009$.

Transgressor's perspective. Unlike in Study 1, women did not report offering significantly more apologies (65) than men reported offering (61), $\chi^2(1, 120) = .13$, $p = .72$ (see Figure 9). Women also did not report committing significantly more offenses (144) than men reported committing (127), $\chi^2(1, 120) = 1.07$, $p = .30$ (see Figure 10). Linear mixed modeling (LMM) analyses, which take into account that events are nested within and unbalanced across both participants and dyads, revealed that, consistent with Study 1, women ($M = .45$, $SD = .50$) and men ($M = .48$, $SD = .50$) did not differ in the proportion of offenses for which they apologized, $t < 1$ (see Figure 11). Note, however, that the proportion of offenses that participants reported apologizing for (.46) in this study was substantially lower than the proportion reported in Study 1 (.81). Relationship quality did not predict likelihood of apologizing, $t < 1$.¹¹

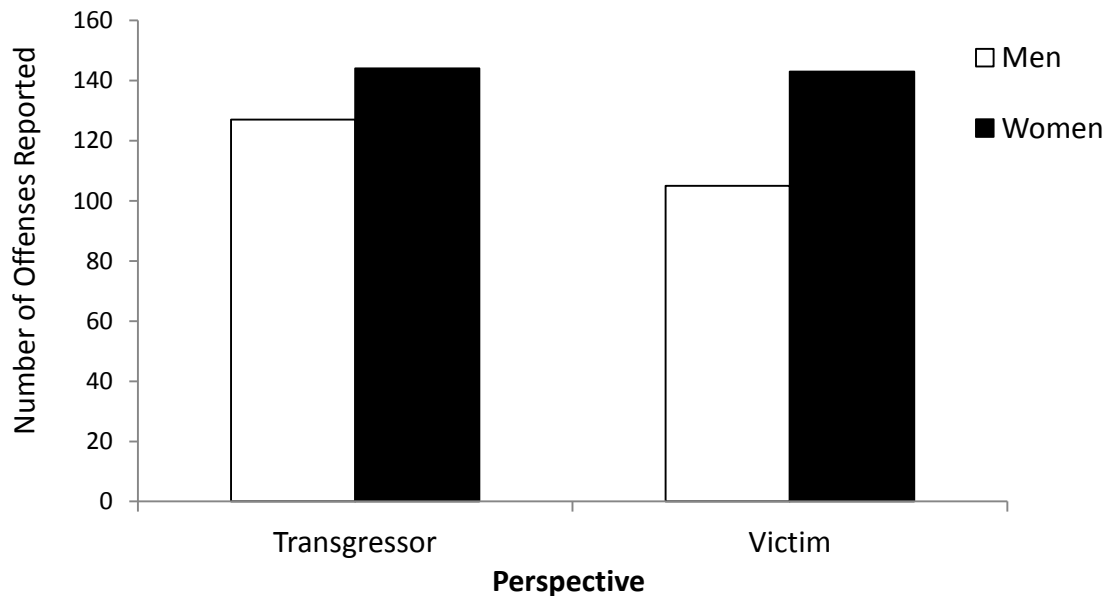
Figure 9. Number of apologies reported as a function of gender and perspective in Study 6.



¹¹ Within the matched sample of offenses only, relationship quality significantly interacted with transgressor gender to influence likelihood of apologizing, parameter estimate = -.27 (.11), $t = -2.44$, $p = .02$. For transgressing men, relationship quality was significantly associated with likelihood of apologizing, parameter estimate = .20 (.07), $t = 2.93$, $p = .005$. For women, no association between relationship quality and likelihood of apologizing emerged, $t < 1$.

Consistent with Study 1, LMM analyses indicated that men and women did not differ in how they apologized. Women and men were equally likely to include each of the elements in their apologies, all $ps > .11$ (see Table 6). In addition, women ($M = 2.11, SD = .94$) and men ($M = 2.00, SD = .75$) offered similarly comprehensive apologies, $t < 1$ (see Figure 12). Relationship quality also did not significantly predict apology comprehensiveness, $t < 1$. Finally, women ($M = 2.86, SD = 1.48$) and men ($M = 2.83, SD = 1.32$) did not differ in their judgments of the severity of their offenses, $t < 1$.

Figure 10. Number of offenses reported as a function of gender and perspective in Study 6.



Victim’s perspective. Consistent with Study 1, women reported receiving more apologies (51) than men reported receiving (29), $\chi^2(1, 120) = 6.05, p = .01$ (see Figure 9). Also as in Study 1, women reported being the victims of significantly more offenses (143) than men did (105), $\chi^2(1, 120) = 5.82, p = .02$ (see Figure 10). LMM analyses revealed that women ($M = .36, SD = .48$) reported receiving apologies for about the same proportion of offenses as men did ($M = .28, SD = .45$), parameter estimate = .08 (.07), $t = 1.17, p = .25$ (see Figure 11). As with

transgressors, the proportion of offenses that participants reported receiving an apology for (.32) in this study was substantially lower than the proportion reported in Study 1 (.62). Self-reported relationship quality did not significantly predict likelihood of receiving an apology, $t < 1$.

LMM analyses also indicated that men and women reported receiving similar apologies. Women and men were equally likely to report each of the elements in the apologies they received, all $ps > .20$ (see Table 6). In addition, women ($M = 1.86$, $SD = .66$) and men ($M = 1.69$, $SD = .60$) reported receiving similarly comprehensive apologies, parameter estimate = .17 (.15), $t = 1.15$, $p = .26$ (see Figure 12). Relationship quality also did not significantly predict apology comprehensiveness, parameter estimate = .10 (.08), $t = 1.22$, $p = .23$. Finally, women ($M = 3.50$, $SD = 1.57$) judged the offenses committed against them to be marginally more severe than men judged the offenses committed against them ($M = 3.04$, $SD = 1.35$), parameter estimate = .41 (.24), $t = 1.75$, $p = .09$.

Figure 11. Proportion of offenses with apology as a function of gender and perspective in Study 6.

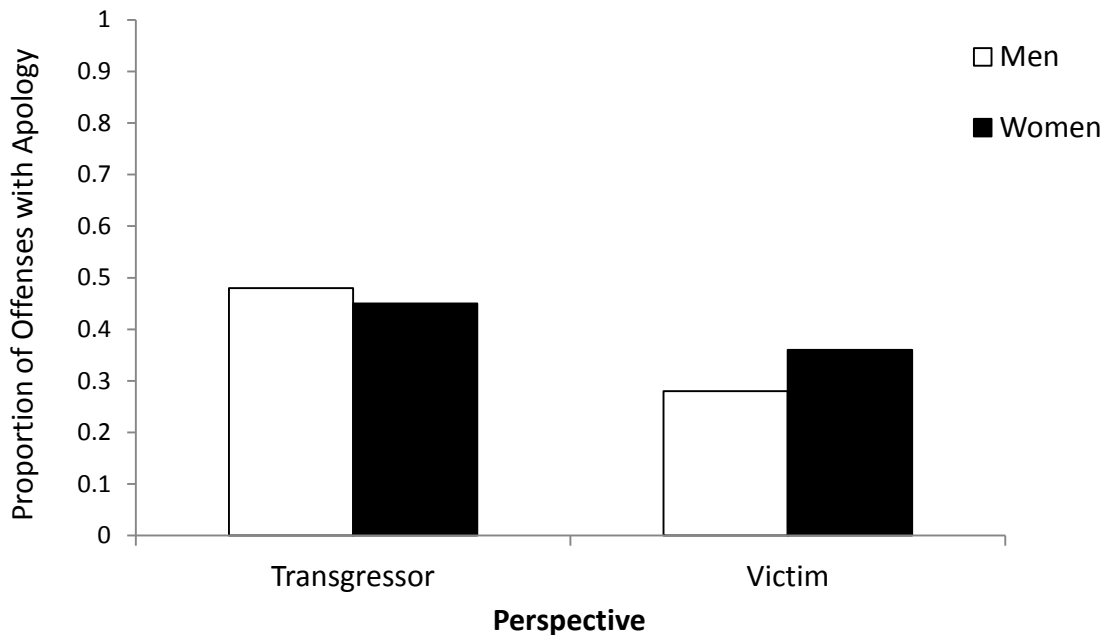
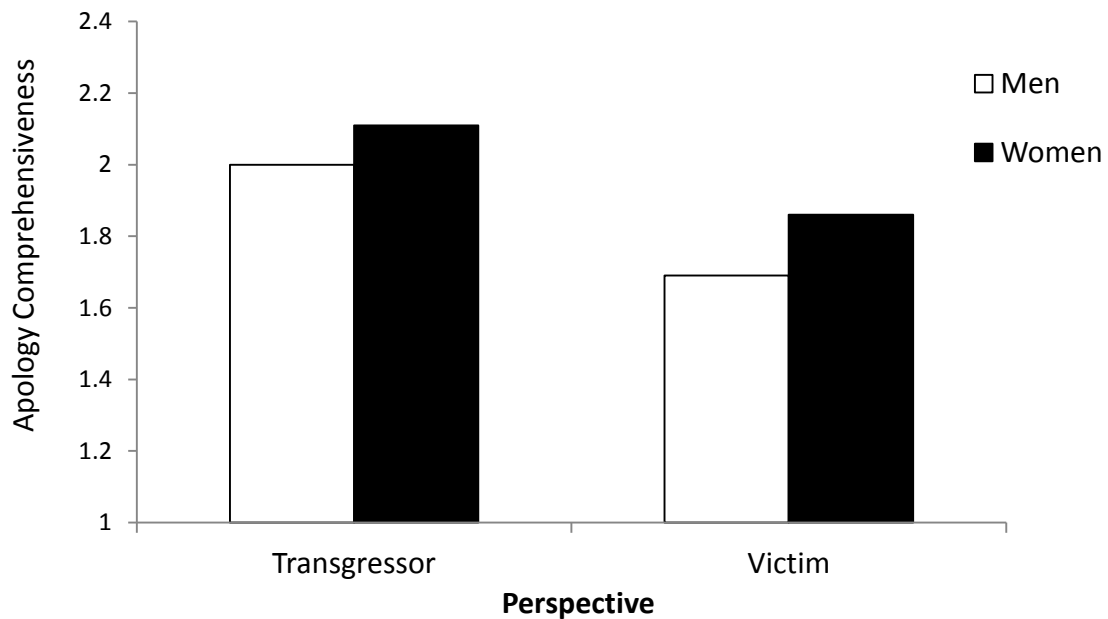


Table 6
Proportion of apologies including apology elements as a function of gender and perspective in Study 6

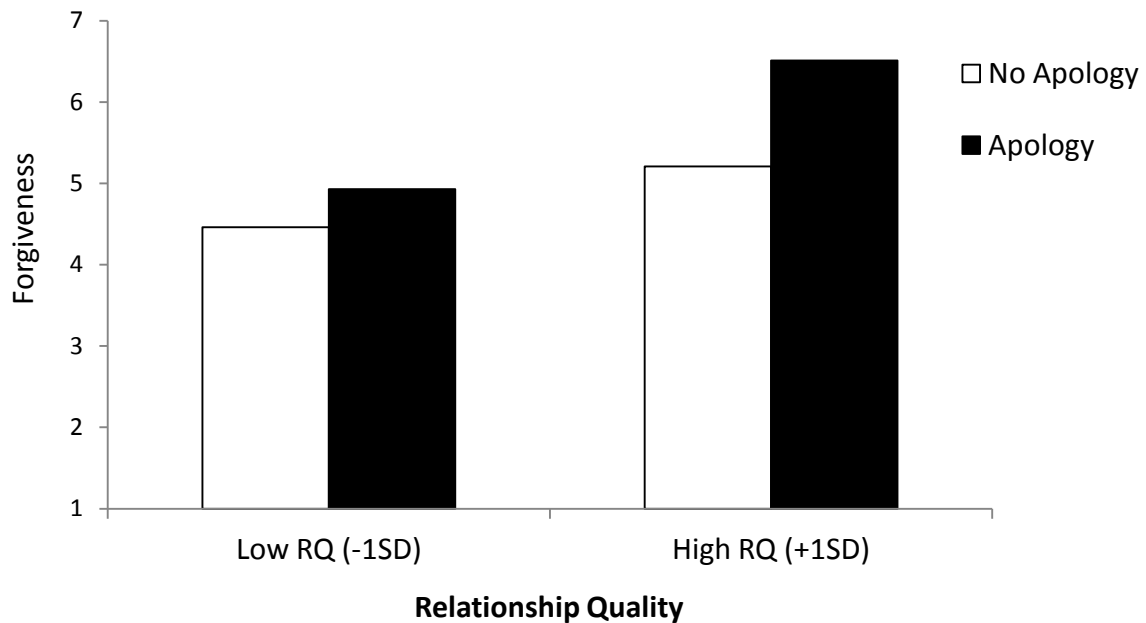
| Element | Transgressor Perspective | | Victim Perspective | |
|-------------------------|--------------------------|-------|--------------------|-------|
| | Men | Women | Men | Women |
| Remorse | .97 | .88 | .79 | .98 |
| Explanation | .33 | .46 | .45 | .33 |
| Responsibility | .31 | .43 | .24 | .33 |
| Acknowledgement of Harm | .16 | .06 | .00 | .02 |
| Offer of Repair | .10 | .05 | .07 | .06 |
| Forbearance | .08 | .09 | .03 | .08 |
| Admission of Wrongdoing | .05 | .14 | .10 | .06 |
| Request for Forgiveness | .00 | .00 | .00 | .00 |

Figure 12. Apology comprehensiveness as a function of gender and perspective in Study 6.



Apology outcomes. Next, I examined whether apologies predicted positive relationship outcomes and whether pre-existing relationship quality was associated with post-apology outcomes. Participants' ratings of forgiveness and dispute resolution were highly correlated ($r = .71, p < .001$) and were combined to create a forgiveness composite. LMM analyses revealed that both apologies (parameter estimate = .88 (.22), $t = 4.05, p < .001$) and relationship quality (parameter estimate = .63 (.18), $t = 3.48, p = .002$) were positively associated with forgiveness. A significant interaction between apology presence and relationship quality also emerged, parameter estimate = .49 (.24), $t = 2.00, p = .05$ ¹² (see Figure 13).

Figure 13. Forgiveness as a function of apology presence and relationship quality in Study 6.



When victims rated their relationship quality as relatively low, the presence of an apology was not significantly associated with increased forgiveness (parameter estimate = .47 (.28), $t = 1.66, p = .11$). When victims rated their relationship as relatively high in quality, however, the

¹² No significant 2- or 3-way interactions with gender emerged, $ps > .21$.

presence of an apology was strongly associated with increased forgiveness (parameter estimate = 1.29 (.31), $t = 4.13$, $p < .001$). Relationship quality was positively associated with forgiveness both when an apology was absent (parameter estimate = .47 (.18), $t = 2.57$, $p = .01$) and present (parameter estimate = 1.01 (.18), $t = 5.50$, $p < .001$).

Examining only events that received an apology, I next tested whether victims in high quality relationships were more forgiving after receiving an apology partially because they perceived the apologies as sincere. As predicted, LMM analyses revealed that relationship quality was positively associated with victims' ratings of the sincerity of apologies (parameter estimate = .93 (.22), $t = 4.20$, $p < .001$), which, in turn, was positively associated with degree of forgiveness controlling for relationship quality (parameter estimate = .55 (.11), $t = 5.13$, $p < .001$).¹³ These associations remained significant when statistically controlling for observer-coded apology comprehensiveness, $ps < .01$.

Discussion

In Study 4, I found evidence both consistent and inconsistent with my threshold hypothesis. In line with my threshold hypothesis and the findings from Study 1, women reported being the victims of more offenses than men reported, and reported receiving apologies for a similar proportion of the offenses they reported against them. Women and men also reported apologizing for a similar proportion of the offenses they reported committing, a finding that further weakens the argument that men actively resist apologizing for their offenses. Finally, women and men reported offering and receiving apologies that were similar in content. Unlike Study 1, however, female transgressors did not report offering significantly more apologies or committing significantly more offenses than male transgressors reported.

¹³ Neither a Sobel test nor bootstrapping model is appropriate for testing mediation in multi-level models. Thus, mediation is assumed by a joint significance test.

One possible explanation for this null finding is that romantic partners are more likely than other relationship partners (e.g., colleagues, friends, strangers) to discuss negative incidents with each other. If so, women and men should report a similar number of offenses because they would both be aware of the offenses. The extremely low proportion of overlapping offenses reported in this study raises doubts about this explanation, however.

Another possibility is that women were less likely to perceive and consequently apologize for offenses in these close romantic relationships. It is possible, for example, that women in highly committed romantic relationships feel secure in their partner's regard and are therefore less concerned that minor incidents could be damaging to their relationship. However, this explanation seems somewhat contrary to research demonstrating that romantic partners are highly motivated to maintain relationship harmony (Bradbury & Fincham, 1990; Fincham, Beach, & Baucom, 1987; Kearns & Fincham, 2005; Murray & Holmes, 1993).

A third possibility is that men in committed romantic relationships are more likely to perceive and consequently apologize for offenses they commit against their partners. Although women are generally more interdependent and oriented toward their connections with others than men are (Cross & Madson, 1997), men in committed romantic relationships may be as interdependent as women and thus similarly attuned to any behaviour that could potentially harm their partner.¹⁴ I return to this possibility in the *Potential Psychological Bases of Differential Thresholds* section of the General Discussion.

A final possibility is that gender differences in thresholds for offense severity are weaker for transgressors than they are for victims. Whereas victims directly experience the pain caused by offenses committed against them, transgressors may estimate the severity of their offenses by

¹⁴ In Study 1, a gender difference in number of offenses reported was found among events occurring between romantic partners. These romantic relationships were likely less committed than the relationships examined in Study 6, however, as participants in the Study 1 sample were undergraduate students (M age = 20.67 years).

imagining themselves in the victim's position or assessing the victim's reaction to the offense. In addition, transgressors might be motivated to engage in self-serving distortions of the offense (Kearns & Fincham, 2005), which might obscure gender differences in severity evaluations. It thus seems possible that the gender difference in thresholds for perceiving offense severity is less robust and consistent for transgressors than it is for victims.

One interesting finding to emerge from Study 6 was the large proportion of offenses that were reported by only one member of the dyad, even among high quality couples. As both transgressors and victims, more than half of the offenses that participants perceived went unnoticed (or at least unreported) by their partner. This finding suggests that even in high quality, committed romantic relationships, partners often have different perceptions or memories of incidents that occur on a day-to-day basis.

Also of note is that partners were substantially less likely to apologize for their offenses in Study 6 ($M = 46\%$) than in Study 1 ($M = 81\%$). One likely reason for this disparity across studies is the wording of the questions. In Study 1, participants were asked to report any instances in which they apologized or did something that might have deserved an apology. This wording likely focused their attention on apologies, increasing their likelihood of reporting incidents for which an apology was given. In Study 6, participants were asked to report any incidents in which they did something that might be considered "negative." There was no mention of apologies in the instructions, which likely contributed to the reduced apology rate. Another possibility for the disparity across studies is that apologies seem less necessary in close relationships. Consistent with Erich Segal's adage "love means never having to say you're sorry," perhaps everyday offenses easily roll off the backs of romantic partners with little need for an apology. Two separate investigations using hypothetical vignettes offer some support for

this interpretation, with participants indicating greater likelihood of apologizing to a stranger than to a friend (Guan, Park, & Lee, 2009; Hamilton & Hagiwara, 1992). Future research should explore whether a) apologies are indeed less likely to be offered within romantic relationships and, if so, b) this is because apologies are less necessary in close romantic relationships.

The interaction found between relationship quality and apology on ratings of forgiveness offers some insight into the latter question. Apologies were more strongly associated with forgiveness within relationships rated as higher quality than within relationships rated as lower quality; however, individuals were more likely to forgive their partner if they were in a higher quality relationship than if they were in a lower quality relationship *even when* they received no apology. This finding suggests that apologies may be less necessary in closer relationships than in less close relationships.

More interesting, however, is that the association between relationship quality and forgiveness was mediated by perceptions of the sincerity of the apology. This finding is consistent with past work demonstrating that individuals in high quality relationships are more likely to perceive their partner's behaviour in a positive light (McCullough et al., 1998; Kearns & Fincham, 2005). Notably, the content analysis of the apologies in the current study did not differ with relationship quality. This finding suggests that the higher sincerity ratings within higher quality relationships were not influenced as much by what was said as by how victims *interpreted* what was said. It is likely, however, that factors not assessed by our coding also influenced evaluations of sincerity, such as intonation, non-verbal behaviour, post-apology behaviour, and prior relationship history (e.g., whether their spouse "lived up" to their apologies in the past by changing their behaviour for the better). To better assess whether the association between relationship quality and sincerity ratings is influenced by victims having a positive bias

when evaluating their partners' apologies, an experimental paradigm needs to be used. For example, participants in relationships of varying quality could be presented with apologies for various offenses hypothetically committed by their partners. Participants could then evaluate the apologies on a range of dimensions (e.g., inclusion of the various elements, overall quality, sincerity).

To my knowledge, this is the first work to show that the effectiveness of apologies depends on the quality of the pre-existing relationship between the transgressor and victim. Although this finding appears intuitive, the opposite finding could have also been anticipated. For example, it seems plausible that, if love truly means never having to say you're sorry, apologies would serve no added benefit in higher quality relationships. Apologies could be particularly helpful in lower quality relationships however, as these relationships leave more room for apologies to exert their powerful influence on reconciliation. Future research should examine whether there are some circumstances under which this opposite pattern occurs, and whether similar relational factors (e.g., trust, closeness) also moderate the influence of apologies on forgiveness within other interpersonal relationships, such as friends and colleagues.

General Discussion

Although often harmonious, interpersonal relationships are sometimes threatened or temporarily injured by transgressions. Apologies are a common and effective technique used by transgressors to mitigate the damage caused by their offenses. In the present research, I explored the oft-assumed but seldom-demonstrated stereotype that women apologize more readily than men do. In Study 1, I used daily diaries to assess gender differences in everyday apology behaviour and found that women indeed apologized more frequently than men did. I found no difference in the proportion of offenses than men and women apologized for, however, suggesting that women may apologize more often than men do because they have a lower threshold for what constitutes offensive behaviour. In Study 2, I replicated a gender difference in apology behaviour using hypothetical offenses and obtained evidence that this difference is partially mediated by different judgments of offense severity.

In Study 3, I used a signal detection paradigm to more subtly assess women and men's tendencies to associate apologies with various potentially offensive behaviours. As hypothesized, I found that women exhibited a more liberal response bias in the direction of remembering an apology. In Study 4, I demonstrated that women and men similarly associate apologies with positive outcomes, and that women (but not men) endorse the stereotype that women apologize more often than men do. In Study 5, I obtained support for the mediation model developed in Study 2 using a more diverse sample and a different set of hypothetical offenses. In the final study, I returned to a daily diary method to collect everyday offenses and apologies occurring between married and cohabiting couples. Unlike Study 1, I found no gender difference in the number of offenses or apologies reported by transgressors. Consistent with Study 1, however, I found that women reported more offenses from the victim perspective than men reported. I also found no difference in the proportion of offenses than men and women apologized for or

reported receiving an apology for. Finally, I found no gender difference in the content of the apologies reported by either transgressors or victims.

Taken together, these studies provide compelling evidence that a gender difference in apology frequency is not caused by a gender difference in valuing of apologies or willingness to apologize. Men and women apologized for a similar proportion of the offenses they reported (Studies 1 and 6), evaluated apologies as being equally beneficial (Study 4), and increased their forgiveness to a similar extent upon receiving an apology (Studies 1 and 6). Moreover, in support of the threshold hypothesis, women judged hypothetical offenses to be more deserving of an apology to the extent that they judged the offenses to be more severe than men judged them to be (Studies 2 and 5). Rather than men being more reluctant to apologize than women, it appears that men apologize less frequently than women do because they tend to perceive offenses as less severe and therefore less deserving of an apology. These studies thus enhance our understanding of why and under what circumstances gender differences in apology behaviour may occur.

Potential Psychological Bases of Differential Thresholds

I propose two potential psychological bases of the gender difference in thresholds for offense severity. One possibility is that women have a lower threshold for both physical and social pain due to a variety of biological and psychosocial factors (“Gender and Pain,” 2007). Across a variety of languages, physical pain words are used to describe experiences of social pain (e.g., we feel “burned,” “crushed,” “hurt,” “broken,” and “heartache”; MacDonald and Leary, 2005). MacDonald and Leary (2005) argued that this link is not purely metaphorical, as physical and social pain share common physiological mechanisms. Recent neurological evidence supports this claim. Neuroimaging scans have revealed that social pain (such as the pain aroused by looking at a picture of an ex-partner) and physical pain (such as the pain aroused by noxious

thermal stimulation on the arm) activate common regions of the brain linked to both sensory and affective components of physical pain (Eisenberger, Lieberman, & Williams, 2003; Kross, Berman, Mischel, Smith, & Wager, 2011). Further, acetaminophen—a common physical pain reliever—reduces everyday experiences of social pain as well as neural responses to social pain in regions associated with the affective component of physical pain (DeWall et al., 2010).

In light of this neurological link between physical and social pain, it seems plausible that individuals who have a lower tolerance for one form of pain also have a lower tolerance for the other form of pain. Women report feeling more intense and more frequent physical pain than men report feeling, and physiological indicators (e.g., pupil dilation) reveal that women actually experience more pain than men experience (e.g., Ellermeier & Westphal, 1995; Giles & Walker, 2000; Unruh, 1996). Conceivably, if women are less resilient to physical pain, they might also have a lower threshold for social forms of pain, such as the pain inflicted by interpersonal offenses.

A second possibility is that women might perceive more offenses because they are more interdependent and thus more focused on the experiences of other people (Cross & Madson, 1997; 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) and greater empathy for victims (Eisenberg & Lennon, 1983). Women are also more likely than men are to pay attention to partners in an interaction (Ickes, Robertson, Tooke, & Teng, 1986), have self-values that are related to interpersonal harmony (Rosenberg, 1989), and experience negative psychological consequences (e.g., depression, lowered self-esteem) in response to social stress (Moran & Eckenrode, 1991). Thus,

in the average mixed-gender interaction, women may be more sensitive to social harmony and may therefore be more likely than men to see behaviour as offensive.

Cross-cultural research provides some support for the influence of interdependence on judgments of offense severity and apology likelihood. Individuals living in interdependent, collectivistic cultures—cultures that emphasize the preservation of relationship harmony and the pursuit of group interests (e.g., China, Japan; Hofstede, 1983; Markus & Kitayama, 1991)—tend to prefer dispute minimizing tactics such as negotiation, bargaining, and apologies, to a greater extent than individuals from individualistic cultures (e.g., United States; Haley, 1998; Itoi et al., 1996; Leung, 1987; Ohbuchi & Takahashi, 1994; Okumura & Wei, 2000; Takaku, 2000). In one especially informative study, Japanese participants evaluated harms depicted in hypothetical vignettes as more severe and indicated greater likelihood of apologizing for them than U.S. participants indicated (Itoi et al., 1996). Although the authors did not test for mediation in this study, they intuited that cultural differences in perceptions of severity were influencing the observed cultural differences in likelihood of apologizing. The authors further suggested that Japanese participants' tendency to evaluate the offenses as more severe was influenced by their interdependent culture.

One additional possibility is that men are indeed less sensitive to both social and physical pain than women are, but increasing interdependence is a potential *remedy* for the gender difference in severity thresholds. Increasing men's interdependence might make them more relationally concerned, leading them to be more attuned to their partners and possible relationship-damaging behaviours. This interpretation would help to explain the lack of gender difference in the number of offenses and apologies reported by transgressors in Study 6. Men in this study were in highly committed romantic relationships, and were likely as interdependent as

their female partners.¹⁵ It is possible that these men still had higher thresholds than women had for offensive behaviour (as reflected in the victim data), but that as transgressors, their heightened interdependence increased their sensitivity to actions that might have hurt their partners. This possibility presents an interesting avenue for future research.

Other Gender Differences in Thresholds

The present research suggests that men and women evidence different thresholds for offensive behaviour. Do men and women have different thresholds for other aspects of life? One possible domain already discussed is physical pain. Physiological and self-report data indicate that women experience more intense and frequent physical pain than men experience, suggesting that women might have lower thresholds for physical pain (e.g., Ellermeier & Westphal, 1995; Giles & Walker, 2000; Unruh, 1996).

Another domain in which women may have lower thresholds than men is risk perception. In one especially relevant survey study, women indicated less likelihood of engaging in risky behaviours than men did, and this gender difference was partially mediated by women perceiving greater likelihood and severity of potential negative outcomes (Harris, Jenkins, & Glaser, 2006). This work on risk assessment again highlights the importance of severity judgments in influencing gender differences in behaviour.

However, women may not always evidence lower thresholds for offense severity than men. For example, men may judge culture of honour offenses (e.g., insults to family, advances toward a romantic partner, physical aggression against self or family) as more severe than women judge them (Cohen & Nisbett, 1994; Cohen, Nisbett, Bowdle, & Schwarz, 1996;

¹⁵ Although I did not directly assess interdependence, I found no gender difference in relationship quality or any of its three subscales (felt security, commitment, and satisfaction).

Ijzerman, van Dijk, & Gallucci, 2007). It would be interesting to explore whether men would also score higher on judgments of apology deservingness for offenses of this nature.

Potential Alternative Explanation

One alternative explanation for the findings in the present research is that gender operates as a generalized status variable. It is possible, for example, that if women typically hold lower status positions than men hold, they may be more mindful of possibly offending others and consequently more likely to apologize for their behaviour. Consistent with this explanation, Brown and Levinson (1987) theorized that the transgressor's status relative to that of the victim is an important determinant of politeness strategies. They predicted that offenders holding lower status positions than their victims would be more likely to use politeness strategies than offenders with higher status relative to their victims. But research on the association between status and apology likelihood has yielded mixed results. Holmes (1990) collected a sample of apologies and found that the majority of apologies were offered between equals, but that there were nearly twice as many apologies offered upwards as there were downwards. Two studies using hypothetical offenses found no effects of status on the use of apologies (McLaughlin et al., 1983; Gonzales et al., 1990).

This alternative explanation is further weakened by the use of controlled vignette studies in the present research. In Study 2, for example, status of the victim was kept constant across the various offenses (the victim was always an equal-status friend of the transgressor), and the gender of the victim was fully crossed with the gender of the transgressor. If gender differences were only occurring because of status differences between men and women, one would expect that participants would be more likely to apologize to men than to women. However, I found no effects of victim gender. Although vignette studies might not tell us how people actually behave

in real life, it does not appear that the gender differences in the present research were caused solely by differences in status.

Limitations

Studying conflict and its resolution presents several methodological challenges. There is an inevitable trade-off between capturing real-life offenses and apologies, having control over variables of interest (e.g., the nature of the offense), and protecting participants from psychological risk or threats to their relationships. In the present research, I attempted to use diverse methods (daily diary, hypothetical vignette, remembered event studies) to optimize ecological validity and control without violating ethical concerns. Each of these methods has limitations, however. Daily diary studies enable the documentation of offenses and apologies as they occur in everyday life, but they introduce the problem of participants changing their behaviour as a result of being in the study. For example, following their first diary entry, participants in Studies 1 and 6 may have paid more attention to their own behaviour, altering it to commit fewer offensive actions or apologize for more of their offenses. Because it would have been highly intrusive and impractical to have participants complete a diary entry immediately after an offense had occurred, there was also a delay between the time of the offense and when participants completed their entries in the evening. Participants' memories of the events may therefore have been altered by events that had occurred between the time of the offense and the time of their entry. Studies of offenses that occurred months or even years later are even more susceptible to memory biases. In the second part of Study 2, participants recalled an offense that they had committed within the past three months. It is thus likely that participants' memories for these past events differed from their original experience (Gramzow & Willard, 2006; Kahneman & Riis, 2005; Ross, 1989). To control the content of the offenses and eliminate some of the

problems inherent in diary and remembered event studies, I used hypothetical vignettes in Studies 2, 3, 4, and 5. Of course, these vignette studies might not reveal how transgressors truly think, feel, or act in real life situations (Wilson & Gilbert, 2003). Despite the limitations associated with each method, however, together they converge to provide a compelling picture of when and why women apologize more than men do.

Future Research

The current studies have provided evidence that women regard identical offenses as more severe than men do, and that these differential judgments of severity mediate gender differences in judgments of apology deservingness. Future investigations should focus on elucidating the causes and remedies for the gender difference in thresholds for offense severity. To explore whether women are simply less resilient to physical and social pain, I plan to examine the correlation between tolerance for physical pain and judgments of offense severity. If women regard interpersonal offenses as more severe in part because they are more sensitive to both social and physical pain, physical pain tolerance and judgments of offense severity should be positively associated. To examine the influence of interdependence on severity thresholds, I plan to prime interdependence prior to assessing judgments of offense severity and apology deservingness. Inducing an interdependent self-construal should cause men—who typically have more independent self-construals than women have—to become more relationally concerned. I predict that this enhanced orientation toward relationship harmony will cause men to regard offenses as more severe and apologies as more warranted.

In Study 3, I found support for my prediction that women would evidence a more liberal bias toward remembering that an apology had been offered. Although I reasoned that women's greater tendency to regard an apology as warranted in the various situations may have informed

their reconstructions or guesses, I found no association between participants' prescriptive beliefs and their degree of bias. The absence of an association between prescriptive beliefs and bias suggests the need for a follow-up experimental study. Participants could, for example, read an article describing apologies as either warranted or unwarranted in a variety of situations. Participants would then read the vignettes and complete the recognition test. I predict that participants previously induced to perceive apologies as warranted would exhibit greater response bias than participants induced to perceive apologies as unwarranted. If found, these results would provide compelling evidence that women's lower threshold for seeing an apology as warranted influenced their response bias. This proposed study is therefore an important direction for future research.

Another direction for future research is to explore conditions under which men may apologize more than women do. As previously mentioned, men may be more sensitive to offenses that violate honour, such as insults or aggression toward family or inappropriate advances toward a romantic partner. Although it is likely that men would be offended to a greater degree by these types of offenses, it is unclear whether men would be more likely to apologize for them. If they were more likely, this research would provide further evidence for the importance of including severity thresholds in our understanding of gender differences in apology behaviour.

Finally, future research should explore the downstream consequences of gender differences in apology behaviour. How do women interpret the absence of an apology when they have perceived an offense, and do their interpretations differ according to the gender of their transgressor? How do men interpret the presence of an apology when they haven't perceived an offense, and do their interpretations differ according to the gender of their transgressor? How do

these interpretations then affect resolution of the dispute at hand and the relationship between the transgressor and victim? Given the manifold benefits of apologies, it seems likely that gender differences in severity thresholds have consequences that extend beyond the presence or absence of an apology.

Implications

Previous interpretations of the stereotype that women apologize more than men do emphasized gender differences in willingness to apologize (Engel, 2001; Tannen, 1996; 1999). For example, men intentionally resist apologizing when they have done something wrong because their “delicate egos” (Engel, p. 49) can’t handle being put in a “one-down position” (Tannen, p. 68). Such interpretations imply that men are at fault for potential disagreements about whether an apology should be offered, and that the onus is on them to change their apology behaviour. The present research provides consistent evidence for a different interpretation. Rather than one gender being to blame, men and women simply have discrepant judgments regarding the severity of offenses and consequently, the necessity of apologies.

This new interpretation highlights the potentially negative consequences of gender differences in severity thresholds for mixed-gender interactions. For example, if women perceive offenses that their male interaction partners do not notice, women might interpret the absence of an apology as evidence that the males are malicious or indifferent to their well-being. Similarly, men may regard their apologizing female interaction partners as overly emotional or diffident, attributions that might be particularly problematic in situations where the female is trying to obtain respect or status (e.g., work settings where women are underrepresented or in a position of authority). These examples point to the need for better communication in the context of mixed-gender conflicts. Rather than assuming that male “transgressors” are fully aware that their

behaviour was bothersome, it might be advantageous for women to state how and why they were offended. It might be equally advantageous for men to be responsive to this communication, discussing and perhaps offering an apology for the behaviour if they feel it is warranted. The present research suggests that if men are aware of their offenses, they are just as likely as women are to apologize for them.

References

- Allard, F., Graham, S., & Paarsalu, M. E. (1980). Perception in sport: Basketball. *Journal of Sport Psychology, 2*, 14-21.
- Baumeister, R. F., & Catanese, K. (2001). Victims and perpetrators provide discrepant accounts: Motivated cognitive distortions about interpersonal transgressions. In J. P. Forgas, K. D. Williams & L. Wheeler (Eds.), *The social mind: Cognitive and motivational aspects of interpersonal behavior* (pp. 274-293). New York, NY, US: Cambridge University Press.
- Bavelas, J. (2004). *An analysis of formal apologies by Canadian churches to First Nations*. Occasional Paper No. 1, Centre for Studies in Religion & Society, University of Victoria.
- Belushi, J. (2006). *Real men don't apologize*. New York: Hyperion.
- Bennett, M., & Earwaker, D. (1994). Victims' responses to apologies: The effects of offender responsibility and offense severity. *The Journal of Social Psychology, 134*, 457-464.
- Beyer, S. (1998). Gender differences in self-perception and negative recall biases. *Sex Roles, 38*, 103-133.
- Beyer, S., & Bowden, E. M. (1997). Gender differences in self-perceptions: Convergent evidence from three measures of accuracy and bias. *Personality and Social Psychology Bulletin, 23*, 157-172.
- Bradbury, T. N., & Fincham, F. D. (1990). Attributions in marriage: Review and critique. *Psychological Bulletin, 107*, 3-33.
- Brown, H. D., Kosslyn, S. M., Breiter, H. C., Baer, L., & Jenike, M. A. (1994). Can patients with obsessive-compulsive disorder discriminate between percepts and mental images? A signal detection analysis. *Journal of Abnormal Psychology, 103*, 445-454.

- Brown, P., & Levinson, S. (1987). *Politeness: Some universals in language usage*. Cambridge, UK: Cambridge University Press.
- Buhrmester, M. D., Kwang, T., & Gosling, S. D. (in press). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*.
- Bybee, J. (1998). The emergence of gender differences in guilt during adolescence. In J. Bybee (Ed.), *Guilt and Children* (pp. 113-125). San Diego: Academic Press.
- Cate, R. M., Koval, J., Lloyd, S. A., & Wilson, G. (1995). Assessment of relationship thinking in dating relationships. *Personal Relationships*, 2, 77-95.
- Classen, W., & Netter, P. (1985). Sex differences in perceiving analgesic drug effects as measured by subjective pain ratings: A concealed signal detection theory analysis. *Perceptual and Motor Skills*, 61, 761-762.
- 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>
- Cross, S. E., & Madson, L. (1997). Models of the self: Self-construals and gender. *Psychological Bulletin*, 122, 5-37.
- Cohen, D., & Nisbett, R. E. (1994). Self-protection and the culture of honor: Explaining southern violence. *Personality and Social Psychology Bulletin. Special Issue: The Self and the Collective*, 20, 551-567.
- Cohen, D., Nisbett, R. E., Bowdle, B. F., & Schwarz, N. (1996). Insult, aggression, and the Southern culture of honor: An "experimental ethnography." *Journal of Personality and Social Psychology*, 70, 945-960.

- Darby, B. W., & Schlenker, B. R. (1982). Children's reactions to apologies. *Journal of Personality and Social Psychology, 43*, 742-753.
- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology, 10*, 85.
- DeWall, N. C., MacDonald, G., Webster, G. D., Masten, C. L., Baumeister, R. F., Powell, C., Combs, D., Schurtz, D. R., Stillman, T. F., Tice, D. M., Eisenberger, N. I. (2010). Acetaminophen reduces social pain: Behavioral and neural evidence. *Psychological Science, 21*, 931-937.
- Eagly, A. H. (2009). The his and hers of prosocial behavior: An examination of the social psychology of gender. *American Psychologist, 64*, 644-658.
- Eaton, J. A. (2006). Repentance as validation: Toward an understanding of the mechanisms behind repentance and forgiveness. *Dissertation Abstracts, Section B: The Sciences and Engineering, 67*(1-B), 598.
- Eisenberg, N., & Lennon, R. (1983). Sex differences in empathy and related capacities. *Psychological Bulletin, 94*, 100-131.
- Eisenberger, N. I., Lieberman, M. D., & Williams, K. D. (2003). Does rejection hurt? An fMRI study of social exclusion. *Science, 302*, 290-292.
- Ellermeier, W., & Westphal, W. (1995). Gender differences in pain ratings and pupil reactions to painful pressure stimuli. *Pain, 61*, 435-439.
- Engel, B. (2001). *The power of apology*. New York: John Wiley & Sons.
- Exline, J. J., DeShea, L., & Holeman, V. T. (2007). Is apology worth the risk? Predictors, outcomes, and ways to avoid regret. *Journal of Social and Clinical Psychology, 26*, 479-504.

- Fincham, F. D., Beach, S. R., & Baucom, D. H. (1987). Attribution processes in distressed and nondistressed couples: IV. Self-partner attribution differences. *Journal of Personality and Social Psychology*, 52, 739-748.
- Frey, P. W., & Adelman, P. (1976). Recall memory for visually presented chess positions. *Memory & Cognition*, 4, 541-547.
- Gardner, R. M., Urrutia, R., Morrell, J., & Watson, D. (1990). Children's judgments of body size and distortion. *Cognitive Development*, 5, 385-394.
- “Gender and Pain”. (2007). *Brain Briefings*. Society for Neuroscience. Retrieved April 6, 2011, from http://www.sfn.org/index.aspx?pagename=brainBriefings_gender_and_pain.
- Gibney, M., Howard-Hassman, R. E., Coicaud, J., & Steiner, N. (2008). The Age of apology: Facing up to the past. *International Journal of Transitional Justice*, 2, 429-430.
- Giles, B. E., & Walker, J. S. (2000). Sex differences in pain and analgesia. *Pain Reviews*, 7, 181-193.
- Gilligan, C. (1994). *In a different voice: Women's conceptions of self and of morality*. New York: Garland Publishing.
- Goffman, E. (1971). *Relations in public*. New York: Basic Books.
- Gonzales, M. H., Pederson, J. H., Manning, D. J., & Wetter, D. W. (1990). Pardon my gaffe: Effects of sex, status, and consequence severity on accounts. *Journal of Personality and Social Psychology*, 58, 610-621.
- Gramzow, R. H., & Willard, G. (2006). Exaggerating current and past performance: Motivated self-enhancement versus reconstructive memory. *Personality and Social Psychology Bulletin*, 32, 1114-1125.

- Guan, X., Park, H. S., & Lee, H. E. (2009). Cross-cultural differences in apology. *International Journal of Intercultural Relations*, 33, 32-45.
- Haley, J. O. (1998). Apology and pardon: Learning from Japan. *The American Behavioral Scientist*, 41, 842-867.
- Hall, J. A. (1978). Gender differences in decoding nonverbal cues. *Psychological Bulletin*, 85, 845-875.
- Hamilton, V. L., & Hagiwara, S. (1992). Roles, responsibility, and accounts across cultures. *International Journal of Psychology. Special Issue: Social Psychological Approaches to Responsibility and Justice: The View Across Cultures*, 27, 157-179.
- Harris, C. R., Jenkins, M., & Glaser, D. (2006). Gender differences in risk assessment: Why do women take fewer risks than men? *Judgment and Decision Making*, 1, 48-63.
- Harvey, J. H., Flanary, R., & Morgan, M. (1986). Vivid memories of vivid loves gone by. *Journal of Social and Personal Relationships*, 3, 359-373.
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76, 408-420.
- Heider, F. (1958). *The psychology of interpersonal relations*. Hoboken, NJ, US: John Wiley & Sons Inc.
- Herlitz, A., & Rehnman, J. (2008). Sex differences in episodic memory. *Current Directions in Psychological Science*, 17, 52-56.
- Hofstede, G. (1983). National cultures revisited. *Behavior Science Research*, 18, 285-305.
- Holmes, J. (1989). Sex differences and apologies: One aspect of communicative competence. *Applied Linguistics*, 10, 194-213.
- Holmes, J. (1990). Apologies in New Zealand English. *Language in Society*, 19, 155-199.

- Holmes, A. F. (1995). *Women, Men, and Language*. London: Longman.
- Ijzerman, H., van Dijk, W., & Gallucci, M. (2007). A bumpy train ride: A field experiment on insult, honor, and emotional reactions. *Emotion, 7*, 869-875.
- Itoi, R., Ohbuchi, K., & Fukuno, M. (1996). A cross-cultural study of preference of accounts: Relationship closeness, harm severity, and motives of account making. *Journal of Applied Social Psychology, 26*, 913-934.
- Kahneman D., & Riis J. (2005). Living, and thinking about it: Two perspectives on life. In F. A. Huppert, N. Baylis & B. Keverne (Eds.), *The science of well-being* (pp. 285-304). Oxford: Oxford University Press.
- Kahneman, D., & Tversky, A. (1973). On the psychology of prediction. *Psychological Review, 80*, 237-251.
- Kearns, J. N., & Fincham, F. D. (2005). Victim and perpetrator accounts of interpersonal transgressions: Self-serving or relationship-serving biases? *Personality and Social Psychology Bulletin, 31*, 321-333.
- 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.
- Kross, E., Berman, M. G., Mischel, W., Smith, E. E., & Wager, T. D. (2011). Social rejection shares somatosensory representations with physical pain. *Proceedings of the National Academy of Sciences*, early online publication.
- Lakoff, R. (1975). *Language and woman's place*. New York: Harper & Row.
- Lazare, A. (2004). *On apology*. New York: Oxford University Press.

- Leung, K. (1987). Some determinants of reactions to procedural models for conflict resolution: A cross-national study. *Journal of Personality and Social Psychology, 53*, 898-908.
- 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.
- 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.
- Marigold, D. C., Holmes, J. G., & Ross, M. (2007). More than words: Reframing compliments from romantic partners fosters security in low self-esteem individuals. *Journal of Personality and Social Psychology, 92*, 232-248.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224-253.
- Marquié, J. C., & Baracat, B. (2000). Effects of age, education, and sex on response bias in a recognition task. *The Journals of Gerontology, 55*, 266-272.
- 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.
- McKeithen, K. B., Reitman, J. S., Rueter, H. H., & Hirtle, S. C. (1981). Knowledge organization and skill differences in computer programmers. *Cognitive Psychology, 13*, 307-325.
- McLaughlin, M. L., Cody, M. J., & O'Hair, H. D. (1983). The management of failure events: Some contextual determinants of accounting behavior. *Human Communication Research, 9*, 208-224.

- Miller, J. B. (1984). *The development of women's sense of self*. Working paper No. 12. Wellesley, MA: Stone Center Working Paper Series.
- 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.
- Moran, P. B., & Eckenrode, J. (1991). Gender differences in the costs and benefits of peer relationships during adolescence. *Journal of Adolescent Research, 6*, 396-409.
- Murray, S. L., & Holmes, J. G. (1993). Seeing virtues in faults: Negativity and the transformation of interpersonal narratives in close relationships. *Journal of Personality and Social Psychology, 65*, 707-722.
- Murray, S. L., Holmes, J. G., & Griffin, D. W. (2000). Self-esteem and the quest for felt security: How perceived regard regulates attachment processes. *Journal of Personality and Social Psychology, 78*, 478-498.
- Neath, I. (2008). *Recognition memory*. Retrieved March 10, 2011, from <http://memory.psych.mun.ca/models/recognition/>
- 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.
- Ohbuchi, K., & Takahashi, Y. (1994). Cultural styles of conflict management in Japanese and Americans: Passivity, covertness, and effectiveness of strategies. *Journal of Applied Social Psychology, 24*, 1345-1366.
- Okumura, K. and Wei, L. (2000). The concept of self and apology strategies in two cultures. *Journal of Asia Pacific Communication 10*, 1-24.

- Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision Making*, 5, 411-419.
- Pixton, T. S. (2011). Happy to see me, aren't you, Sally? Signal detection analysis of emotion detection in briefly presented male and female faces. *Scandinavian Journal of Psychology*, early online publication.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Method, Instruments & Computers. Special Edition: Web-based archive of norms, stimuli, and data, Part 2*, 36, 717-731.
- Rehman, J., & Herlitz, A. (2007). Women remember more faces than men do. *Acta Psychologica*, 124(3), 344-355.
- Risen, J. L., & Gilovich, T. (2007). Target and observer differences in the acceptance of questionable apologies. *Journal of Personality and Social Psychology*, 92, 418-433.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Rosenberg, M. (1989). *Society and the adolescent self-image*. Middletown, CT: Wesleyan University Press.
- 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). New York: Academic Press.
- Ross, M. (1989). The relation of implicit theories to the construction of personal histories. *Psychological Review*, 96, 341-357.
- Ross, M., & Holmberg, D. (1992). Are wives' memories for events in relationships more vivid than their husbands' memories? *Journal of Social and Personal Relationships*, 9, 585-604.

- 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.
- Schlenker, B. R., & Darby, B. W. (1981). The use of apologies in social predicaments. *Social Psychology Quarterly*, 44, 271-278.
- 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. (2010a). Why women apologize more than men: Gender differences in thresholds for offensive behavior. *Psychological Science*, 21, 1649-1655.
- Schumann, K., & Ross, M. (2010b). 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 psychology of justice and legitimacy: The Ontario Symposium* (Vol. 11). New York: Psychology Press.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7, 422-445.
- Silver, N. C., & Dunlap, W. P. (1987). Averaging correlation coefficients: Should fisher's z transformation be used? *Journal of Applied Psychology*, 72, 146-148.
- Smith, N. (2008). *I was wrong: The meaning of apologies*. New York: Cambridge University Press.
- Snodgrass, J. G., Levy-Berger, G., & Haydon, M. (1985). *Human experimental psychology*. New York: Oxford.
- Struthers, C. W., Eaton, J., Santelli, A. G., Uchiyama, M., & Shirvani, N. (2008). The effects of

- attributions of intent and apology on forgiveness: When saying sorry may not help the story. *Journal of Experimental Social Psychology*, 44, 983-992.
- Takaku, S. (2000). Culture and status as influences on account giving: A comparison between the United States and Japan. *Journal of Applied Social Psychology*, 30, 371-388.
- 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). Contribute makes right. *Civilization*, 6, pp. 67-70.
- Tannen, D. (2001). *You just don't understand: Women and men in conversation*. New York: William Morrow.
- Tavuchis, N. (1991). *Mea culpa*. Stanford, CA: Stanford University Press.
- Tomlinson, E. C., Dineen, B. R., & Lewicki, R. J. (2004). The road to reconciliation: Antecedents of victim willingness to reconcile following a broken promise. *Journal of Management*, 30, 165-187.
- Unruh, A. M. (1996). Gender differences in clinical pain experience. *Pain*, 65, 123-167.
- Wilson, T. D., & Gilbert, D. T. (2003). Affective forecasting. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 35, pp. 345-411). San Diego, CA: Elsevier.
- Zechmeister, J. S., Garcia, S., Romero, C., & Vas, S.N. (2004). Don't apologize unless you mean it: A laboratory investigation of forgiveness and retaliation. *Journal of Social and Clinical Psychology*, 23, 532-564.

Appendix A

Imagined Scenarios (Study 2)

Scenario #1

You go out with some friends one night and return at 3am. You're hungry, so you go to the kitchen to make a snack. You know your friend, whom you live with, is fast asleep because he has an important job interview at 8:30 the next morning. She asked before you left that you be quiet when you got home. You don't want to wake her, but you risk it because you're really hungry. While you're making the food, you end up making enough noise to wake up your friend.

The next day your friend tells you that she couldn't fall back asleep until 5am and ended up going to the interview on only a few hours of sleep.

Scenario #2

You promised to send your section of a paper you are doing with your friend to her two days ago. However, you only send it today, because you had to study for a midterm that you had last night. You could have worked on the paper earlier to avoid this conflict, but you miscalculated how much work you had and ended up leaving yourself too little time. You chose to study for your midterm rather than work on the paper.

Because of your two-day delay, your friend has to forfeit studying for the midterm she has tomorrow in order to complete the paper (which only she can do because she has the necessary information) and hand it in on time.

Scenario #3

Coming home from school one night, you are in a grumpy mood because you just had one of those days. You want to be alone, but your friend, with whom you live, starts talking to you. You could tell her that you need to be alone, but instead you act irritably towards her. Eventually she notices that you're upset, so she asks you what's wrong. You know she's just being nice, but you can't help but snap at her and start an argument.

When she tries to calm you down and cheer you up, you tell her that she's annoying and leave the room.

Appendix B

Vignettes (Studies 3 and 4)

You have 5 minutes to read through the scenarios listed below. You will later be given a memory test on these scenarios, so try to make sure that you read through all of them at least once.

While Patricia is at a party with her boyfriend, she unintentionally lets a secret of his out of the bag. He is really embarrassed. She later apologizes to him for betraying his confidence.

Robert is stressed about meeting a strict deadline at work. After the task is completed, Robert realizes that he had been bossing a colleague around over the last few days. Robert apologizes to him for being so bossy.

An acquaintance of Barbara's hosts a potluck at his house. Barbara finishes work early so she decides to attend the potluck last minute. She apologizes to the host for not contributing anything to his potluck.

David is at a colleague's party, and he accidentally spills his cranberry juice on the white carpet. When his colleague sees the spill, David asks him for a paper towel. David doesn't apologize.

Karen wants to have a small party, but she doesn't want to invite a friend in her group that has been getting on her nerves lately. When the friend confronts Karen about not inviting her, Karen doesn't apologize.

Before Jason leaves for vacation, he promises his mother that he'll call her shortly after his plane lands. He forgets to call her until the next day. Jason apologizes to his mom for forgetting to call.

Chris is talking to a friend about a movie he just went to see, and accidentally tells her what happens at the end. She tells Chris that she was really looking forward to seeing the movie. Chris apologizes for ruining it for her.

Melissa is standing on the bus because it is very full. The bus driver stops the bus suddenly, and she loses her balance, stepping on her brother's toe. Melissa apologizes to him.

Jessica and her friend are on their bikes when her friend doesn't see a pothole and wipes out. She's pretty scraped up, but Jessica laughs at her. She gets upset with Jessica for laughing at her. Jessica apologizes.

Rick is out for dinner with his girlfriend, and he quickly realizes that the waitress is flirting with him. She's really cute, so Rick flirts back a little, upsetting his girlfriend. Rick doesn't apologize to her.

Kim's sister buys a new outfit and asks Kim how she looks in it. Kim doesn't find it flattering on her, so she tells her the truth. Kim's sister gets noticeably upset by her comments. Kim doesn't apologize.

Nancy borrows a shovel from a neighbor but forgets it outside for a week, causing it to rust from the snow. When Nancy returns it to her neighbor, she apologizes to her for the damage.

While Jim is talking to his brother, Jim mentions that he thinks his brother's girlfriend is a snob. Jim's brother looks hurt. Jim doesn't apologize for criticizing her.

During a meeting at work, Sarah's boss gives her credit for another colleague's work, and Sarah doesn't correct the mistake. Sarah later apologizes to her colleague for accepting the credit for his work.

Cynthia promises her boyfriend that she will clean the house before he brings his family over that evening, but she is swamped with work and doesn't find the time to clean up. Cynthia apologizes to him when he gets home.

Sean finds a container of his favourite Haagen Dazs ice cream in the freezer. It belongs to his sister but he eats it anyway. Sean's sister notices that it's missing, but Sean doesn't apologize for eating it.

Laura and a couple of colleagues are sharing jokes while taking a lunch break. Laura tells a joke that insults Americans. One of her colleagues doesn't laugh and tells Laura he's American. Laura doesn't apologize.

Lisa runs into an acquaintance after having lunch, and while talking, accidentally lets out a loud, garlicky burp. Lisa continues talking and doesn't apologize.

Joanna tells a colleague that the cookies another colleague baked were awful, but then realizes that the colleague who baked them overheard her. Joanna doesn't apologize to her.

Martin and his friends are playing softball in the neighborhood, and Martin accidentally hits a neighbour's car with it. The neighbour happens to be gardening outside. Martin apologizes to him.

Aaron borrows a friend's shirt for a night out on the town but spills ketchup on it. Aaron knows it's one of his friend's favorites. He apologizes when he returns the shirt to his friend.

After having a bad day at work, Eli snaps at his girlfriend when she asks him to help her with something. She's shocked and upset. Eli doesn't apologize to her.

Jen's office mate is on a diet. Though she usually tries to be sensitive, Jen is really craving chocolate today. She eats a chocolate bar right in front of her. Jen apologizes to her officemate.

Mark is irritable one day and runs into an acquaintance. Mark really doesn't feel like talking, so he's very abrupt with him. Mark tells him that he has to go. Mark walks away without apologizing.

Jane comes home late one night and goes into the kitchen to make some food. She wakes up her boyfriend because she's noisy. He's grumpy about it. Jane doesn't apologize to him.

Shayna goes to the washroom in the middle of the night and finishes the toilet paper roll. She's tired so she doesn't replace it. The next morning Shayna's boyfriend gets stuck with no toilet paper. Shayna doesn't apologize.

Craig's boss comes by his office and asks him if he knows where one of Craig's colleagues is. Craig tells him that she left the office early to go on a date. The next day Craig apologizes to his colleague for not covering for her.

John's father buys him a shirt for his birthday that John really doesn't like. John tells him that he doesn't like it and asks his father if he can return it. John sees that his father looks hurt. John apologizes to him.

Philip runs into an acquaintance on the street, and she has her baby with her. Philip tells her that her son is adorable. She looks offended and tells Philip that the baby is actually a girl. Philip doesn't apologize for his error.

Travis has plans to go to dinner with a friend who is in town for a night. Another friend offers Travis a ticket to a concert last minute, so Travis decides to cancel his dinner plans. Travis does not apologize to his friend.

Danny gets home one day to find that his girlfriend has cooked him dinner and bought him a gift. Danny forgot that it's their anniversary, and didn't do anything for his girlfriend. Danny apologizes for forgetting.

Anne is on the phone with a friend when her cell phone suddenly dies and hangs up on her friend. Anne plugs her phone into the charger, but decides not to call her back until later that night. Anne doesn't apologize.

While playing soccer with some acquaintances, Kathryn slide tackles an opponent to try to take the ball off him. She accidently takes him out, and he hits the ground pretty hard. Kathryn doesn't apologize.

A friend tells Brandon an important secret. Another friend correctly guesses the secret, and asks Brandon if it's true. Brandon's facial expressions give it away. Brandon doesn't apologize to his friend for revealing her secret.

Linda runs into an acquaintance at a nightclub. While they are talking, Linda spills her drink on her acquaintance's dress. Linda apologizes for her clumsiness.

Julia has plans with a friend to go for a run in the morning. Julia sleeps in, and her friend calls her later to find out where she was. Julia doesn't apologize to him for missing the run.

Monica's mother has repeatedly asked Monica to clean her dishes after cooking, but Monica again leaves them in the sink because she's running late. When Monica gets home, she apologizes to her mother for leaving them.

On Kyle's way home he picks up the mail from the mailbox and unintentionally opens his girlfriend's credit card bill. Kyle secretly takes a peek at it before giving it to his girlfriend. He apologizes to her for opening it.

At an office party Tom strikes up a conversation with a colleague whose name he can't remember. Tom asks him to remind him of his name. Tom apologizes to him for forgetting it.

James promises his father to help him clean out the garage on the weekend, but decides to go to the beach to hang out with friends instead. James doesn't apologize to his father for breaking his promise.

Appendix C

Individual Difference Measures (Study 6)

Relationship Quality (Marigold, Holmes, & Ross, 2007)

Please consider how you feel about your relationship right now when you answer the following questions.

| | | | | | | |
|----------------------------|----------|----------|----------------------------|----------|----------|----------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| not at all true | | | moderately true | | | completely true |

1. I am confident that my partner will always want to look beyond my faults and see the best in me. _____
2. My partner loves and accepts me unconditionally. _____
3. I have found that my partner is a thoroughly dependable person, especially when it comes to things that are important. _____
4. Though times may change and the future is uncertain, I know my partner will always be ready and willing to offer me strength and support. _____
5. Based on past experience I cannot, with complete confidence, rely on my partner to keep promises made to me. _____
6. I am never concerned that unpredictable conflicts and serious tensions may damage our relationship because I know we can weather any storm. _____
7. I feel close to my partner. _____
8. My partner and I are strongly connected to each other. _____
9. My partner knows me extremely well. _____
10. I feel very much understood by my partner. _____
11. I am very committed to my relationship. _____
12. I feel enthusiastic about my relationship. _____
13. I see my relationship as a burden. _____
14. I am confident my partner will always want to stay in our relationship. _____
15. Sometimes I wonder whether my partner is really committed to making our relationship work. _____
16. I am extremely happy with my current romantic relationship. _____
17. I have a very strong relationship with my partner. _____
18. I do not feel that my current relationship is successful. _____
19. My relationship with my partner is very rewarding (i.e., gratifying, fulfilling). _____

Interpersonal Reactivity Index (Davis, 1980)

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. Please read each item carefully before responding and answer as honestly as you can.

| | | | | |
|-----------------------------------|---|---|---|---------------------------|
| A | B | C | D | E |
| Does not describe me very well | | | | Describes me very well |

1. I often have tender, concerned feelings for people less fortunate than me. (EC)
2. I sometimes find it difficult to see things from the "other guy's" point of view. (PT)
3. Sometimes I don't feel very sorry for other people when they are having problems. (EC)
4. I try to look at everybody's side of a disagreement before I make a decision. (PT)
5. When I see someone being taken advantage of, I feel kind of protective towards them. (EC)
6. I sometimes try to understand my friends better by imagining how things look from their perspective. (PT)
7. Other people's misfortunes do not usually disturb me a great deal. (EC)
8. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (PT)
9. When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (EC)
10. I am often quite touched by things that I see happen. (EC)
11. I believe that there are two sides to every question and try to look at them both. (PT)
12. I would describe myself as a pretty soft-hearted person. (EC)
13. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (PT)
14. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (PT)

PT = perspective-taking scale

EC = empathic concern scale

Relationship Thinking Scale (Cate, Koval, Lloyd, & Wilson, 1995)

1. I think about whether my partner feels the same about me as I do about him/her. (PT)
2. I reflect on how much I love my partner (PAT)
3. I wonder about how close my partner feels toward me (PT)
4. I reflect on whether I am being treated fairly/unfairly in our relationship (PT)
5. I think about our sexual relationship (PAT)
6. I reflect on how much my partner loves me (PAT)
7. I wonder about how my partner feels about our relationship (PT)

PT = partner thinking subscale

PAT = positive affect thinking subscale

Self-Esteem Scale (Rosenberg, 1965)

1. On the whole I am satisfied with myself.
2. At times I think that I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I am a person of worth, at least the equal of others.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

Appendix D

Full Daily Diary Questionnaire (Study 6)

Section I:

Please think of any instances today where you did something to your romantic partner that might have been considered “negative” behaviour. Please list each instance separately. Sometimes it takes a moment or two to remember an event, so please take your time to reflect on the interactions you had with your romantic partner throughout the day.

If after giving it some thought you **cannot** think of an event, please click [HERE](#)

If you **can** think of an event, please describe it below:

Event #1

1. Briefly describe what happened:

2. How severe were the consequences of your actions for your partner?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Extremely</i> |

3. How upset do you think your partner was?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Extremely</i> |

4. How guilty did you feel about this incident?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Extremely</i> |

5. How responsible did you feel for this incident?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Extremely</i> |

6. How hurtful were your actions?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Extremely</i> |

7. How much did you share your partner’s emotional reaction to this incident?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Very much</i> |

8. Did you try to see this incident from your partner's point of view?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Very much</i> |

9. Did your partner try to see the incident from your point of view?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Very much</i> |

10. Do you think that your partner deserved an apology from you?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Very much</i> |

11. Do you think your partner has forgiven you for this incident?

| | | | | | | |
|-------------------|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Completely</i> |

12. Do you think this incident has been resolved?

| | | | | | | |
|-------------------|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Completely</i> |

13. At this moment, how close do you feel to your partner?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Extremely</i> |

14. At this moment, how much do you feel that your partner loves and accepts you, no matter what?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Very much</i> |

15. Did you apologize to your partner? YES NO

➤ If yes, what did you say?

➤ If yes, how sincere was your apology?

| | | | | | | |
|-------------------|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <i>Not at all</i> | | | | | | <i>Extremely</i> |

16. Did your partner request an apology from you? YES NO

Appendix E

Matched Sample of Offenses (Study 6)

The focus of this section is on matched events from complementary perspectives, as they enable the comparison of transgressor and victim perspectives of the same incident.

Of the 60 participating couples, 42 reported at least one matching event. Participants who reported at least one matching event (and were therefore included in this sample of matched offenses) did not significantly differ from participants who reported no matching events on relationship status, relationship length, age, relationship quality, self-esteem, or number of days signed in. However, participants included in the matched sample reported significantly more events ($M = 5.41, SD = 3.29$) than participants with no matching events ($M = 3.22, SD = 2.13$), $t(119) = 3.67, p < .001$.

The 42 couples in the matched sample reported between one and nine matching events ($M = 2.40, SD = 2.04$). Men were the transgressors and women the victims in 52 of the 101 matched events; women were the transgressors and men the victims in the remaining 49 matched events. Relational offenses comprised the majority (70.29%) of these matched offenses, followed by inconveniences (13.86%), failed obligations (12.87%), and physical/possession offenses (2.97%).

To assess effects for perspective, I aggregated across all events reported by each participant to account for within-person dependence. Separate paired t -tests were then conducted on these aggregated variables for events when the transgressor was female and the victim male, and events when the transgressor was male and the victim female. See Table 7 for means, standard deviations, and correlations associated with the analyses reported in this section.

Table 7
Perspective differences as a function of gender in Study 6

| | Female Transgressor | Male Victim | <i>r</i> | Male Transgressor | Female Victim | <i>r</i> |
|-----------------------------------|------------------------|----------------|------------------|----------------------|------------------|----------|
| % Offenses with Apology | .55 (.46) | .37 (.43) | – | .58 (.44) | .51 (.43) | – |
| Offense Severity | 3.40 (1.45) | 2.95 (1.22) | .27 | 2.85 (1.09) | 3.14 (1.40) | .54** |
| Transgressor Guilt | 3.94 (1.39) | 2.77 (1.52) | .37* | 3.54 (1.39) | 2.80 (1.25) | -.04 |
| Transgressor Responsibility | 4.22 (1.75) | 2.95 (1.72) | .35 [†] | 4.61 (1.51) | 3.51 (1.27) | .14 |
| Actions Hurtful | 3.07 (1.21) | 2.80 (1.46) | .43* | 2.56 (1.25) | 3.14 (1.30) | .48** |
| Transgressor See Point of View | 4.43 (1.20) | 2.90 (1.48) | -.01 | 4.34 (1.70) | 3.10 (1.89) | .00 |
| Apology Deservingness | 4.38 (1.76) | 4.00 (1.83) | -.02 | 4.55 (1.71) | 4.21 (1.64) | -.13 |
| Victim Forgiveness | 5.57 (1.09) | 5.65 (1.48) | .66*** | 5.81 (1.34) | 5.89 (1.15) | .66*** |
| Incident Resolved | 5.30 (1.49) | 5.38 (1.53) | .40* | 5.76 (1.34) | 5.08 (1.87) | .54** |
| Apology Sincerity | 5.98 (0.80) | 5.42 (1.42) | .32 | 5.70 (1.05) | 5.43 (1.54) | .30 |
| Coded Apology Comprehensive | 2.32 (0.91) | 1.85 (0.61) | .34 | 1.53 (0.84) | 2.06 (0.71) | .06 |

Note. *** $p < .001$; ** $p < .01$; * $p < .05$; [†] $p < .10$.

An analysis of transgressors' and victims' accounts of whether an apology had been offered revealed that female transgressors reported apologizing for a higher proportion of offenses than their male victims reported receiving, $t(28) = 2.69, p = .01$. Male transgressors reported apologizing for a similar percentage of offenses as female victims reported receiving, $t(29) = 1.03, p = .31$.

Female transgressors rated their offenses as non-significantly more severe than their male victims rated them, $t(28) = 1.47, p = .15$. Male transgressors rated their offenses as non-significantly less severe than their female victims rated them, $t(29) = -1.28, p = .21$.¹⁶ Both female and male transgressors reported feeling more guilty about the incident than their victims reported thinking their partner felt, $t(28) = 3.86, p = .001$ and $t(29) = 2.14, p = .04$, respectively. Both female and male transgressors also reported feeling more responsible for the incident than their victims reported thinking their partner felt, $t(28) = 3.46, p = .002$ and $t(29) = 3.29, p = .003$, respectively.

Female transgressors rated their actions as about as hurtful as their male victims rated them, $t < 1$. Male transgressors rated their actions as significantly less hurtful than their female victims rated the same behaviors, $t(29) = -2.43, p = .02$. Both female and male transgressors' ratings of how hurtful their actions were were significantly correlated with victims' responses, $r_s \geq .43, p_s < .05$. Female and male transgressors indicated that they tried to see their partner's point of view to a greater extent than their victims reported, $t(28) = 4.30, p < .001$ and $t(29) = 2.68, p = .01$, respectively. Transgressors and victims did not differ in the extent to which they believed an apology was deserved, $t_s < 1$.

¹⁶ Collapsed across perspective, women ($M = 3.22, SD = 1.38$) rated the offenses as more severe than men ($M = 2.80, SD = 1.06$) rated them, $t(41) = -2.04, p < .05$.

Both female and male transgressors' estimates of victim forgiveness mirrored victims' responses at the mean level, $t_s < 1$. Transgressors' estimates of victim forgiveness were also highly correlated with victims' ratings of forgiveness, $r_s = .66, p_s < .001$. Female transgressors did not significantly differ from their male victims in the extent to which they reported that the incident had been resolved, $t < 1$. Male transgressors, however, reported thinking that the incident had been resolved to a greater extent than their female victims reported thinking, $t(29) = 2.32, p = .03$. Both female and male transgressors' ratings of resolution were significantly correlated with victims' responses, $r_s \geq .40, p_s < .05$. Finally, though transgressors and victims did not differ in their ratings of sincerity ($p_s > .16$), the apologies reported by female transgressors were coded as marginally more comprehensive than the apologies reported by male victims, $t(13) = 1.93, p = .08$. Conversely, the apologies reported by male transgressors were coded as significantly less comprehensive than the apologies reported by female victims, $t(19) = -2.22, p = .04$.