

WOMEN'S RESPONSE TO DISCRIMINATION IN THE PRESENCE OF
OUTGROUP VERSUS INGROUP SUPPORT: EMOTIONS, APPRAISALS OF
DISCRIMINATION, ACTION ENDORSEMENT, AND PERCEIVED SUPPORT

by

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Abstract

The present study examined whether women's emotions, appraisals, and action endorsements following exposure to a discriminatory event depended on the presence of ingroup versus outgroup support, and the effect of different sources of support as a function of gender identification. Female students (40 were accompanied by their heterosexual dating partner, 40 by a same sex friend, and 40 participated alone) read a discriminatory online blog. Paired participants communicated their reactions with each other using MSN messenger, whereas women who participated alone posted an online comment to the blog. Women reported more positive perceptions of support from a female ingroup member, but the effects of source of support depended on gender identity. Contrary to expectations, ingroup support was more likely to elicit greater normative action endorsements when ingroup ties were weak, and more stress and negative emotions were experienced when ingroup affect was negative. Interpretations of these results are discussed.

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Women's Response to Discrimination in the Presence of Outgroup versus Ingroup
Support: Emotions, Appraisals of Discrimination, Action Endorsement, and Perceived
Support

The experience of discrimination based on group membership can be a profound social stressor. The ability to deal with the negative effects of stressors such as discrimination depends on the nature of the event, how it is appraised, and individuals' coping resources (Lazarus & Folkman, 1984). One of the most common strategies used to contend with a stressor is to seek support from others. Much like other stressors, when group members experience discrimination, they may seek social support from others for a variety of reasons. This includes clarifying their interpretation or appraisal of the situation or to identify and enact an appropriate response. Given that discrimination is a collective experience targeting members of a particular social group, group members will often turn to other members of their group for support (Ellemers, Spears, & Doosje, 2002; Tajfel & Turner, 1986). Yet, there might also be situations in which support is sought from members of the outgroup, particularly when there exists a high degree of interdependence between ingroup and outgroup members (Jaskinskaja-Lahti, Liebkind, Jaakkola, & Reuter, 2006; Sanchez-Mazas, Roux, & Mugny, 1994). However, the source of support might fundamentally change individuals' response to their discriminatory experience.

Given the collective nature of discrimination, ingroup support can re-affirm individuals' collective esteem as group members concur on their interpretation of the experience and provide the social backing to confront the situation. In this regard, perceived ingroup support has been found to increase individuals' strength of

identification with the group following discrimination (Branscombe, Schmitt, & Harvey, 1999; Haslam & Reicher, 2006; Schmitt, Branscombe, Kobrynowicz, & Owen, 2002; Schmitt, Spears, & Branscombe, 2003). When individuals were in the presence of fellow group members, situations were more likely appraised as discriminatory (Stangor, Swim, Van Allen & Sechrist, 2002), greater anger was expressed (Iyer & Ryan, 2009), and there was an increased likelihood of endorsing confrontational actions against the perpetrator (Louis & Taylor, 1999; van Zomeren, Spear, Fischer, & Leach, 2004).

When seeking outgroup support, acknowledgement of the experience of discrimination may undermine the integrity of the relationship and quality of support received. Claims of discrimination can be perceived as blame towards the outgroup member and could potentially elicit a defensive reaction (Branscombe, Doosje, & McGarty, 2002). As a member of the perpetrating group, an outgroup source of support benefits from the discrimination that has occurred, even if only indirectly. As a result, the targeted individual may alter her reactions to discrimination to minimize possible conflict with their available source of support. This response may be especially likely among women when their male source of support is someone with whom they have a close personal relationship that they wish to maintain. In light of various potential reactions of the outgroup source of support, women's own appraisals and responses to discrimination might be altered, depending on how they anticipate that their source of support might react, and the nature of the response they are seeking.

Of particular interest in the present study were the social support factors that influence how women respond to a situation of sex discrimination. Women's responses were studied when in the presence of another member of the ingroup (a female friend) or

a valued member of the outgroup (their male partner). As in past research, it was expected that support from a female friend would result in a greater likelihood of acknowledging a discriminatory event, expressing anger towards the injustice, and a greater probability of acting to confront the perpetrator.

It is less clear how women would respond to discrimination in the presence of their male partners, and this may depend on the strength of women's gender identity. Among women with a strong gender identification, anger is likely the predominant response to discrimination. Although anger may be expected to elicit a defensive reaction among male outgroup members, women with a strong gender identification may be more likely to choose a male partner that supports her close identification with her ingroup and who is more likely to share the anger due to the perceived injustice committed (Thomas, McGarty, & Mavor, 2009). In contrast, women with a weak gender identity may be more likely to adopt a response that is more appeasing to her male partner, seeking sympathy and minimization of the situation rather than confrontation. Therefore women's gender identification may be an important moderator of how women respond to discrimination and the support they anticipate from members of the outgroup.

Discrimination and Social Identity Theory

The experience of discrimination reflects the negative treatment of individuals simply due to their membership in particular social groups. According to Social Identity Theory (SIT; Tajfel & Turner, 1986), members of a group form an identity based on their recognition of their belonging to a social category. This type of categorization yields a distinction between the ingroup (other members that belong to the same group as an individual) and an outgroup (individuals outside of one's group) (Turner, Oakes, Haslam,

& McGarty, 1994). In the current study, group categorization was based specifically on gender. In contrast to individuals' personal identities (i.e., the unique personal attributes of the individual), a social identity is shared among other group members and is defined by the values, norms, and behaviours associated with belonging to a given group (Hogg & Vaughan, 2002; Tajfel, 1978). Variations in the salience and strength of identification with a given group can vary as a function of situational variables (e.g., being the only woman in a room full of men), as well as individual differences in the importance of the group membership to one's self-concept (Roccas, Sagiv, Schwartz, Halevy, & Eidelson, 2008). Group members vary in the extent to which they feel a sense of pride emanating from their group membership, and the degree they share a common bond with other member; all of these factors contribute to having a weak or strong group identification (Cameron, 2004).

A fundamental component of SIT posits that individuals are motivated to maintain and defend a positive self-concept associated with their group memberships (Tajfel & Turner, 1986). As a result, threats against a social identity may be experienced when the individual group member has not been personally targeted, but the group's value and status has been challenged (Tajfel & Turner, 1979). The motivation to maintain or re-establish a positive identity drives a differentiation between one's own group from the outgroup (Brewer, 1979), along with behaviours reflecting ingroup favouritism and outgroup discrimination. Any threat to the status of one's social group membership and positive identity will prompt defensive reactions and behaviours to restore a positive self-concept (Branscombe, Ellemers, Spears, & Doosje, 1999; Guimond & Dambrun, 2002; Tajfel 1978, Tajfel & Turner, 1986).

According to the SIT framework, an individual is more likely to engage in collective action if they perceive the intergroup relationship as unstable and illegitimate (Tajfel & Turner, 1979). Despite the strong motivation for a positive identity, members of disadvantaged groups will not always acknowledge a discriminatory experience, even when there are explicit and objective indicators of discrimination (Feagin & Sikes, 1994; Kaiser & Miller, 2001; Swim, Cohen, & Hyers, 1998). Variations in willingness to respond to a threat to one's social identity may reflect individual differences in the relevance of the identity to group members' self-concept. Not surprisingly, women with strong identification were more likely to report incidences of discrimination and take a stand against it (Postmes, Branscombe, Spears, & Young, 1999).

Dimensions of Gender Identification

The concept of gender identification has been regarded as an important aid in understanding intergroup behaviours. Gender identification is most often defined as a three factor multidimensional construct (Cameron, 2004; Ellemers, Kortekaas, & Ouwerkerk, 1999) that emerged from the theoretical framework of social identity theory (Tajfel, 1978; Tajfel & Turner, 1979). However, the dimensions that constitute these three factors can vary. For example, Cameron (2004) conceptualized gender identity in terms of cognitive centrality (e.g., the importance of one's group), ingroup affect (e.g., pride emanating from group membership), and ingroup ties (e.g., a sense of belongingness with other group members). Ellemers et al. (1999) similarly delineated three factors, but unlike Cameron's (2004) model of identity, the affective/evaluative component of Ellemers et al.'s model highlights direct evaluations of one's group in comparison to other groups rather than the personal emotions (e.g., pride) associated with

belonging to a particular group. Such variations in definitions of identity likely contribute to differences in patterns of findings associated with group identification.

The relations between the dimensions of identity and emotions associated with situations as discrimination vary across studies. For example, several studies reported buffering effects of cognitive centrality on the effects of perceived discrimination on emotional distress (Oseela, Caldwell, Faison, & Jackson, 2009; Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003). Specifically, higher levels of centrality were associated with diminishing the relation between perceived discrimination and engagement in aggressive emotional behaviours (Caldwell, Kohn-Wood, Schmeelk-Cone, Chavous, & Zimmerman, 2004). However, although these studies examined centrality, their measurement scale included items reflecting perceived ingroup ties. Indeed, other studies that have separated out these dimensions of identity have found the opposite pattern of results, in that individuals for whom the relevant identity was highly central were more likely to make attributions of discrimination in response to ambiguous (Shelton & Sellers, 2000) and/or negative incidents (Operario & Fiske, 2001), and centrality was associated with intensifying the link between perceived discrimination and reported depressive symptoms (Bombay, Matheson, & Anisman, 2010). In contrast, ingroup affect buffered against the effects of perceived discrimination on depressive symptoms (Bombay et al., 2010). It is possible that this moderating effect of ingroup affect may have been due to the social connection individuals felt toward other ingroup members derived from their pride of membership (Lee, 2005). In effect, the conditions under which aspects of identity may or may not buffer against the negative emotional outcomes of perceived discrimination are still to be elucidated (Crocker & Major, 1989;

Major, Kaiser, & McCoy, 2003).

The different dimensions of identity also have implications for collective action in response to discrimination. Studies that operationalized identity in terms of cognitive centrality typically reported positive effects (Schmermund, Sellers, Mueller, & Crosby, 2001; Elizonda & Crosby, 2004), such as greater support for affirmative action programs (Elizonda & Crosby, 2004). Once again, however, these studies did not specifically measure centrality exclusively, but rather, used a centrality subscale of the Multidimensional Inventory of Black Identity (Sellers, Smith, Shelton, Rowley, & Chavous, 1998), which includes several items reflecting ingroup ties. It may well be that centrality plays a role in group-based action, but better insight is needed. In contrast, the affective component on group behaviours has been well established (Ashmore, Deaux, & McLaughlin-Volpe, 2004; Cameron, 2004; Giguère & Lalonde, 2010), and there is also evidence that strong ingroup ties similarly dispose group members to participate in collective actions (Bilewicz & Wojcik, 2010).

To date, the link between dimensions of identity and perceived support from ingroup compared to outgroup members is lacking. Tajfel and Turner (1986) proposed that individuals with strong identities seek social support to manage stressful experiences. The benefits of seeking support following a stressor have been found to be helpful for dealing with discrimination (Miller & Kaiser, 2001; Miller & Major, 2000; Uba, 1994). Yet, these studies often measured social support received from friends and family rather than assessing support from ingroup versus outgroup members. However, Ellemers, Spears, and Doosje (1999) suggested that ingroup members are assumed to share similar beliefs and values, and so in this regard, may be more likely to seek support from one

another. One might intuit that this would especially be the case when identification in terms of ingroup ties is relatively strong.

Situational factors can also alter the risks and benefits of contending with a threat to one's social identity. Women with weaker identification are more likely to downplay the transgression, particularly in the presence of men (Ouwerkerk & Ellemers, 2002). This finding points to situational factors that may increase the costs of responding to discrimination. It has been suggested that the social costs of claiming discrimination can be high (Kowalski, 1996; Kaiser & Miller, 2003). When such social costs are high, an individual is less likely to take a stand (Swim & Hyers, 1999). For example, Swim and Hyers (1999) found that the majority of women failed to directly confront discriminatory comments made to them by a male, although they indicated that they would do so when the situation was presented as hypothetical. The source of support in a given situation also influences how she interprets the event and reacts. Stangor et al. (2002) found that women were less willing to report events of discrimination in the presence of an outgroup member when compared to being in the presence of other women. This finding suggests that source of support serves as a situational factor that is likely to influence women's responses to discrimination. In response to a stressor, individuals may seek support from either an ingroup or outgroup member.

Ingroup Support Following a Social Identity Threat

Given that discrimination is a collective experience, such threats typically result in group members turning to other ingroup members for support (Ellemers et al., 2002; Haslam & Reicher, 2006; Jetten, Branscombe, Spears, & Schmitt, 2001). According to the rejection-identification model (RIM; Branscombe et al., 1999), ingroup support can

re-affirm an individual's identity, and buffer the individual against feelings of rejection. The increased support an individual receives from ingroup members is more likely to reduce negative emotions (Brewer, 1991) and protect one's collective self-esteem and well-being by challenging the negative meanings and/or consequences associated with belonging to a socially devalued group (Branscombe et al., 1999; Jetten et al., 2001). The more ingroup members share their sense of identity, the more effective the social support from other ingroup members is in protecting against the negative impacts of discrimination (Haslam & Reicher, 2006).

Although ingroup support may be effective in diminishing negative emotions such as self-blame or depressive affect, anger is posited to be the predominant emotion when discrimination is encountered (Kappen & Branscombe, 2001; Mackie, Devos, & Smith, 2000; Matheson & Cole, 2004). This may be especially the case among women with a strong gender identity (Barreto & Ellemers, 2000; Lalonde & Silverman, 1994). This emotion is experienced when the situation is appraised as unjust (Kappen & Branscombe, 2001) and/or the ingroup as strong (Mackie et al., 2000). In the context of discrimination, anger may be the activating emotion that propels action to confront the injustice and bring about social change when ingroup members act collectively (Gill & Matheson, 2006; Mackie et al., 2000; van Zomeren et al., 2004), and this might especially be the case in the presence of other women who share the reaction.

Outgroup Support Following Discrimination

Social support seeking is a general strategy for coping with stressors. Seeking support may be a necessary and utilitarian response to injustice if a collective response to the threat is to be mobilized. Support seeking may include instrumental goals or may

entail a motivation to meet emotional and affirmational needs (Lazarus & Folkman, 1984), including sympathy or moral support (Carver et al., 1989). Typically, emotional support seeking involves turning to trusted others. However, the intergroup nature of gender discrimination adds additional complexities when women are seeking social support to contend with such an experience. Women's closest support often comes from their intimate male partners, who are members of the outgroup that has both perpetrated and benefited from discrimination against women.

High levels of interdependence between groups may often result in group members seeking support from the outgroup (Sanchez-Mazas et al., 1994). Not only might outgroup members represent close sources of emotional support, but in the case of groups with differential power and social advantage, outgroup members might also have greater access to resources, and personal connections that facilitate the ability to achieve desired goals or to restore justice.

In the face of discrimination, a range of emotions might be experienced by members who belong to the group perpetrating the transgression, each of which may have different implications for the nature of support provided (Thomas et al., 2009). For instance, a response of anger and outrage regarding the transgression might elicit a joint confrontational response (Thomas et al., 2009). Feelings of guilt on the part of the outgroup member might also be experienced, likely promoting an acknowledgment of responsibility on behalf of their respective outgroup, but actions may or may not ensue (Branscombe & Doosje, 2004; Schmitt, Branscombe, & Brehm, 2004; Thomas et al., 2009). Similarly, sympathy may be felt for the victim, which also does not necessarily

guarantee action-oriented support, but might result in a minimization of the situation to help diminish distress in the targeted individual (Thomas et al., 2009).

In seeking support from outgroup members, the threatened individual may alter her reactions depending on the emotions she thinks he is likely to feel. For example, a woman may feel anger, even towards her male partner due to the fact that he belongs to the group (i.e., men) that is responsible for maintaining women's disadvantaged status, and hence, benefiting from discrimination. However, she may downplay the extent to which she expresses her anger in order to avoid conflicts arising from her partner's association with his ingroup. She may be concerned that the expression of anger could elicit defensive reactions on the part of her male partner, such as justifying the situation or minimizing her interpretation. If guilt is elicited, the partner might seek forgiveness on behalf of the group or attempt to take over the situation to protect the woman (Branscombe et al., 2002). The expected response of the male supporter likely depends on the extent to which they feel challenged, threatened, or feel the need to compensate for the behaviour of other members of their group (Branscombe, 1998; Schmitt et al., 2004). Despite this, if there is too much of a personal or social cost associated with providing support, the male partner may demonstrate a lack of engagement in the situation (Schmitt et al., 2004).

The challenge for female victims of discrimination becomes one of predicting the reactions of their male partners. When a male and female share a common identity in an intimate couple relationship, emotional experiences may be strongly shared even when the threat solely targeted the female partner. Thus, in the context of discrimination, it is possible that both the female and her male partner may share feelings of anger towards

the transgression. Under circumstances in which members of the advantaged group (men) share the moral outrage at the injustice experienced by others (i.e., someone with whom they share a personal relationship), they are more likely to express their anger, recognize their collective responsibility for the harm-doing, and be motivated to mend the misdeeds of their group (Leach, Snider, & Iyer, 2002; Thomas et al., 2009). In so doing, the female may become more confident in expressing her own anger, and perceive positive support from her male partner. Ironically, this shared reaction might be especially likely to occur when the woman has a strong gender identity, as she is also more likely to choose a partner that understands this aspect of her self-concept. As a result, highly identified women may be more likely to exhibit more anger, as they anticipate that their partners' support would entail a sense of shared moral outrage.

Weakly identified women may be more likely to attribute her experiences to her personal characteristics, and hence express emotions such as shame or embarrassment in the face of gender discrimination. Moreover, in the absence of support against feelings of rejection and a sense of collective empowerment that a strong ingroup identity can provide, women may feel more fear or anxiety about her situation than anger (Mackie et al., 2000; Smith, 1993). Out of a sense of compassion, her male partner may be more likely to express sympathy (Branscombe & Miron, 2004; Thomas et al, 2009). Women who experience this kind of emotional response may also be more likely to seek emotional support from her partner in an effort to reaffirm her self-esteem, rather than perceiving positive support to confront the situation.

Current Study

Little research has examined what happens when a woman who has experienced gender discrimination (stressor) seeks support from a male partner in comparison to a same-sex friend. The current study examined whether women's appraisals, emotions, and strategies to respond to a situation of discrimination were tempered depending on her source of support, as well as her own gender identification. To assess this possibility, female participants read an online blog that represented a situation of gender discrimination. After reading the blog, women were given an opportunity to discuss their reactions using MSN Messenger with either (a) their intimate male partner; (b) a close same sex friend; or (c) expressed their reactions as a comment posted to the blog (comparison condition); the partner or friend accompanied the participant to the study, and was in the adjoining room. In addition, women completed measures assessing their emotions (following the blog, but before and after MSN messaging), appraisals of the event, gender identification, and perceived quality of support received.

Following an instance of gender discrimination, it was hypothesized that there would be an interaction between the dimensions of gender identification (centrality, ingroup affect, and ingroup ties) and source of support. Specifically, it was expected that

- women with higher levels of ingroup affect or ties would be more likely to display anger and the endorsement of actions to confront the situation. In addition, high levels of ingroup affect or ties would be associated with lower feelings of shame, sadness, or anxiety, and greater appraisals of the situation as threatening and stressful. This pattern of response was expected to be more likely evident in the

presence of support from their female friend, in comparison to the male partner or the no support control condition.

- when their identity as women was highly central, women would be more likely to appraise the situation as discriminatory and to express negative emotions.

However, centrality was not expected to be associated with greater collective action engagement.

Social support perceptions were also compared for women who were in the male versus female supporter conditions (but not in the no support control condition). It was expected that

- women with strong ingroup affect, ingroup ties, or centrality would be more likely to perceive positive support (i.e., acting on her behalf, felt better after seeking support) from her female friend versus her male partner, whereas this difference in perceived support would not be evident among women with low gender identification.

Method

Participants

A sample of 120 female students (40 were accompanied by their heterosexual dating partner, 40 were accompanied by a same sex friend willing to participate, and 40 female students were unaccompanied) ranging in age from 17 to 30 years ($M = 19.48$; $SD = 2.12$) were recruited for participation in this study. Participants were either students enrolled in Introductory Psychology, or in a second year course in Research Design and Analysis (see Appendix A); or were individuals that responded to recruitment posters around campus (see Appendix B). The study was advertised concerning how people react to Internet blogs.

Procedure

Shortly after sign-up, participants were emailed (or phoned, if no response from e-mail was obtained) to confirm whether the participant had a male partner or female friend who would be willing to participate in the study on a scheduled laboratory date with them. Male participants without a female partner were not eligible, and were given the option to participate in other lab studies. Prior to attending the laboratory session, participants were emailed a reminder notice.

The laboratory session was composed of three parts. First, the study began with a brief verbal introduction and overview of the study (see study script in Appendix C). Participants were informed of what their participation involved, and their ability to withdraw at any time. Prior to beginning the initial set of questionnaires, participants provided their written consent (see Appendix D). Next, participants were shown how to access the Internet and log on to the system network. Those participating in pairs remained in the same room until both were logged on the system, but were separated into adjacent rooms following the completion of background questionnaires. Participants were asked to fill out a series of background questions that assessed gender identity, and experience with Internet social networking as filler measures that supported the cover story.

In the second part of the study, participants read a blog and communicated using the Internet. Prior to logging onto the Internet, paired participants (e.g., partners or close friend) were reminded of their Internet task and MSN Messenger conversation outline while in separate rooms. Once the participants were logged successfully onto the Internet, they were given five minutes to read the blog (see Appendix E) and 10 minutes

to complete a short questionnaire. Next, both participants proceeded on MSN Messenger to communicate with each other their reactions to the blog. Participants were given 10 minutes to discuss their thoughts, feelings, and reactions. Female participants that participated alone were provided with the same amount of time to post a comment that expressed their thoughts and feelings to the Internet blog.

When participants had finished the Internet task, they were asked to complete questionnaires that assessed their appraisals, mood adjectives, gender identification, action endorsements, and perceived support (e.g., positive or negative). At the end of the session, participants received a verbal debriefing (see Appendix F) explaining the real purpose of study. Because deception was used, participants provided their consent for their data to be used, along with an informed consent for use of quotations from their post-blog communications (which will be analyzed outside of the context of this thesis) (see Appendix G & Appendix H). Participants either received 1 bonus credit toward their final class mark in Introductory Psychology or \$10.00 cash for their participation.

Measures

Questionnaires used in the current study will be discussed in detail (see Appendix I).

Stress appraisal measure. The Stress Appraisal Measure (SAM; Peacock & Wong, 1990; see Appendix I) was used to assess participants' cognitive appraisals. In the current study, the two subscales that were examined included perceived threat (e.g., "How threatening is the blog?") and stress (e.g., "To what extent do I perceive this blog as stressful") emanating from the blog. Responses were made on a 5-point scale ranging from 0 (not at all) to 4 (extremely). The average rating across items of each subscale

created scores for this measure. For the present study, the internal reliability for both subscales was high (Cronbach's alpha= 0.70 for centrality and .85 for stressfulness).

An additional item was included to assess whether participants perceived the blog to be "due to prejudice or discrimination" using a 5-point scale ranging from 0 (not at all) to 4 (definitely/extremely).

Mood adjectives. A series of 23 mood adjectives assessed a range of emotions that included shame, anxiety, anger, and sadness which participants might have felt at a given moment. Responses were made using a 7-point scale ranging from 0 (not at all) to 6 (extremely). An overall score for each subscale was created by averaging the items belonging to each particular subscale. Cronbach's alphas for these five emotional responses ranged from .52 to .94.

Action endorsements. The Action Endorsement Scale (Wright, Taylor, & Moghaddam, 1990; see Appendix I) assessed 12 behavioural responses to discrimination, but was adapted to assess how women would like to respond to the blog. Participants rated, on a 5-point scale, the extent to which they would participate in each of the actions (e.g., "Accept the situation, that is, don't bother responding to what the bloggers said"). The scree plot derived from a factor analysis identified two components. Based on factor loadings of .45 or higher, the first factor comprised 5 items that represented direct confrontation strategies, including confronting the bloggers to demand a personal apology, demand an apology to all women, getting together with other women to create a new blog that provides a positive view of women, or working to together to create a new blog that makes the bloggers look bad, and organizing a petition with other women ($\alpha = .79$). The second factor included 6 items that reflected indirect normative strategies,

which included accepting the situation (reverse scored), requesting that the bloggers receive training about the treatment of women, asking volunteers to report the blog, responding if others initiated a response, joining a different online group to give an opinion, or not join the blog ($\alpha = .68$).

Identification. The Social Identification Scale (Cameron, 2004; see Appendix I) is a self-report measure that consisted of 12-items that contained three subscales including ingroup ties, ingroup affect, and centrality that were used to assess gender identity. For this study, the internal reliabilities were fairly high (Cronbach's alpha = .82 for ingroup ties, .65 for centrality, and .82 for ingroup affect). Participants responded to each item using a 7-point scale ranging from -3 (strongly disagree) to 3 (strongly agree), where participants were asked to rate the extent to which they agree or disagree with each statement (i.e., "I feel strong ties to other women"). A total mean score for each subscale was calculated.

Perceptions of support. This self-report measure (see Appendix I) consisted of 7-items to assess participants' perceptions of whether support received from the same-sex friend or male partner was positive ("How likely do you think your partner/friend wanted to act on your behalf"), or negative (e.g., "Did your partner/friend make you feel helpless to respond effectively to the blog"). Participants were asked to rate each item on a 5-point scale ranging from 0 (disagree) to 4 (agree). Responses were factor analyzed to derive appropriate subscales. Based on a factor analysis, the scree plot indicated two factors. Based on loadings of .45 or higher the first factor represented positive support perceptions, including perceiving the friend/partner as supportive participants' personal feelings, as agreeing with the participants' reaction, and as supportive of her reactions (α

= .79). The second factor reflected negative support perceptions, including perceiving the support received as helpless, as indifferent, as unsupportive, and as making her feel uncomfortable. ($\alpha = .60$).

Results

As gender identification was assessed within the laboratory context following the stressor (the blog), we examined whether there were differences in women's gender identification as a function of source of support (male partner, female friend vs. no support). One-way analyses of variance (ANOVA) indicated no significant differences on any of the three dimensions of gender identification as a function of the social support conditions (see Table 1).

Table 1

Mean Scores (Standard Deviations) for Dimensions of Gender Identification with in each of the Social Support Conditions

	<i>Alone</i>	<i>Same-Sex Friend</i>	<i>Male Partner</i>	<i>F</i>	<i>p</i>
Ingroup Ties	1.24 (1.30)	1.35 (1.30)	.76 (1.42)	2.24	.111
Ingroup Affect	2.33 (.78)	2.35 (.87)	2.36 (.81)	.008	.992
Centrality	.53 (1.41)	1.03 (.99)	.59 (1.18)	2.21	.113

Note. Gender identity was assessed on a -3 to 3 scale.

As seen in Table 2, on the whole, women appraised the blog as discriminatory. However, women did not perceive the blog to be particularly threatening or stressful. In regard to their emotional reactions, women tended to feel rather angry, but did not report high levels of any of the other negative emotions. On the whole, women reported endorsing normative actions after reading the blog and they perceived that they received

positive support. In regards to internal validity, on the whole, women perceived the blog as discriminatory. Contrary to expectations, women were not as angry.

Table 2

Mean Scores and Standard Deviations for Study Variable

	<i>M</i>	<i>SD</i>
Appraisals		
Perceived Threat	1.01	0.92
Perceived Stress	1.26	0.92
Blog rated as discrimination	3.28	1.06
Emotions		
Sadness	1.10	1.29
Anger	2.00	1.58
Anxiety	1.03	1.22
Shame	0.79	1.15
Action Endorsements		
Confrontation	1.40	1.03
Normative Action	2.62	0.86
Perceived		
Positive Support	3.25	0.88
Negative Support	1.00	0.76

Note. Appraisals, action endorsements, and perceived support were assessed on a 0- 4 scale. Emotions were assessed on a 0- 6 scale.

* $p < .05$; ** $p < .01$.

Effect of Source of Support Moderated by Gender Identification

A series of hierarchical regression analyses was conducted to test the hypothesis that gender identification (ingroup ties, centrality, and ingroup affect each as a continuous variable) interacted with the source of support to influence emotions, appraisals, actions and perceived support in relation to the discriminatory experience. Social support condition was recoded into two orthogonal variables: female versus male support (alone was coded as 0, same-sex friend was coded as +1, and male partner was coded -1) and support versus no support (alone was coded as -2, same-sex friend and male partner were both coded +1). Each of the three dimensions of gender identification was entered as the moderating variable in the first step (in separate analyses), the two orthogonal coded variables representing social support conditions were entered on the second step, and the cross-products between the orthogonally coded variables and the relevant dimension of gender identification were entered on the third step. The dependent variables were emotions (anger, shame, sadness, and anxiety), appraisals of discrimination (including perceived threat, stress, and discrimination), action (direct confrontational and indirect normative), and perceived support (positive and negative).

Moderating Role of Ingroup Ties. Regression analyses conducted on participants' emotions and appraisals showed no significant predictive effects of ingroup ties, social support condition, or the interaction between these variables. However, there was a marginally significant main effect of ingroup ties in relation to women being more inclined to endorse confrontational actions ($\beta = .16$, $R^2 = .026$, $F(1, 118) = 3.09$, $p = .081$), as well as indirect normative actions ($\beta = .18$, $F(1, 118) = 3.83$, $p = .053$). Although the main effect of source of support was not significant (see Table 4), a

marginal interactive effect of ingroup ties and source of support was evident on normative actions ($R_{change}^2 = .038$, $F(2, 114) = 2.63$, $p = .091$), primarily due to the simple interaction of ingroup ties and support from a same-sex friend versus opposite sex partner, $\beta = -.25$, $p = .030$. Simple slope analyses were conducted to examine the relation between normative actions and the source of support from either a same sex friend or male partner at high and low levels (1 *SD* above and below the mean, respectively) of ingroup ties. As seen in Figure 1, as reported ingroup ties strengthened, the source of support had a minimal effect on women's likelihood of engaging in normative action. However, as ingroup ties were diminished, the presence of a male partner was less likely to elicit normative action endorsements, in comparison to when they received support from a same-sex female friend. Ingroup ties did not moderate the effect of the presence of support overall relative to being alone on endorsements of normative action (see Table 4).

Table 4

Hierarchical Regression Results assessing Moderating Effects of Ingroup Ties on the relation between Source of Support and Normative Action

Step	Variable	β	R^2_{Change}	p	sr
Step 1					
	Ingroup Ties	.177	.031	.053	.18
Step 2					
	Support Condition		.034	.129	
	Female versus Male	.134			.14
	Support versus No Support	.126			.13

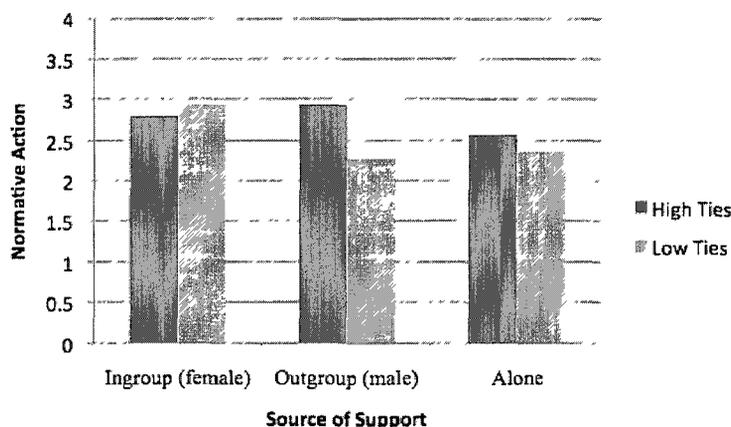
Step 3

Ingroup Ties* Support	.038	.091
Ingroup Ties*Female vs. Male Support	-.250	-.20*
Ingroup Ties*Support vs. No Support	.014	.01

* $p < .05$

Figure 1

Normative Actions as a function of Source of Support at 1 Standard Deviation above and below the Mean for Ingroup Ties.



Women's perceptions of negative support were not directly related to either the strength of their ingroup ties or to the source of support (see Table 5). Likewise, ingroup ties were not associated with perceptions of positive support (see Table 5). However, source of support was a significant predictor of positive support perceptions ($R^2 = .065$, $F(1, 77) = 5.43$, $p = .022$). Specifically, women perceived more positive support when it emanated from a female ingroup member ($M = 2.16$, $SD = 1.09$), in comparison to when it came from her male partner ($M = 1.68$, $SD = 0.90$). There were no significant interactions (see Table 5).

Table 5

Effects of Ingroup Ties and Support on Perceived Perceptions of Social Support

Step	Variable	Negative Perceptions			Positive Perceptions		
		β	R^2 Change	p	β	R^2 Change	p
Step 1							
	Ingroup Ties	-.042	.002	.713	-.077	.006	.495
Step 2							
	Female vs. Male Support	-.029	.001	.801	.262	.065	.022
Step 3							
	Ingroup Ties*Female vs. Male Support	-.056	.002	.703	-.184	.021	.191

Note. Support perceptions were not measured in the alone condition.

Moderating Role of Centrality. Hierarchical regressions assessing the effects of centrality as a moderator of the relation between source of social support and emotions indicated a marginally significant main effect of centrality only in relation to feelings of anger. Specifically, when their gender identity was more central to women, they were more likely to express anger at the discriminatory blog ($\beta = .18$, $R^2 = .031$, $F(1, 118) = 3.84$, $p = .052$). There were no other significant main effects or interactions in relation to the remaining emotions (shame, sadness, and anxiety).

Women's appraisal of whether or not the blog constituted discrimination was not influenced by centrality or source of support. However, greater centrality of the identity was associated with women being more likely to appraise the blog as threatening ($\beta = .24$,

$R^2 = .057$, $F(1, 118) = 7.14$, $p = .009$) and that the blog was stressful ($\beta = .19$, $R^2 = .034$, $F(1, 118) = 4.21$, $p = .042$).

Analysis of women's action endorsements indicated only a significant main effect between greater centrality and being more likely to endorse confrontational actions ($\beta = .19$, $R^2 = .036$, $F(1, 118) = 4.46$, $p = .037$). The main effect of source of support was not significant, nor were there any significant interactive effects between centrality and source of support on confrontational or normative actions.

Women's perceptions of negative support were not directly related to the centrality of their identity or to the source of support. However, there was a marginal interactive effect of centrality and source of support on negative support perceptions ($\beta = -.26$, $R^2 = .041$, $F(1, 76) = 3.37$, $p = .070$). A simple slope analysis was conducted to examine the relation between negative perceptions and the source of support at varying levels of centrality (1 *SD* above and below the mean). This analysis indicated that as women's gender identity was increasingly central to them, they were less likely to perceive negative support from a female ingroup member, relative to a male outgroup member (see Figure 2). Conversely, as the identity was less central, this relation was reversed, in that women were increasingly likely to perceive negative support from the female ingroup member, relative to the male outgroup member (Figure 2).

Centrality was not a significant predictor of positive support perceptions, but as noted previously, a female ingroup member was perceived as significantly more positive source of support than the male outgroup member ($\beta = .23$, $F(1, 77) = 4.19$, $p = .044$). In addition, a marginal interactive effect of centrality and source of support was evident ($\beta = -.25$, $R^2 = .038$, $F(1, 76) = 3.14$, $p = .080$). As seen in Figure 3, simple slope analysis

indicated that as the identity became more central to women, differences in perceptions of positive support as a function of source were diminished, whereas, contrary to expectations, women were much more likely to perceive positive support emanating from the female ingroup member when the identity was less central to them.

Figure 2

Negative Perceptions and Source of Support Graphed 1 SD above and below the Mean for Centrality

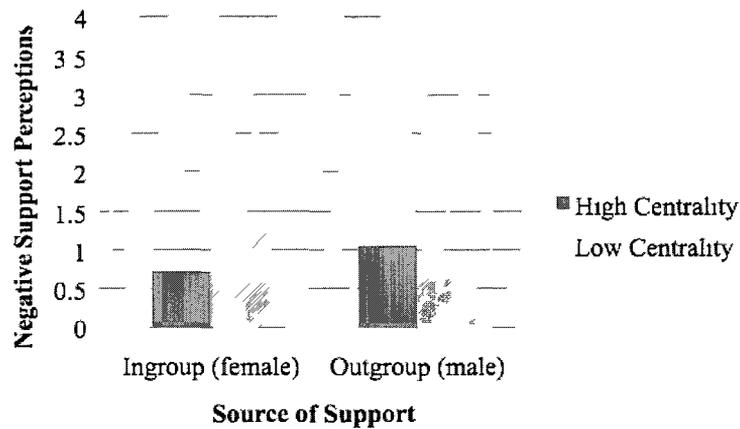
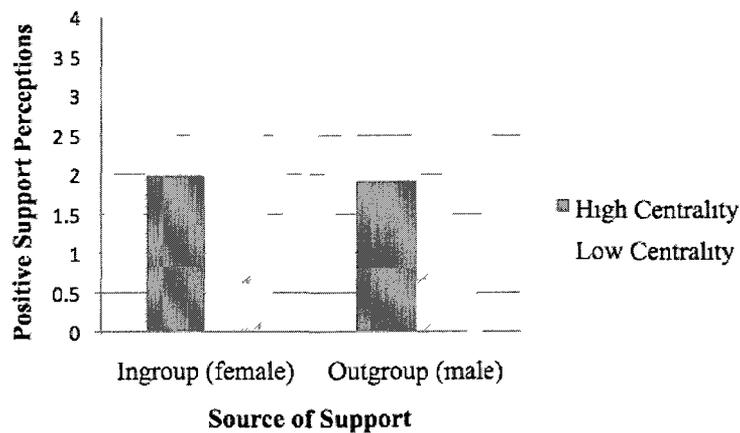


Figure 3

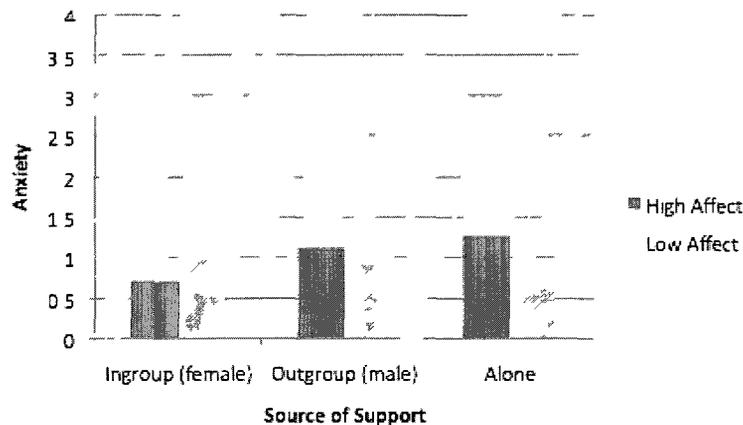
Positive Perceptions and Source of Support Graphed 1 SD above and below the Mean for Centrality



Moderating Role of Ingroup Affect. Regression analyses indicated that participants' feelings of anger and shame were not related to either the strength of ingroup affect or to the source of support. Although there were no main effects of affect or source of support on feelings of anxiety, there was a marginal interactive effect ($R^2 = .040$, $F(2, 114) = 2.38$, $p = .097$). Simple slope analyses were conducted to examine the relation between anxiety and the source of support at varying levels of ingroup affect (1 *SD* above and below the mean). As seen in Figure 4, as ingroup affect strengthened, women were less likely to display anxiety in the presence of a female ingroup member in comparison to the other conditions. However, at lower levels of ingroup affect, women experienced less anxiety when they were alone.

Figure 4

Anxiety and Source of Support Graphed 1 SD above the Mean for Ingroup Affect.

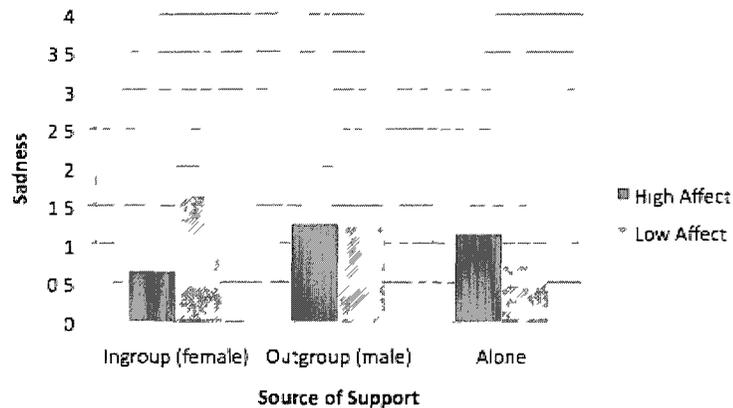


A significant interactive effect of ingroup affect and source of support was also evident for sadness ($R^2 = .051$, $F(2, 114) = 3.15$, $p = .046$). Simple slope analyses were conducted to examine the relation between sadness and the source of support at high and low levels (1 *SD* above and below the mean, respectively) of ingroup affect. As seen in Figure 5, as reported ingroup affect strengthened, women displayed the least sadness in

the presence of a female ingroup member. Conversely, at lower levels of ingroup affect, women were less sad when they experienced the discriminatory event alone, and the greatest sadness when their source of support came from an ingroup member.

Figure 5

Sadness and Source of Support Graphed 1 SD above the Mean for Affect



There was only a marginally significant main effect between reporting strong ingroup affect and being more likely to attribute the blog to discrimination ($\beta = .17$, $R^2 = .028$, $F(1, 118) = 3.36$, $p = .069$). None of the other appraisals was directly related to ingroup affect or source of support. However, a significant two-way interaction between ingroup affect and source of support was evident on the appraisals of stress, $R^2 = .063$, $F(2, 114) = 3.84$, $p = .024$ (see Table 6). As seen in Figure 6, at lower levels of ingroup affect, women expressed greater stress when their source of support was a female rather than a male, but as ingroup affect strengthened, women who were alone were increasingly stressed by the blog as well.

Table 6

Effects of Ingroup Affect and Support on Appraisals of Stress

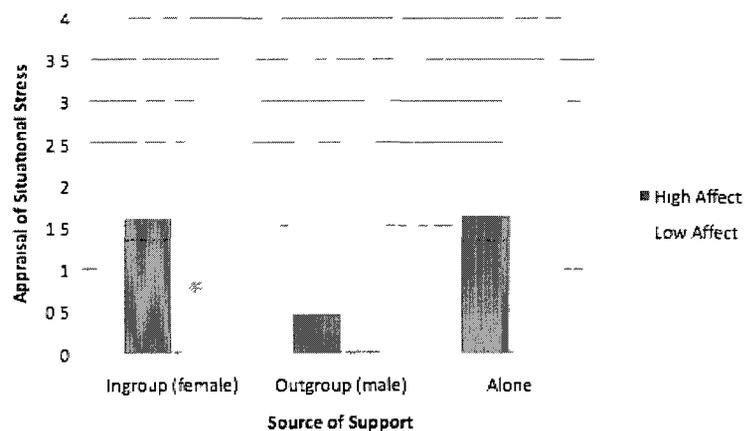
Step	Variable	β	R^2 Change	p	sr
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Step 1					
Ingroup Affect		-.068	.005	.462	-.07
Step 2					
Support Condition			.003	.861	
Female versus Male		.015			.02
Support versus No Support		-.048			-.05
Step 3					
Ingroup Affect* Support			.063	.024	
Ingroup Affect*Female vs. Male Support		-.046			-.02
Ingroup Affect*Support vs. No Support		-.782			-.25*

* $p < .05$.

Figure 6

Appraisal of Situational Stress and Source of Support Graphed 1 SD above and below the Mean for Affect



Women's endorsements of normative or confrontational actions were not directly related to the strength of their ingroup affect. However, women were more likely to

indicate that they would engage in normative actions when the source of support was another woman ($M= 2.86, SD= .72$), rather than her male partner ($M= 2.51, SD= .92$) or if she was alone ($M= 2.48, SD= .92$), $R^2= .040, F(2, 116) = 2.41, p = .094$. There were no other significant main effects or interactions on action endorsements.

Perceptions of negative support were not related to the strength of their ingroup affect or to the source of support. As noted previously, women perceived more positive support from an ingroup compared to outgroup member, $R^2= .054, F(1, 77) = 4.48, p = .038$. There were no other significant main effects or interactions.

Summary

As expected, women perceived more positive support when it emanated from a female ingroup member in comparison to when it came from her male partner. However, the effects of social support on women's reactions to the blog were dependent upon gender identification. The three dimensions of gender identification each play a different role, depending on which set of outcome variables was considered.

Specifically, greater ingroup ties were associated with women being more inclined to endorse confrontational actions and normative actions to deal with the bloggers. Ingroup ties further moderated the effects of social support on women's normative action endorsements, in that when women perceived strong ties with other women, the source of support had no significant effect on women's likelihood of engaging in normative action, whereas when they perceived weak ties, women were more likely to endorse normative action endorsements in the presence a same-sex friend versus their male partner or alone.

Greater centrality of the identity was associated with women being more likely to appraise the blog as threatening and stressful, to express greater anger, and to endorse normative and confrontational actions. Although centrality did not moderate women's reactions to the blog per se, it did moderate women's perceptions of support from their same- or opposite-sex friend. Specifically, the more central women's identity was, the less likely they were to perceive the support from a female ingroup member as negative, and more positive, in comparison to the support they received from the male outgroup member.

Lastly, the greater ingroup affect women reported, the greater the likelihood that they appraised the blog as discriminatory. Levels of ingroup affect further moderated the effects of women's source of support on their appraisals and emotions. When women reported lower levels of ingroup affect, they reported higher stress and greater feelings of anxiety and sadness when they were with a female ingroup member, whereas when they reported higher ingroup affect, they were least anxious or stressed when receiving support from a female ingroup member.

Although ingroup affect did not moderate the effects of source of social support on action endorsements, when ingroup affect was controlled, women were more likely to indicate that they would engage in normative actions when the source of support was another woman rather than her male partner or when she was alone.

Discussion

The purpose of this study was to examine social support factors that influenced how women respond to a situation of gender discrimination, including the role played by the strength of women's gender identification. Previous research has noted an association

between appraisals of discrimination and greater levels of group identification (Postmes et al., 1999). Indeed, in the present investigation, several main effects of identity were found. Consistent with past studies, the stronger women's identification in terms of ingroup affect, the more likely individuals were to perceive the blog as discriminatory (Operario & Friske, 2001; Shelton & Sellers, 2000). This finding is consistent with past research that has found individuals with strong ingroup affect have a deep social connection toward other ingroup members (Lee, 2005). As previously noted individuals can experience a threat to one's social identity through group member association (Tajfel & Turner, 1979). Thus, it is possible that women with strong ingroup affect felt particularly likely to acknowledge the unfair treatment of women was unacceptable, due to the pride emanating from her group membership.

In addition, when women's gender identity was more central to them, they were more likely to appraise the blog as a threat and as stressful. Although threat and stress were assessed as appraisal dimensions, in fact, they also reflect the emotional distress associated with the experience. Indeed, although centrality was not associated with greater shame, anxiety, or sadness, it was related to greater feelings of anger toward the blog. In the context of discrimination, anger is posited to be the predominant emotion (Kappen & Branscombe, 2001; Mackie et al., 2000; Matheson & Cole, 2004), particularly for women with a strong gender identity (Barreto & Ellemers, 2000; Lalonde & Silverman, 1994). Although centrality was associated with being more likely to express feelings of anger toward the blog, the literature examining centrality and emotions associated with situations of discrimination vary in results. On the one hand, some studies have found that strong centrality diminished emotional distress (Oseela et

al., 2009), while others have found the opposite pattern of results (Bombay et al., 2010). However, studies have included items of ingroup ties in their assessment of centrality, which may explain these differences (Oseela et al., 2009). Unfortunately, research examining the association between centrality and emotions is relatively recent. Hence whether or not the relationship between these two variables in fact exists needs to be thoroughly examined in future studies. This said, the fact that centrality was also associated with a greater likelihood of endorsing normative or confrontational actions to contend with the blog suggests that in the present context, centrality of their gender identity was a key motivator underlying women's responses.

Consistent with previous research that has examined ingroup ties and participation in collective action (Bilewicz & Wojcik, 2010), it was also observed that women with strong ingroup ties were more likely to endorse both confrontational actions as well as normative actions. In addition, ingroup ties interacted with the source of support that was available to women to influence action endorsements.

Source of Social Support

Previous research that has examined women's responses to discrimination in the presence of ingroup support found that more individuals appraised situations as discriminatory (Stangor et al., 2002), greater anger was expressed at the injustice (Iyer & Ryan, 2009), and a higher tendency to employ confrontational actions (van Zomeren et al., 2004). It was less clear, however, has been how women would respond to discrimination in the presence of their male partners (outgroup), as they are both members of the perpetrating group that discriminates against women, along with having a close personal relationship to women.

In the present study, women did report that a female ingroup member was a more positive source of support that when they experienced the discriminatory event in the presence of a male outgroup member. Generally, an individual with a threatened identity often seeks support from ingroup members given the collective experience of discrimination and engages in behaviours of ingroup favouritism (Tajfel & Turner, 1986). It is possible that individuals assume other ingroup members share similar values and beliefs, which may encourage them to seek support from other members (Ellemers et al., 1999). Thus, women may have perceived more positive support from other females under the impression they could relate more to the blog, that did an outgroup member.

On the whole, however, the present study found that the source of support available to women when they encountered discrimination had little direct effect on their appraisals, emotions, or confrontational action endorsements on the dimensions of identity. Rather, the effects of support depended on women's levels of gender identification. In particular, levels of ingroup affect moderated the effects of source of support on women's appraisals and emotions, whereas ingroup ties moderated the effects of support on women's action endorsements.

Ingroup affect primarily influenced women's reported stress when they were exposed to the discriminatory blog without social support being available to them. This is consistent with previous research that has found women with strong identity were more likely to report discrimination (Postmes et al., 1999), and hence women with stronger affective ties to their group may be more stressed when exposed to the identity threat. Generally, women with low identity tend to downplay the transgression, particularly in the presence of men (Ouwerkerk & Ellemers, 2002). Indeed, women expressed greater

stress when their source of support was a female, in comparison to when their support was from a male, irrespective of their levels of ingroup affect. The presence of another woman may have made the intergroup nature of the event more salient, thereby increasing distress, and the accompanying need to need to respond (Stangor et al., 2002).

In line with this, as reported ingroup affect strengthened, women displayed less sadness and anxiety in the presence of a female ingroup member. Conversely, at lower levels of ingroup affect, women experienced the most anxiety and sadness when they were with a same-sex friend. Previous research has found that ingroup support can reaffirm an individual's identity, and buffer the individual against feelings of rejection (Branscombe et al., 1999). Moreover, the more ingroup members share their sense of identity, the more effective the social support from other ingroup members is in protecting against the negative impacts of discrimination (Haslam & Reicher, 2006), and that this buffering effect was particularly the case with respect to the affective dimension of their identity (Bombay et al., 2010). Thus, women that highly identified to their group benefited the most from other ingroup support diminishing the negative emotional effects of discrimination.

Women with low ingroup affect displayed less sadness and anxiety in the absence of support. This finding is inconsistent with past research that has suggested that in the absence of support, which provides a sense of collective empowerment, women feel more anxiety (Smith, 1993). It is possible low identifiers may have felt less social pressure to express sadness or anxiety in the absence of support. Alternatively, given their lack of pride associated with their gender, women with low ingroup affect who were exposed to negative treatment emanating from their gender may not benefit from support. Support

would have required that the experience was visible to others, but such women may be more likely to invoke avoidant coping strategies that allow them to minimize the role of gender in their lives.

The affective component of ingroup identification on group behaviours has been established by previous research (Ashmore et al., 2004; Cameron, 2004; Giguère & Lalonde, 2010). Yet the strength of ingroup affect did not have any implications for women's endorsement of confrontational action in response to discrimination in the present study. However, consistent with research demonstrating that strong ingroup ties often dispose members to participate in collective action (Bilewicz & Wojcik, 2010; Louis & Taylor, 1999; van Zomeren et al., 2004). In the present study, the source of support had a minimal effect on a woman's likelihood of engaging in normative action if they had strong ingroup ties; rather, it was when ties were weak that women in the presence of a male partner were less likely to endorse normative actions, in comparison to when they received support from a same-sex female friend. Among women with strong ties, there may be a sense of collective strength that would support such actions, irrespective of the fact that they were being confronted with the situation in the presence of a close male other. However, when ties were weak, as we had expected, women may have been inclined to ignore the situation or diminish the need to act when they were in the presence of their male partner. Indeed, previous research has found that feelings of guilt on the part of the outgroup member might be experienced (Branscombe & Doosje, 2004; Schmitt et al., 2004; Thomas et al., 2009). Thus, it is possible that male partners' emotional response may have diminished women's willingness to act to deal with the situation in order to diminish any distress he was experiencing. This said, women's

partners may have also expressed other reactions that women with low ties may have responded to in a manner that decreased the extent to which she was prepared to act.

The behaviour of male partners, which may have influenced women's responses, was only assessed in the present study in terms of women's perceptions of support as positive or negative. However, women's reactions likely depended on the type of emotions her male partner experienced (Thomas et al., 2009). For example, male partners may have experienced guilt and took responsibility on behalf of their group (other men) but this might not translate in support for action (Branscombe & Doosje, 2004). However, the role of specific emotions experienced by the male partner on women's responses was not evaluated in the present study.

Limitations and Conclusion

The link between the responses of discrimination and social support has been examined extensively in the presence of other ingroup members. Examining how women respond to this discrimination particularly in the presence of an outgroup member (male partner) is important in order to examine whether her reactions to discrimination would be altered as a way to minimize possible conflict with their available source of support. This particular research avenue does not seem to have been examined to the same extent as ingroup interactions.

In the present study, women who are either in pairs or alone, responded to an artificial Internet blog created a discriminatory experience. All participants were presented with the same discriminatory experience by means of an online blog. This study created a situation where a woman who experienced gender discrimination sought support from either a same-sex friend (ingroup member) or a male partner (a member of

the outgroup that benefits from discrimination against women). This study was able to examine victims' responses in the presence of an outgroup member with whom the participant has a close relationship.

A possible limitation of the study may have been the lack of provoking content in the blog as opposed to a situation of discrimination where the perpetrator is physically present. Blog postings generally tend not to follow standard guidelines for communication. Words tend to be abbreviated, along with heavy usage of slang. It is possible that the blog was written in a more academic fashion in comparison to general student blogs. Several participants indicated that they 'thought the blog was fake' when asked about their thoughts about the study. It is possible that some belief in the blog as fake may have affected how women reacted emotionally as well as their endorsement in collective action due to the lack of realism. These women may have found it difficult to become emotionally aroused when there was no threat. The urge to endorse collective action may have been overshadowed by the fact that no counteraction, neither positive nor negative, would result possibly making action endorsement less attractive. Perhaps a blog written less academically may have conveyed an increased sense of realism for the participations in this study. For example, the use of more slang terminology or Internet abbreviation (e.g., 'lol') may have conveyed a more typical interaction between students. It is possible that this may have provided stronger results due to establishing a sense of realism, thereby creating a genuine threat to women's social identity.

Another possible limitation of the current study involved recruiting participants from a university sample. It is possible that university women may have been less affected by threats to social identity from discrimination due to a preoccupation with

aspects of student life such as balancing academics, relationships, and/or family. It is possible that using an older non-university sample could yield stronger findings because of a better understanding of how the world works as well as stronger opinions that come from more life experiences.

Several of the findings in the current study were marginal as opposed to significant, and effect sizes were relatively small (less than 5% of the variance accounted for). That said, the marginal findings provided insight on patterns that emerged. In order to validate their meaningfulness, future studies are needed in order to replicate the findings.

Lastly, the use of the control condition (alone) may have been a concern. A strength associated with women participating in the study alone was that women were able to express their own opinions without being influenced by others, in effect providing a social support control condition. However, a weakness of this choice of control was the absence of communication. Women who participated in pairs were given the opportunity to discuss their responses to the blog, which was not a possibility in the control condition. An alternative for the control condition could have included the communication between a woman and another individual on MSN whose gender was withheld. This would have ensured that all three conditions were given the opportunity to discuss responses in pairs. However, such an alternative would have been confounded with whether the discussion was with people known to the participant versus a stranger. In this sense, there was no perfect control condition.

In the current study, there is particular interest on how women respond to discrimination in the presence of ingroup versus outgroup support moderated by her own

strength of gender identification. The present study indeed demonstrated that the effects of social support depended on women's gender identity. Support from the ingroup (same-sex friend) was most effective in making women feel like they had positive support and reduced sadness as well as anxiety, especially when women felt strong ingroup affect. However, outgroup support (male partner) was most effective in reducing distress. In order to diminish emotional distress from a discriminatory experience, women should seek support from ingroup members. To reduce perceived stress, women should seek support from her male partner.

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APPENDIX A

Recruitment Notice

Study Title: Responding to Online Blogs

Abstract:

Earn 1% in experimental credit in Introductory Psychology Course OR \$10 cash

Description:

This study examines responses to online blogs. It consists of a laboratory component that will take about an hour to complete. You will be asked to complete a series of questionnaires, plus read and respond to an online blog. Please note that experience with the instant messaging program MSN Messenger is required.

This study has received clearance by the Carleton University Psychology Research Ethics Board (10-105)

APPENDIX B

Recruitment Poster

(This is the text of a potential poster; formatting and graphics will be added. Flyers will be similar, but printed two to a page.)

**DO YOU HAVE INTERNET
EXPERIENCE?**

Participate in a
Study on Online Blogs

Receive either 1 bonus credit OR \$10 Cash

Duration of study will take about 60 minutes to complete

For more information, or to sign up for the study, please visit SONA website
SONA URL

This study has received clearance by the Carleton University Psychology Research Ethics
Board (10-105)

APPENDIX C

Study Script

As people come in to the room for the study, have participants take a seat.

Hi. First of all, I want to thank you for signing up. My name is Trista Takacs, and I'm conducting this study for my masters research in psychology. As you know, the purpose of this study is to assess reactions to online blogs. Generally blogs discuss feelings on a particular topic, some are often done for fun for those individuals that enjoy writing or sharing their views with others. However, we're interested in how outside readers react to various kinds of blogs and what feeds into their responses?

In this study, we're especially interested in how people react to a student blog and how they communicate about the blog to other individuals, especially in these days of viral advertising and communications

[Insert for paired condition only] Generally, the first people we share our reactions with are those that we know well and have a close relationship. Thus, that is why we asked you to come together so that we can obtain a realistic understanding of how they react.

Basically, there are three parts to this study. First, there are some background questionnaires you will be asked to complete. These responses will provide us with some information about you such as online experience & communication strategies. Next, you'll be directed to a website to read a blog, and then briefly to discuss your reactions online. Lastly, you'll fill out several brief questionnaires that also measure your reactions.

You are free to withdraw from the study at any point, or to decide to not answer particular questions, and this will not affect whether or not you will receive your credit or payment. This study should take about one hour to complete.

Now I'm going to pass out the consent form that describes what your participation involves. Also, we will be saving your online comments. All information gathered in this study will be kept confidential. Results will be analyzed by groups, and no personal identifying information will appear in any publications.

Pass out consent form

Wait for all consent forms to be signed, collect them and put them in a separate pile.

Answer any questions participants may have. Next, show how to access the Internet and log on to the system network from the computer at the same time to all participants (e.g. paired or control condition)

[Insert for paired condition only] Now you have both completed the consent forms and been shown how to access the internet, I will ask you both to remain seated while I give you the first set of questionnaires. Eventually, I separate you into different rooms so that we can get your online reactions, without it being influenced by how you actually see one another respond.

Next handout the first set of questionnaires to the participant(s)

This folder contains all the materials you need for the first part of this study. Why don't you open your folders and get started. Whenever you're finished with your questionnaires, please let me know so I can set you up for Stage Two—the Internet portion of the study.

Once participants begins to read the blog - reset timer to zero

→ (Script for paired participants) MSN MESSENGER CONDITION

Let me tell you how the Internet session will work in this study. First, I will give you a sheet of paper with a web address you will need to type into the browser. When you link into this website, please take a few moments to read the blog along with the comments. I'll give you 5 minutes to do this and complete a very brief questionnaire. Second, you and your partner will both be asked to sign in to MSN Messenger to discuss the blog for 10 minutes. While you're on MSN, please keep focused on reactions to the blog, as opposed to other things that you have going on in your life. Remember that these MSN Messenger conversations will only be identifiable by a code number. Your name will not be associated with your data to maintain confidentiality. Are there any questions?

Ok, let's get started. Do you have any questions about the log in? Just a reminder that once you are done reading the blog, please let me know you are ready to sign in on MSN Messenger. During your conversation in MSN Messenger, discuss your thoughts and the feelings you experienced while reading this blog. How did this blog make you feel? What did you think of the blog author?

→ (Script for single participants) blog comments

Let me tell you how the Internet session will work in this study. First, I will give you a sheet of paper that has a web address you will need to type into the web browser. When you link into this website, please take a few moments to read the blog along with the comments. I'll give you 5 minutes to do this and complete a very brief questionnaire. Second, you will be asked to post an online comment on the blog, and you will have 10 minutes to write your reaction. There is no minimum or maximum posting length requirement. Feel free to indicate your thoughts and the feelings you experienced while reading this blog. How did this blog make you feel? What did you think of the blog author? Remember that your online comment will only be identifiable by a code number.

Your name will not be associated with your data to maintain confidentiality. Do you have any questions?

Ok, let's get started. Do you have any questions about the log in? Just a reminder that once you are done reading the blog, please let me know when you are ready to post a comment.

When participants finish the internet session, ask participants to complete final questionnaires

Okay, this is the last part to this study. I'd like you to go ahead and fill out the remaining questionnaires. If you have any questions while filling out the questionnaires, I'll be happy to answer them. Remember that these questionnaires will only be identifiable by a code number. Your name will not be associated with your data to maintain confidentiality. Please try to answer all the questions as honestly and accurately as you can.

Bring participants together to provide verbal debriefing after questionnaires are completed

Thanks for participating in this study.

GIVE VERBAL DEBRIEFING

I'm going to give you the first final consent form for permission to use your data now that you know the true purpose of the study. Please take a few minutes read over the consent form, sign, and return it to me. The second final consent form is permission to possibly quote something that you say.

GIVE FINAL CONSENT FORM

For this study, you have your choice of either one bonus point towards your grade in psychology, or \$10. Just let me know which you prefer. For the bonus points, be sure to keep the copy I give you to make sure that you get credit for your participation at the end of the semester. I'll inform the department that you participated in my study, but it is a good idea to keep your copy too.

Pass out bonus point forms, sign them and separate them for student and professor. Or, give cash and have signed receipt.

If you have any more questions about this study, feel free to contact me. Have a great day.

PROVIDE CONTACT SHEET IF THEY HAVE ANY QUESTIONS OR CONCERNS.

APPENDIX D

Informed Consent Forms

The purpose of an informed consent is to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent has to provide sufficient information such that you have the opportunity to determine whether you wish to participate in the study.

Study Title: Online Blogs

Research Personnel:

The following people are involved in this research and may be contacted at any time if you have any questions about the project, what it means, or concerns about how it was conducted:

Trista Takacs, Graduate Researcher, Department of Psychology, (613) 520-2600 ext. 2692

Dr. Kim Matheson, Faculty Member, Department of Psychology, (613) 520-2684

Dr. Hymie Anisman, Faculty Member, Department of Psychology, (613) 520-2699

If you have any ethical concerns about how this study was conducted please contact:
Dr. Monique Sénéchal, monique_senechal@carleton.ca (613-520-2600 ext. 1155).

If you have any other concerns please contact:
Dr. Janet Mantler, janet_mantler@carleton.ca (613-520-2600 ext. 4173).

Purpose and Task Requirements:

The goal of this study is to examine reactions to internet blogs. You will be asked to answer a few background questionnaires prior to beginning the task. Next, you will be asked to read and respond online to a blog, followed by several additional questionnaires. This study will take approximately 60 minutes to complete, and you will either receive 1 credit toward your Psychology class OR 10\$ as a token of our appreciation for your participation.

Potential Risk and Discomfort:

There are no anticipated physical harms or benefits associated with participating in this study. You may experience some emotional discomfort when reading the opinions others express using internet communications.

Benefits:

Your honest answers are crucial as they may help us understand how people respond to particular types of blogs. There are no wrong or good answers; your accurate answer is the one that first comes to your mind.

Anonymity/Confidentiality:

Any information obtained from this study will be kept confidential. Your personal information will be stored in a separate file from your questionnaire responses. Only your chosen "id name" will identify your data.

Right to Withdraw:

Your participation in this study is entirely voluntary. At any point during the study you have the right to choose to not answer any questions, or to withdraw entirely without penalty.

I acknowledge that I have read and understand the information provided on this study, and I have been given the opportunity to ask questions and have them answered. The data collected will be used in research publications and/or for teaching purposes. I understand I may contact the researcher if any questions should arise in the future. My signature indicates that I agree to participate in the study, and this in no way constitutes a waiver of my rights.

Participant's Full Name (please print): _____

Signatures:

Participant: _____ Date: _____

Researcher: _____ Date: _____

This study has received clearance by the Carleton University Psychology Research Ethics Board (10-105)

APPENDIX E**Blog**

Baby, try doing some 'real' work

We all know that university is where the leaders of tomorrow emerge. Eager new students arrive in September ready to learn new skills and be successful as they take on the next chapters of their lives. And yeah, we know that women are now pretty much taking over university campuses. Yet, 80% of women believe that pursuing *non*-science degrees is going to get them advanced standing in the world. I can't understand how these other degrees are even considered a real degree. Arts students might, on a bad day, have maybe 3 classes where all you do is take notes. As an engineer, I spend innumerable hours solving math problems, writing lab reports, and processing tons of information! How can women even try to compare themselves and defend these majors when most women haven't experienced what real academic work even consists of! This is why men aren't coming to university. They don't want to waste their time on air-head degrees, and the hard disciplines like engineering are really competitive and limited in the numbers admitted.

"What about that other 20% of women who don't go into the arts," you might be asking? That part is easy too. Most women don't make it through their first year of sciences or engineering. For those who do make it through to the second year, that's usually because they found some dude to teach them what they can't teach themselves, or because they choose team projects where, since the majority of people in the program are guys, they carry the load when it comes to the more technical and concrete aspects of thinking. Although the women think that they're better team players, they actually make everyone uptight and worried that if they say the wrong thing or crack the wrong kind of joke, the women will lay a complaint. Then women wonder why they aren't especially welcome on these projects. Well, the truth is if you're incapable of thinking on your own, do you really think you can contribute anything to the larger group? Easy answer: not likely.

One girl I talked to actually said that she gets mean comments, looks, etc from her engineering classmates. I guess it is kind of similar to what you were saying before about the huge drop out rates of girls in science. It seems to fit, especially since they don't want to get too close to her because they assume she isn't going to be around much longer. They can fill the lab group with someone who plans on sticking it out.

Speaking of personal stories, a girl in my biology department once had an oven mitt hanging from her door. If that isn't a hint for her to go back to the kitchen and leave the real work to men, I don't know what is LOL.

Being a physics student, if I had any classes that were 95% female, I would have probably found a hot girlfriend a lot faster. Those arts ladies may be not the smartest, but at least they are nice to look at!

Yah- but usually the hot ones are feminists. Do you really want to get involved with that?

Women are made to look pretty, but thinking just isn't in their resume.

5

What about the arts chicks?

Yeah, what about them? I thought this discussion was meant for a reflection on real degrees.

Agreed. How can you even compare our advanced calculus, chemistry, and circuits to something like women's studies or reading novels?

APPENDIX F

Debriefing

Our ability to deal with the negative effects of stressful experiences varies on a numerous factors such as considering the nature of the stressor that is being experienced. For example, does the stressor have a negative impact on you? Another important factor depends on how the stressor is appraised by you during the experience.

Of particular interest to us in the present study is how people react when they see discrimination against women. Consider what happens when you see such discrimination towards a woman. Some women may appraise the situation as non-threatening, i.e., just something that happens. However, other women in the same situation may acknowledge the situation as having a serious impact on themselves, and that such attitudes could influence their own lives. In addition to how such events are interpreted in the first place, how people react may depend on the coping resources (i.e., emotional and social support) that are available. Social support within close relationships is clearly important to individuals' well-being. However, this support is not always the most effective for contending with a stressor. For example, what happens if the male partner feels guilty, or that he's partly to blame? Women may be more concerned about making him feel better than they are about the situation itself. Or what happens if he gets angry at the perpetrators and wants to protect her. Again, the woman might be more concerned about calming him down, or might alternatively feel like he's taking over the situation on her, and so might not feel supported. There are many different reactions women may have to discrimination, depending on the response of their male partners, and these might differ if they were instead sharing the experience with another woman, or with no-one else in particular at all.

To understand how experiences are appraised as discriminatory and how social support was used, you read a fictitious online blog that represented a situation of discrimination. Women were randomly assigned to discuss their reactions to the blog using MSN Messenger with either (a) their male partner; (b) their closest same sex friend; or (c) expressed their reactions as a comment posted to the blog.

The goal of this study explored women's response to discrimination. During this session, you were asked to:

- 1) Read and respond to a fictitious discriminatory online blog with comments. The blog aided in obtaining two measurements. First, your emotional state before and after reading the blog. Second, we were interested in whether you appraised the stressor as threatening (as discriminatory). If so, how would you respond either on your own or with social support of the lab partner (i.e., partner or same-sex friend). Within the social support context, we were also interested in there would be differences in the nature of support of given.
- 2) Complete a number of questionnaires assessing your personal characteristics, your health, appraisals of the event, gender identification, perceived closeness to the person they are communicating with on MSN, coping strategies, and perceived quality of support received.

At the beginning of the laboratory session, we did not tell you the true purpose of this study. The reason behind using this was to reduce the tendency for participants to act a particular way consistent with what you feel the study is measuring. If the experimenter tells you what the study is about, individuals are more inclined to act a certain way since you were told what the purpose of the experiment. We hope that your reactions and answers will provide us with information on factors that influence and burden the integrity of the romantic relationship when gender discrimination is acknowledged.

We appreciate the time you have given us to complete this study. Should you have any questions about this study or should you feel any discomfort following the completion of this study, you are encouraged to contact the following persons or services.

APPENDIX G

Informed Consent

Participant Code: _____

The purpose of this informed consent is to ensure that you now understand the true purpose of the study and that you agree to allow your data to be used for research and teaching purposes. Because you were only told of the procedures and not the purpose of this study at the outset, we are now asking for your consent to allow your data to be used for research and teaching purposes.

Purpose. The purpose of this study is to investigate women's response to discrimination depending on the nature of the social support they receive. This study examines whether women's emotions, appraisals, and coping strategies are tempered when her source of support is their male partner or a female friend, or there is no support immediately available.

Anonymity/Confidentiality. The data collected in this study will be kept anonymous and confidential. Your consent forms will be kept separate from your responses.

Right to withdraw data. You have the right to indicate that you do not wish your data to be used in this study. If you indicate this is your choice, then all measures you have provided will be destroyed.

Signatures: I have read the above description of the study concerning reactions to gender discrimination. The data in the study will be used in research publications or for teaching purposes. My signature indicates that I agree to allow the data I have provided to be used for these purposes.

Full Name (Print): _____

Participant Signature: _____

Date: _____

Researcher Signature: _____

Date: _____

This study has received clearance by the Carleton University Psychology Research Ethics Board (10-105)

APPENDIX H

Use of Quotations

Participant Code: _____

Researchers involved in this project may present findings from this study at professional conferences or in written publications in psychology journals. The use of short excerpts from your online responses to the blog may help to explain or illustrate certain concepts. Before using these excerpts, we will remove information such as specific names as well as any additional identifying information. For example, to illustrate how people describe their academic experience in a particular class, we could present the example: “The science class was very interesting, but [Shane and Sarah], always seemed to be talking during the lecture.” The information in brackets [Shane and Sarah] would be eliminated or replaced with a more general term [some classmates]

However, we only use direct quotations from participants who have given their prior consent. Your consent to the use of specific quotations is voluntary; you may decline without penalty. Your responses will still be included in aggregated (group) results even if you don’t consent to the use of quotations.

If you decide to provide your consent, you have two consent alternatives.

You can choose to provide “blanket” consent for any excerpts (you consent at this time to the use of any excerpts drawn from your responses), provided that the researchers omit all identifying information.

OR

You can choose to be contacted in the event that researchers should wish to use specific excerpts from your responses, and to only make a consent decision at that time. If you choose this alternative, you will be asked to provide your code ID and contact information that we can use should we need to contact you. Please note that this information will be secured in a locked cabinet and accessible only to authorized researchers, but your responses will no longer be completely anonymous to the researchers because your code name and email will both be linked to your questionnaire. After all contacts have been made, code names and contact information will be destroyed, rendering responses anonymous.

Please indicate the alternative you choose.

_____ NO, please DO NOT use excerpts of my responses for presentation or research publication purposes.

_____ YES, the researchers may present excerpts of my responses at professional conferences or in research publications, provided that all identifying information, such as names, specific locations, or organizations are omitted.

_____ YES, the researchers may CONTACT ME to ask permission to present specific excerpts of my responses at professional conferences or in research publications. Identifying information such as names, specific locations, or organizations will be omitted. I will choose to either give permission or decline it if I am contacted. I have provided my contact information below:

Name: _____

Email: _____

Phone: _____

Participant Signature _____

Date _____

This study has received clearance by the Carleton University Psychology Research Ethics Board (10-105)

APPENDIX I: QUESTIONNAIRES USED**Stress Appraisal Measure (SAM)**

This questionnaire is concerned with your thoughts about various aspects of the situation identified previously. There are no right or wrong answers. Please respond according to how you view this situation right NOW. Please answer ALL questions. Answer each question by CIRCLING the appropriate number corresponding to the following scale.

0	1	2	3	4
Not at all	Slightly	Moderately	Considerably	Extremely

- | | | | | | |
|--|---|---|---|---|---|
| 1. Does this blog create tension in me? | 0 | 1 | 2 | 3 | 4 |
| 2. Does the blog make me feel anxious? | 0 | 1 | 2 | 3 | 4 |
| 3. Does the blog have important consequences for me? | 0 | 1 | 2 | 3 | 4 |
| 4. Does this blog have serious implications for me? | 0 | 1 | 2 | 3 | 4 |
| 5. Did this blog strain or exceed my coping resources? | 0 | 1 | 2 | 3 | 4 |
| 6. Are there sufficient resources available to help me in dealing with the blog? | 0 | 1 | 2 | 3 | 4 |
| 7. How threatening is the blog? | 0 | 1 | 2 | 3 | 4 |
| 8. To what extent do I perceive this blog as stressful? | 0 | 1 | 2 | 3 | 4 |
| 9. To what extent does the blog require coping efforts on my part? | 0 | 1 | 2 | 3 | 4 |
| 10. Does this blog have long-term consequences for me? | 0 | 1 | 2 | 3 | 4 |
| 11. Is the blog going to have a negative impact on me? | 0 | 1 | 2 | 3 | 4 |

Action Endorsements

Please indicate the extent to which you would participate in the following actions if you had **the opportunity to respond to the Facebook blog**.

- | | | | | | |
|---|---|---|---|---|-------------|
| 1. Accept the situation, that is, don't bother responding to what the bloggers said. | 0 | 1 | 2 | 3 | 4 |
| Not at all | | | | | Very Likely |
| 2. Request that the bloggers get some training about sexism and appropriate treatment of women. | 0 | 1 | 2 | 3 | 4 |
| Not at all | | | | | Very Much |
| 3. Confront the bloggers and demand a personal on-line apology. | 0 | 1 | 2 | 3 | 4 |
| Not at all | | | | | Very Much |
| 4. Confront the bloggers and demand an online apology to all women. | 0 | 1 | 2 | 3 | 4 |
| Not at all | | | | | Very Much |
| 5. Get together with other women to create a new blog that provides a positive view of women in science. | 0 | 1 | 2 | 3 | 4 |
| Not at all | | | | | Very Much |
| 6. Get together with other women to create a new blog that makes these male bloggers look bad. | 0 | 1 | 2 | 3 | 4 |
| Not at all | | | | | Very Much |
| 7. I would ask volunteers to report this Facebook group. | 0 | 1 | 2 | 3 | 4 |
| Not at all | | | | | Very Much |
| 8. I would not do anything; however, if another individual initiated a response to confront these bloggers I would be willing to participate. | 0 | 1 | 2 | 3 | 4 |
| Not at all | | | | | Very Much |
| 9. I would not do anything, and if another individual initiated a response I would not participate. | 0 | 1 | 2 | 3 | 4 |
| Not at all | | | | | Very Much |

10. I would likely join an online group such as that one so that I can give my opinion and educate its members.

0	1	2	3	4
Not at all				Very Much

11. I would join this blogger group, because I believe that they really do value scholastic ability in science.

0	1	2	3	4
Not at all				Very Much

12. I would like to solicit the support of women in science in the form of a petition that I will organize. The aim of the petition is to remove false content about women in science.

0	1	2	3	4
Not at all				Very Much

Identification Scale

Using the scale below, please rate the extent to which you agree or disagree with each of the statements below on a scale of -3 (strongly disagree) to 3 (strongly agree).

	-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Neither Agree nor Disagree	Mildly agree	Moderately Agree	Strongly Agree
1. I have a lot in common with other women.	-3	-2	-1	0	1	2	3
2. I often think about the fact that I am woman	-3	-2	-1	0	1	2	3
3. In general, I'm glad to be a woman	-3	-2	-1	0	1	2	3
4. The fact that I am a woman rarely enters my mind.	-3	-2	-1	0	1	2	3
5. Generally, I feel good when I think about myself as a woman.	-3	-2	-1	0	1	2	3
6. I feel strong ties to other women.	-3	-2	-1	0	1	2	3
7. I often regret that I am a woman.	-3	-2	-1	0	1	2	3
8. Overall, being a woman has very little to do with how I feel about myself.	-3	-2	-1	0	1	2	3
9. I don't feel good about being a woman.	-3	-2	-1	0	1	2	3
10. I find it difficult to form a bond with other women.	-3	-2	-1	0	1	2	3
11. In general, being a woman is an important part of my self-image.	-3	-2	-1	0	1	2	3
12. I don't feel a sense of being "connected" with other women.	-3	-2	-1	0	1	2	3

PERSONAL ATTITUDES TOWARD MY DATING PARTNER/FRIEND

Using the scale below, please rate the extent to which you agree or disagree with each of the statements below.

1. How do you think the blog made your partner/friend today feel?

A) Upset

0	1	2	3	4
Not at all				Very

B) Indifferent

0	1	2	3	4
Not at all				Very

C) Calm

0	1	2	3	4
Not at all				Very

2. How likely do you think your partner/friend wanted to act on your behalf?

0	1	2	3	4
Not at all				Very

3. To what extent did you and your partner/friend agree in how you reacted to the blog?

0	1	2	3	4
Not at all				Very much in agreement

4. How supportive did you feel that your partner/friend today was toward your feelings?

0	1	2	3	4
Not at all				Very much so

5. Did your partner/friend make you feel helpless to respond effectively to the blog?

0	1	2	3	4
Not at all				Very much so

6. How supportive did you feel that your partner/friend was for how you reacted to the blog?

0	1	2	3	4
Not at all				Very much so

7. How comfortable were you communicating with your partner/friend about the blog?

0	1	2	3	4
Not at all				Very much so