GROUP PROCESSES

AND THE PERCEPTION OF DISCRIMINATION

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ABSTRACT

The present thesis describes a group-oriented program of research designed to investigate the experience of victims of discrimination. Ninety female college students were tested in small groups and confronted with the possibility of their having been discriminated against by a male student on a test. Women assessed the extent to which the received feedback was due to discrimination or their answers on the test, prior to and following a group discussion. Results indicated that contrary to previous research in which women consistently minimized discrimination as a reason for group-based negative feedback, women in the present experiment were willing to acknowledge discrimination. Results are interpreted in terms of the influence of social sharing of emotional and informational support with ingroup members after receiving feedback where discrimination might be implied. The thesis emphasizes the importance of social networks for disadvantaged group members who need to cope with the possibility of being targets for discrimination.

RÉSUMÉ

Cette thèse décrit un programme de recherche portant sur l'étude de l'expérience des victimes de discrimination d'un point de vue de groupe. Quatre-vingt-dix participantes ont été conviées en petits groupes, puis confrontées à la possibilité d'avoir été victimes de discrimination de la part d'un homme après avoir complété un test. Les participantes ont réagi à leur feedback avant, puis après, avoir pris part à une discussion de groupe. Les résultats indiquent que contrairement aux recherches antérieures dans lesquelles les femmes minimisent invariablement la discrimination comme cause possible d'un feedback négatif, dans cette étude les participantes ont clairement reconnu la discrimination dirigée contre elles. L'interprétation des résulats est articulée autour de l'influence du partage d'émotions et d'information avec des membres de l'endogroupe après avoir reçu un feedback potentiellement discriminatoire, et met l'emphase sur l'importance des réseaux sociaux pour les membres de groupes désavantagés qui doivent faire face à la possibilité d'être cibles de discrimination.

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Prejudice and discrimination are pervasive social issues and as such they occupy a central position in social psychological theory and research. Even if, at times, people might prefer to be treated differently on the basis of their category membership—such as when affirmative-action programs are implemented—discrimination is usually a distressing experience. Discrimination involves an individual or a group behaving towards other groups or individuals in a different, but usually negative manner, exclusively on the basis of their category membership, and without the consent of the group or individual being discriminated against (Taylor & Moghaddam, 1994).

Discrimination is by definition an intergroup phenomenon, involving a perpetrator (member of an advantaged group), and a victim (member of a disadvantaged group). One important theme that has emerged concerning the experience of victims of discrimination is their apparent tendency to *minimize* their experience of personal discrimination in response to group-based negative feedback. The social implications of minimizing personal experiences with discrimination are disquieting. Disadvantaged group members who blame their personal qualities for negative outcomes rather than discrimination from the advantaged group might be more likely to accept the status quo. In so doing they are also internalizing personal failure. Only when disadvantaged group members perceive and acknowledge the discrimination that confronts them, will they be in a position to decide if and what steps to take to improve their status and the status of their group.

Despite the fact that discrimination is a group phenomenon, to date theoretical explanations and methodological strategies used to explore the minimization-of-

discrimination effect have tended to be very individualistic. Clearly a thorough investigation of group processes is essential for the understanding of most forms of social behavior, including and especially discrimination.

The present thesis is based on the premise that research on the topic of discrimination has been insufficiently *social*, and that it has not adequately reflected the reality that discrimination is by definition a group phenomenon. Given the disconcerting findings of the minimization of personal discrimination among disadvantaged group members, there is a pressing need to shift research from the present individually-based perspective, to a more group-oriented approach, in which individuals are not posited as being isolated, but rather as being interactive members of various social networks. The study of the perception of discrimination in a group context should provide insights into the scope of the minimization-of-discrimination phenomenon.

A review of the research on discrimination and, specifically, concerning the experience of its victims, as well as a review of the limited research conducted thus far on group processes and the perception of discrimination, will serve to provide the necessary context for describing a research program designed to investigate the experience of victims of discrimination from a group perspective.

The Study of Discrimination

By definition, discrimination is an intergroup phenomenon involving a perpetrator and a victim, yet research on the topic of discrimination has been conducted in a rather unbalanced manner (see Taylor & Moghaddam, 1994). Traditionally, social psychological research on prejudice and discrimination has focused primarily on the perpetrators of

discrimination. The aim, specifically, has been to analyze individual differences among the members of dominant groups in order to understand what personality flaws lead individuals to become prejudiced or to engage in discriminatory practices. For instance, perpetrators of discrimination have been ascribed specific personality traits, such as authoritarianism (Adorno, Frenkel-Brunswick, Levinson, & Sanford, 1950), dogmatism (Rokeach, 1960), conformism (Pettigrew, 1958), and low self-esteem (Ehrlich, 1973).

The focus in both social psychological theory and research upon the perpetrators of discrimination has left little room to explore the psychological consequences of being a victim of discrimination, undoubtedly because it has seemed intuitively obvious that such an experience would be negative. Early research that pursued the topic of discrimination from the point of view of its victims had in fact suggested that members of stigmatized groups suffered from low levels of self-esteem. The preference, for instance, of Black children and Maori native children for white dolls (Clark & Clark, 1947; Vaughan, 1972), the identification of concentration-camp prisoners with their aggressors (Bettelheim, 1958), or the positive reaction of French-speaking schoolchildren in Québec to English-speaking voices (Lambert, Hodgson, Gardner, & Fillenbaum, 1960) had all been taken as evidence for the presence of low levels of self-esteem among disadvantaged group members (Taylor & Moghaddam, 1994).

Recently, however, social scientists have begun to recognize that the psychological consequences of being a victim of discrimination might be more complex than originally thought. The theoretical and empirical contribution of Crocker and Major (1989) has been influential in defining a new direction for theory and research on the topic of discrimination. From this relatively new focus on the victims of discrimination,

two novel avenues of inquiry have emerged, and have led to very different propositions concerning the experience of victims of discrimination.

The Experience of Victims of Discrimination: Two Competing Theories

The Role of Attributional Ambiguity in the Experience of Discrimination

In 1989, Crocker and Major published a pivotal theoretical article that challenged the common belief that members of disadvantaged groups suffer from low levels of self-esteem. Their review of the literature lead them to observe that for a variety of stigmatized groups, including racial and ethnic minorities, women, the physically disabled, the learning disabled, homosexuals, the mentally ill, and juvenile delinquents, *no evidence of pervasive low self-esteem is to be found.* Crocker and Major (1989) thus concluded that the experience with discrimination does not result in lowered self-esteem for members of stigmatized groups.

To explain these counterintuitive findings on the relationship between self-esteem and membership in a stigmatized group, Crocker and Major (1989) theorized that members of stigmatized groups have at their disposal special opportunities for self-protection that are not available to members of a group that is not stigmatized. Specifically, Crocker and Major (1989) proposed three ways in which stigmatized group members may protect their self-concept. Firstly, disadvantaged group members can avoid the potentially esteem lowering effect of comparing one's outcomes with an advantaged group by making ingroup, instead of intergroup, social comparisons. Secondly, disadvantaged group members can maintain high self-esteem by selectively devaluing the performance dimensions on which their ingroup fares poorly, and selectively valuing

those dimensions on which their ingroup excels. Thirdly, and more directly related to the topic of discrimination, disadvantaged group members can attribute negative feedback to prejudice against their ingroup as a way to maintain high self-esteem.

Crocker and Major (1989) propose that members of stigmatized groups, in their day-to-day experiences, constantly face *attributional ambiguities* that are not faced by advantaged group members. This ambiguity arises each time a stigmatized group member receives feedback—positive or negative—from an advantaged group member: Among the number of possible attributions for the feedback, there is always the possibility that whether it be positive or negative, it might be due to their membership in a stigmatized group. For example, a woman who is fired from her job may attribute this negative outcome to inferior performance, but she may also believe that she was fired because she is a woman.

This distressing possibility paradoxically offers members of disadvantaged groups the opportunity to engage in self-protection and self-enhancement by attributing poor performance to discrimination, rather than to inadequate personal qualities. In other words, attributing negative feedback to prejudice against one's ingroup helps bolster self-esteem in the face of failure. Similarly, experiencing success in spite of one's membership in a stigmatized group may also be highly ego enhancing. In both situations, prejudice and discrimination allow disadvantaged group members to maintain high levels of self-esteem.

In summary, Crocker and Major's (1989) proposition challenges the traditional contention that disadvantaged group members who confront discrimination suffer from low self-esteem. To the contrary, Crocker and Major (1989) suggest that stigmatized

group members may attribute negative feedback to discrimination against their group as one of the ways to maintain high self-esteem.

The Personal/Group Discrimination Discrepancy

Crocker and Major's (1989) perspective on the experience of victims of discrimination is particularly challenging in light of another phenomenon associated with the experience of disadvantaged group members that Taylor, Wright, Moghaddam, and Lalonde's (1990) have labeled the *personal/group discrimination discrepancy*. This phenomenon involves a tendency among members of disadvantaged groups to rate discrimination directed at their group as a whole substantially higher than discrimination directed at themselves personally as a member of that group.

This discrepancy has surfaced among a wide variety of disadvantaged groups, including working women in America (Crosby, 1982, 1984), women in both French Canada and France (Dubé & Abbondanza, 1985), Francophones in the province in Québec (Guimond & Dubé-Simard, 1983), Anglophones of Québec (Taylor, Wong-Rieger, McKirnan, & Bercusson, 1982), South Asian and Haitian immigrant women (Taylor et al., 1990), as well as inner-city African-American men, and Aboriginal people (Taylor, Wright, & Porter, 1993). The pervasive nature and the robustness of this phenomenon pose a theoretical challenge: that is, the need to understand the bases of people's perceptions of personal and collective discrimination, inasmuch as they seem mutually exclusive of one another.

Numerous and varied explanations have been offered for the discrepancy (Taylor, Wright, & Ruggiero, 1991). To date, the most popular explanation for the personal vs. group discrimination discrepancy is the tendency for disadvantaged group members to

minimize their experience of personal discrimination in response to failure (Taylor, Wright, & Ruggiero, in press). For instance, Crosby (1982, 1984) proposed that personal minimization-of-discrimination may be the manifestation of the individual's desire to avoid naming a specific villain as the source of unfair treatment against oneself, due to the fear of consequent retaliation. By contrast, admitting the awareness of discrimination toward one's ingroup does not require the association of specific individuals to the discriminatory behavior. Alternatively, Taylor and Dubé (1986) argued that minimizing one's personal experience with discrimination might help the individual to avoid the dissonance of not having taken any specific action against the perpetrator of discrimination. The minimization explanation assumes that perceptions of discrimination at the group level reflect objective reality. Distortions occur at the personal level, and in a direction to diminish one's personal experience with discrimination.

In summary, the hypothesis suggested by the role of *attributional ambiguity* (Crocker & Major, 1989) implies that when confronted with negative feedback, disadvantaged group members will tend to attribute their feedback to discrimination as a means to maintain high self-esteem. The hypothesis suggested by the *personal/group discrimination discrepancy* (Taylor et al. 1990) implies that disadvantaged group members will tend to minimize attribution to discrimination in response to negative feedback. These two competing theories of perceived discrimination offer divergent hypotheses about the attribution to discrimination in response to personal failure.

Methodological Challenges in the Study of Perceived Discrimination

A major challenge arising from theoretical and empirical research conducted on the experience of victims of discrimination involves designing a laboratory paradigm capable of testing the competing hypotheses concerning perceived discrimination. An essential element of such a paradigm will be some measure of the objective amount of discrimination directed at potential victims. For example, in a real-world context, it is often difficult to objectively determine the amount of discrimination that a particular individual has experienced upon being fired from a job. While a woman might believe that gender discrimination was the cause of her dismissal, the employer may argue that the firing took place because of the employee's poor work performance. In the laboratory, however, objective amounts of discrimination can be induced. But this has to be done in such a way as to give participants enough freedom to either perceive or minimize the discrimination that has been directed at them.

Ruggiero and Taylor (1995) have introduced an experimental paradigm that provides participants with a base-rate probability for the occurrence of discrimination, ambiguous enough so that psychological processes have the possibility to influence perceptions. The discrimination paradigm involves disadvantaged group members receiving negative feedback from an advantaged group member. Disadvantaged group members are given explicit information about the probability that the advantaged group member discriminates against members of their group. They are told that either 100%, 75%, 50%, or 25% of the advantaged group members on a panel discriminate against members of their group. Participants are then asked to attribute the extent to which their negative feedback is due to discrimination or to their personal performance.

In an initial experiment, Ruggiero and Taylor (1995) found that women appeared to minimize the discrimination that they confronted in the experiment, supporting the hypothesis implied by the *personal/group discrimination discrepancy* (Taylor et al. 1990). In this experiment, women reacted to negative feedback after receiving information about the probability that they had been discriminated against by a male judge. It was observed that when discrimination was absolutely certain (that is, a probability of 100%), disadvantaged group members tended to attribute their failure to discrimination. However, when the possibility of discrimination was more ambiguous (that is, conditions in which the probability of being discriminated against by the male judge was 75%, 50%, or 25%), disadvantaged group members tended to attribute their failure to their personal performance rather than to discrimination.

These results provided striking support for the minimization effect. Indeed, if participants were responding to information about discrimination in a purely rational manner, attributions of failure to discrimination should have been extremely high in the 100% condition, and then perception of discrimination should have declined in a stepwise manner through the other conditions. Yet, participants in the 75% probability for discrimination condition were as reluctant to attribute their failure to discrimination as those in the 25% condition. In sum, the tendency to minimize discrimination in the face of failure occurred when the probability of being discriminated against was ambiguous, whereas the tendency to acknowledge discrimination occurred when the possibility of being discriminated against was absolutely certain (Ruggiero & Taylor, 1995).

These initial findings for gender discrimination have been replicated and the experimental paradigm of Ruggiero and Taylor (1995) has been further extended to discrimination on the basis of ethnicity for samples of Asians and Black students (see

Ruggiero & Taylor, 1997). These results also provide striking support for the minimization-of-discrimination effect, and suggest that the tendency to minimize discrimination as a reason for negative feedback is not unique to women, but rather a more general phenomenon that can be found among members of various low-status groups (Ruggiero & Major, 1998).

The tendency to minimize personal discrimination raises a puzzling question: If, as Crocker and Major (1989) theorize, the acknowledgment of discrimination protects self-esteem, why would disadvantaged group members minimize the discrimination that confronts them? In an attempt to address this issue, Ruggiero and Taylor (1995, 1997) have conducted a series of experiments that extend the theoretical work of Crocker and Major (1989) by demonstrating a more complex relationship between the attribution to discrimination and one's self-esteem, as well as the relationship between the attribution to discrimination and other fundamental psychological process, such as the need for control.

The Costs and Benefits of Perceiving Discrimination

Ruggiero and Taylor (1995) propose that there may be psychological costs associated with attributing failure to discrimination. For instance, in an achievement context, attributing failure to discrimination may have different consequences for two different dimensions of self-esteem: performance self-esteem and social self-esteem. On the one hand, Ruggiero and Taylor (1995) hypothesize that the attribution of failure to personal performance—and not to discrimination—allows members of disadvantaged groups to protect their social self-esteem: admission of poor performance on a task at least leaves one's sense of social worth intact. On the other hand, attributing failure to

discrimination allows disadvantaged group members to maintain a sense of positive evaluation of their personal performance, but it also forces them to admit that they are socially rejected. Thus, minimizing personal discrimination would protect social self-esteem, but threaten performance self-esteem. Conversely, being vigilant in the perception of discrimination would protect performance self-esteem, but threaten social self-esteem. Still, questions remain: Why do disadvantaged group members minimize the discrimination that they confront?

Ruggiero and Taylor (1997) propose that other psychological processes might be involved in the minimization-of-discrimination phenomenon. Specifically, they suggest that one potential reason for the minimization of personal discrimination is the need for perceived control, or "the belief that one can determine one's own internal states and behavior, influence one's environment, and/or bring about desired outcomes" (Wallston, Wallston, Smith, & Dobbins, 1987, p.5). As with self-esteem, the minimization of personal discrimination has consequences for the perception of control in two domains: the performance and social domains. On the one hand, by minimizing discrimination as a reason for failure, disadvantaged group members are judging themselves as the cause for their poor performance. Despite this negative self-evaluation, the integrity of their fundamental belief of control over personal outcomes in the performance domain is maintained. On the other hand, by minimizing discrimination as a reason for failure, disadvantaged group members can maintain a sense of control over their social acceptability.

Thus, the psychological benefits of minimizing personal discrimination become clearer when one analyzes the consequences for perceived control. In addition to protecting one's social self-esteem, the minimization of personal discrimination allows

disadvantaged group members to maintain the perception of control over their lives, in both the performance and the social domains (Ruggiero & Taylor, 1997).

The theoretical and empirical challenge arising from Crocker and Major's (1989) vs. Ruggiero and Taylor's (1995) divergent perspectives leads one to a crucial question: When will disadvantaged group members acknowledge the discrimination that they may confront? Disadvantaged group members will only be in a position to take the necessary actions to improve their status and the status of their group when they perceive and acknowledge the discrimination that confronts them.

Group Processes in the Perception of Discrimination

To date, the minimization of personal discrimination has been explained through intra-individual processes, such as the motivation to protect social self-esteem, as well as the motivation to protect perceived control in the performance and the social domains. Although the phenomenon of discrimination is articulated within an intergroup framework, Crocker and Major (1989), Taylor and his collaborators (1991), as well as Ruggiero and Taylor (1995, 1997) did not explore any group-related processes in their analyses of the experience of victims of discrimination. A group-oriented approach to the study of discrimination is clearly important given the collective nature of the phenomenon.

One important theme, however, has emerged from the limited research conducted on discrimination from a group perspective. The group process of social support has been introduced as potentially impacting on the minimization-of-discrimination phenomenon. According to Ruggiero, Taylor, and Lydon (1997), the strategy of coping with

discrimination by minimizing it is equivalent to the avoidance strategies used by people to cope with a wide variety of stressful life-events. Yet avoidance strategies take attention away from the stressful situation. The challenge is then to determine the conditions under which disadvantaged group members might use a more problem-focused strategy to cope with discrimination, in order to be able to acknowledge that they might be discriminated against. Social support is one of the factors associated with avoidance and problem-focused coping strategies.

The hypothesis concerning the relationship between attribution to discrimination and social support predicts less minimization of personal discrimination when ingroup social support is available (Ruggiero et al., 1997). In one experiment in which women reacted to a failing grade after receiving ambiguous information concerning the probability of their having been discriminated against by an advantaged group member, Ruggiero et al. (1997) distinguished between two categories of social support: emotional support, and informational support. In the informational support condition, female participants were told that the last woman with the same male judge had also failed the test. In the emotional support condition, participants were told that they would have the opportunity to meet with another woman to discuss their performance on the test. In the condition where both types of social support were offered, participants were told that they would have the possibility to meet and discuss their performance with the last woman with the same male judge who had also failed the test.

Results showed that, in a 50% base-rate probability of discrimination, when no social support was available, women tended to attribute their failure more to the quality of their answers on a test than to discrimination, replicating the minimization-of-discrimination effect. But when either emotional or informational social support was

available, participants were equally likely to attribute their failure to discrimination and to the quality of their answers on the test. The availability of social support apparently led disadvantaged group members to be more problem-focused, and thereby perceive that their test stood a 50% chance of being graded by an advantaged group member who discriminates against women. However, when both informational and emotional support were available, disadvantaged group members blamed their failure more on discrimination and less on their personal qualities. In sum, results suggested that minimization of personal discrimination occurred in an individual context, when no social support was available; whereas in a group-based environment where both informational and emotional support were available, women became vigilant in their perception of personal discrimination (Ruggiero et al., 1997).

Ruggiero and colleagues' study (1997) of social support and the perception of discrimination is a first step toward redressing the paucity of group-based variables in research on discrimination. But worthy of attention is the fact that the methodological strategy used in Ruggiero et al.' s (1997) experiment was very individualistic. Indeed, participants in their experiment were not offered genuine social support. Women neither met nor interacted with a member of their ingroup: They were only told that the last female participant had also failed the test (informational support condition), and/or that they would have the opportunity to meet later with someone to discuss their performance on the test (emotional support condition). Participating victims were confronted with discrimination in a laboratory setting that isolated them from their real-world social network. Most importantly, participating victims did not voluntarily choose to engage in a socially supportive interaction as a means of coping with discrimination.

Thus, research conducted on the topic of discrimination has clearly been individualistic on two fronts: the nature of the processes investigated, as well as the methodological strategies employed. As such they have failed to account for the group-based nature of the phenomenon of discrimination.

While it has never been tested empirically in the context of discrimination, it has been suggested that in real-world situations, individuals often have the opportunity to compare their personal experiences with those of others, in order to give a direction to their interpretation of ambiguous events. For instance, it has been shown that individuals rely on others to validate social reality, or to evaluate the appropriateness of emotional reactions, especially in novel and ambiguous situations (see Stroebe & Stroebe, 1996). It is, therefore, reasonable to expect that people might rely on their social network to help them interpret an ambiguous event related to discrimination. For instance, while at first a woman might think that she has been fired because of poor work performance, her social network might help her disentangle the ambiguity of the situation by providing her with the material and the psychological resources necessary to become more vigilant in the perception of discrimination. Through a series of interactions and information sharing with other women who have undergone the same experience, the woman might come to interpret her dismissal as discriminatory. Clearly a thorough investigation of group processes is essential for the understanding of most forms of social behavior (Levine & Moreland, 1998), including and especially discrimination.

The present thesis is based on the premise that research on the topic of discrimination has been insufficiently *social*. Given the disconcerting findings of the minimization of personal discrimination among disadvantaged group members, research on the experience of victims of discrimination must now be shifted from the present

individually-based perspective, to one that is more group-oriented. The study of the perception of discrimination in a group context should provide insights into the scope of the minimization-of-discrimination phenomenon.

The Present Experiment

The present experiment is aimed at redressing the characteristic methodology of past research, which, in spite of the group-based nature of the phenomenon of discrimination, has isolated participating victims from their real-world social networks when studying the perception of discrimination.

A modified version of the base-rate paradigm for perceived discrimination (Ruggiero & Taylor, 1995) was employed in order to meet the requirements of a group-oriented program of research. First, women in the present experiment were not tested individually, but rather in small groups. Second, women were offered the opportunity to receive genuine social support through a real face-to-face interaction with the other participants. In accordance with the base-rate paradigm for perceived discrimination, women were asked to react to a test grade after receiving ambiguous information about the probability that they had been discriminated against by an advantaged group member. Women's attributions for feedback were assessed twice: once prior to the group discussion, and once following the group discussion.

The face-to-face interactions were completely unrestrained. There is some indication that people need to express their thoughts and feelings concerning aversive events (Coates & Wortman, 1980; Dunkel-Schetter & Wortman, 1982; Silver & Wortman, 1980), and in the present experiment, women were given total freedom to

discuss their thoughts and feelings with each other. No attempt whatsoever was made by the experimenter to control the topics discussed by the participants. The resulting face-to-face interactions will, therefore, reflect the participants' spontaneous use of this opportunity to either engage, or not, in socially supportive behavior as a way to cope with discrimination.

The basic hypothesis for the present experiment is that disadvantaged group members will be less inclined to minimize personal discrimination in a group context. Additionally, to the extent that less minimization-of-discrimination arises, central to the present experiment is the exploration of what basic group processes might be involved in the perception of discrimination, such as: Do women, when in a group context, spontaneously talk about their experience with discrimination? Do they spontaneously seek support from their peers when confronting discrimination? If—and to the extent that—women do engage in socially supportive behavior, does the social sharing of information and/or emotions with members of their ingroup after receiving feedback where discrimination might be implied lead women to become vigilant in the perception of discrimination?

METHOD

Participants

The participants were 90 female college students from a variety of faculties of study, who ranged in age from 16 to 27, with a mean age of 18.5 years. French was the language spoken at home for 88% of the sample, while 11% reported speaking both French and English at home, and 1% reported speaking French and another language. All were volunteers and agreed to participate in a study on "Future Career Success" to receive a $5 bonus and to win $100 in a lottery. None had ever before participated in a social psychology experiment. Thus, women who took part in this experiment were not aware of research methods and concepts used in social psychology.

Procedure

Participants were scheduled to participate in groups of two to three students in a one-hour testing session. Upon arrival at the testing room, a male confederate introduced himself as being the graduate student in charge of the study, and asked women to take their seats around a small table. The male confederate informed the participants that the goal of the study was to validate a test that assesses the extent to which individuals will be successful in their future careers. The male confederate explained that the session involved taking the test, and answering complementary questionnaires regarding the test. The confederate also explained that the session involved taking part in a short group

discussion. Participants were informed that the discussion would be videotaped for the experimenter's records. Participants read and signed a consent form. The male confederate finally left the participants with his female assistant.

Participants were then presented with the test booklet (see Appendix A), and were asked to read the instructions on the cover page. The female assistant explained that the test was designed to determine their future career success by measuring their competence in logical and mathematical reasoning, as well as in creative thinking. Participants were informed that the test was not dependent on the academic training that was emphasized in participants' specific faculty of study. Participants completed the demographic items, which included gender, age, and school faculty, as well as language spoken at home. Following the instructions, each of the participants was given six minutes to complete the test.

In order to stimulate participants' motivation to perform well in the test, they were informed that in addition to the $5 bonus to participate in the study, those who succeeded the test would be eligible for a $100 lottery, whereas those who failed the test would only be eligible for a $10 lottery. Actual performance on this test was irrelevant to the experiment; it was chosen because it had been shown in earlier pilot testing that participants found it interesting. In reality, succeeding and failing grades were randomly assigned, and all participants were entered in the $100 lottery.

Pilot testing had shown the importance of improving the experimental realism of Ruggiero and Taylor's (1995) original methodology when testing participants in groups. The manner in which the manipulation for discrimination was established was therefore modified. It had been observed that participants did not find credibility in the existence of a panel composed of so many advantaged group members whose task was to grade the

tests. Rather, in the present experiment, participants were told by the female assistant that the tests would be graded by the male graduate student in charge of the study, whom they met briefly at the beginning of the session. Having participants meet with the perpetrator of discrimination raises the potential for a confounding variable. However, participants did not find the procedure to be credible when they were not given the possibility to meet with the student in charge of the experiment, and even less when told of the existence of a panel of graders waiting to evaluate their tests.

Also modified was the base-rate probability for discrimination manipulation, in order to follow the logic of the modified setting. Prior to returning the tests to the male graduate student for the evaluation, the female assistant told the participants that she had something to confess. She confided that she had been working for this male graduate student for some time, and she had noticed that he demonstrated a bias against women. She estimated that 50% of his grading criteria was based on gender. This manipulation created a 50% base-rate probability that the participants' grade could be due to discrimination.

Following the manipulation for discrimination, the female assistant left the room to submit the tests to the male graduate student. A five-minute delay followed, during which time the tests were presumably being evaluated by the male graduate student. In reality, participants were randomly assigned to one of two possible test feedback conditions: a successful grade ($N = 41$), or a failing grade ($N = 49$). Additionally, these two grades were distributed so as to create two different group compositions. On the one hand, the homogeneous groups ($N = 19$) consisted of two or three participants who either all failed or all succeeded. On the other hand, the mixed groups ($N = 15$) consisted of either two failing participants paired with one successful participant, or one failing

participant paired with two successful participants. The participants were unaware of the composition of their group. Participants who succeeded on the test were given a grade of "C", a moderate success, in order to follow the logic implied by the base-rate probability for discrimination manipulation. A perfect grade of "A" would presumably be impossible to obtain when 50% of the grade was based on gender.

During the grading period, participants completed a one-page questionnaire in which they were asked to describe their future career, as well as the abilities required to succeed in that particular profession. This questionnaire was irrelevant to the experiment; it was given to the participants to disguise the true purpose of the experiment.

Following the prescribed delay, the male confederate returned the participants' evaluation sheets to his female assistant, on which the test feedback (C or F) as well as the corresponding amount of money for the lottery ($10 or $100) were indicated. Participants were given a few minutes to inspect their evaluation sheets and to complete the lottery ticket. Participants were asked to do so discreetly and in silence in order to protect the integrity of the experiment.

The female assistant then asked the participants to complete a questionnaire designed to allow them to express their opinion about the new test. This questionnaire comprised a number of items measuring the extent to which logical and mathematical reasoning, as well as creative thinking, were perceived to be predictive of future career success. This questionnaire was also irrelevant to the experiment; it was given to the participants to disguise the true purpose of the experiment.

Immediately after completion of this questionnaire, the female assistant told the participants that prior to proceeding with the group discussion, she had a favor to ask them. She explained that she had designed her own questionnaire in order to assess what

they thought about their grade, and that the graduate student in charge of the study would not have access to this questionnaire. The female assistant told the participants that she would appreciate their help with her own parallel project, insisting that they were not obliged to complete her questionnaire if they felt uncomfortable with it.

This one-sheet questionnaire measured participants' perceived causal attribution for their feedback on the test, including the quality of their answers and discrimination (see Appendix B). Participants completed this questionnaire individually and without knowing the other participants' performance feedback on the test. All participants agreed to complete the female assistant's questionnaire. Pilot testing had shown the importance of not including the measures of perceived discrimination as part of the "official" questionnaires, which would be inspected by the male student in charge of the project. Participants found it more credible when the measures of perceived discrimination were part of the female assistant's parallel project.

After completion of this questionnaire, the female assistant explained that in order to learn as much as possible about the new test, they were now asked to discuss their opinions about the test for a duration of five minutes. The female assistant told the participants that the graduate student in charge of the study would not view the tapes, for she was the one in charge of transcribing the discussions. They could therefore feel free to talk about <u>any</u> aspect of the experiment that they wished. No attempts whatsoever were made to control the topics discussed. Participants were given total freedom to reveal their grade or not, to talk about discrimination or not, or to express their opinions about the test or not. The resulting interactions therefore reflected the participants' spontaneous use of this opportunity to engage, or not, in socially supportive behavior.

The female assistant left participants alone in the room for the duration of the discussion, and came back after the prescribed delay with the next questionnaire to be completed. She explained that the discussion that they had may have altered their view of the test. Participants were thus given the same questionnaire designed to allow them to express their opinion about the new test. This questionnaire comprised a number of items measuring the extent to which logical and mathematical reasoning, as well as creative thinking, were perceived to be predictive of future career success. This questionnaire was again irrelevant to the experiment; it was given to the participants to disguise the true purpose of the experiment.

Immediately after completion of this questionnaire, the female assistant asked the participants if they would for a second time agree to fill out her own questionnaire as well, insisting that they were not obliged to complete it if they felt uncomfortable. Again, the assistant told the participants that she had formulated this questionnaire in order to assess what they thought about their grades, and that the graduate student in charge of the study would not have access to this questionnaire. All participants agreed to fill out the questionnaire a second time. Participants were thus given the same one-sheet questionnaire that measured the perceived causal attributions for their feedback on the test, including the quality of their answers and discrimination (see Appendix C).

Participants then completed another questionnaire that verified the occurrence of informational and emotional support during the group discussions (see Appendix D). The participants finally completed a manipulation check, to verify that the probability for discrimination manipulation had been effective. (see Appendix E).

Following the recommendations of Aronson, Brewer, and Carlsmith (1985), all participants were then probed for suspicions regarding the experimental procedure and

fully debriefed about the true purpose of the experiment by the real graduate student in charge of the experiment. Participants were informed of the true goals of the study, and informed of the deceptions involved in the study, as well as the rationale for the use of such manipulations. Most importantly, participants were told that the test had nothing to do with future career success, and that the grade they had received had been randomly decided by the experimenter. Participants were also told that they would all be entered in the $100 lottery. Finally, participants consented not to disclose the true purpose of the experiment to their peers until the end of the study.

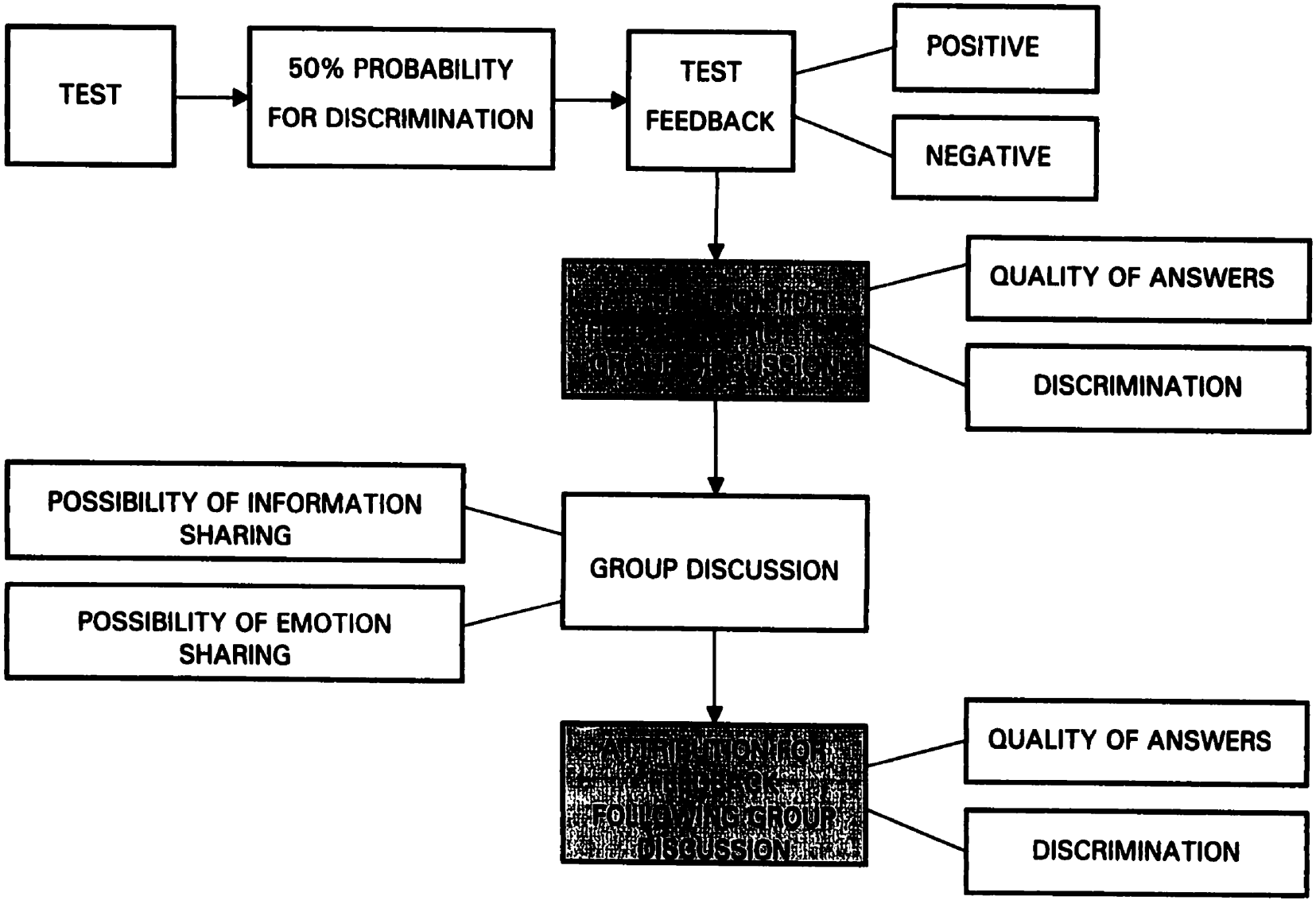
A schematic representation of the modified base-rate paradigm (Ruggiero & Taylor, 1995) adapted for the study of group processes and perceived discrimination is presented in Figure 1. The testing sessions as well as the questionnaires were all in French.

Measures

Attributions for Feedback Prior to and Following the Group Discussion

The measures of perceived causal attributions for feedback required the participants to rate the extent to which six factors played a role in the grade that they received on the test. Specifically, participants rated the extent to which they thought that their grade was based on the quality of their answers and on discrimination. Participants were also asked to rate the extent to which they thought that their grade was based on how anxious they felt while writing the test, their previous academic training, the type of test, their personal abilities, and the effort they put into the completion of the test. These last items were included only to disguise the true goal of the experiment. Each item was

Figure 1: A schematic representation of the modified base-rate paradigm (Ruggiero & Taylor, 1995) adapted for the study of group processes and the perception of discrimination.



rated on an 11-point scale, ranging from 0 (not at all) to 10 (very much). The participants individually completed the same questionnaire twice: prior to the group discussion, and following the group discussion.

Emotional and Informational Support

The measure of perceived emotional and informational support required the participants to rate the extent to which the group discussion had been emotionally and/or informationally supportive, using sixteen items that were created following the theoretical definitions of both types of support (see Wills, 1985). Measures of emotionally supportive interactions included listening attentively, offering sympathy and reassurance, as well as feeling accepted and esteemed. Measures of informationally supportive interactions included offering information, advice, and guidance. The items were labeled in two directions in order to measure the extent to which participants *gave* and *received* both types of support. Each item was rated on an 11-point scale, ranging from 0 (definitely no) to 10 (definitely yes). The obtained Cronbach alphas for the emotional and the informational support subscales were .84 and .90, respectively. Participants also indicated whether or not they had discovered their peers' performance feedback, as well as whether or not they had revealed their own performance feedback during the group discussion. A final question required the participants to indicate whether they thought that the group discussion had been beneficial, using the same 11-point scale.

Probability for Discrimination Manipulation Check

Two questions were included to verify that the probability for discrimination manipulation had been effective. Participants were first asked if the assistant had said

anything about the grader discriminating against women, to which participants responded either yes or no. The format of the second question was open-ended, and it asked participants to indicate exactly which percentage of the grading criteria was based on gender.

RESULTS AND DISCUSSION

The results of the experiment and their interpretation will be presented in three sections. The first section, *Preliminary Analyses*, examined the effects of demographic variables upon the dependent variables, that is, participants' ratings of causal attributions for feedback to the quality of their answers and discrimination, prior to and following the group discussion. Also examined in the first section were participants' responses to the discrimination manipulation checks to verify that the probability for discrimination manipulation was effective.

The second section, *Attributions for Positive and Negative Feedback Prior to the Group Discussion*, examined participants' attribution ratings to the quality of answers and discrimination for feedback prior to the group discussion. Since women's attributional patterns prior to engaging in the group discussion reflect their individual perceptions, this analysis allowed for a replication of the minimization-of-discrimination effect found in previous experiments (Ruggiero & Major, 1998; Ruggiero & Taylor, 1995, 1997; Ruggiero et al., 1997).

The third section, *Attributions for Positive and Negative Feedback as a Function of the Group Discussion*, explored the influence of meeting with other ingroup members in a group discussion upon participants' ratings of causal attributions for feedback to the quality of their answers and discrimination. We sought to assess if, and to what extent, the opportunity to meet with other women after receiving feedback where discrimination might be implied influenced participants' perceptions of the confronted discrimination.

Preliminary Analyses

Effects of Demographic Variables

An initial multivariate analysis of variance (MANOVA) was performed to examine the effects of participants' school faculty, age, and language spoken at home, upon the dependent variables. The dependent measures were participants' ratings of causal attributions for feedback to the quality of their answers and discrimination, prior to and following the group discussion. No significant differences across these independent variables were found ($p > .05$). Furthermore, the analysis yielded no significant differences for the three different male confederates who were involved in the experiment ($p > .05$). Thus, these independent variables were excluded from all subsequent analyses.

Probability for Discrimination Manipulation Checks

An analysis was conducted on participants' responses to the discrimination manipulation checks in order to verify that the probability for discrimination manipulation had been effective. The participants were asked if the female assistant had said anything about the male grader discriminating against women. Participants were also asked to write down what percentage of the grading criteria they believed was based on gender.

The analysis revealed that all but one of the participants indicated that the assistant had said something about the grader discriminating against women. However, the analysis of the participants' responses to the follow-up question concerning the percentage of the grade that was allegedly based on gender showed that only 42 of the 90 participants were able to specify the exact intended amount of discrimination (50%).

Twenty participants reported percentages that ranged between 5% and 90%, whereas 6 participants indicated a probability for discrimination of 0%, and 2 participants indicated a probability for discrimination of 100%. Finally, 20 of the 90 participants did not answer the question concerning the intended amount of discrimination.

The manipulation was thus only partly effective in establishing the intended base-rate probability for discrimination. While all but one of the participants remembered that the assistant had said something about the male grader discriminating against women, only 46.7% reported the exact percentage of intended discrimination. Two chi-square analyses revealed that the frequencies associated with participants who reported the exact amount of discrimination (50%) compared to those who did not were equally distributed within the test feedback (success; failure) condition (χ^2 (1, $\underline{N}$ = 90) = .135, $\underline{p}$ > .05), as well as the group composition (homogeneous; mixed) condition (χ^2 (1, $\underline{N}$ = 90) = 2.86, $\underline{p}$ > .05). While it is difficult to assess what psychological factors lead women to distort, forget, or repress the amount of discrimination confronted in the present experiment, these results nevertheless suggest that no biases in terms of the manipulation of grades or group compositions were associated with the fact of reporting the intended amount of discrimination.

This relative ineffectiveness in establishing the intended amount of discrimination could be regarded as a serious compromise for the interpretation of the present results, yet two observations need to be emphasized. Firstly, this phenomenon is better appreciated in light of the fact that almost one hour separated the moment at which the female assistant confessed the percentage, and the moment at which participants completed the discrimination checks. The distortion—or, possibly, the forgetting—of this piece of

information could thus be accounted for by the relatively long period of time that separated these two events.

Secondly, as Ruggiero and Taylor (1995, 1997) have demonstrated, individuals do not tend to respond to information about discrimination in a rational manner. In their experiments, participants in the 75% probability for discrimination condition were as reluctant to attribute their failure to discrimination as those in the 25% condition. In the present experiment, nearly 70% of the sample reported amounts of discrimination that ranged between 5% and 90%. Even though many participants deviated from the intended 50% base-rate probability for discrimination, it is reasonable to argue that the manipulation was nevertheless relatively effective in establishing a condition of situational ambiguity with respect to the probability of being discriminated against.

Attributions for Positive and Negative Feedback Prior to the Group Discussion

Examined in this section were participants' attributional patterns prior to the group discussion. Specifically, since women's attributional patterns prior to taking part in the group discussion involve their individual perceptions, the analysis allowed for a replication of the minimization-of-discrimination effect found in previous experiments (Ruggiero & Major, 1998; Ruggiero & Taylor, 1995, 1997; Ruggiero et al., 1997).

Participants' attribution ratings to quality of answers and discrimination for feedback prior to the group discussion were examined by means of a 2 (test feedback: success, failure) X 2 (target of attribution before the group discussion: quality of answers, discrimination) ANOVA, with target of attribution before the group discussion as a within-subjects variable. The analysis yielded a significant Target of Attribution X Test

Feedback interaction (F (1, 83) = 8.98, $p < .01$), which is presented in Figure 2. Post hoc pairwise comparisons using Tukey's HSD procedure were performed to compare the interaction means.

The analysis revealed that, prior to the group discussion, participants who received positive feedback attributed their grade significantly more to the quality of their answers (M = 6.69) than to discrimination (M = 5.62; $p < .05$). Conversely, participants who received negative feedback attributed their grade significantly more to discrimination (M = 6.91) than to the quality of their answers (M = 5.59; $p < .05$). Post hoc comparisons further revealed that participants who received negative feedback perceived significantly more discrimination than the successful participants ($p < .05$), while placing blame upon the quality of their answers significantly less than their successful counterparts ($p < .05$).

The results of participants' attributions for negative feedback, prior to the group discussion, fail to replicate past research on perceived discrimination under conditions of situational ambiguity (Ruggiero & Major, 1998; Ruggiero & Taylor, 1995, 1997; Ruggiero et al., 1997). Most importantly, the present results indicate a willingness on the part of women to perceive discrimination when confronted with group-based negative feedback. While participants who received positive feedback tended to focus primarily on personal responsibility for their success, the failing participants demonstrated a tendency to acknowledge greater discrimination over the quality of their answers as a reason for feedback.

It might be argued that this failure to replicate the minimization-of-discrimination effect prior to the group discussion could be accounted for by the less than complete effectiveness in establishing the intended 50% base-rate probability for discrimination underscored earlier. Perhaps the present experiment lacked the ambiguity necessary for

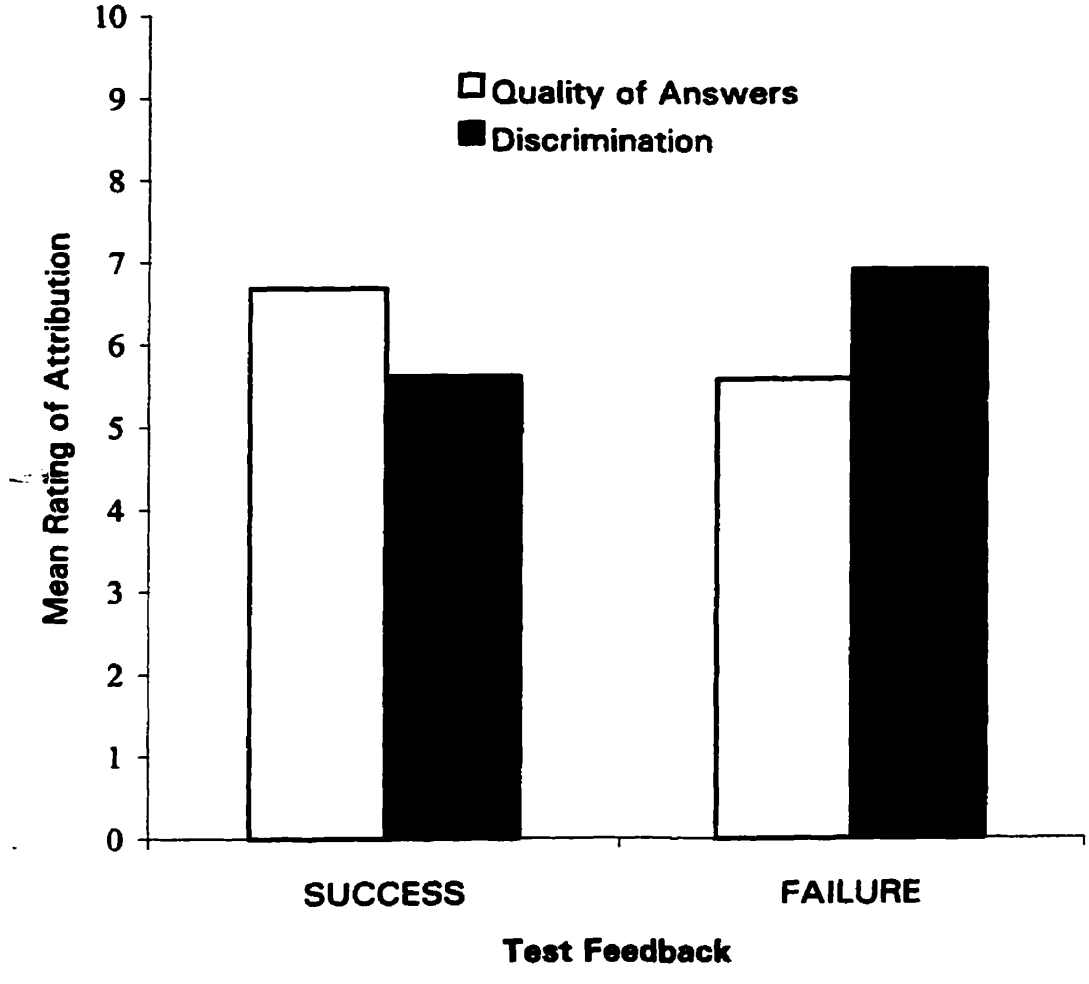


Figure 2. Mean ratings of attributions to quality of answers and discrimination as a function of the test feedback, prior to the group discussion.

minimization-of-discrimination to occur. Yet it is reasonable to argue that if the discrimination manipulation had not been ambiguous enough, the participants who received positive feedback would also have acknowledged greater discrimination over personal responsibility for their feedback. The reason is that their success, which was only a moderate one (C), leaves enough psychological room to formulate the belief that the grade could be due to a discriminatory grading scheme. The fact that the successful participants attributed their feedback more to the quality of their answers than to discrimination, however, suggests that the probability for discrimination was indeed ambiguous, enough in fact for these women to minimize the role of discrimination upon making a judgement about the grade that they received. It is, therefore, reasonable to conclude that the observed tendency to acknowledge greater discrimination over personal responsibility as a reason for negative feedback cannot be explained by a lack of situational ambiguity with regard to the probability for discrimination manipulation.

It may be possible, however, to reconcile these unexpected findings with past research on the minimization-of-discrimination phenomenon. It is reasonable to suggest that the tendency to attribute failure more to discrimination than to the quality of answers emerged because of the particular setting of the present experiment. Contrary to previous experiments that gave rise to the minimization-of-discrimination effect (Ruggiero & Major, 1998; Ruggiero & Taylor, 1995, 1997; Ruggiero et al., 1997), participants in the present experiment were not tested individually, but rather in groups of two to three women. In other words, participants in the present experiment were not provided with the same conditions in which minimization-of-discrimination has occurred in previous experiments.

Yet the question remains: Why would confronting participants with discrimination in a group context produce such a dramatic deviation from earlier findings on the perception of discrimination? Two explanations are considered here. Confronting discrimination in a group rather than individually might provide women with the necessary strength, or confidence, to point to a specific villain as the source of unfair treatment against the self. In other words, naming a villain in the presence of other women might reduce women's fear of retaliation from the perpetrator. A mechanism similar to the diffusion-of-responsibility effect may influence women's cognitive processes, such that women are encouraged to acknowledge the illegitimacy of a situation simply because other women are present to endorse the allegation.

A careful examination of the manipulation for social support used by Ruggiero, Taylor, and Lydon (1997) may also provide some insights into the failure to replicate the minimization-of-discrimination effect in the present experiment. In Ruggiero and colleagues' experiment, participants in the condition in which both emotional and informational support were available, were only told of a future opportunity to meet with the last woman who had also failed the test with the same male judge. The mere anticipation of such a meeting appeared to be enough for participants to *perceive* the availability of social support, and hence acknowledge their experience with discrimination. In the present experiment, participants were informed at the beginning of the experiment that the session involved a group discussion with the other students in the room. It is reasonable to argue that participants in the present experiment also anticipated the possibility for a supportive meeting with their peers, and hence showed the same tendency as in Ruggiero and colleagues' experiment to attribute their failure significantly

more to discrimination than to the quality of their answers, even prior to actually taking part in the discussion.

A direct test of the hypothesis that women perceived the availability of social support—even prior to taking part in the group discussion—was conducted. Correlations were computed between the ratings of attribution to discrimination prior to the group discussion, and the mean ratings of perceived emotional and informational support reported on the social support scale following the group discussions. Table 1 presents the correlations for participants who received positive and negative feedback.

Table 1

Correlations between attribution to discrimination prior to the group discussion and perceived emotional and informational support as a function of the test feedback

	Positive Feedback (n = 39)	Negative Feedback (n = 46)
Perceived Emotional Support	.092	.357*
Perceived Informational Support	.151	.148

*p = < .05

The resulting pattern of correlations is consistent with the hypothesis that participants in the present experiment perceived the availability of social support prior to the group discussion. Ratings of perceived discrimination prior to the discussion were positively correlated with perceived emotional support, but not with perceived informational support. Moreover, this positive correlation between ratings of perceived

discrimination prior to the discussion and perceived emotional support was only significant for participants who received negative feedback. Thus, the more women who received negative feedback reported the group to be emotionally supportive, the more they attributed their failure to discrimination prior to the group discussion.

Although the social support scale was completed following the group discussion, and thus presumably reflected women's perceptions of support during the discussion, it is nevertheless reasonable to argue that the ratings on the emotional support scale could have mirrored participants' impressions of the group both before and after the group discussion. The reason is that, on the scale, emotional support was defined as the perception of the group as reassuring and sympathetic, as well as the feeling of being accepted and esteemed by the group. The mere presence of other female college students in the room could, therefore, have resulted in this particular type of support being "in the air" prior to the face-to-face group discussion.

Summary

In summary, results for the participants' attributional patterns prior to taking part in the group discussion show that the tendency observed in earlier experiments to minimize perceptions of discrimination when facing negative feedback (Ruggiero & Major, 1998; Ruggiero & Taylor, 1995, 1997; Ruggiero et al., 1997) was not replicated in the present experiment. To the contrary, results indicate a clear willingness to acknowledge greater discrimination over personal qualities for women who received negative feedback. This unexpected finding can only be given a tentative interpretation; two explanations for the non-replication of the minimization effect when investigating the perception of discrimination in a group context were suggested.

Firstly, women might be more willing to acknowledge the illegitimacy of a situation in the presence of other women. It is reasonable to argue that women were encouraged to point to a specific villain simply because other women were present to endorse a part of the allegation. Secondly, participants in the present experiment anticipated a group discussion with the other women in the room. In this sense their situation was similar to that of Ruggiero and colleagues' (1997) setting, where the mere fact of anticipating a meeting with a woman who underwent the same experience appeared to be sufficient grounds for women to acknowledge their experience with discrimination. A correlational analysis confirmed that emotional support was perceived to be salient prior to taking part in the group discussion.

The theoretical and empirical implications of the observed tendency to acknowledge substantially more discrimination over personal responsibility when facing group-based negative feedback within a group context are challenging. On the one hand, Ruggiero and Taylor's (1995) findings on the minimization-of-discrimination effect might mirror a cognitive pattern found in women who do not perceive the availability of—or do not have access to—supportive resources in their social network. On the other hand, the present results, paired with Ruggiero et al.'s (1997) findings, might portray the social conditions necessary for disadvantaged group members to become vigilant in assessing their experience with discrimination. Perceiving the availability of resources for social support could be one of the factors that differentiates between women who minimize, and women who acknowledge, their experience with discrimination.

Attributions for Positive and Negative Feedback as a Function of the Group Discussion

While the attributional patterns observed prior to the group discussion suggested that the mere fact of perceiving the availability of a potential resource for social support was apparently sufficient for women to become vigilant in their perception of discrimination, this section explored the effects of actually meeting with other women after receiving feedback where discrimination might be implied upon participants' causal attributions for feedback.

Participants' attribution ratings to quality of answers and discrimination for feedback, prior to and following the group discussion, were examined by means of a 2 (test feedback: success, failure) X 2 (target of attribution: quality of answers, discrimination) X 2 (ratings: before the group discussion, after the group discussion) ANOVA, with target of attribution and ratings before and after the group discussion as within-subjects variables. The analysis yielded a significant before-after group discussion main effect (F (1, 83) = 4.726, $p < .05$), qualified by a significant Target of Attribution X Before-After Group Discussion interaction (F (1, 83) = 5.682, $p < .05$). The analysis also yielded a significant Target of Attribution X Test Feedback interaction (F (1, 83) = 16.25, $p < .001$). These two 2-way interactions were subsumed under a significant Target of Attribution X Before-After Group Discussion X Test Feedback three-way interaction (F (1, 83) = 3.804, $p = .05$).

Attributional Patterns Following the Group Discussion

Before clarifying the nature of the three-way interaction, participants' ratings of causal attributions following the group discussion were first examined, in order to verify

whether the attributional patterns following the discussion mirrored the patterns obtained prior to the discussion.

Post hoc pairwise comparisons using Tukey's HSD procedure revealed that, following the group discussion, participants with negative feedback attributed their failure significantly more to discrimination ($\underline{M}$ = 7.22) than to the quality of their answers ($\underline{M}$ = 4.61; $\underline{p} < .05$). As for the attributional pattern for successful participants, post hoc comparisons revealed that they attributed their feedback significantly more to the quality of their answers ($\underline{M}$ = 6.44) than to discrimination ($\underline{M}$ = 5.49) following the discussion ($\underline{p} < .05$). Post hoc comparisons also revealed that, following the discussion, participants who received negative feedback perceived significantly more discrimination than the successful participants ($\underline{p} < .05$), while placing the blame upon the quality of their answers significantly less than the successful participants ($\underline{p} < .05$).

Thus, the attributional patterns following the group discussion are comparable to the patterns obtained prior to the discussion. Successful participants demonstrated the tendency to attribute their success more to the quality of their answers than to discrimination, while failing participants tended to attribute their failure more to discrimination than to the quality of their answers.

Attributional Patterns as a Function of the Group Discussion

The attributional patterns following the group discussion mirror the patterns obtained prior to the group discussion. The question is, did the ratings of attributions to quality of answers and discrimination significantly increase, or decrease, as a function of the group discussion? This section clarified the nature of the Target of Attribution by Test Feedback, by Before-After Group Discussion three-way interaction, which is presented in

Figure 3. The aim was to explore whether, and to what extent, the group discussion influenced participants' perceptions of causal attributions for positive and negative feedback.

Post hoc pairwise comparisons using Tukey's HSD procedure were performed to compare the interaction means. An analysis comparing women's ratings of causal attributions prior to and following the group discussion revealed that participants who received negative feedback attributed their failure significantly less to the quality of their answers following the group discussion than prior to the group discussion ($p < .05$). Failing participants' attribution ratings for discrimination did not increase or decrease as a function of the group discussion ($p > .05$). Finally, successful participants' attribution ratings for the quality of answers and discrimination did not increase or decrease as a function of the group discussion ($p > .05$).

The group discussion, therefore, did influence participants' perceived causal attributions for feedback. Specifically, the opportunity to interact with other women after receiving feedback where discrimination might be implied influenced attribution ratings for participants who received negative feedback, such that they endorsed less personal responsibility for their failure after having taken part in the group discussion than prior to the group discussion. The group discussion did not, however, result in assigning either more, or less, blame upon the confronted discrimination than prior to the group discussion. This observation suggests that the opportunity to discuss with ingroup members upon confronting discrimination primarily impacts the self, and in such a manner as to protect it. Yet even if no minimization of personal discrimination as a reason for failure was observed, women nonetheless demonstrated a relative reluctance to

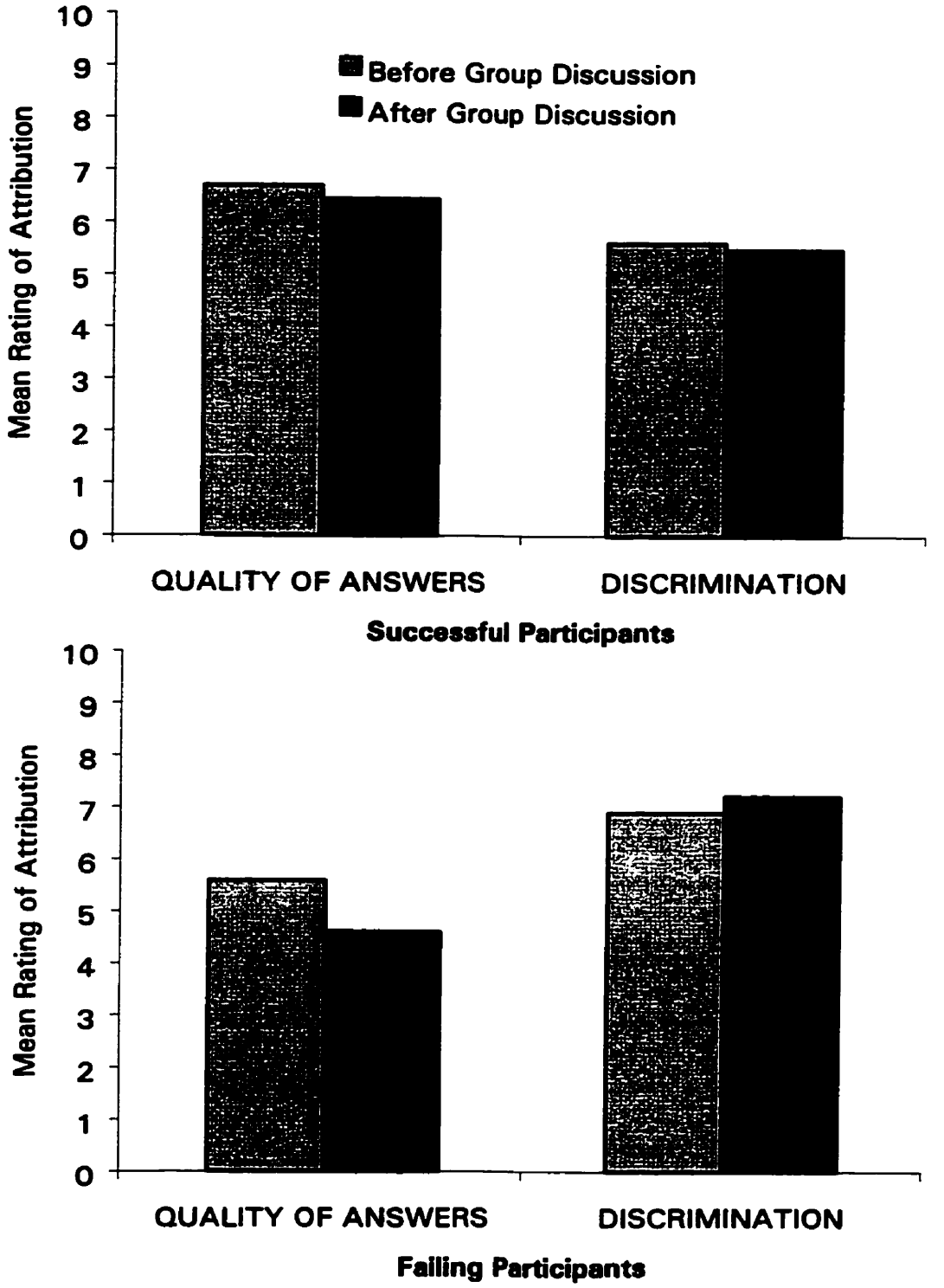


Figure 3. Mean ratings of attributions to quality of answers and discrimination as a function of the test feedback, prior to and following the group discussion.

perceive more discrimination following the group discussion than prior to the group discussion.

The overriding hypothesis that less minimization of personal discrimination as a reason for failure would be observed when testing women in a group context was thus largely confirmed. In fact, the tendency to acknowledge greater discrimination over personal qualities was observed even prior to taking part in the group discussion. The mere fact of anticipating a meeting with ingroup members who underwent the same experience appeared to be sufficient grounds for participants to perceive the availability of social support, and hence acknowledge their experience with discrimination. However, caution is required in interpreting the effect of the opportunity to actually interact with ingroup members upon the perception of discrimination. Results show that even if no minimization-of-discrimination was observed, women in the present experiment were still reluctant to acknowledge more discrimination following the group discussion than prior to the group discussion.

Central to the present experiment was the exploration of what basic group processes might be involved in the perception of discrimination. A careful analysis of the group discussions might provide insights into this apparent reluctance to acknowledge greater discrimination following a meeting with ingroup members undergoing the same threat, yet without minimizing the presence of discrimination. Using the social support scale and the videotaped group discussions, women's conversations were investigated in order to document how they used the opportunity to engage, or not, in socially supportive behavior within the context of a completely unrestrained group discussion.

Descriptive Analysis of the Group Discussions

In this section, the actual conversations the women had during the group discussion were analyzed. The first analysis focused on participants' perception of the supportive nature of the group discussion. The second analysis focused on the actual content of their conversation.

Social support scale. The participants' answers to the social support scale were examined in order to address the question of whether, and to what extent, women judged that they had sought, and received, support from their peers during the group discussions. Also verified was the extent to which participants reported that they gave and received emotional and informational support during the group discussion.

A 2 (test feedback: success, failure) X 2 (group composition: homogeneous, mixed) X 2 (type of social support: emotional, informational) X 2 (directionality of support: give, receive) ANOVA was performed, with type of social support and directionality of social support as within-subjects variables. Measures of emotionally supportive interactions included listening attentively, offering sympathy and reassurance, as well as feeling accepted and esteemed. Measures of informationally supportive interactions included offering information, advice, and guidance.

The analysis revealed a significant main effect for type of social support ($\underline{F}$ (1, 85) = 201.36, $\underline{p} < .001$). Post hoc pairwise comparisons using Tukey's HSD procedure revealed that participants rated the group discussions to have been significantly more emotionally supportive ($\underline{M} = 7.8$) than informationally supportive ($\underline{M} = 4.2$; $\underline{p} < .05$).

The analysis also revealed a significant Directionality of Support X Test Feedback interaction ($\underline{F}$ (1, 85) = 4.16, $\underline{p} < .05$). Post hoc pairwise comparisons using Tukey's HSD procedure revealed that participants who received negative feedback felt that they had

given and received significantly more support during the group discussions ($\underline{M}_{give} = 6.18$; $\underline{M}_{receive} = 6.33$) than participants who received positive feedback ($\underline{M}_{give} = 5.74$; $\underline{M}_{receive} = 5.72$; $\underline{p} < .05$).

These results suggest that the group discussions did stimulate the sharing of socially supportive behavior. Specifically, participants reported that they had exchanged significantly more emotional support than informational support, whether the received feedback was positive or negative, and whether participants were assigned to a homogeneous or a mixed group. Women reported that they felt largely accepted, esteemed, listened to, and reassured by their peers. Moreover, these results demonstrate that women who received negative feedback were also more likely to seek and give social support, both emotional and informational, than women who received positive feedback. Undoubtedly women who received negative feedback experienced more distress than participants who received positive feedback, and hence needed to engage in socially supportive interaction to a greater extent.

It appears, therefore, that women took advantage of this opportunity to interact with ingroup members to actually engage in emotionally supportive behavior. Yet it also appears that the high prevalence of emotionally supportive interaction during the group discussions did not lead women to acknowledge more discrimination than prior to the group discussion. It is perhaps reasonable to suggest that the group discussions, although perceived to be highly emotionally supportive, might have stimulated the exchange of issues more relevant to the self than to discrimination, hence the observed tendency to place less blame upon one's personal qualities, yet not more upon discrimination following the group discussion. In order to confirm this possibility, the content of the

group discussions was thus investigated in order to discover the major themes discussed by the participants.

Content analysis. The videotaped group discussions were scrutinized in their entirety, and an account of the recurring topics was recorded. Five main categories were identified as reflecting the major themes discussed by the participants. These were, in order of their frequency:

(1) Test validity: Categorized under this theme were participants' opinions about the test, or the sharing of how valid the test was perceived to be in its capacity to predict future careers, as well as the sharing of reasons why the test was perceived to be a fair, or poor, predictor of future career success. Worthy of note is the fact that the test was largely perceived to be a poor predictor of career success by women in the present experiment.

(2) Answers: Categorized under this theme were participants' exchanges about answers on the test. Most frequently discussed were the sections concerning creative thinking and mathematical reasoning, for these stimulated a wide variety of answers. For the most part, participants appeared to be assessing who had generated the best and most creative answers.

(3) Grade subjectivity: Categorized under this theme was any discussion of the grading criteria employed to evaluate the test. The evaluation was largely perceived by women in the present experiment to be highly subjective.

(4) Grades: Categorized under this theme was the sharing of information concerning the received test feedback (success vs. failure).

(5) Discrimination: Categorized under this theme was any conversation directly or indirectly related to discrimination. Indirect references to discrimination included allusions to what the female assistant had confessed about the male graduate student, or

mention of the discrimination ratings on the assistant's questionnaire. Direct references to the confronted discrimination involved discussing the extent to which the received feedback was perceived as being due to discrimination.

Table 2 summarizes the time participants spent discussing each theme, in percentage figures, as a function of the group composition of each testing session.

First addressed was the extent to which women spontaneously sought support from their peers when confronting discrimination. The content analysis revealed that participants in the experiment did take advantage of the group discussion to talk about issues that were relevant to what they had just experienced. Interestingly, relatively little time was spent discussing any topic that was not related to the experiment. Specifically, participants in all three groups spent more than 80% of the total discussion time focusing on their experiences, exchanging their thoughts and feelings about the experiment, and comparing their grades and their answers on the test. This observation suggests that the group discussions did stimulate women in the present experiment to seek support from their peers as a result of their experience with confronted discrimination.

What aspects of the experiment, therefore, did the participants choose to discuss? A question of interest was the extent to which women in this experiment spontaneously talked about their experience with discrimination. The content analysis revealed that issues of discrimination were not the main theme discussed (see Table 2). On the one hand, failing participants in the homogeneous groups spent 6.5% of the total discussion time expressing their thoughts, both directly and indirectly, about discrimination, while participants in the mixed groups spent 4.6% of their time discussing this theme. On the other hand, successful participants in the homogeneous groups spent less than 1% of the total interaction time discussing issues related to discrimination.

Table 2

Time spent discussing the major themes, in percentage, as a function of the group compositions

	Test Validity (%)	Answers (%)	Grade Subjectivity (%)	Grade (%)	Discrimination (%)
Homogeneous All-Failure	56.38	14.24	5.96	6.02	6.52
Homogeneous All-Success	58.94	18.57	3.03	1.70	0.79
Mixed	55.99	20.71	6.15	5.13	4.60

The grade subjectivity topic can also be seen as an attempt to indirectly approach the theme of discrimination. Perhaps discussing how subjective the evaluation of this type of test was, seemed a less than threatening way to tackle the topic of discrimination. But again, the grade subjectivity topic was not discussed to a large extent: approximately 6% of the total discussion time in the homogeneous all-failures and the mixed groups, while approximately 3% of the total discussion time in the homogeneous all-success groups, constituted the discussion of grade subjectivity (see Table 2). Thus, although topics related to discrimination were mostly discussed in the groups involving failing participants, women in the present experiment nevertheless allotted a fairly small portion of the discussion time to talk about discrimination.

The content analysis revealed that the test validity issue was by far the main topic discussed, occupying almost 60% of the total discussion time in all groups (see Table 2). This finding is not surprising, since women were under pressure to discuss any aspect of the experiment, and this theme was perhaps the most obvious. The discussion of the test validity might have been stimulated by a need for women to counteract any lingering anxiety or doubt concerning their future career performances, as was presumably assessed by the test.

Additionally, women in the present experiment discussed to some extent their answers on the test. This theme was in fact the second most frequently discussed topic in all three groups, with percentages ranging from 14% to 21% of the total discussion time (see Table 2). It thus appears that women during the group discussions attempted to make self-evaluative assessments of their own performance through the comparison of the quality of their answers. There is also some indication that women in the experiment compared their grades during the group discussions, as 5% and 6% of the total discussion

time in the mixed and the homogeneous all-failure groups was allotted to the sharing of information concerning the received test feedback (see Table 2). The comparatively small amount of time spent discussing the grades in the homogeneous all-success groups (less than 3%, see Table 2) probably reflects the normative decorum expected from students who do well at school, which is to say that they tend to avoid boasting about their grades.

The results of the content analysis suggest that women in the present experiment apparently avoided direct discussion of discrimination during the group discussions by focusing on other aspects of their experience. However, given that the participants were aware that the group discussions were being videotaped, the percentages associated with the time spent discussing issues of discrimination in the homogeneous all-failure and mixed groups are nonetheless relatively high. Women confronting negative feedback apparently demonstrated a need to talk about their experience with other ingroup members. Yet women spent very little time overtly discussing issues of discrimination. Perhaps women in the present experiment felt more comfortable discussing issues such as the test validity or the quality of their answers as a means of rationalizing their failing grade. Conceivably, in a more informal, real-world context, women confronting discrimination would feel more comfortable to openly talk about discrimination with members of their social network.

Taken together, these observations offer some insight into the interpretation of the observed tendency for failing participants to attribute less personal blame for negative feedback following the group discussion, yet without acknowledging more discrimination than prior to the group discussion. The content analysis of the group discussions has confirmed that the conversations stimulated the exchange of issues more relevant to the self than to discrimination. Women essentially discussed their thoughts and feelings about

the test, presumably to counteract any lingering anxiety or doubt concerning their future career performance. They also compared their answers on the test, presumably to evaluate the appropriateness of their answers and, consequently their grade. As a result, women came to perceive that another cause, external to the self, was responsible for the negative feedback. Moreover, women rationalized their failure by not placing the blame upon their personal qualities as much as on discrimination following a discussion with their peers.

Participants in the present experiment did not choose, following the group discussion, to acknowledge more discrimination as the reason for their failure than prior to the group discussion. This finding is mirrored by the relatively low prevalence of topics related to discrimination that were raised during the group discussions. There is some indication that women chose to blame their feedback on an external cause other than discrimination, possibly one that would be less threatening for the social self. The content analysis of the group discussions demonstrated that women spent a substantial amount of time discussing their opinions concerning the test. A subsidiary analysis was performed on another item worthy of inspection included on the attribution scale—that is, the type of test—in order to verify if this external factor was perceived to have played an important role in women's received test feedback.

Attribution for Positive and Negative Feedback to the Test Format

Participants' attribution ratings to the quality of answers, discrimination, and type of test, prior to and following the group discussion, were examined by means of a 2 (test feedback: success, failure) X 3 (target of attribution: quality of answers, discrimination, type of test) X 2 (ratings: before the group discussion, after the group discussion) ANOVA, with target of attribution before and after the group discussion as within-

subjects variables. The goal was to examine whether, and to what extent, another external cause—that is, the type of test—was perceived to have played an important role in the participants' test feedback.

The analysis yielded a significant target of attribution main effect (F (2, 166) = 4.97, $p < .01$), subsumed under a significant Target of Attribution X Test Feedback two-way interaction (F (2, 166) = 8.89, $p < .001$), as well as a significant Target of Attribution X Before-After Group Discussion two-way interaction (F (2, 166) = 5.26, $p < .01$). The Target of Attribution X Before-After Group Discussion X Test Feedback three-way interaction did not reach the .05 significance level. Post hoc pairwise comparisons using Tukey's HSD procedure were performed to clarify the nature of the two 2-way interactions.

As illustrated in Figure 4, the analysis revealed that collapsed over the before-after group discussion factor, the successful participants attributed their feedback equally to the quality of their answers (M = 6.56) and the type of test (M = 6.95; $p < .05$). Successful participants also attributed their feedback significantly more to the quality of their answers and to the type of test, than to discrimination (M = 5.55; $p < .05$). As for the failing participants, they attributed their feedback equally to the type of test (M = 6.94) and discrimination (M = 7.07; $p < .05$). Failing participants also attributed their feedback significantly less to the quality of their answers (M = 5.1), than to discrimination and the type of test ($p < .05$).

Additionally, as illustrated in Figure 5, the analysis revealed that collapsed over the test feedback factor, the attribution ratings for the type of test prior to (M = 6.8) and following (M = 7.08) the group discussion, as well as the attribution ratings for discrimination prior to (M = 6.26) and following (M = 6.35) the group discussion did not

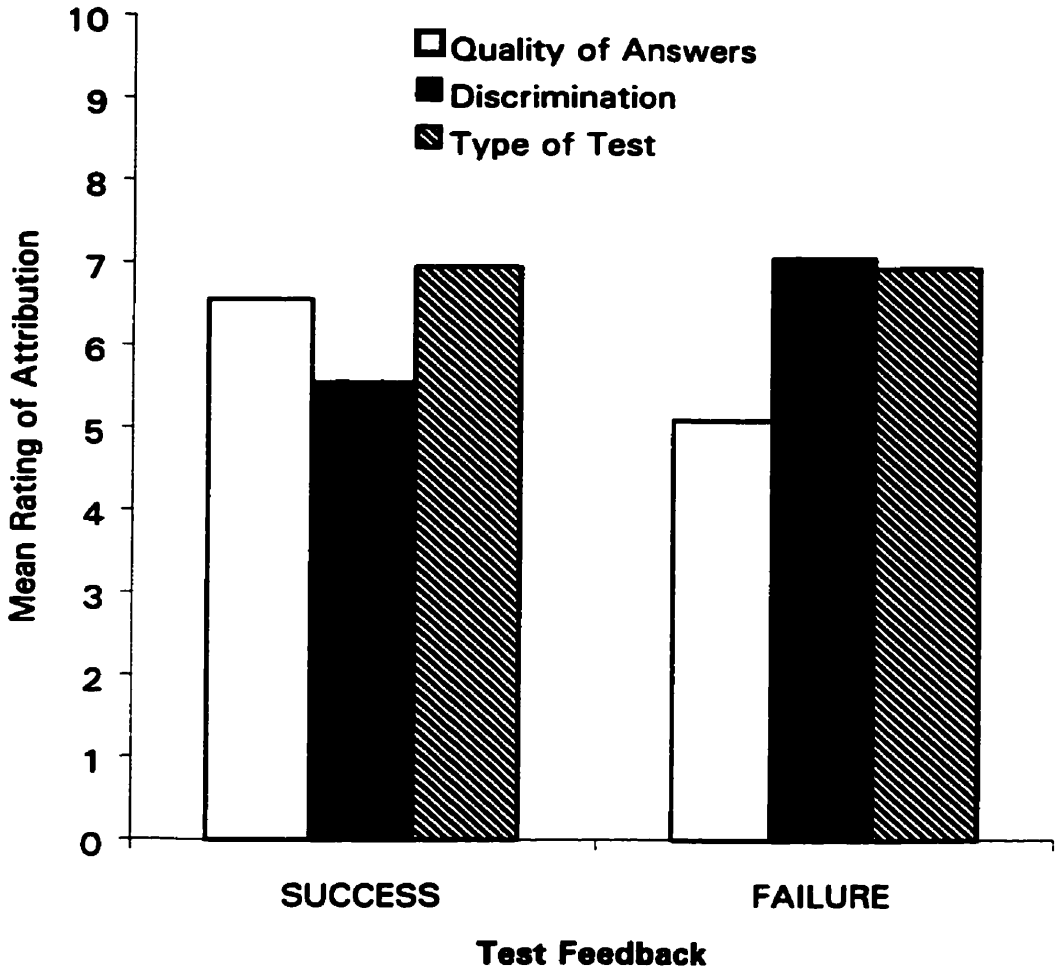


Figure 4. Mean ratings of attributions to quality of answers, discrimination, and the type of test, as a function of the test feedback, collapsed over the before-after group discussion factor.

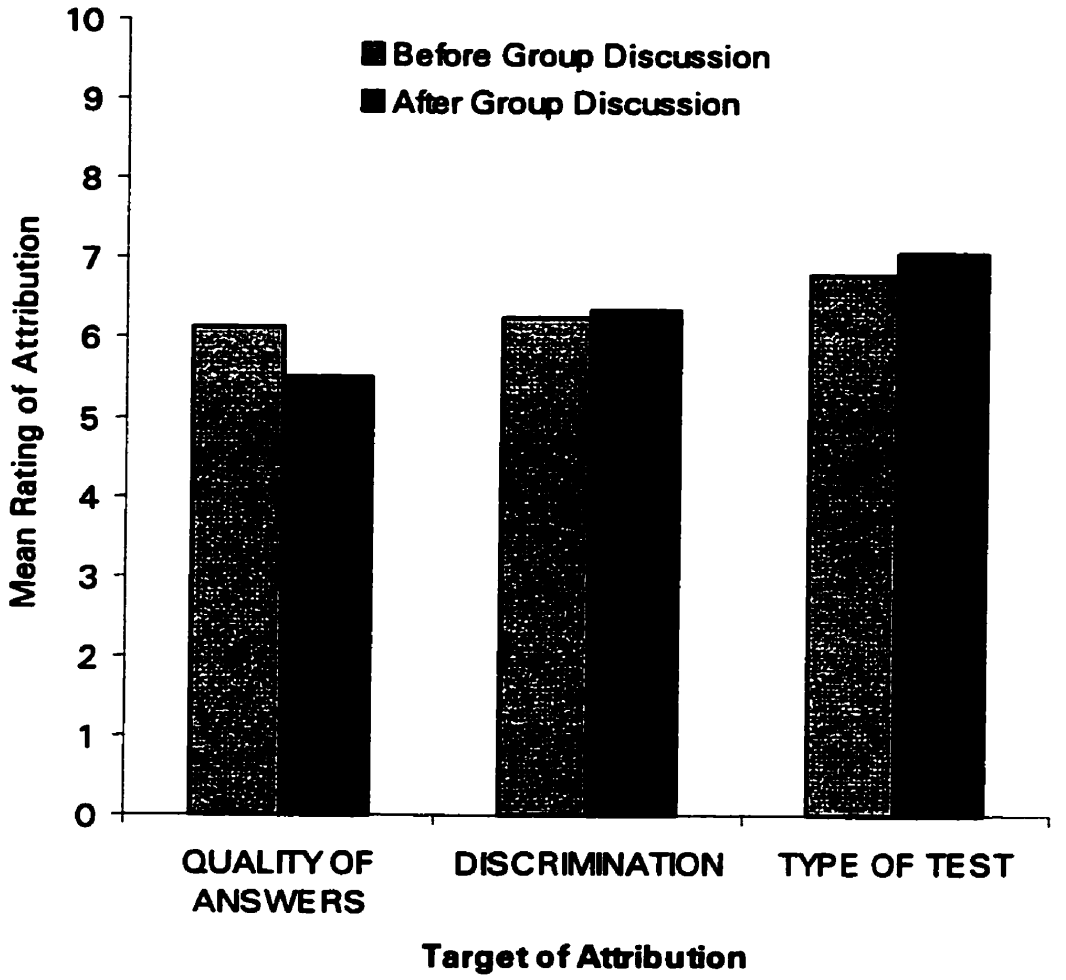


Figure 5. Mean ratings of attributions to quality of answers, discrimination, and the type of test, prior to and following the group discussion, collapsed over the test feedback factor.

significantly increase, or decrease ($p > .05$) as a function of the group discussion. However, attribution ratings to the quality of answers were significantly lower following the group discussion ($M = 5.52$) than prior to the group discussion ($M = 6.14$; $p < .05$).

Taken together, these results suggest that the women in the experiment definitely perceived that another external cause, that is, the type of test, played an important role in their feedback. On the one hand, successful participants perceived that their grade was equally due to the quality of their answers and the type of test. On the other hand, failing participants perceived that their grade was equally due to discrimination and the type of test. However, the perception that the type of test was at least in part responsible for the received feedback did not increase, or decrease, as a function of the group discussions. Thus, the fact that failing participants attributed less personal blame for negative feedback following the group discussion, yet without acknowledging more discrimination than prior to the group discussion, cannot be explained by a tendency for participants to attribute their failure to another external cause that would be less threatening to the social self. If this would have been the case, then ratings of attribution to the type of test for feedback should have been greater than ratings of attribution to other causes following the group discussion.

Yet these observations nevertheless leave one important question unanswered: Why did the group discussion apparently have no effect on women's perceived discrimination? It has been observed that the group discussions highly stimulated the exchange of emotionally supportive interaction. Additionally, there is some evidence that women in the present experiment shared information concerning their grades. It is reasonable to suggest that taking account of the prevalence of these two types of socially

supportive behavior during the group discussions could offer interesting insights into the mechanisms of the minimization-of-discrimination phenomenon.

The Effects of Social Sharing of Information and Emotion upon the Perception of Discrimination

Explored in this section was the extent to which being in a social network rich in emotional and informational support, compared with being in a social network that failed to provide such resources, influenced women's perception of discrimination. Participants were divided according to their ratings on the emotional support scale. Two categories were created: participants who had high ratings on perceived emotional support, and participants who had low ratings on perceived emotional support. This division of participants allowed for a direct test for the role that the sharing of emotional support with other potential victims of discrimination played in the perception of personal discrimination.

Participants were also categorized according to whether or not they had discovered their peers' grades during the group discussions. Participants were divided in two groups according to their answer—either "yes" or "no"—to the following question: "Did you find out the other students' grades on the test?" This division of participants allowed for a direct test for the role that the sharing of informational support with other potential victims of discrimination played in the perception of personal discrimination.

A preliminary chi-square analysis revealed that participants were equally distributed within the categories of perceived emotional support (high vs. low), and occurrence of information sharing (yes vs. no), for participants with both positive (χ^2 (1, $\underline{N}$ = 41) = .509, $\underline{p}$ > .05) and negative (χ^2 (1, $\underline{N}$ = 49) = .002, $\underline{p}$ > .05) test feedback.

Participants' attribution ratings to the quality of answers and discrimination for feedback following the discussion were thus examined by means of a 2 (test feedback: success, failure) X 2 (occurrence of information sharing: information sharing, no information sharing) X 2 (perceived emotional support: high emotional support, low emotional support) X 2 (target of attribution after the discussion: quality of answers, discrimination) ANOVA, with target of attribution after the discussion as a within-subjects variable.

The analysis yielded a significant Target of Attribution X Test Feedback two-way interaction (F (1, 80) = 6.155, $p < .05$), as well as a significant Target of Attribution X Information Sharing two-way interaction (F (1, 80) = 4.128, $p < .05$). Most importantly, these two 2-way interactions were subsumed under a significant Target of Attribution X Test Feedback X Information Sharing X Emotional Support four-way interaction (F (1, 80) = 5.583, $p < .05$), which is presented in Figure 6.

Post hoc pairwise comparisons using Tukey's HSD procedure were performed to compare the interaction means. The analysis revealed that, following the group discussion, participants who received negative feedback tended to attribute their failure significantly more to discrimination than to the quality of their answers. However, participants in the No Information Sharing/Low Emotional Support group showed the reversed tendency: They attributed their failure significantly more to the quality of their answers (M = 8.5) than to discrimination (M = 6.0; $p < .05$). These results replicated the minimization-of-discrimination phenomenon found in previous experiments for participants facing group-based negative feedback (see Ruggiero & Major, 1998; Ruggiero & Taylor, 1995, 1997; Ruggiero et al., 1997).

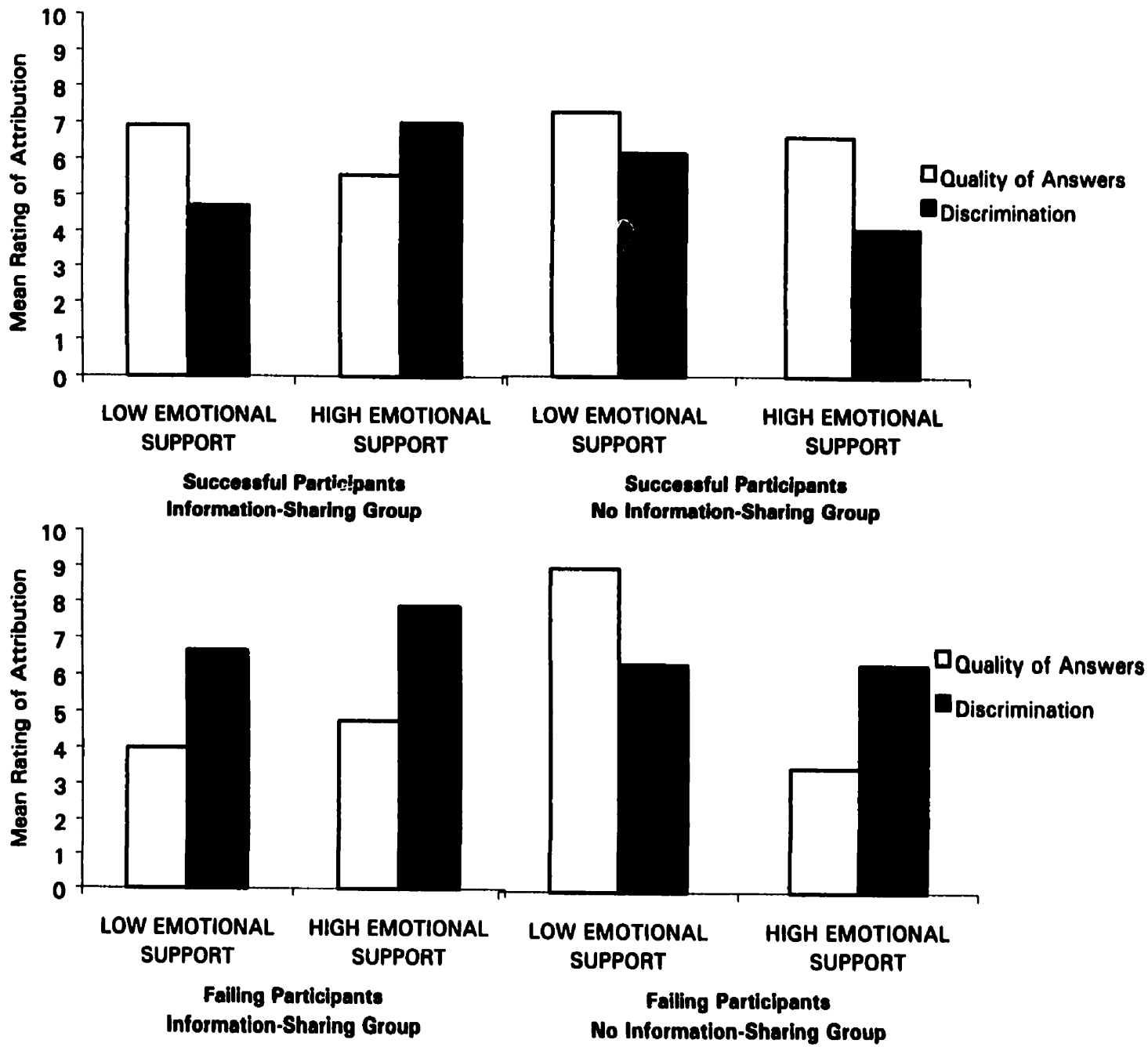


Figure 6. Mean ratings of attributions to quality of answers and discrimination following the group discussion, as a function of the test feedback and informational and emotional support.

Conversely, participants who received positive feedback tended to attribute their success significantly more to the quality of their answers than to discrimination following the group discussion. However, participants in the following two groups showed a different tendency: Participants in the No Information Sharing/Low Emotional Support group attributed their feedback equally to discrimination ($\underline{M} = 5.86$) and to the quality of their answers ($\underline{M} = 6.93$; $\underline{p} < .05$). Additionally, participants in the Information Sharing/High Emotional Support group showed the reversed tendency observed earlier for successful participants in the present experiment: They attributed their feedback significantly more to discrimination ($\underline{M} = 7.0$) than to the quality of their answers ($\underline{M} = 5.56$; $p < .05$). These results replicated, for participants who received positive feedback, the tendency observed in the present experiment with failing participants to attribute negative feedback significantly more to discrimination than to personal qualities.

These results provide an important insight into the effects of sharing informational and emotional support with ingroup members upon the perception of discrimination. These results demonstrate that women who received negative feedback and who did not have access to <u>any</u> type of social support—either informational or emotional—replicated the minimization-of-discrimination effect found in earlier experiments (Ruggiero & Major, 1998; Ruggiero & Taylor, 1995, 1997; Ruggiero et al., 1997). Women who received negative feedback and who had access to <u>both</u> or <u>either</u> types of social support tended to attribute their failure significantly more to discrimination than to the quality of their answers. Furthermore, the results demonstrate that women who received positive feedback and who had access to <u>both</u> types of social support attributed their feedback significantly more to discrimination than to the quality of their answers. This tendency to

perceive discrimination, rather than assume personal responsibility as a reason for feedback, was not observed in any of the other conditions for the successful participants.

A subsidiary analysis was performed to determine whether the successful participants who had access to informational support concerning each others' grades were assigned to a homogeneous or a mixed group. The chi-square analysis revealed that the frequencies associated with the occurrence of information sharing concerning the grades as a function of the group composition for successful participants were, to a significant extent, unequally distributed (χ^2 (1, N = 41) = 5.467, p < .05). Therefore, the majority of the women who had access to informational support concerning each others' grades were assigned to the mixed condition (see Table 3).

Table 3

Pattern of information sharing as a function of the group compositions for participants who received positive feedback

		Discovered Peers' Grades	
	n	YES	NO
Group Composition			
Homogeneous	21	6	15
Mixed	20	13	7

A significant majority of the successful participants who acknowledged greater discrimination over personal responsibility as a reason for positive feedback were thus paired with failing participants during the group discussions. These results suggest that

successful participants who shared information with participants who had experienced personal discrimination, and who perceived the conversation to be highly emotionally supportive, became more vigilant in their own assessment of the probability that their moderate success may be due to the effect of discrimination.

Taken together, these results demonstrate that the minimization-of-discrimination phenomenon found in previous experiments was replicated with failing participants in the condition where women did not have access to any type of social support—either emotional or informational. This condition reflects the characteristic methodology of previous research that gave rise to the minimization effect (Ruggiero & Major, 1998; Ruggiero & Taylor, 1995, 1997; Ruggiero et al., 1997), in which individuals were confronted with discrimination in isolation from any social network, which in turn prevented them from perceiving any social support whatsoever.

Additionally, women who received positive feedback and who had access to both types of social support replicated the tendency observed in the present experiment with failing participants, namely, to attribute negative feedback significantly more to discrimination than to personal qualities. It seems that through information sharing with women who had experienced discrimination, successful participants had come to perceive the illegitimacy of their predicament. These women thereby became more vigilant in their own assessment of personal experience with discrimination. These results suggest that it is not necessary to have experienced discrimination directly in order to become aware of the illegitimacy of a particular intergroup relationship. Information sharing with members of a given social group apparently fosters a collective acknowledgment of discrimination toward one's ingroup.

The implications of these results for disadvantaged group members emphasize the importance of social networks in coping with the experience of discrimination. This experiment demonstrates that it is important for victims of discrimination to perceive that resources for social support are available to them. Most importantly, this experiment suggests that these very resources must provide disadvantaged group members with specific types of socially supportive behavior in order to lead them to become vigilant in their personal experience with discrimination.

CONCLUSIONS

The present thesis describes a group-oriented program of research designed to investigate the experience of victims of discrimination. Four themes emerge from the present results. In direct contradiction to previous research, where women consistently minimized discrimination as a reason for group-based negative feedback (Ruggiero & Major, 1998; Ruggiero & Taylor, 1995, 1997; Ruggiero et al., 1997), women in the present experiment were willing to acknowledge discrimination. The overriding hypothesis—that less minimization of personal discrimination as a reason for failure would be observed when testing women within a group context—was thus largely confirmed. In fact, the tendency to acknowledge greater discrimination over personal qualities as a reason for negative feedback was observed both prior to, and following, the group discussion.

Central to the present experiment was the exploration of how women would spontaneously use the opportunity to meet with other potential victims of discrimination to cope with their personal experience with discrimination. Indeed, content analysis of the videotaped group discussions indicates that women in the present experiment took advantage of the opportunity to interact with ingroup members in order to engage in supportive interaction. Especially prevalent was the sharing of emotionally supportive behavior. These results suggest that the women in the present experiment spontaneously sought support from their peers as a result of their experience with the confronted discrimination. However, women apparently avoided direct discussion of discrimination during the group discussions. They mainly focused on counteracting any anxiety or doubt

concerning their future career performance, as well as on making self-evaluative assessments of their own performance, through the comparison of their answers and their grades on the test.

A precaution, regarding the effect of the opportunity for discussion with ingroup members upon the perception of discrimination, must be underscored. Results indicate that the group discussions apparently led women to endorse less personal responsibility for their negative feedback. However, even if women did not minimize their attributions to discrimination as a reason for failure following the group discussion, they nevertheless demonstrated a reluctance to acknowledge more discrimination than prior to the group discussion. The opportunity to discuss their experience with ingroup members after receiving feedback where discrimination may have been implied apparently did not stimulate a willingness for women to become even more vigilant in their evaluation of discrimination.

The relationship between the perception of discrimination and the opportunity to interact with ingroup members becomes more clear when account is taken of the emotionally and informationally supportive behavior that occurred during the group discussions. Results demonstrate that women who received negative feedback and who did not have access to <u>any</u> type of social support—either informational or emotional—replicated the minimization-of-discrimination effect found in earlier experiments (Ruggiero & Major, 1998; Ruggiero & Taylor, 1995, 1997; Ruggiero et al., 1997). Women who received negative feedback and who had access to <u>both</u> or <u>either</u> types of social support tended to attribute their failure significantly more to discrimination than to the quality of their answers. Furthermore, the results demonstrate that women who received positive feedback and who had access to <u>both</u> types of social support attributed

their feedback significantly more to discrimination than to the quality of their answers. These results suggest that social support from ingroup members is clearly needed to help women acknowledge their experience with discrimination.

Generalizing the findings, from the laboratory to society, must always be done with prudence. Nonetheless, the implications of the present results emphasize the importance of social networks for disadvantaged group members who need to cope with the possibility of being targets for discrimination. This thesis demonstrates the importance for disadvantaged group members to *perceive* that resources for social support are available to them, and the importance of actually interacting with members of their ingroup, in order to acquire the necessary tools to become more vigilant in acknowledging their experience with discrimination. Most importantly, this thesis demonstrates that these very resources must provide individuals with specific types of socially supportive behavior, in order to lead disadvantaged group members to confidently attribute a potentially biased feedback to discrimination.

Given the psychological benefits associated with the minimization of personal discrimination (Ruggiero & Taylor, 1995, 1997), the present thesis provides insights into the social conditions necessary for disadvantaged group members to face the reality of discrimination, without suffering the negative psychological consequences associated with acknowledging such a threat.

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APPENDIX A

Future Career Success Test Booklet

LA RÉUSSITE PROFESSIONNELLE

Le but de cette étude est de nous aider à valider un nouveau test pouvant prédire votre réussite professionnelle. Pourquoi un nouveau test? Parce qu'il a été démontré que les tests conçus jusqu'à présent ont tendance à dépendre du domaine d'étude des répondants. Par exemple, certains tests mettent trop d'emphase sur les habiletés verbales, tandis que d'autres mettent trop d'emphase sur les habiletés mathématiques. Nous croyons donc que ces tests peuvent avantager ou désavantager certaines personnes, simplement en raison de leur domaine d'étude respectif.

Mais nous pensons avoir conçu un test prédisant la réussite professionnelle qui soit indépendant du domaine d'étude des répondants. En effet, il semble évident que la réussite professionnelle est tributaire de plusieurs facteurs, et non d'un seul facteur comme les habiletés verbales. En fait, des études récentes semblent démontrer qu'au moins quatre facteurs interagissent afin de déterminer la réussite professionnelle: la pensée créative, la pensée logique, le raisonnement mathématique, ainsi que la capacité de bien gérer le temps et le stress.

Les pages qui suivent contiennent le test qui sera utilisé afin de prédire votre réussite professionnelle. Le test est divisé en trois parties: la première partie porte sur la pensée logique, la deuxième partie porte sur la pensée créative, et la troisième partie porte sur le raisonnement mathématique. Vous diposerez d'un maximum de 6 minutes pour compléter le test. Les questions sont construites de façon telle qu'il n'existe pas qu'une seule bonne réponse.

Vous pouvez maintenant remplir la section démographique se trouvant à la page 2, puis lire les consignes se trouvant à la page 3. Attendez le signal avant de commencer le test en page 4.

TEST SUR LA RÉUSSITE PROFESSIONNELLE

Information Démographique

Sexe:

❑ **Féminin**

❑ **Masculin**

Age: _____

Domaine d'Études: _____

Langue(s) parlée(s) à la maison: _____

_____

_____

- 3 -

TEST SUR LA RÉUSSITE PROFESSIONNELLE

CONSIGNES

Vous disposez de 6 minutes pour compléter le test. Le test est divisé en trois parties: la première partie porte sur la pensée logique, la deuxième partie porte sur la pensée créative, et la troisième partie porte sur le raisonnement mathématique. Ne prenez pas plus de 2 minutes pour compléter chaque partie. Les questions sont construites de façon telle qu'il n'existe pas qu'une seule bonne réponse.

Votre performance sera évaluée de la façon suivante:

Si le correcteur vous donne un **A** : vous avez **très bien** réussi le test;
Si le correcteur vous donne un **B** : vous avez **bien** réussi le test;
Si le correcteur vous donne un **C** : vous avez **assez bien** réussi le test;
Si le correcteur vous donne un **D** : vous avez **peu** réussi le test;
Si le correcteur vous donne un **E** : vous avez **échoué** le test.

Afin de stimuler votre désir de bien performer, nous avons décidé que seulement les personnes ayant obtenu un **A**, un **B**, un **C** ou un **D** seront éligibles à la lotterie de **100$**. Les personnes qui obtiendront un **E** seront éligibles à une lotterie de **10$**.

Attendez le signal avant de commencer le test.

Partie 1 : La pensée logique

Veuillez lire attentivement les trois énoncés suivants. Après chaque énoncé, trois conclusions vous seront présentées. Votre tâche est d'indiquer si ces conclusions suivent la logique apportée par l'énoncé. Cochez **VRAI** si vous croyez que la conclusion est la suite logique de l'énoncé. Cochez **FAUX** si vous croyez que la conclusion ne constitue pas une suite logique de l'énoncé. Ne prenez pas plus de 2 minutes pour compléter cette partie.

Énoncé 1

Aucun animal carnivore n 'a quatre estomacs;
Tous les ruminants ont quatre estomacs;
Donc...

Conclusion 1: Aucun carnivore n'est ruminant.	VRAI _____	FAUX _____
Conclusion 2: Certains carnivores sont aussi ruminants.	VRAI _____	FAUX _____
Conclusion 3: Aucun ruminant n'est carnivore.	VRAI _____	FAUX _____

Énoncé 2

Quelques poissons sont des requins;
Tous les saumons sont des poissons;
Donc...

Conclusion 1: Quelques saumons sont des requins.	VRAI _____	FAUX _____
Conclusion 2: Aucun requin n'est un saumon.	VRAI _____	FAUX _____
Conclusion 3: Certains requins sont des saumons.	VRAI _____	FAUX _____

Énoncé 3

Toutes les planètes sont rondes ;
Une roue est ronde;
Donc...

Conclusion 1: Une roue est une planète.	VRAI _____	FAUX _____
Conclusion 2: Aucune roue n'est une planète.	VRAI _____	FAUX _____
Conclusion 3: Une planète est une roue.	VRAI _____	FAUX _____

Partie 2: La pensée créative

Dans cette partie, nous vous demandons d'inscrire trois utilisations possibles pour chacun des trois objets présentés ci-dessous. Votre tâche est de faire preuve d'originalité dans vos réponses. Ne prenez pas plus de 2 minutes pour compléter cette partie.

Objet 1: COFFRE

Utilisation 1) _____

Utilisation 2) _____

Utilisation 3) _____

Objet 2: AIGUILLE

Utilisation 1) _____

Utilisation 2) _____

Utilisation 3) _____

Objet 3: CRÈME

Utilisation 1) _____

Utilisation 2) _____

Utilisation 3) _____

Partie 3: Le raisonnement mathématique

Dans cette partie, nous vous demandons de résoudre un problème mathématique. Cinq choix de réponses s'offrent à vous. Votre tâche est de choisir la bonne réponse en **encerclant** la lettre appropriée. Inscrivez vos calculs dans l'espace prévu à cette fin. Ne prenez pas plus de 2 minutes pour compléter cette partie.

Un homme débourse 60$ pour acheter un cheval, puis le revend 70$.
Cet homme débourse ensuite 80$ pour racheter ce cheval, puis le revend 90$.
Combien d'argent cet homme a-t-il fait dans cette affaire?

A. Il a perdu 10$

B. Il n'a ni gagné ni perdu d'argent

C. Il a gagné 10$

D. Il a gagné 20$

E. Il a gagné 30$

Calculs:

APPENDIX B

Perceived Causal Attributions for Feedback Prior to the Group Discussion

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Jusqu'à quel point croyez-vous que chacune des caractéristiques suivantes a joué un rôle dans la note que vous avez reçue?

a) Votre anxiété face au test?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

b) Votre expérience académique?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

c) Vos habiletés personnelles?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

d) L'effort déployé lors du test?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

e) La qualité de vos réponses?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

f) Le genre de test?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

g) La discrimination?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

APPENDIX C

Perceived Causal Attributions for Feedback Following the Group Discussion

---

Jusqu'à quel point croyez-vous que chacune des caractéristiques suivantes a joué un rôle dans la note que vous avez reçue?

1. Votre anxiété face au test?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

2. Votre expérience académique?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

3. Vos habiletés personnelles?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

4. L'effort déployé lors du test?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

5. La qualité de vos réponses?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

6. Le genre de test?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

7. La discrimination?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

APPENDIX D

Informational and Emotional Support Verification

CONSIGNES

Veuillez répondre aux questions suivantes en ayant en tête le contenu de la discussion que vous avez eue avec les autres étudiants.

---

1. Lors de la discussion, avez-vous découvert la note que les autres étudiants ont obtenue au test?

❑ OUI
❑ NON

Si vous avez répondu OUI à cette question, répondez à la question 2.
Si vous avez répondu NON à cette question, répondez à la question 3.

2. Comment vous êtes-vous senti après avoir découvert la note des autres étudiants?

_____

_____

3. Auriez-vous aimé découvrir la note que les autres étudiants ont obtenue au test?

❑ OUI
❑ NON

4. Lors de la discussion, avez-vous révélé aux autres étudiants la note que vous avez obtenue pour le test?

❑ OUI
❑ NON

Si vous avez répondu OUI à cette question, répondez à la question 5.
Si vous avez répondu NON à cette question, répondez à la question 6.

5. Pourquoi avez-vous révélé aux autres étudiants la note que vous avez obtenue?

_____

_____

6. Pourquoi n'avez-vous pas révélé aux autres étudiants la note que vous avez obtenue?

_____

_____

Veuillez répondre aux questions suivantes en ayant en tête la discussion que vous avez eue avec les autres étudiants, peu importe son contenu.

7. Vous êtes-vous senti(e) accepté(e) par les autres étudiants?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

8. Avez-vous fait sentir aux autres étudiants que vous les acceptiez?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

9. Vous êtes-vous senti(e) apprécié(e) par les autres étudiants?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

10. Avez-vous fait sentir aux autres étudiants que vous les appréciiez?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

11. Vous êtes-vous senti(e) écouté(e) par les autres étudiants?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

12. Avez-vous écouté attentivement les autres étudiants?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

13. Avez-vous senti que les autres étudiants vous offraient de la sympathie?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

14. Avez-vous offert de la sympathie aux autres étudiants?

0 1 2 3 4 5 6 7 8 9 10
Pas du tout Moyennement Énormément

15. Avez-vous offert du réconfort aux autres étudiants?

0	1	2	3	4	5	6	7	8	9	10
Pas du tout					Moyennement					Énormément

16. Avez-vous senti que les autres étudiants vous offraient du réconfort?

0	1	2	3	4	5	6	7	8	9	10
Pas du tout					Moyennement					Énormément

17. Avez-vous donné des informations aux autres étudiants?

0	1	2	3	4	5	6	7	8	9	10
Pas du tout					Moyennement					Énormément

18. Les autres étudiants vous ont-ils donné des informations?

0	1	2	3	4	5	6	7	8	9	10
Pas du tout					Moyennement					Énormément

19. Avez-vous donné des conseils aux autres étudiants?

0	1	2	3	4	5	6	7	8	9	10
Pas du tout					Moyennement					Énormément

20. Les autres étudiants vous ont-ils donné des conseils?

0	1	2	3	4	5	6	7	8	9	10
Pas du tout					Moyennement					Énormément

21. Avez-vous donné des suggestions aux autres étudiants?

0	1	2	3	4	5	6	7	8	9	10
Pas du tout					Moyennement					Énormément

22. Les autres étudiants vous ont-ils donné des suggestions?

0	1	2	3	4	5	6	7	8	9	10
Pas du tout					Moyennement					Énormément

23. Sentez-vous que la discussion que vous avez eue avec les autres étudiants vous a été bénéfique?

0	1	2	3	4	5	6	7	8	9	10
Pas du tout					Moyennement					Énormément

APPENDIX E

Probability for Discrimination Manipulation Check

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1. Est-ce que quelqu'un a mentionné, au cours de la session, que l'étudiant corrigeant les tests avait tendance à être biaisé contre les femmes?

☐ OUI
☐ NON

2. Quel pourcentage de ses critères de correction était basé sur le sexe des participants?

_____%
