WHEN GIRLS EVALUATE THEMSELVES BETTER THAN BOYS IN MINORITY GROUPS: ROLE OF THE PERFORMANCE CONTEXT

Delphine Martinot, Michel Désert and Sandrine Redersdorff
Université Blaise Pascal
Clermont-Ferrand, France

ABSTRACT

In the literature, token status is more threatening for women than for men. We suggest that the impact of minority status on self-evaluations of boys and girls might depend on the performance context. To test this hypothesis, pupils in the majority or minority by gender took an academic test either in a context favorable to boys (a working-group condition) or favorable to girls (an intergender-comparison condition). As expected, in the working-group condition, girls reported lower self-evaluations than boys did. In the intergender-comparison condition, girls reported better self-evaluations than boys did. The role of gender stereotypes is discussed.

Group gender composition has been shown to affect the effectiveness of women in groups. The fewer women in a group, the less likely their ideas will be considered (Craig & Sherif, 1986). Many laboratory and field studies, in academic as well as occupational contexts, have shown that working in a predominantly male environment creates major difficulties for women (e.g., Alexander & Thoits, 1985; Kanter, 1977; Morrison & von Glinow, 1990; Sackett, DuBois, & Noe, 1991; Spangler, Gordon, & Pipkin, 1978; Yoder, 2002; Yoder & Sinnett, 1985). Accordingly, it has been observed that women's performance suffers if they are the only representative of their gender (Sekaquaptewa & Thompson, 2003) or if their gender is in the minority (Inzlicht & Ben-Zeev, 2003), whether the task to be accomplished is associated with an area where women have a poor reputation (Inzlicht & Ben-Zeev, 2000) or do not have such a reputation (Sekaquaptewa & Thompson, 2002). Other studies have shown that when women must perform in a gender-minority situation, their performance expectations (Sekaquaptewa & Thompson, 2003; Stangor, Carr, & Kiang, 1998) and their self-esteem (Krimmel & Gormley, 2003) are lower; they also receive lower ratings from superiors (Sackett et al., 1991), feel more isolated (Kanter, 1977), and perceive more discrimination (Steele, James, & Barnett, 2002). Although less numerous than studies focusing on women, studies on men working in a minority context have shown that men are apparently not negatively affected by a minority status. Evidence from these studies shows that neither men's performance (e.g., Inzlicht & Ben-Zeev, 2000; Sekaquaptewa & Thompson, 2003), nor their self-perceptions (e.g., Cohen & Swim, 1995; Sekaquaptewa & Thompson, 2003; Yoder & Sinnett, 1985), nor even judgments of them made by others (e.g., Fuegen & Biernat, 2002; Sackett et al., 1991) are lowered by their being in the minority. In sum, the above body of research indicates that women seem to be more negatively affected by a numeric minority status than men. For instance, Policewomen are seen to face many disadvantages, whereas male nurses enjoy advantages from being one of the few among female colleagues (Krimmel & Gormley, 2003). To sum up, previous studies focusing directly, in a same investigation, on the effects of minority status on men's and women's self-evaluations have shown that women's self-evaluations were more threatened than those of men in a context of performance (Craig & Sherif, 1986; Crocker & McGraw, 1984; Krimmel & Gormley, 2003). The aim of the present study was to examine whether the impact of minority status on boys' and girls' self-evaluations depends on the performance context.

Status and Differential Expectations

In their expectation states theory, Berger and his colleagues (Berger, Rosenholtz, & Zelditch, 1980; Berger, Wagner, & Zelditch, 1985), proposed that because gender has traditionally been correlated with prestige and status differences in society, differential expectations exist concerning the social power of men and women. These expectations, in turn, can generalize and, through a process of behavioral confirmation of expectancies similar to the self-fulfilling prophecy (Rosenthal & Jacobson, 1968), affect power-related behavior and perceptions of power across a variety of social contexts (Berger et al., 1985; Eagly, 1983; Meeker & Weitzel-O'Neill, 1985). In line with the expectation states theory, Dovidio, Brown, Heltman, Ellyson and Keating (1988) found that gender differences in power-related behavior were affected by context. They showed that systematic differences in the power-related behaviors of men and women emerged in the situations in which there was differential familiarity based on the gender-linked nature of the task. On the masculine task men displayed more verbal and nonverbal power-related behavior than did women. On the feminine task women exhibited more power than men on most of the verbal and nonverbal measures. In other words, situational cues such as stereotypically male or female tasks can influence behavior because they evoke differential expectations of

expertise, and hence situation-related power or status (Dovidio, Ellyson, Keating, Heltman, & Brown, 1988; Ridgeway, 2001).

In a mixed-gender stereotypically masculine work context, because of the effects of gender status beliefs on performance expectations, expectation states theory predicts that men will be more influential than women who are otherwise similar to them (Wagner & Berger, 1997). Furthermore, Williams (1992) argues that men take their gender privilege with them even when they enter predominantly female occupations. This advantaged social status translates into an advantage in spite of their numerical rarity (Ott, 1989; Thompson & Sekaquaptewa, 2002), and allows a "glass escalator effect" (Williams, 1992). Women experience the opposite in male-dominated occupations. Many women encounter a "glass ceiling" in their efforts to scale organizational and professional hierarchies (e.g., Williams, 1992).

We suggest that, when males work in predominantly female professions (Krimmel & Gormley, 2003; Ott, 1989; Williams, 1992) or when they represent the minority in a working group (Craig & Sherif, 1986), their advantaged social status is likely to be related to a male-favoring gender stereotype. On the contrary, when females work in predominantly male professions (Krimmel & Gormley, 2003; Ott, 1989; Williams, 1992) or when they represent the minority in a working group (Craig & Sherif, 1986), they would not benefit from a female-favoring gender stereotype. If this threat is due to the fact that the performance context makes a male-favoring gender stereotype salient, then women's self-evaluations should no longer be negatively affected when a gender stereotype favorable to women is made salient. Indeed, as expectation states theory argues, the biasing effect of gender status on self-other performance expectations is not invariant across all situations. Although they are primed by gender categorization in all situations (Fiske, 1998), the diagnostic value of gender status beliefs to participants can vary from very little to substantial, depending on how salient and task relevant gender is the situation compared to other social roles or status-valued distinctions that are also salient for the participants (Wagner & Berger, 1997; Ridgeway, 2001). There are other examples in the literature of situations in which the performance context has a beneficial impact on women, even when they have to perform on a domain related to a negative reputation of their group. In line with stereotype threat research (e.g., Shih, Pittinsky, & Ambady, 1999; Spencer, Steele, & Quinn, 1998), different stereotypes triggered by the performance context can be activated. For example, in the United States, Shih and colleagues (e.g., Shih et al., 1999) showed that Asian American women did better on a mathematics test when their Asiatic identity was made salient than when their identity as females was brought to the fore. These authors account for these results in terms of the activation of identity stereotypes, here, the stereotype that Asiatics excel in mathematics as opposed to the stereotype that women's aptitude is poor in this domain. In line with such results, we believe that self-evaluations of boys and girls may depend on the activation of different gender stereotypes triggered by the performance context and the participant's minority status. The main objective of our experiment was to test this hypothesis.

Minority Status and Gender Stereotypes

To be in the minority is to be put under a magnifying glass, accentuating the differences between majority and minority (e.g., Kanter, 1977). Moreover, a phenomenon of assimilation causes members of the minority to be judged, and to judge themselves, in a more extreme and stereotyped manner than do members of the majority group (Cohen & Swim, 1995; Crocker & McGraw, 1984; Kanter, 1977). Thus, males and females are seen as more likely to be playing out

a gender-stereotyped role, the fewer the number of other members of their gender subgroup are present. When they are in the minority in a working group, men are likely to be perceived as more influential and leaders within the group than women (Craig & Sherif, 1986; Crocker & McGraw, 1984; Jemmott & Gonzales, 1989; Williams, 1992). Indeed, expectation states theory argues that gender is deeply entwined with social hierarchy and leadership because the rules for the gender system that are encoded in gender stereotypes contain status beliefs at their core (Wagner & Berger, 1997). Perceptions of leadership skills among men and influence exercised over other group members are positively correlated with the proportion of women present in the performance context (Ridgeway & Balkwell, 1997; Tsui, Porter, & Egan, 2002; Webster & Hysom, 1998). Social norms are such that men occupy higher and more prestigious positions than women (Cotter, DeFiore, Hermsen, Kowalewski, & Vanneman, 1997); men are also perceived as better suited to the role of leader (Crocker & McGraw, 1984; Powell, Butterfield, & Parent, 2002). Thus, the greater the ratio of women to men in the performance context, the more men are perceived as having good leadership skills. In other words, men are evaluated favorably when they are in the minority because a positive stereotype is activated (Fuegen & Biernat, 2002). On the other hand, because the content of the female stereotype does not involve leadership skills (Bem, 1974; Williams, Daws, Best, Tilquin, Wesley, & Bjerke, 1979), women are more likely to be perceived as less influential and as having weaker leadership skills in a working group where they are in the minority (Craig & Sherif, 1986). As a consequence, we suggest that the impact of minority status on self-evaluations should be more negative for women than for men when they must perform in a working group.

Nevertheless, we suggest that, in a performance context that makes a female-favoring gender stereotype salient, this effect on self-evaluations should be reversed. Recently, Martinot and Désert (2007) showed that French middle-school pupils were not only aware of, but also endorse, a gender stereotype regarding academic abilities that favors girls over boys. French middle-school boys and girls think that people in general perceive girls as being more academically able than boys, and they also believe this personally. This stereotype is particularly interesting because it relates to a socially important domain -- academic success -- and because it clearly favors girls. The fact that the French academic context conveys this stereotype makes it an ideal setting for studying the effects of numerical asymmetries in a domain that is both socially valued and favorable to girls. Moreover, it is interesting to test if the effects observed among adults can be replicated among pupils. Accordingly, we suggest that a girl-boy comparison on an academic test constitutes a performance situation that activates a gender stereotype favoring girls.

For this reason, we hypothesize that, in a setting that induces an intergender comparison of academic abilities among participants in the minority by gender, self-evaluations of girls would be higher than those of boys. On the other hand, to solve problems of an academic test in a working group constitutes a performance situation that activates the gender stereotype bearing on boy's superior leadership skills. Therefore, in the "working group" condition, when pupils are placed in the minority by gender, girls should report lower self-evaluations than boys. Furthermore, since belonging to the majority in a performance context makes individuals less visible and less distinct (Crocker & McGraw, 1984; Kanter, 1977), gender identity and its associated stereotypes should be much less salient among pupils who are in the majority based on gender. Hence, the self-evaluation differences between girls and boys should be reduced in this case, whatever the performance context (intergender comparison or working group).

OVERVIEW

Eleven-year-old pupils were placed in a fictitious internet work group where their gender was either the majority (9 persons out of 12) or the minority (3 persons out of 12). All of the pupils were informed that they were going to take a very important test of academic abilities, but half of them believed that the test was part of a survey about working in a group on the internet (working-group condition) whereas the other half expected a comparison within their internet group between the average grade of the girls and the average grade of the boys taking the test (intergender-comparison condition).

METHOD

One hundred and seven sixth-grade pupils (51 boys and 56 girls; mean age 11 years 1 month) participated in the experiment. They were not selected, but all volunteered for the study with parental agreement. They came from 8 different classes of a public and urban school. This urban school was selected to obtain wide variety of social backgrounds for the students. They were randomly assigned to one of the eight conditions in the following experimental design: 2 (gender) x 2 (performance condition: intergender comparison *vs.* working group) x 2 (numeric status of the gender group: majority *vs.* minority).

Each child participated individually in this study. Upon arrival, the pupil was seated in front of a computer by an experimenter of the same sex. After making sure that the pupil thought he/she was actually on the internet, the experimenter let him/her navigate freely through the various web pages that presented the study. The first page showed the title of the (bogus) study: "Test of Academic Abilities". This test was presented as measuring very important academic-abilities that predict academic success. In the next web page, the pupil was asked to state his/her gender identity and received the instructions concerning the numeric status of the group and the performance context.

Each participant gradually saw a number of pseudo-connections showing how many other children of each sex were connected up to the internet with him/her. In the condition where the pupil's gender was in the minority, the pupil learned that he/she was connected up with two pupils of the same sex and nine pupils of the opposite sex. In the condition where his/her gender was in the majority, the pupil found out that he/she was connected up with eight pupils of the same sex and three pupils of the opposite sex. The last web page reminded the participants of the purpose of the survey and allowed us to induce the performance context. Half of the pupils read that the goal of the study was an important survey to compare, for the twelve pupils currently connected, the girls' grades to the boys' grades on the academic-abilities test (intergender-comparison condition). Then, the participants in this condition anticipated an intergender comparison following the academic test. The other half read that the goal of the study was an important survey on how students solve problems of the academic-abilities test in working within a group on the internet (working-group condition).

Then the participants took the alleged academic-abilities test. All of the pupils accomplished individually the same task. Because our hypotheses dealt with the effects of minority status and performance condition on self-evaluations of pupils, test difficulty had to be controlled so that individual differences in performance would not interfere with the processes under study. To do this, we selected ten matrices (based on a pretest) from Thurstone's (1938) PMA (Primary

Mental Abilities) tests and set a time limit of 2.5 minutes; in this way, the pupils would be unable to correctly solve very many matrices ($M = 2.52$, $SD = 1.78$). As expected, controlling for actual performance did not alter the results and will not be discussed below.

As soon as the bogus test of academic abilities was completed, the participants filled in a questionnaire containing two self-evaluation measures, self-esteem and perceived performance, and one associated measure, conformity to the gender prototype. For each item, the pupils answered on a thermometer-like scale (a Likert-type scale adapted for children) ranging from 1 (*totally disagree*) to 5 (*totally agree*).

Global Self-Esteem

Based on a validated French self-esteem scale for children (Pierrehumbert, Plancherel, & Jankech-Carreta, 1987), this part of the questionnaire consisted of five items designed to measure global self-esteem (e.g., *"In general, I am satisfied with my life"*). The reliability level of the self-esteem scale was acceptable (Cronbach's alpha = .79).

Perceived Performance

There were five items to assess how well pupils thought they had performed on the test (e.g., *"I think I did well on the test of academic abilities"*). The reliability level of this perceived-performance scale was acceptable (Cronbach's alpha = .70).

Perceived Conformity to the Gender Prototype

One item assessed the extent to which the pupils thought they were typical of their gender group ("A good description of me is that I am a typical boy (girl)"). This item was aimed at assessing how applicable each pupil thought the gender stereotypes were to him/herself.

Manipulation Checks

The questionnaire ended with three questions aimed at making sure the experimental inductions were effective. First of all, the pupil had to report the number of boys and girls connected at the same time as him/herself; this was used to determine whether the induced numeric asymmetry had been correctly perceived. Then, to control for proper processing of the information about the performance condition, the participant had to recall the purpose of the survey in which he/she had just participated. Finally, the pupil was questioned about whether the internet connection went well; this was to make sure that he/she had no doubts about this aspect of the experimental procedure. Then, the pupil was debriefed and thanked.

RESULTS

Four pupils who answered the induction-control questions incorrectly were eliminated from the analyses. For the remaining 103 participants, a 2 (gender) x 2 (performance condition: intergender comparison *vs.* working group) x 2 (numeric status: majority *vs.* minority) ANOVA was conducted on the self-esteem, perceived-performance, and perceived-conformity to the gender prototype. Preliminary analyses did not show any effect of classes (in public or urban schools) on these different measures, all *F*s < 1.

Self-Esteem

The analysis yielded an interaction between gender and performance condition, $F(1, 95) = 5.18$, $p < .05$. As expected, this interaction was qualified by a significant three-way interaction between gender, performance condition and numeric status, $F(1, 95) = 18.72$, $p < .0001$, eta-square = .17. Planned comparisons showed, as expected, that when pupils were in the minority with respect to members of the other sex and in an intergender-comparison condition, girls exhibited higher self-esteem than boys, $t(95) = -2.31$, $p < .05$. By contrast, and as expected, when pupils were in the minority and in a working-group condition, girls exhibited lower self-esteem than boys, $t(95) = 4.21$, $p < .0001$. When their gender was the majority, there was no difference on self-esteem between girls and boys, regardless of the performance condition, $ps > .25$, *ns* (see Table 1).

Perceived Performance

The analysis revealed no main effect of numeric status ($M = 3.49$ for majority and $M = 3.51$ for minority) and no main effect of gender ($M = 3.48$ for boys and $M = 3.53$ for girls), all $Fs < 1$, *ns*. The analysis yielded a significant interaction between gender and performance condition, $F(1, 95) = 6,40$, $p < .05$, but again, it was qualified by a significant three-way interaction between gender, performance condition, and numeric status, $F(1, 95) = 9.30$, $p < .01$, eta-square = .09. Planned comparisons showed, as expected, that when pupils were in the minority and in an intergender-comparison condition, girls perceived their performance as higher than did boys, $t(95) = -2.87$, $p < .01$. On the other hand, and as expected, when gender-minority pupils believed to perform in a working group, girls perceived their performance as lower than boys did, $t(95) = 2.69$, $p < .01$. When their gender group was the majority group, there was no difference on perceived performance between girls and boys, regardless of the performance condition, $ts < 1$, *ns* (see Table 1).

Table 1. Mean Ratings of Self-Esteem, Perceived Performance, and Perceived Conformity to the Gender Prototype (Standard Deviation in Parentheses) as a Function of Numeric Status, Performance Condition and Gender.

	Minority				Majority			
	Group-work context		Intergender-comparison context		Group-work context		Intergender-comparison context	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
N	12	12	14	13	14	12	14	12
Self-esteem	3.11 (1.14)	4.28 (.50)	4.28 (.48)	3.67 (.79)	4.18 (.76)	3.87 (.55)	3.87 (.41)	4.11 (.50)
Perceived performance	3.08 (.85)	3.68 (.50)	3.94 (.51)	3.34 (.49)	3.51 (.50)	3.35 (.51)	3.58 (.36)	3.53 (.56)
Perceived gender-prototype conformity	2.67 (1.30)	4.25 (1.28)	4.14 (.86)	3.30 (.94)	4.22 (1.01)	3.75 (1.28)	4.00 (1.24)	3.66 (1.55)

Note. The ratings ranged between 1 and 5. Higher ratings mean higher self-esteem, higher perceived performance, and stronger conformity to the gender prototype.

Perceived Conformity to the Gender Prototype

The analysis yielded a significant interaction between gender and performance condition, $F(1, 95) = 5.91$, $p < .05$, qualified by a significant three-way interaction between gender, performance condition, and numeric status, $F(1, 95) = 7.34$, $p < .01$, eta-square = .07. Planned comparisons showed that when girls were in the minority, they perceived themselves as more like a typical girl in an intergender-comparison condition than in a working-group condition, $t(95) = -3.15$, $p < .01$. In contrast, when boys were in the minority, they perceived themselves as more like a typical boy in a working-group condition than in an intergender-comparison condition, $t(95) = 1.98$, $p < .05$. When their gender group was the majority, the perceived conformity to their gender prototype of boys and girls did not differ as a function of the performance context, ts < 1, *ns* (see Table 1). Moreover, the gender-conformity measure was positively correlated with both self-esteem ($r = .37$, $p < .0001$) and perceived performance ($r = .25$, $p < .01$) (see Appendix).

DISCUSSION

Numerous studies have shown that belonging to a minority in a work or performance setting creates major difficulties for female adults (e.g., Alexander & Thoits, 1985; Kanter, 1977; Morrison & von Glinow, 1990; Sackett et al., 1991; Spangler et al., 1978; Yoder & Sinnett, 1985). The main objective of this experiment was to determine the role of the performance context on self-evaluations of boys and girls in minority situations. In particular, we looked at the effects of academic performance contexts in which stereotypes favorable to either girls or boys were likely to be salient. As expected, minority status in a working group led to poorer self-evaluations among girls than among boys. In this situation of problem solving in a group, the girls in the gender minority reported poorer self-esteem and lower perceived performance than did the boys. This finding seems to support the idea that, in a working group boys in the minority condition may benefit from a positive male stereotype (Craig & Sherif, 1986; Crocker & McGraw, 1984; Jemmott & Gonzales, 1989). This hypothesis is supported by the fact that, when the pupils had a gender-minority status, the boys were more likely to describe themselves as a typical boy in a working-group condition than in an intergender-comparison condition. In a working group, boys may see more benefits in being like other boys because the salient stereotype is favorable to them.

On the other hand, and in line with our hypothesis, it seems that the impact of minority status observed in the self-evaluations of boys and girls in an academic working-group condition can be reversed in an academic intergender-comparison condition. In the present academic performance context involving an intergender comparison, the girls showed higher self-esteem and better perceived performance when in the minority than the boys did in the same situation. This finding is consistent with the idea that belonging to a minority in an academic setting that compares girls to boys renders salient the stereotype that girls are better pupils than boys (Martinot & Désert, 2007). The fact that the girls in the minority were more likely to describe themselves as typical girls in an intergender-comparison condition than in a working-group condition leads us to surmise that the salient stereotype in this situation favors girls over boys.

CONCLUSIONS AND IMPLICATIONS

The present results tend to confirm, for an academic context and among pupils, what has already been observed in the workplace or laboratory among adults, on numerous measures (e.g., Kanter, 1977; Sackett et al. 1991; Sekaquaptewa & Thompson, 2002, 2003): females are more threatened than males when they work in a group where their gender is in the minority. However, our results go beyond a mere replication among pupils of the effects observed among adults. Indeed, contrary to what most studies on minority status lead us to believe, males' self-confidence can also be affected when they find themselves outnumbered in a group of females. Moreover, it does not seem to be the nature of the task that affects self-evaluations, but rather the performance context and the gender stereotype made salient by that context. Indeed, in this study, the actual task was a mental rotation exercise (from Thurstone's PMA matrices) on which boys supposedly evaluate themselves better than girls (Weiss, Kemmler, Deisenhammer, Fleischhacker, & Delazer, 2003). However, in the intergender comparison context, the girls in the minority had a higher self-esteem rating and a better perception of their performance on this task than did the boys in the minority. This suggests that the role of the performance context -- that is, a boy-girl comparison on a domain for which girls have a better reputation -- is preponderant in this case.

Moreover, research suggests that having another member of one's social category in a group can change self-evaluations (Biernat, Crandall, Young, Kobrynowicz, & Halpin, 1998). In the present experiment, with a ratio of 75/25, minority members are likely to begin to move toward less extreme distributions and less exaggerated effects than in a situation with a ratio of 85/15 or with solitary individuals (or solos) (e.g., Kanter, 1977). Future studies should test whether the present results would be generalizable in a situation with a more extreme ratio of boys/girls. Finally, when participants in a performance context were in the majority by gender, their self-evaluations did not seem to depend on the performance context. Consistent with previous studies, being part of the numeric majority seems to be a comfortable situation, because it does not increase the feeling of being "on stage" and does not involve the stress of being the sole representative of one's group (Sekaquaptewa & Thompson, 2003). In addition, as Brewer and colleagues (e.g., Brewer & Weber, 1994; Pickett, Silver, & Brewer, 2002) showed, members of the majority feel a need to differentiate themselves. Hence, to affirm their uniqueness, they have a tendency to think of comparisons with others as irrelevant (Brewer & Weber, 1994). This could explain why our participants' self-evaluations did not seem to be influenced by the performance context when their gender group represented the majority. This finding opens up research avenues for studying the beneficial role of the group in situations where an unfavorable stereotype reigns. Indeed, studies on stereotype threat have demonstrated that it is beneficial to individuate members of groups that are devalued by a negative stereotype (Désert, Croizet, & Leyens, 2002; Marx, Stapel, & Muller, 2005). Therefore, it might be interesting to better pinpoint the role of an anonymous or deindividuating situation in which an individual performs in a context where an unfavorable stereotype is salient, but also where he or she is surrounded by a majority of individuals from his/her own gender group. Ultimately, a better understanding of the role of the numeric ratio between the two gender groups in performance contexts, whether at school, or in university settings could suggest courses of action likely to promote equal opportunities for girls and boys.

REFERENCES

Alexander, V.D., & Thoits, P.A. (1985). Token achievement: an examination of proportional representation and performance outcomes. *Social Forces, 64*, 332-340.

Bem, S.L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology, 42,* 155-162.

Berger, J., Rosenholtz, S. J., & Zelditch, M., Jr. (1980). Status organizing processes. *Annual Review of Sociology,* 6, 479-508.

Berger, J., Wagner, D. G., & Zelditch, M., Jr. (1985). Introduction: Expectation states theory. In J. Berger & M. Zelditch, Jr. (Eds.), *Status, rewards, and influence* (pp. 1-72). San Francisco: Jossey-Bass.

Biernat, M., Crandall, C.S., Young, L.V., Kobrynowicz, D., & Halpin, S.M. (1998). All that you can be: Stereotyping of self and others in a military context. *Journal of Personality and Social Psychology, 75*, 301-317.

Brewer, M.B., & Weber, J.G. (1994). Self-evaluation effects of interpersonal versus intergroup social comparison. *Journal of Personality and Social Psychology, 66*, 268-275.

Cohen, L.L., & Swim, J.K. (1995). The differential impact of gender ratios on women and men: tokenism, self-confidence, and expectations. *Personality and Social Psychology Bulletin, 21*, 876-884.

Cotter, D.A., DeFiore, J., Hermsen, J.M., Kowalewski, B., & Vanneman, R. (1997). All women benefit: The macro level effect of occupational integration on gender earnings equality. *American Sociological Review, 62*, 714-734.

Craig, J. M., & Sherif, C.W. (1986). The effectiveness of men and women in problem-solving groups as a function of group gender composition. *Sex Roles, 14*, 453-466.

Crocker, J., & McGraw, K.M. (1984). What's good for the goose is not good for the gander: solo status as an obstacle to occupational achievement for males and females. *American Behavioral Scientist, 27,* 357-369.

Désert, M., Croizet, J. C., & Leyens, J. P. (2002). La menace du stéréotype: une interaction entre situation et identité. *L'Année Psychologique, 102*, 555-576.

Dovidio, J.F., Brown, C.E., Heltman, K., Ellyson, S.L., & Keating, C.F. (1988). Power Displays Between Women and Men in Discussions of Gender-Linked Tasks: A Multichannel Study. *Journal of Personality and Social Psychology, 55,* 580-587.

Dovidio, J.F., Ellyson, S.L., Keating, C.F., Heltman, K., & Brown, C.E. (1988). The relationship of social power to visual displays of dominance between men and women. *Journal of Personality and Social Psychology, 54,* 233-242.

Eagly, A. H. (1983). Gender and social influence: A social psychological analysis. *American Psychologist, 38,* 971-981.

Fiske, S.T. (1998). Stereotyping, prejudice, and discrimination. In D.T. Gilbert, S.T. Fiske, & G. Lindzey (Eds.), *The Handbook of social psychology* (4th ed., Vol.2, pp. 357-411). Boston: McGraw-Hill.

Fuegen, K., & Biernat, M. (2002). Reexamining the effects of solo status for women and men. *Personality and Social Psychology Bulletin, 28*, 913-925.

Inzlicht, M., & Ben-Zeev, T. (2000). A threatening intellectual environment: Why females are susceptible to experiencing problem-solving deficits in the presence of males? *Psychological Science, 11,* 365-371.

Inzlicht, M., & Ben-Zeev, T. (2003). Do high-achieving female students underperform in private? The implications of threatening environments on intellectual processing. *Journal of Educational Psychology, 95*, 796-805.

Jemmott, J.B., & Gonzales. E. (1989). Social status, the status distribution, and performance in small groups. *Journal of Applied Social Psychology, 19,* 584-598.

Kanter, R.M. (1977). Some effects of proportions on group life: skewed sex ratios and responses to token women. *American Journal of Sociology, 82,* 965-990.

Krimmel, J.T., & Gormley, P.E. (2003). Tokenism and job satisfaction for policewomen. *American Journal of Criminal Justice,* 28, 73-88.

Martinot, D., & Désert, M. (2007). Awareness of a gender stereotype, personal beliefs and self-perceptions regarding math ability: When boys do not surpass girls. *Social Psychology of Education, 10,* 455-471.

Marx, D.M., Stapel, D. A., & Muller, D. (2005). We can do it: The interplay of construal orientation and social comparisons under threat. *Journal of Personality and Social Psychology, 88*, 432-446.

Meeker, B. E, & Weitzel-O'Neill, P. A. (1985). Sex roles and interpersonal behavior in task-oriented groups. In J. Berger & M. Zelditeh, Jr. *(Eds.), Status, rewards, and influence* (pp. 379--405). San Francisco: Jossey-Bass.

Morrison, A., & von Glinow, M. (1990). Women and minorities in management. *American Psychologist. Special Issue: Organizational psychology, 45 (2),* 200-208.

Ott, E.M. (1989). Effects of the male-female ratio at work. *Psychology of Women Quaterly, 13*, 41-57.

Pickett, C. L., Silver, M.D., & Brewer, M.B. (2002). The impact of assimilation and differentiation needs on perceived group importance and judgments of ingroup size. *Personality and Social Psychology Bulletin, 28,* 546-558.

Pierrehumbert, B., Plancherel, B., & Jankech-Carreta, C. (1987). Image de soi et perception des compétences propre chez l'enfant. *Revue de Psychologie Appliquée*, *37*, 359-377.

Powell, G.N., Butterfield, D.A., & Parent, J.D. (2002). Gender and managerial stereotypes: have the times changed? *Journal of Management, 28*, 177-190.

Ridgeway, C.L. (2001). Gender, status, and leadership. *Journal of Social Issues, 57*, 637-655.
Ridgeway, C.L., & Balkwell, J.W. (1997). Group processes and the diffusion of status-beliefs. *Social Psychology Quarterly, 60*, 14-31.

Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom. New* York: Holt, Rinehart & Winston.

Sackett, P., DuBois, C.L., & Noe, A.W. (1991). Tokenism in performance evaluation: the effects of work group representation on male-female and White-Black differences in performance ratings. *Journal of Applied Psychology, 76*, 263-267.

Sekaquaptewa, D., & Thompson, M. (2002). The differential effects of solo status on members of high and low status groups. *Personality and Social Psychology Bulletin, 28*, 694-707.

Sekaquaptewa, D., & Thompson, M. (2003). Solo status, stereotype threat, and performance expectancies: their effects on women's performance. *Journal of Experimental Social Psychology, 39*, 68-74.

Shih, M., Pittinsky, T.L., & Ambady, N. (1999). Stereotype susceptibility: Shifts in quantitative performance from socio-cultural identification. *Psychological Science, 10*, 80-90.

Spangler, E., Gordon, M.A., & Pipkin, R.M. (1978). Token women: an empirical test of Kanter's hypothesis. *American Journal of Sociology, 84,* 160-170.

Spencer, S., Steele, C. M., & Quinn, D. M. (1999). Under suspicion of inability: Stereotype threat and women's math performance. *Journal of Experimental Social Psychology, 35,* 4-28.

Stangor, C., Carr, C., & Kiang, L. (1998). Activating stereotypes undermines task performance expectations. *Journal of Personality and Social Psychology, 75*, 1191-1197.

Steele, J., James, J.B., & Barnett, R.C. (2002). Learning in a man's world: examining the perceptions of undergraduate women in male-dominated academic areas. *Psychology of Women Quarterly, 26*, 46-50.

Thompson, M., & Sekaquaptewa, D. (2002). When being different is detrimental: solo status and the performance of women and racial minorities. *Analyses of Social Issues and Public Policy, 2*, 183-203.

Thurstone, L. L. (1938). Primary mental abilities. *Psychometric Monographs,1*, ix-121.

Tsui, A.S., Porter, L.W., & Egan, T.D. (2002). When both similarities and dissimilarities matter: Extending the concept of relational demography. *Human Relations, 55*, 899-929.

Wagner, D.G., & Berger, J. (1997). Gender and interpersonal task behaviors : Status expectation accounts. *Sociological Perspectives, 40*, 1-32.

Webster, M. Jr., & Hysom, S.J. (1998). Creating status characteristics. *American Sociological Review, 63,* 351-378.

Weiss, E. M., Kemmler, G., Deisenhammer, E. A., Fleischhacker, W. W., & Delazer, M. (2003). Sex differences in cognitive functions. *Personality and Individual Differences. 35*, 863-875.
Williams, C.L. (1992). The glass escalator: Hidden advantages for men in the "female" professions. *Social Problems, 39*, 253-267.

Williams, J. E., Daws, J. T., Best, D. L., Tilquin, C., Wesley, F., & Bjerke, T. (1979). Sex-trait stereotypes in France, Germany, and Norway. *Journal of Cross Cultural Psychology, 10,* 133-156.

Yoder, J.D. (2002). 2001 Division 35 presidential address: Context matters: Understanding tokenism processes and their impact on women's work. *Psychology of Women Quarterly*, *26*, 1-8.

Yoder, J.D., & Sinnett, L.M. (1985). Is it all in the numbers? A case study of tokenism. *Psychology of Women Quarterly, 9*, 413-418.

APPENDIX: INTERCORRELATIONS AMONG DEPENDENT VARIABLES

	Self-esteem	Perceived Performance	Perceived Conformity to the Gender Prototype
	1	2	3
1		.56**	.37**
2			.25**

** Correlation significant at the 0.01 level (2-tailed). N = 103

AUTHOR BIOGRAPHIES
Delphine Martinot received her Ph.D in Social Psychology from Clermont-Ferrand University in 1993, and is now a professor at this university. Her research focuses on the role of group membership and self-perceptions in educational settings. Email: delphine.martinot@univ-bpclermont.fr

Michel Désert received his Ph.D in Social Psychology from Louvain-La-Neuve Catholic University in 2000, and is now a senior lecturer at Clermont-Ferrand University. His research focuses on stereotype threat in educational settings. Email: michel.desert@univ-bpclermont.fr

Sandrine Redersdorff received her Ph.D in Social Psychology from Clermont-Ferrand University in 2002, and is now a senior lecturer at this university. Her research focuses on perceived discrimination. Email: delphine.martinot@univ-bpclermont.fr