

IMPACT OF UPWARD COMPARISONS WITH OUTGROUP MEMBERS ON SELF-ESTEEM IN AN ASYMMETRICAL INTERGROUP COMPARISON CONTEXT

Delphine MARTINOT and Sandrine REDERSDORFF
University of Clermont-Ferrand, France

Although upward comparison may threaten people's self-esteem, it has been argued that this is not the case if the comparison other is an outgroup member. In the latter case, people may protect their self-esteem by dismissing the comparison information involving outgroup members as not self-relevant. We suggest that this self-protective strategy may not work when the outgroup is being perceived as superior to the ingroup on the comparison dimension, so that upward comparison does lower people's self-esteem in an asymmetrical group situation. To test this hypothesis, participants were led to believe that they were inductive rather than deductive thinkers. After doing a test presumably designed to assess either their emotional intelligence or their logical intelligence, they were exposed to bogus information on the performance of another individual who was always described as a deductive thinker and who had performed either better (upward comparison) or worse (downward comparison) than the participants themselves. Supporting the hypothesis, inductive thinkers who had been confronted with the superior performance of a deductive thinker on the logical intelligence test (favorable to the latter) reported lower self-esteem than those confronted with the superior performance of a deductive thinker on the emotional task (unfavorable to the latter). In the former case, the unfavorable position of the ingroup in the asymmetrical comparison context could explain such a result.

The theory of social comparison holds that in the absence of objective information about themselves, people compare their own opinions and abilities with those of other people (Festinger, 1954). These social comparisons often give rise to asymmetries between the self and others. One may indeed compare oneself with someone who is better-off (upward social comparison) or with someone who is worse-off (downward comparison). In general, social comparison with others doing poorly is thought to generate positive feelings and contribute to self-esteem (Taylor, Buunk, & Aspinwall, 1990; Wills, 1981; Wood, Taylor, & Lichtman, 1985), whereas social comparison with others doing well is portrayed as having negative affective consequences (Morse & Gergen, 1970). However, the effect of self-other asym-

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Correspondence concerning this article should be addressed to Delphine Martinot, Laboratoire de Psychologie Sociale de la Cognition (LAPSCO), Université Blaise Pascal, 34 avenue Carnot, 673037 Clermont-Ferrand Cedex, France. E-mail: martinot@srvpsy.univ.bpclermont.fr

metries on self-esteem is not intrinsic to the direction of comparison. Research has demonstrated for instance that upward comparisons with superior others can raise (e.g., Brown, Novick, Lord, & Richards, 1992; Buunk, Collins, Taylor, Dakof, & Van Yperen, 1990; Tesser, 1988) or lower self-evaluation (e.g., Brickman & Bulman, 1977; Morse & Gergen, 1970; Wills, 1981). In the same way, downward comparisons with inferior others can also raise (e.g., Taylor et al., 1990; Wills, 1981; Wood et al., 1985) or lower self-evaluation (e.g., Ybema, Buunk, & Heesink, 1996). Although various factors have been identified as determinants of the effects on self-esteem of upward and downward comparisons in an interpersonal context (see Collins, 1996; 2000 for a review), however, the role of these factors in an intergroup comparison context has received little research attention and hence remains poorly understood. Therefore, the present study focused on the impact on self-esteem of social comparisons in an intergroup context.

A major study that is still being widely cited and that has been used to develop certain theoretical propositions concerning the impact of in-group and out-group comparisons on self-esteem is that of Major, Sciacchitano and Crocker (1993). These authors found that individuals exposed to upward comparisons with ingroup members reported lower self-esteem than those exposed to upward comparisons with outgroup members or to downward comparisons, whatever the target group. Major et al. (1993) concluded that people may dismiss upward comparison information involving outgroup members as not being self-relevant, thereby protecting their self-esteem. In the case of downward comparisons, they argued that a person who has performed better than others experiences a positive impact on self-esteem, regardless of the group membership of the comparison others, because he or she is likely to ignore or minimize differences between him- or herself and others (Brickman & Bulman, 1977; Major, Testa, & Bylsma, 1991).

An important point to emphasize with regard to the experiment of Major et al. (1993) is that they used a minimal group induction, which did not imply any asymmetry between the comparison groups. Participants were led to believe, on the basis of a bogus test, that they belonged to one of two groups, X-types or Z-types, and that the experiment was designed to investigate the relationship between personality type and "verbal-spatial ability". Since membership of the X-type or Z-type group did not refer to any ability that was even remotely relevant to the ability under study, no group asymmetry was being induced. In this intergroup context, upward ingroup comparisons lowered the participants self-esteem whereas upward outgroup comparisons did not. Major et al. (1993) stated that "if the better performance of others can be attributed to differences in group membership between the self and comparison others, the negative implications of such comparisons for self-esteem would be avoided" (p. 718). This argument is

based on classical research on social comparison processes which suggests that comparisons with similar others have more influence on self-evaluation than comparisons with dissimilar others (see Suls & Miller, 1977). Indeed, comparing oneself to someone who is considered to be very different simply carries very little pertinent information (e.g., Collins, 2000). Applying these notions to ingroup/outgroup comparisons, it can be argued that since outgroup members are more different from oneself than ingroup members, comparisons with outgroup members may lack relevance. As noted above, Major et al.'s (1993) results were nevertheless obtained in a context where the comparison groups occupied symmetrical positions. It is possible, therefore, that the impact of intergroup social comparisons on self-esteem depends on the relative position of the various groups on the dimension of comparison. The question is, more specifically, if the results of Major et al. (1993) concerning the impact of social comparisons on self-esteem in a symmetrical intergroup context may be replicated when the in- and out-groups occupy asymmetrical positions with respect to each other.

Quite relevant to this question is the observation that recent experiments have failed to replicate Major et al.'s (1993) results concerning the effects on people's self-esteem of social comparison with ingroup members (Blanton, Crocker, & Miller, 2000; Martinot, Redersdorff, Guimond, & Dif, 2002). These experiments mainly differed from Major et al.'s (1993) study in that a certain asymmetry was created between the comparison groups. Whereas Major et al. (1993) found that upward ingroup comparison led to lower levels of self-esteem than downward ingroup comparison, Blanton et al. (2000) and Martinot et al. (2002) found no difference between participants who had been exposed to upward comparisons with ingroup members and those who had been exposed to downward comparisons with ingroup members. Apparently, individuals receiving upward comparison information from ingroup members were able to protect their self-esteem by assimilating their self-evaluation to the good performance of their peers, provided there was asymmetry between the ingroup and outgroup which was unfavorable for their group (Blanton et al., 2000; Martinot et al., 2002). Conversely, when the ingroup occupied a better position than the outgroup, i.e., was perceived as the reference group in the comparison domain, then participants exposed to upward ingroup comparisons did not look for assimilation and reported lower self-esteem than those exposed to downward ingroup comparisons (Martinot et al., 2002). If the direction of the ingroup/outgroup asymmetry can reverse the effects on self-esteem of upward comparisons involving ingroup members, then it seems reasonable to suppose that the effect of upward comparisons with outgroup members may likewise depend on this asymmetry. The present study was designed to test this hypothesis and there-

fore focused on comparisons with outgroup members in an asymmetrical intergroup comparison context.

The Influence of Comparison Information on Self-Evaluation: The Role of Group Expertise

As previously noted, according to Major et al. (1993), comparisons with outgroup members may lack relevance in that outgroup members are more different from oneself than ingroup members. However, we suggest that the processing of comparative information largely depends on the asymmetry of the comparison groups. Thus, members of a non-expert group, even if they perceive themselves as different from the members of an expert group, should take into account comparisons with them because such comparisons are informative. As Fiske (1993) says, the powerless cannot display a total disregard for the powerful. Non-experts similarly have to pay attention to the experts as their future may depend on it. This view is in agreement with Festinger's (1954) assumption that comparisons will be characterized by a unidirectional drive upward, whereby people will seek comparisons with slightly superior others in order to obtain information on how to improve. Experts in a specific domain may indeed be regarded as superior others likely to provide useful information. On the contrary, members of a group perceived as non-expert in the same domain do not represent useful comparison targets to evaluate one's abilities and obtain information about oneself, even if they succeed highly.

Consistent with this argument, Mussweiler and Bodenhausen's (2002) research confirms that self-evaluations strongly depend on what information about others is available at the time of the evaluation. Brown et al. (1992) demonstrated that comparisons with outgroup members will only influence self-judgement if the group membership is informative with respect to the critical dimension. Thus, they showed that a woman's evaluation of her physical attractiveness was only influenced by exposure to another woman and not by exposure to a man. Since different standards of physical beauty exist for men and women, men are not generally seen as being more or less pretty than women and on this dimension, neither men nor women may be considered to be the reference group. However, when a group is perceived as expert in a specific domain and therefore corresponds to "The" comparison standard, comparison information from members of this group should be regarded as informative and taken into account, even if it is unfavorable for oneself. As an example, Caucasian Americans have a better reputation than African Americans in certain intellectual domains and in particular African American women are thought to have poorer mathematical abilities than

Caucasian American women (Blanton et al., 2000). Hence in the context of a comparison between the Black group and the White group, the latter should constitute the reference group with the expertise to achieve a mathematical task. Consistent with our hypothesis, the African American participants of Blanton et al.'s (2000) study seemed to take into account upward comparison information from expert group members in that they tended to have lower self-esteem following upward comparison with a White confederate than following downward comparison. Blanton et al. (2000) highlighted that their marginally significant finding "provides evidence that participants wanted to do well relative to the White confederate" (p. 526). Such an argument conforms with ours as it is difficult to believe that a participant who would like to do better than an outgroup member does not consider comparison with this person to be relevant. In the same vein, it is highly probable that women pay attention to comparison information from men on a stereotypically male task, i.e., a task where men represent the expert group, and then suffer when compared unfavorably. This would seem all the more likely in so far as several studies have shown that men are often regarded as "The" standard category and "The" norm against which women are compared (e.g., Eagly & Kite, 1987; Eagly & Mladinic, 1989; Hurtig & Pichevin, 1986). Indeed, Martinot et al. (2002) found that women who compared unfavorably with men on a stereotypically masculine task reported diminished self-esteem. In another experiment, psychology students who took an intelligence test and were then exposed to upward comparisons with students from prestigious scientific preparatory classes showed lowered levels of self-esteem. It is clear that the participants in this study did not consider the outgroup comparison information to lack relevance as it was related to a dimension on which the students from the scientific preparatory classes were likely to be superior.

To summarize, upward comparisons with outgroup members may be considered as informative when the outgroup is perceived as more expert than the ingroup in the comparison domain and hence if it occupies the favorable position in an asymmetrical relationship. Contrary to Major et al. (1993), therefore, we propose that upward comparisons with outgroup members may be detrimental to people's self-esteem. We assume that any discrepancy between these authors' findings and the ones predicted by our hypothesis would be due to the minimal group induction used in their study. As stated above, this induction did not imply any asymmetry between the comparison groups. Hence, it minimized the relevance of the outgroup. In contrast, we highlight the necessity of taking into account the relationship between the ingroup and the outgroup. We suggest that the effect of outgroup comparisons on how people evaluate themselves is strongly linked to the asymmetrical relationship that may exist between the groups under comparison.

Therefore, this relationship cannot be neglected when evaluating the impact of such comparisons on self-esteem.

The major hypothesis emerging from this analysis is that people belonging to a non-expert group in a particular domain and exposed to upward comparisons with expert outgroup members will not be able to protect their self-esteem, as they will process this information as relevant. Conversely, individuals belonging to an expert group in the same domain and exposed to upward comparisons with non-expert outgroup members should be able to protect their self-esteem, as they will not consider such information to be relevant. As a consequence, they should report the same level of self-esteem as individuals exposed to downward outgroup comparisons. Since people who have performed better than others (downward comparisons) ignore or minimize differences between themselves and others (Brickman & Bulman, 1977; Major et al., 1991; Redersdorff & Martinot, 2002), they feel good and do not experience a negative impact on self-esteem, irrespective of whether the others were in- or outgroup members (Major et al., 1993). Therefore, members of a non-expert group under upward comparison with expert outgroup members should report the lowest self-esteem, as compared to members of an expert group under upward comparison with non-expert outgroup members or individuals under downward comparison, whatever the expertise of the in- and out-groups.

Overview

This hypothesis was tested among female participants led to believe they were inductive thinkers (ingroup members) as compared to deductive thinkers (outgroup members). After performing an emotional or logical intelligence test, they were exposed to upward or downward comparisons with deductive thinkers. If an inductive and a deductive thinker perform a logical test, i.e., for which deductive thought is required, the former should consider comparison with the latter to be informative. Conversely, an inductive thinker will probably reject the self-relevance of such comparison information in a domain requiring inductive thought, i.e., an emotional test. In the case of downward outgroup comparisons, participants may be expected to regard these as informative because they are unlikely to take into account differences between themselves and others (Brickman & Bulman, 1977; Major et al., 1991; Redersdorff & Martinot, 2002). Consequently, we expected that participants (inductive thinkers) exposed to upward comparisons with deductive thinkers (outgroup members) on a logical test (favorable to the latter) would report lower self-esteem than participants exposed

to upward comparisons with deductive thinkers on an emotional test, or to downward comparisons on either test.

Method

Participants and Design

Fifty-eight female undergraduate students took part in the experiment and received experimental credit for their participation. Each participant was randomly assigned to a 2 (Task: Emotional or logical intelligence test) X 2 (Direction of comparison: Upward or downward) between-participant factorial design. Four reported suspicion at the time of debriefing and their data were discarded, leaving the data of 54 participants for final analysis.

Procedure

Manipulation of Group Membership

Participants received information through a monitor and could answer questions using a keyboard. After an introduction explaining the use of the computer during the experiment, the cover story was presented. It described the experiment as an investigation into various types of thought. Participants were told that people may be divided into two distinct groups, namely, inductive thinkers and deductive thinkers. In order to make participants' assignment to the inductive group more meaningful, they were asked to perform an association test (Doosje, Spears, & Koomen, 1995) consisting of two subtests. In the first subtest, participants were shown a key word and had to indicate which of the four other words presented they associated most with the key word. For example, one item read: Which word do you associate most with the key word "Cow"? Possible answers were: *Horse, Farmer, Grass* and *Milk*. This subtest comprised 12 items. The second was basically the same, but here the participants saw a key number. For instance, one item read: Which number do you associate most with the key number "12"? They could choose among *11, 6, 13* and *24*. This subtest contained 10 items. After the association test, participants were told that integrated software was installed on the computer allowing to determine their group membership (inductive or deductive thinkers). In fact, all participants were assigned to the inductive thinker group.

Manipulation of Group Asymmetry Through the Comparison Domain

Participants were then informed that the experiment was designed to investigate the relationship between inductive or deductive thought and emotional or logical intelligence. We chose the comparison domains of emotional and logical intelligence in order to induce an asymmetry between the inductive and deductive thinker groups. In a pre-test carried out during a teaching session, about 92 undergraduate psychology students who did not participate in the main experiment were asked to assess the domains of expertise of inductive and deductive thinkers. Half of them had to answer the following question: "*In your opinion, should deductive thinkers perform better on an emotional intelligence test than inductive thinkers?*" (from 1 –strongly disagree – to 7 – strongly agree). The other half had to answer the same question but for logical intelligence. One sample Student's *t* tests of the distribution about the theoretical mean (4) were performed on each of these two questions. Results showed that inductive thought was significantly associated with emotional intelligence ($M = 3.24$, $t(45) = -4.01$, $p < .0001$), while deductive thought was significantly associated with logical intelligence ($M = 5.07$, $t(45) = 5.46$, $p < .0001$). Thus, when performing an emotional intelligence test the participants (inductive thinkers) belonged to an ingroup for which the intergroup comparison context was favorable (expert position) given that they were generally superior to the outgroup (deductive thinkers). When performing a logical intelligence test, however, they belonged to an ingroup for which the intergroup comparison context was unfavorable (non-expert position).

Participants were randomly assigned to either one of the intelligence test conditions. Participants who took the emotional intelligence test were informed that the experiment was designed to explore the relationship between inductive or deductive thought and emotional intelligence. To ensure that emotional intelligence had a strong personal relevance, the experimenter noted that people high on emotional intelligence had a high capacity for situational analysis and personal relationship management and that they were highly sensitive to the needs of others, which were presented as the keys to success. Participants who took the logical intelligence test were informed that the experiment was designed to investigate the relationship between inductive or deductive thought and logical intelligence. To ensure that logical intelligence had a strong personal relevance, the experimenter noted that people high in logical intelligence had a high capacity for situational analysis, good management abilities and a high adaptability, which were presented as the keys to success.

Participants were then presented with the emotional intelligence test or the logical intelligence test. These two tests, based on the Raven matrix con-

sisting of logical geometric series, each comprised 28 items, about 17 of which were easy. However, for the emotional test, we replaced the 8 geometric figures of each item by 8 different well-identified emotional faces (Auxiette, 2002). Participants had to find the emotion required to complete the series (emotional test) or the geometric figure required to complete the series (logical test) and were told that if they did not answer after one minute, the next item would appear. At the end of the test, the monitor screen went black with a sentence indicating that the computer was scoring the test. Two minutes later, a new image appeared with their group membership and score for the test. All participants received the same score: 19. Participants were informed that this score corresponded to the number of correct answers relative to the total number of items (28).

Direction of Comparison

Participants were then asked to choose one of 7 individuals who had already taken part in the experiment to learn their score and their group membership. Each individual was identified by a number ranging from 1 to 7 only. Participants had to pick one, no other information being available to them concerning the persons behind the numbers. Whatever their choice, all participants in the downward comparison condition learned that the other was a deductive thinker (outgroup) and that she had scored 14 in the test. Those in the upward comparison condition learned that the other was a deductive thinker (outgroup) and that she had scored 24 in the test.

After seeing the score of their comparison other, all participants completed a questionnaire containing the dependent measures and manipulation checks. Participants were told that these measures would allow the experimenter to get to know them better.

Measures

State Self-Esteem

State self-esteem was measured using a French version of the State Self-Esteem Scale (Heatherton & Polivy, 1991). The SSES is a measure of short-lived changes in self-esteem that has been demonstrated to be sensitive to manipulations designed to temporarily alter self-esteem. The SSES contains subscales for performance, social and appearance self-esteem. The six items assessing appearance self-esteem were deemed irrelevant to our investigation and were not included. Participants rated how they felt "right now" on each of 7 social items (e.g., "I am worried about what other people think of

me", reverse scored) and 7 performance items (e.g., "I feel confident about my abilities"). Each item was rated on a 7-point scale, ranging from *not at all* (1) to *extremely* (7). Performance and social self-esteem were highly correlated ($r = .71, p < .001$) and an analysis on the 14 items yielded an acceptable level of reliability (Cronbach's $\alpha = .86$). Therefore average scores on the 14 items were computed, with higher scores indicating more positive state self-esteem.

Evaluation of the Comparison Information

Self-relevance of the comparison information. Participants had to answer the following question: "Did you learn something about yourself from the comparative information you received?" This question was rated on a 7-point scale, ranging from *nothing at all* (1) to *a great deal* (7).

Self-informative character of group membership. Participants next had to rate the extent to which they felt the group membership was informative for the task they performed by answering the following question: "On the dimension of emotional (or logical) intelligence, to what extent is each of these groups, deductive thinkers or inductive thinkers, informative to know your personal value on this dimension?" Each group was rated on a 7-point scale, ranging from *not at all informative* (1) to *extremely informative* (7).

Manipulation Checks

Finally, participants were asked to report their own group membership and the group membership of their comparison target. They also indicated whether the target's performance was inferior, equal or superior to their own. Participants were then fully debriefed and asked not to discuss the experiment with their fellow students. Four participants reported suspicion concerning the validity of the two subtests allegedly determining whether they were inductive or deductive thinkers. Their data were excluded from the analysis.

Results

The results presented for all dependent variables are based on 2 (Task) X 2 (Direction of Comparison) ANOVAs in a between-participants design.

State Self-Esteem

We hypothesized that participants (inductive thinkers) performing a logical intelligence task and exposed to upward comparisons with outgroup members (deductive thinkers) would consider these negative comparisons to be informative and therefore insufficiently protect their self-esteem. On the contrary, participants performing an emotional intelligence task and exposed to upward comparisons with outgroup members would be in a position to dismiss such negative comparisons as uninformative. Concerning downward comparisons, participants were expected to regard this positive information as self-relevant because they would not take into account the difference in group membership between themselves and their comparison target. Hence we predicted that participants exposed to upward comparisons on a logical intelligence task should report significantly lower self-esteem than participants in the other three conditions (upward comparison on an emotional intelligence task or downward comparison on either task).

An analysis of state self-esteem revealed a marginally significant main effect of the direction of comparison ($F(1, 50) = 3.48, p = .07$). Participants who received upward comparison information tended to report lower self-esteem ($M = 4.41, SD = .93$) than those exposed to downward comparisons ($M = 4.86, SD = .92$). However, this main effect was qualified by the predicted significant Task X Comparison interaction ($F(1, 50) = 5.16, p = .03$).

As can be seen in Table 1 and as expected, the lowest score of self-esteem was observed when participants (inductive thinkers) performing a logical

Table 1. *State Self-Esteem and Self-Relevance of Comparison Information According to Task and Upward or Downward Comparison with Outgroup Members*

| Conditions | N | Measures | | | |
|---------------------|----|-------------------|-----|--|------|
| | | State self-esteem | | Self-relevance of comparison information | |
| | | M | SD | M | SD |
| Downward comparison | | | | | |
| Logical test | 13 | 5.01a | .97 | 3.85 | 1.99 |
| Emotional test | 14 | 4.70a | .88 | 5.00 | .88 |
| Upward comparison | | | | | |
| Logical test | 14 | 4.01b | .96 | 4.00 | 1.88 |
| Emotional test | 13 | 4.80a | .72 | 3.92 | 2.22 |

Note: Ratings could range from 1 to 7, with higher scores reflecting greater self-esteem or self-relevance. Within a column, means without a common letter differ at $p = .004$.

intelligence test compared unfavorably with outgroup members (deductive thinkers). A planned comparison confirmed that participants exposed to upward comparisons with deductive thinkers on a logical intelligence task reported significantly lower self-esteem than participants in the other three conditions ($F(1, 50) = 9.02, p = .004$). Thus, the results supported our expectation that upward comparisons with members of a non-expert outgroup would have no more impact than downward comparisons and apparently be dismissed as uninformative, whereas upward comparisons with members of an expert outgroup would be taken into account and lead to lower scores of state self-esteem.

Evaluation of the Comparison Information

Self-Relevance of the Comparison Information

The assumption of Major et al. (1993) concerning the effects on self-esteem of upward comparisons with outgroup members and their suggestion that such comparison information would be dismissed as not self-relevant can be questioned. In their study, one had no way of knowing whether the comparison information from outgroup members was really regarded as not self-relevant. Hence in our experiment the participants were asked to rate the extent to which they esteemed the comparison information they received to be self-relevant. According to Major et al. (1993), participants exposed to upward comparisons with deductive thinkers (outgroup members) should dismiss this information and therefore rate it as less self-relevant than participants in downward comparison conditions. However, analysis of the ratings of the self-relevance of the comparison information revealed no significant effect (all $ps > .20, ns$). Except when they were exposed to downward comparisons with deductive thinkers on an emotional intelligence task, participants rated the information as neither really self-relevant nor really not self-relevant (see Table 1). A one-sample Student's tests of the distribution around the theoretical mean (4) confirmed that the comparison information was rated as truly self-relevant if it involved an emotional task and in the downward comparison condition only ($M = 5.00, t(14) = 4.27, p = .001$; all $ps > .78$ in the other three conditions).

Correlations between the scores of state self-esteem and the self-relevance ratings of the comparison information were nevertheless congruent with the hypothesis of Major et al. (1993). The assumed dismissal of upward comparison information from an outgroup member in order to protect self-esteem was supported by the significant negative correlations between self-relevance ratings and state self-esteem scores under upward comparison

conditions (see Table 2). As expected, the more a participant exposed to upward comparison with an outgroup member rated the comparison as uninformative, the more she protected her state self-esteem. Moreover, the correlations between self-esteem and self-relevance of the comparison information were clearly not significant when participants were exposed to downward comparison with a deductive thinker on an emotional task (see Table 2). Participants in this condition were the only ones to rate the comparison information as self-relevant (see preceding paragraph), suggesting that the self-enhancement goal was not related to that of self-evaluation. As Wood (1989) has proposed, social comparisons can be used for different purposes like self-evaluation, self-improvement or self-enhancement.

Self-Informative Character of Group Membership

We have highlighted that the symmetrical minimal group induction used by Major et al. (1993) may have minimized the importance of group membership in their study. In an asymmetrical intergroup comparison context, in contrast, the comparison other's group membership and hence her belonging to an inferior versus a superior outgroup cannot be neglected when evaluating the impact of outgroup comparisons on self-esteem.

The self-informative nature of the comparison other's group membership was analyzed by means of a 2 (Task: emotional or logical intelligence test) X 2 (Direction of comparison: upward or downward) X 2 (Target group: ingroup (inductive thinkers) or outgroup (deductive thinkers)) ANOVA. The first two variables were treated as between-participant variables while the last one was treated as a within-participant variable. The Task by Target group interaction was significant ($F(1, 50) = 12.80, p = .0008$). As expected, the performance of deductive thinkers was perceived as less self-informative for one's score on an emotional intelligence test ($M = 3.52, SD = 1.63$) than the performance of inductive thinkers ($M = 4.78, SD = 1.01; t(26) = -3.50, p = .001$). This result supported the idea that an inductive thinker would be in a position to minimize the self-evaluative impact of comparison information

Table 2. *Correlation Between State Self-Esteem and Self-Relevance of Comparison Information According to Task and Upward or Downward Comparison with Outgroup Members*

| Conditions | Downward comparison | Upward comparison |
|----------------|---------------------|-------------------|
| Logical test | .26 (- .02) | .47 (.15)† |
| Emotional test | .07 (- .08) | .65 (.37)* |

Note: Correlation coefficients are significant at $p = .01$ when followed by * and marginally significant ($p = .09$) when followed by †. Values in brackets are the adjusted R Square.

involving a deductive thinker's emotional intelligence. For the logical intelligence task, no significant difference was observed between the perceived informativeness of the scores of members of the two target groups (inductive versus deductive thinkers, $t(26) = 1.56, p = .12$). It seems, therefore, that participants (inductive thinkers) who had performed a logical intelligence test considered comparison with a deductive thinker to be as informative as comparison with an inductive thinker. Stated differently, they did not readily minimize its self-evaluative impact. Closer inspection of the relevant means suggested that information on the performance of deductive thinkers was even regarded as being somewhat more self-informative ($M = 4.52, SD = 1.40$) than information on the performance of inductive thinkers ($M = 3.93, SD = 1.47$), although the difference between the two groups did not reach significance.

The Direction of comparison by Target group interaction was also significant ($F(1, 50) = 5.57, p = .02$). Scores of inductive thinkers were perceived as being more self-informative in the downward ($M = 4.85, SD = 1.10$) than in the upward comparison condition ($M = 3.85, SD = 1.35; t(26) = 2.71, p = .009$). This may appear surprising in the light of the original formulation of social comparison theory (Festinger, 1954), which holds that comparisons should be characterized by a unidirectional drive upward. However, it is in line with the self-enhancing social comparison (Wills, 1991; Wood, 1989). The perceived self-informative nature of the scores of deductive thinkers was did not depend on the direction of the comparison ($t < 1, ns; M = 3.89, SD = 1.70$ for downward and $M = 4.15, SD = 1.49$ for upward comparison). This result is consistent with our suggestion that the impact on self-esteem of comparisons with outgroup members does not primarily depend on the direction of the comparison.

Discussion

The aim of the present experiment was to test the hypothesis that the consequences of upward comparisons with outgroup members for one's self-esteem do not only depend on differences in group membership between the self and the comparison other, as suggested by Major et al. (1993), but also on the asymmetry that may exist between the two groups in the domain of the comparison. Instead, we predicted that the effect of perceived self-other asymmetries on self-esteem in an intergroup context would depend on the area of expertise of the comparison groups. In the experiment, when the task to perform was a logical intelligence test, inductive thinkers were members of a non-expert group as compared to deductive thinkers, whereas the reverse was true when the task was an emotional intelligence test. On a task

related to logical intelligence, where they were members of a non-expert group, the participants could not neglect the informative nature of upward comparisons with members of an expert group (deductive thinkers), as they could do on a task related to emotional intelligence. Hence participants (inductive thinkers) exposed to upward comparisons with deductive thinkers for a logical intelligence test were predicted to report lower self-esteem than participants exposed to the other conditions (upward comparisons for an emotional intelligence test or downward comparisons for either test). As expected, the lowest state self-esteem score was observed when participants saw upward comparison information from a deductive thinker for a logical intelligence test.

Previous research concerned with self-protection from upward comparisons with outgroup members considered that the negative implications of such comparisons would be avoided by taking into account differences in group membership between the self and comparison others (Major et al., 1993). However, the present results revealed that members of a group with non-expert status (inductive thinkers performing a logical intelligence test) reported lower self-esteem when exposed to upward comparisons with members of an outgroup perceived as more expert (deductive thinkers). In an asymmetrical intergroup context, then, members of the "superior" group do not seem to suffer from upward comparison with outgroup members, whereas such a comparison does appear to have a negative impact on self-esteem among members of the group that holds a relatively unfavorable position on the dimension under study. However, the absence of a no comparison control condition in the present experiment prohibits further elaboration of this point as yet. Without such a baseline condition, firm conclusions about the direction of the comparison effects cannot be drawn (Wheeler, 2000). Thus, although we suggest that intergroup upward comparison may harm people's self-esteem when the comparison involves members of a more expert group, the observed effects may have resulted from an increase in self-esteem under downward comparison conditions and under upward comparison with members of a non-expert group. Future research should therefore include a no comparison control condition.

Although Major et al.'s (1993) findings could not be replicated when upward comparison occurred with an outgroup member belonging to a more expert group, their argument that dismissing upward comparison information may be self-protective was supported. The significant negative correlations observed between self-relevance ratings of the comparison information and state self-esteem scores under upward comparison conditions indicate that the more a participant exposed to upward comparison with an outgroup member rated this information as not self-relevant, the higher her state self-esteem. However, participants under upward comparison on a logical task

reported lower self-esteem than those under upward comparison on an emotional task, whereas the self-relevance ratings of the comparison information did not differ between these two conditions. We suggest that the perceived self-relevance of the comparison information is probably not the only variable involved in the effects observed under upward comparison conditions. Therefore, a greater insight in the factors to which participants attribute their performance should enable a better understanding of the results. When a deductive thinker obtains a higher score on an emotional intelligence test than an inductive thinker, for instance, the latter may use the non-expert status of the former group to attribute this superior performance to external and unstable factors such as luck. These attributions may in turn be self-protective. When a deductive thinker obtains a higher score on a logical intelligence test, the expert status of the deductive thinker may lead an inductive thinker to attribute his or her performance to internal and stable factors such as his or her strong ability. Consequently, the inductive thinker's self-esteem may be threatened (Midgley, Arunkumar, & Urdan, 1996). Additional measures related to attributions of performance levels may therefore be useful to improve our understanding of the effects of social comparisons on self-esteem in an asymmetrical intergroup context.

Concerning downward comparisons with outgroup members (deductive thinkers), the impact of such comparisons on the self-esteem of participants (inductive thinkers) did not seem to depend on the asymmetry between the in- and out-groups. Thus, the self-esteem reported by participants when their group was in a favorable position (emotional test) was not significantly different from that recorded when their group was in an unfavorable position (logical test). However, downward comparison did not appear to be used to the same ends in both cases. Downward comparison with a deductive thinker on a task on which the ingroup scored generally well (the emotional intelligence test) could be both self-enhancing and self-informative, without there necessarily being any link between the two roles. Consistent with this view, participants who were exposed to such a comparison were the only ones to rate the comparison information as self-relevant while the correlations between self-esteem scores and self-relevance ratings were not significant. In contrast, downward comparisons with deductive thinkers on a task unfavorable to the ingroup (the logical intelligence test) could only be self-enhancing. Self-esteem of participants did in fact seem to be protected under this condition, but they did not rate the comparison information as really self-relevant.

Implications

Recent research has suggested that group status may be a potential moderator of the tendency to adopt particular self-protective strategies against

upward comparisons in an intergroup context (Martinot et al., 2002; Redersdorff & Martinot, 2002). Our findings provide further evidence for the important role which group status can play in determining how comparison information may protect self-esteem. Although the self-protective properties of social comparisons have been well documented at the individual level, i.e., in an interpersonal context, there exists as yet only limited direct evidence that social comparison processes buffer self-esteem at the positional level (Doise, 1984), i.e., in an intergroup context. If we consider that a group with expert status in the comparison domain corresponds to an advantaged group, while a group with non-expert status corresponds to a stigmatized group, then on the basis of the present results, members of the stigmatized group exposed to upward comparisons with members of the advantaged group could suffer a detrimental impact on self-esteem. In relation to the previous hypothesis, holding that to protect their self-esteem members of the stigmatized group will dismiss upward comparisons with advantaged outgroup members as not self-relevant (Major et al., 1993), our results suggest that such dismissal should be positively linked to self-esteem but will probably be insufficiently implemented to be self-protective. Additional research investigating social comparisons between truly advantaged and stigmatized groups will obviously be necessary to test the relevance of this analysis. It is nevertheless important to note that research on the effects of segregation and integration sustains our reasoning. Rosenberg and Simmons (1972) found for example that Black school children in a segregated setting had higher self-esteem than those in an integrated setting, presumably because the former were more likely to compare themselves with similar (Black) others than with dissimilar and advantaged (White) others. In conclusion, since the effects of social comparisons on self-esteem in an intergroup context appear to depend on group asymmetries, we consider that group status must be taken into account before proposing implications for stigma or self-esteem. This aspect has unfortunately received insufficient attention in previous work, which focused mainly on self-other asymmetries in an interpersonal context.

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