Neuroticism and Social Comparison Orientation as Moderators of Affective Responses to Social Comparison at Work

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ABSTRACT  In a study among 72 nurses, the affective consequences of social comparison were examined and related to neuroticism (N) and to social comparison orientation (SCO). Participants were confronted with a bogus interview with an upward versus a downward comparison target. Positive affect and identification were higher, and negative affect was lower, in the upward than in the downward comparison condition. Independent of their SCO, the higher individuals were in N, the less they identified with the upward comparison target, the more they identified with the downward comparison target, and the less positive affect they showed following confrontation with the upward comparison target. In contrast, independent of their level of N, the higher individuals were in SCO, the more negative affect they showed following confrontation with the downward comparison target. The effects on negative affect stayed the same when controlling for positive affect, and the effects on positive affect stayed the same when controlling for negative affect. These effects were also obtained when perceived direction was used as a predictor instead of the experimentally manipulated direction. It is concluded that, although N and SCO are correlated, these variables seem to have independent and distinct effects upon the responses to social comparison information.

People are regularly confronted with individuals who are in some respect better off and with others who are in some respects worse off than they
are. People learn about such persons through television, they hear stories about them or meet them at work or in their private lives. How do people respond to confrontations with others who are doing better and worse than they are? This question plays a central role in current social comparison theory in which it is assumed that confrontations with comparable others who are better or worse off than oneself instigate comparison processes. Earlier research suggests that comparison induces predominantly contrast effects, with others worse off (downward comparison) generating positive feelings, such as relief (e.g., Diener & Fujita, 1997; Collins, 1996; Tennen & Affleck, 1997; Wills, 1991), and others better off (upward comparisons) generating negative affect, such as envy and frustration (Morse & Gergen, 1970; Salovey & Rodin, 1984). Recent studies suggest, however, that, under normal circumstances, exposure to descriptions of better-off others evokes in general a more positive and less negative mood than comparison with worse-off others (e.g., Aspinwall & Taylor, 1993; Pelham & Wachsmuth, 1995; Van der Zee, Buunk & Sanderman, 1998; Ybema & Buunk, 1995).

These last findings can be understood from the Identification-Contrast model (Buunk & Ybema, 1997). According to this model, when engaging in social comparison, individuals may not only contrast but also identify themselves with the comparison targets (i.e. they may see the other’s fate as their own actual or possible fate, recognize themselves in the other, and perceive the other as similar to themselves; Ybema & Buunk, 1995). When confronted with vivid comparison information about others who are doing worse, people may lose their initial good feelings about themselves, realizing that they may resemble the other, that it is possible for them to decline. In contrast, when individuals identify with an upward comparison target, they may experience happiness in realizing that they are actually or potentially similar to the comparison target. Indeed, a study by Ybema, Buunk, and Heesink (1996) among individuals who had recently lost their jobs, showed that both the positive affect in response to upward comparison and the negative affect in response to downward comparison were mediated by identification with the comparison target (see also: Buunk, 1995; Buunk, Collins, Taylor, Van Yperen, & Dakoff, 1990; Helgeson & Michelson, 1995; Pelham & Wachsmuth, 1995).

It is hypothesized here that individuals high in neuroticism (N) will respond less positively to confrontation with better-off others than individuals low in N. N is characterized by a tendency to experience negative, distressing emotions and to possess associated behavioral and cognitive
traits, including fearfulness, irritability, low self-esteem, social anxiety, poor inhibition of impulses and helplessness (Costa & McCrae, 1987). High N individuals tend to set extremely high goals for themselves and tend to underestimate their own performances (Eysenck, 1947), leading them to feel less confident in their own ability to deal with the situation and making them particularly sensitive to upward social comparisons (e.g., Gilbert & Allan, 1994; Van der Zee, Buunk & Sanderman, 1996; Van der Zee, Oldersma, Buunk, & Bos, 1998). Indirect support for the assumption that high N individuals will respond less positively to upward comparisons comes from research showing that such individuals are more responsive to negative information about themselves because it is consistent with their self-image (Reed & Derryberry, 1995) and have a better recall of negative information about themselves (e.g., Bradley, Mogg, Galbraith, & Perrett, 1993; Martin, Ward, & Clark, 1983).

Although some studies have examined the role of lower-level personality variables, in particular self-esteem, in moderating the affective responses to social comparison information (e.g., Aspinwall & Taylor, 1993; Buunk et al., 1990; Gibbons & Boney McCoy, 1991; Wheeler & Miyake, 1992), the only experimental study thus far that examined the role of N in moderating the affective responses to upward and downward social comparisons was conducted by Van der Zee, Buunk et al. (1998). In this study, cancer patients were confronted with a description of a fellow patient who was either doing better or worse than themselves. In general, individuals showed more positive affective reactions to the upward than to the downward comparison target. However, with increasing levels of N, individuals responded less positively to upward comparisons. Moreover, high N individuals identified more with the downward and less with the upward comparison target, and the less positive response to the upward comparison target among these individuals was due to a lower identification with this target. Of course, this study was confined to a very specific group (i.e. cancer patients) limiting the extent to which the findings generalize to other populations and other settings.

The present research examined the role of N in moderating the responses to social comparisons in a work setting. In addition, the role of individual differences in the inclination to compare oneself with others was investigated. A number of researchers have noted that individuals are often reluctant to admit that they actually do compare themselves with others. For example, in a study among cardiac patients (Helgeson
& Taylor, 1993), 40% indicated that they never compared themselves. These patients gave various reasons for this. For instance, they argued that all situations are unique, that everyone is different, that they were not interested in others’ conditions, that they did not find comparisons valuable or relevant, or that they believed that their own condition was better than that of others (which may be regarded as a social comparison in itself!). A common interpretation of such statements seems to be that it is socially undesirable to admit social comparison (e.g., Brickman & Bulman, 1977).

The fact that many individuals say they do not engage in social comparisons may, however, reflect individual differences in the tendency to engage in comparisons. Several researchers have previously theorized that people may differ in their disposition to compare themselves with others. For instance, Hemphill and Lehman (1991) mentioned “the need for researchers to include measures of social comparison that acknowledge the fact that people may not wish to compare with others to an equal extent” (p. 390). Recently, Gibbons and Buunk (1999) proposed the concept of social comparison orientation (SCO) to refer to the personality disposition of individuals who are strongly oriented to social comparison, particularly sensitive to their own standing relative to others, and interested in information about others’ thoughts and behaviors in similar circumstances. In a series of studies, Gibbons and Buunk demonstrated that SCO was related positively to self-awareness and N, and negatively to self-esteem. Moreover, SCO was more prevalent among individuals with a positive orientation towards others, as apparent from the substantial positive correlations between SCO, and interpersonal orientation and communal orientation. According to Gibbons and Buunk, these findings suggest that individuals high in SCO are characterized by a heightened uncertainty about themselves, accompanied by a relatively strong dependency upon other people for their self-evaluation. In a series of experiments, SCO was related to interest in the test scores of others. Those high in SCO were also more affected by social comparisons, and particularly by downward comparisons (see Buunk, Oldersma, & De Dreu, in press; Buunk, Ybema, Gibbons, & Ipenburg, 2001; Van der Zee, Oldersma et al., 1998).

Because SCO is related to N, it is theoretically important to disentangle the role of both constructs in examining the moderating effects of social comparison. To what extent is the moderating effect of SCO simply an effect of N? And, vice versa, can the role of N in moderating the effect
of upward comparison found by Van der Zee, Buunk et al. (1998) be explained by differences in SCO between high and low N individuals? In an initial test of these questions, Van der Zee, Oldersma et al. (1998) used a computerized program enabling patients to select information about fellow patients’ disease-related experiences. The results showed that, although SCO was related to N, N predicted negative affective reactions to the self-selected social comparisons above and beyond SCO.

The present study examined the responses of nurses to vivid upward versus downward social comparison information by using the experimental approach employed by Buunk et al. (2001), Ybema and Buunk (1995) and Van der Zee, Buunk et al. (1998). It was expected that participants would typically respond with more identification, more positive affect, and less negative affect to upward rather than downward comparisons. But we anticipated that these effects would be moderated by N, with high N individuals showing less positive responses to upward comparison, less identification with upward comparison targets, and more identification with downward comparison targets. Two other goals of the study were to determine if identification mediates the effect of direction of social comparison upon affect and the extent to which SCO enhances the effects of confrontation with a social comparison target. Based on preliminary evidence that SCO particularly moderates the consequences of downward comparisons (Buunk et al., in press, 2001), we anticipated that, whereas high N individuals would respond less positively to upward comparison, individuals high in SCO would respond more negatively to downward comparison.

**METHOD**

**Sample and Procedure**

A total of 159 nurses of the Thorax Surgery Department of the Academic Hospital of the University of Groningen in The Netherlands were approached, of whom 72 (13 males and 59 females) agreed to participate. The study was presented as a study on work stress. Participants were recruited by research assistants with the help of the head nurses and were randomly assigned to either the upward or the downward condition. The ages of the participants ranged from 24 to 55 years ($M = 32.9; SD = 7$).
Questionnaire

All subjects received a questionnaire that contained some measures for work stress that are not considered further, the measures for SCO and N, and the experimental manipulation.

Social comparison orientation. SCO was measured by the Iowa-Netherlands Comparison Orientation Measure (INCOM; Gibbons & Buunk, 1999). Previous research has provided evidence of the construct, discriminant and concurrent validity, and the test-retest reliability of the scale (.72 over 8 months). The scale does not correlate with social desirability. Sample items are “I often compare myself with others with respect to what I have achieved in life,” “If I want to find out how well I have done something, I compare what I have done with how others have done,” and “I never consider my situation in life relative to that of other people.” The 11 items are measured using 5-point scales, ranging from strongly disagree (1) to strongly agree (5). In the current sample, scores ranged from: 26 to 53, $M = 35.54$, $SD = 5.54$, coefficient $\alpha = .67$.

Neuroticism. N was measured with the Dutch version of the neuroticism scale of Eysenk's Personality Questionnaire (Eysenck & Eysenck, 1991). Participants had to respond with “yes” or “no” to a personality-describing statement. For example: “Does your mood often go up and down?” In the current sample, scores ranged from 1 to 5, $M = 3.53$, $SD = 2.89$, coefficient $\alpha = .79$. N correlated $r = .26$, $p < .05$, with SCO, which is in line with previous findings (Gibbons & Buunk, 1999).

After completing these measures of SCO and N, participants were presented with a fictitious interview fragment with another nurse, who supposedly had participated in an earlier study, and told about his or her work. Nothing was said about the gender of the interviewee. The fragments were based on 10 interviews with nurses from the same department as the sample, in which they were asked to mention as many characteristics as they could of an imaginary nurse who was excellent in his or her work and of an imaginary nurse who was just mediocre in his or her work. The upward and downward comparison fragments contained information on precisely the same dimensions. In the upward comparison interview ($N = 38$), the nurse had a good relationship with his or her colleagues and physicians, had a good overview of issues in the department, was knowledgeable about various diseases, often received positive feedback during performance evaluations, informed patients well, and was flexible and capable of working under stress. In the downward comparison condition ($N = 34$), the nurse had a problematic relationship with his or her colleagues and physicians, had a rather poor overview of issues in the department, was not very knowledgeable about various diseases, often received negative feedback during performance evaluations, had problems with adequately informing patients, and was not very
flexible and capable of working under stress. Subjects in the two conditions did not differ in gender, age, educational level, N, or SCO.

Affect. Directly after reading the social comparison information, participants were given a list of 38 adjectives that described possible feelings. The adjectives were in part a translation of the MAACL (Zuckerman, 1960; Zuckerman, Lubin, Vogel, & Valerius, 1964), and were used in previous research using the same paradigm (e.g., Van der Zee, Buunk et al., 1998; Ybema & Buunk, 1995). Of these adjectives, 19 concerned positive affect (e.g., grateful, hopeful, reassured, self-confident), and 19 concerned negative affect (e.g., angry, confused, depressed, discouraged). The seven remaining adjectives (e.g., surprised, understanding) were either not definitely positive or negative, or were too specific for upward or downward comparison, and were excluded. Subjects were asked to check all of the adjectives that described feelings they had at that moment or had felt while reading the social comparison information. The measure of positive affect was the number of positive adjectives checked (range: 0 to 13, $M = 2.71$, $SD = 3.41$, coefficient $\alpha = .85$); negative affect was indicated by the number of negative adjectives checked (range: 0 to 11, $M = 2.43$, $SD = 3.28$, coefficient $\alpha = .86$). Positive and negative affect had a moderately negative correlation ($r = –.36$, $p < .001$). N correlated with positive as well as with negative affect, $r = –.36$, $p < .001$, and $r = .27$, $p < .05$, respectively. SCO was not correlated with positive affect and was only marginally correlated with negative affect, $r = –.06$, ns, and $r = .16$, $p = .10$, respectively.

Identification. Identification was measured with a four-item scale (see Ybema & Buunk, 1995), including the items “Can you recognize yourself in the person in the interview?”; “Do you think you resemble this person?”; “Do you think you function in the same way as this person?”; and “Do you like this person.” These items were scored on 5-point scales, ranging from 1 (not at all) to 5 (very strongly) (range: 4 to 17, $M = 9.15$, $SD = 3.62$, coefficient $\alpha = .86$). The coefficient $\alpha = .90$. N and SCO did not correlate with identification, $rs < .13$, ns.

Manipulation checks. After assessing affect, the extent to which the social comparison target was perceived as upward or downward was measured by asking participants to compare themselves with the target on the following aspects mentioned in the interview fragments: functioning at work, overview of what was going on in the department, knowledge of diseases, and resistance to stress. These items were scored on 5-point scales, ranging from 1 (much worse
than me) to 5 (much better than me), with a midpoint of 3 (as good as me). The items were averaged to form a reliable scale, coefficient $\alpha = .97$.

**RESULTS**

**Manipulation Checks**

The upward target was perceived as functioning much better than the downward target, $F(1,70) = 321.98, p < .001$. A $t$ test was used to examine whether the average scores on the manipulation checks diverged from the scale midpoint. The position of the target was rated as better than the self in the upward comparison condition ($M = 3.46$, $t(37) = 6.57$, $p < .001$) and worse than the self in the downward comparison condition ($M = 1.21$, $t(34) = 33.77$, $p < .001$), indicating that the manipulation was successful. However, the fact that the relative positions of the self and target were further apart in the downward comparison than in upward comparison conditions suggests that subjects felt more similar to the upward than the downward target.

**Effects of Comparison Direction**

In line with the predictions, an ANOVA with positive affect as dependent variable and direction as a factor revealed a significant effect of comparison direction, $F(1, 70) = 4.56, p < .05$. Upward comparison was accompanied by more positive affect ($M = 3.50$ vs. $M = 1.82$) than downward comparison. Complementing this result, downward comparison was accompanied by more negative affect than upward comparison, $F(1, 70) = 27.84, p < .001, (M = 4.27$ vs. $M = 79)$. In addition, comparison direction had a significant effect upon identification, $F(1, 70) = 667.96, p < .001$, with more identification occurring after upward comparison ($M = 2.78$) than after downward comparisons ($M = 1.74$).

**Effects of Neuroticism and Social Comparison Orientation**

Next, an initial series of hierarchical regression analyses (Cohen & Cohen, 1983) were carried out with positive affect, negative affect, and identification as dependent variables, and $N$, SCO, comparison direction (first step), the two-way interactions (second step), and the three-way interaction as predictors. Except for the direction of comparison
(downward = –1, upward = 1, see Aiken & West, 1991), all variables were standardized. None of these analyses produced either an interaction between N and SCO or a three-way interaction between N, SCO, and direction of comparison. Moreover, in none of the analyses were the interaction between N and direction, and the interaction between SCO and direction, significant when entered simultaneously. Therefore, to assess the independent effects of SCO and N, we present here the results of a series of regression analyses, in which the moderating roles of both N and SCO were analyzed separately, while controlling only for the main effect of the other. In the first step, either N or SCO was entered as a control variable; in the second step, the main effects of direction of comparison and either SCO or N were entered; and in the third step the two-way interaction between direction and either SCO or N was entered.

Positive and negative affect were correlated, although it was assumed that these were separate constructs. Therefore, an additional series of regression analyses were conducted with positive and negative affect as dependent variables, controlling for the other affect measure by also entering it in the first step. Furthermore, because the manipulation check revealed that, for a number of participants, the targets (especially the upward target) were not perceived as intended, for all dependent variables, another series of regressions were executed with perceived comparison direction (i.e., the manipulation check) instead of the experimentally manipulated direction as independent variable.

Positive affect. N had a negative effect upon positive affect, $\beta = –.33$, $p < .01$, and the predicted significant interaction with comparison direction, $\beta = –.27$, $p < .05$. As Figure 1 shows, following upward comparison, the higher the nurses scored on N, the less positive affect they experienced, $\beta = –.53$, $p < .001$, whereas following downward comparisons N was unrelated to positive affect, $\beta = –.07$, ns. There was no main effect of SCO, and no significant interaction between SCO and comparison direction (all $\beta$s < .02, ns). These results stayed the same when controlling for negative affect, for N, $\beta = –.28$, $p < .05$, and for the interaction between N and comparison direction, $\beta = –.28$, $p < .05$ (for SCO, all $\beta$s < .09, ns). Furthermore, similar results were obtained with perceived comparison direction as predictor, for N, $\beta = –.34$, $p < .01$, and for the interaction between N and comparison direction, $\beta = –.21$, $p = .07$ (for SCO, all $\beta$s < .08, ns).
Negative affect. N had a marginally significant effect upon negative affect ($\beta = .17, p = .09$), but there was no interaction between N and comparison direction ($\beta = -.03, ns$). SCO had no main effect either ($\beta = .16, p = .15$). However, SCO had the predicted significant interaction with comparison direction, $\beta = -.20, p < .05$. Additional analyses revealed that, as Figure 2 shows, the higher nurses scored on SCO, the more negative affect they experienced following downward comparison, $\beta = .32, p < .05$ (one-tailed), whereas for upward comparison, SCO was unrelated to negative affect, $\beta = .14, p = .40$. These results stayed largely the same when controlling for positive affect, for SCO, $\beta = .28, p < .05$, and for the interaction between SCO and comparison direction, $\beta = -.20, p < .05$ (for N, all $\beta$s < .11, ns). Furthermore, partially similar results were obtained with perceived comparison direction as predictor, for SCO, $\beta = .19, p = .07$, for the interaction between SCO and comparison direction, $\beta = -.18, p = .07$, for N, $\beta = .22, p < .05$, and for the interaction between N and comparison direction, $\beta = -.06, ns$. 

**Figure 1**

Neuroticism as related to positive affect after social comparison.
Identification. Whereas low N individuals were assumed to engage primarily in upward identification, high N individuals were expected to identify themselves downwardly. There were no main effects of SCO and N upon identification, nor was there an interaction between SCO and comparison direction (all $\beta$s < .15, ns). However, the predicted interaction between N and direction of comparison on identification was obtained ($\beta = -0.35; p < 0.001$). Figure 3 shows that, for downward comparison, N was positively related to identification ($\beta = 0.43; p < 0.05$), whereas, for upward comparison, N was negatively related to identification ($\beta = -0.38; p < 0.05$). Furthermore, similar results were obtained with perceived comparison direction as predictor, for N, $\beta = -0.09$, ns, for the interaction between N and perceived comparison direction, $\beta = -0.22$, $p < 0.05$. For SCO, $\beta = -0.19$, $p = 0.06$, for the interaction between SCO and perceived comparison direction, $\beta = -0.03$, ns.

**Figure 2**
Social comparison orientation as related to negative affect after social comparison.
We attempted to examine whether identification mediated the effects of SCO and N upon positive and negative affect. Because, in the downward condition, N did not correlate with positive or negative affect, a mediational analysis could not be conducted. In the upward condition, the conditions for a mediational analysis were met for positive affect (Baron & Kenny, 1986). N correlated with identification and with both types of affect, whereas identification correlated only with positive affect. Little evidence for a mediational role of identification was found. As Figure 4 shows, when identification was first entered in the regression, N still had a direct effect upon positive affect. No mediational analyses related to SCO could be conducted because, in the upward condition, SCO did not correlate with positive or negative affect, and, in the downward condition, SCO did not correlate with identification.

**Figure 3**
Neuroticism as related to identification with social comparison targets.

**Mediational Analyses**

We attempted to examine whether identification mediated the effects of SCO and N upon positive and negative affect. Because, in the downward condition, N did not correlate with positive or negative affect, a mediational analysis could not be conducted. In the upward condition, the conditions for a mediational analysis were met for positive affect (Baron & Kenny, 1986). N correlated with identification and with both types of affect, whereas identification correlated only with positive affect. Little evidence for a mediational role of identification was found. As Figure 4 shows, when identification was first entered in the regression, N still had a direct effect upon positive affect. No mediational analyses related to SCO could be conducted because, in the upward condition, SCO did not correlate with positive or negative affect, and, in the downward condition, SCO did not correlate with identification.
DISCUSSION

In the present study among nurses, the responses to upward versus downward comparison information were examined, and, in particular, the way in which these responses were moderated by N and SCO. Overall, the findings suggest that positive affect was higher, and negative affect was lower, after confrontation with a better-functioning comparison target than after confrontation with a worse-functioning comparison target. Moreover, participants identified more with the better- as opposed to the worse-functioning target. These findings are in line with a number of studies that employed a similar paradigm as the present research and that were conducted in a variety of samples, including disabled individuals (Ybema & Buunk, 1995), nurses (Buunk et al., 2001), cancer patients (Van der Zee, Buunk et al., 1998), students (Aspinwall & Taylor, 1993), and unemployed individuals (Ybema et al., 1996). In addition, because not all participants accepted that the supposed better-off target was indeed better functioning than they were, it is important to note that targets who were perceived as better or worse off showed effects similar to targets who were intended to be better or worse off. Taken together, the present research underlines the point that social comparison may induce not only contrast effects but also assimilation effects and suggests that the positive effects of upward comparison, and the negative effects of downward comparison, may deserve more attention (cf. Collins, 1996; Diener & Fujita, 1997; Suls & Wheeler, 2000).

Upward targets were not perceived by all individuals as more positive and less negative than downward targets. To begin with, the present research replicated in a work setting the findings by Van der Zee, Buunk et al. (1998) obtained among cancer patients on the moderating role of N. As in that study, the present study showed that, with increasing levels of N, individuals responded with less positive mood to upward

![Figure 4](image-url)

**Figure 4**
Neuroticism, identification, and positive affect after upward comparison.
comparisons, identified less with the upward comparison target, and identified more with the downward comparison target. Moreover, these effects were retained when using perceived instead of manipulated direction as independent variable. The fact that, in work settings, N seems to moderate the responses to social comparison in precisely the same way as among cancer patients suggests that the findings by Van der Zee et al. are not restricted to a particular population but have a wider generalizability. Moreover, the present findings are in line with studies that have shown that, with lower levels of mental health, individuals tend to respond less positively to upward comparisons, and tend to identify more with worse-off, and less with better-off, others. For instance, individuals with low self-esteem tend to respond with more negative affect to upward comparisons (Wheeler, 2000); disabled individuals who experience relatively little control over their situations report relatively less positive affect and identification in response to upward comparisons (Ybema & Buunk, 1995); nurses respond less positively to upward comparisons, as they are higher in burnout (Buunk et al., 2001); and, unlike happy individuals, unhappy individuals are bothered by being outperformed by a peer (Lyubomirsky & Ross, 1997).

One might argue that, because N is associated with negative affect, the less positive response to upward comparison among high N individuals may simply reflect the negative mood prevalent among such individuals. However, this possibility seems quite unlikely because the effect was retained when controlling for the level of negative affect. Moreover, we did not find a less positive response after downward comparison with increasing levels of N, suggesting that a less favorable interpretation of upward comparison among neurotic individuals is accompanied with a reduced level of positive affect after such comparisons. That the findings for positive affect were different than those for negative affect is consistent with the assumption of Costa and McCrae (1980) that positive and negative affect are related to different groups of traits. Indeed, a single combined measure of positive and negative affect did not produce any effects of the predictors. Nevertheless, the finding on the moderating role of N must be viewed with caution for two reasons. First, although this was predicted, N moderated only one out of four potential effects (i.e., not the effect of upward comparison upon negative affect or the effects of downward comparison upon positive and negative affect). Second, because the design did not include a control group, there is no baseline against which to evaluate the effects. For example, it is theoretically
possible that those high in N were very low in positive mood before the manipulation, and that upward comparison (and downward comparison as well) increased positive mood more among those high in N than among those low in N. Nevertheless, it still is the case (see Figure 1) that among those low in N, but not among those high in N, positive affect was higher in the upward comparison condition than in the downward comparison condition. This suggests that high N individuals respond indeed differently to upward as opposed to downward comparisons than low N individuals do.

The present findings further suggest that individual differences in SCO, as assessed by the scale developed by Gibbons and Buunk (1999) are relevant for understanding the affective responses following social comparison. First, because the role of N in moderating the effect of upward comparison was also found when controlling for SCO, the role of N cannot be explained by differences in SCO between individuals high and low in N (cf. Van der Zee, Oldersma et al., 1998). Second, SCO seems to play a specific role in moderating the effects of social comparison that is independent and different from that of N. In line with the findings by Buunk et al. (2001), those high in SCO seem to be characterized by a tendency to experience negative affect after downward comparison. Yet, the absence of a control group and the fact that, for SCO, only one of the four possible moderating effects was significant indicate that caution is required when interpreting this particular finding.

These caveats notwithstanding, the present data seem to suggest that individuals with a strong inclination to compare themselves with others tend to respond relatively more negatively to downward comparison (see also Buunk et al., 2001; Gibbons & Buunk, 1999; Gibbons & Gerrard, 1997). Among those high in SCO, the difference in negative affect following downward as opposed to upward comparisons was larger than among those low in SCO. A possible explanation for this is that those high in SCO view the situation of the worse-off other as a potential future for themselves. In general, the moderating role of SCO suggests that negative feelings after confrontation with a downward target may indeed be the result of a social comparison process (cf. Taylor & Lobel, 1989). However, the nature of the negative affect in this situation is not fully clear at present, and the cognitive processes that may underlie negative affect following downward comparison clearly need to be examined in future research.
To conclude, while previous research on the role of individual difference variables in moderating the affective responses to social comparison information has, in particular, focussed upon self-esteem (e.g., Aspinwall & Taylor, 1993; Buunk et al., 1990; Gibbons & Boney McCoy, 1991; Wheeler & Miyake, 1992) and depression (e.g. Ahrens & Alloy, 1997; Buunk & Brenninkmeyer, 2000), the present research suggests a potentially important and distinct role of two other individual difference variables (i.e., N and SCO). By doing so, the present findings may provide a challenge to future research on social comparison. Such research would have to examine more closely if and why those high in N indeed respond less positively, particularly to upward comparisons, and if and why those high in SCO indeed respond more negatively, particularly to downward comparisons. Although the present study leaves a number of issues open for future research, it adds to a growing literature suggesting that the determinants of how people respond to social comparisons may not only rest in features of the comparison context, but that individual difference variables may have an important influence on the way individuals respond to social comparison information.

REFERENCES
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