Perceived Intragroup Variability as a Function of Group Status and Identification

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Judgments of intragroup variability were examined as a function of relative group status and identification with the group. In the first study ($n = 131$), psychology students received false feedback that their group was more *or* less intelligent than a comparable outgroup (business students) in order to manipulate relative ingroup status. Subjects were divided into high and low identifiers on the basis of their scores on an ingroup identification measure. As well as rating both groups on a series of comparative dimensions, subjects rated the similarities within their group. Although there was no difference in similarity ratings between high and low identifiers when ingroup status was high, low status subjects who identified weakly with their group rated within-group similarity as significantly less than high identifiers. In the second study ($n = 101$) both status and group identification were manipulated experimentally. Subjects were categorized as belonging to one of two groups, ostensibly on the basis of their problem solving style, and they received false feedback on a subsequent task indicating that their group had performed better *or* worse than the other group on

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a series of personnel decision problems. Group identification was manipulated by means of false feedback reinforced by a "bogus pipeline" procedure. Ratings of ingroup (and outgroup) variablility as measured by the perceived range of group scores on various positive dimensions, replicated the interaction obtained the first study. In the high status condition, ingroup identification did not affect the perceived range of group scores whereas under low group status, subjects in the low identification condition perceived greater intragroup variation than did subjects in the high identification condition. The differential perception and use of variability judgments by high and low group identifiers in the face of a threatened group image is discussed in terms of social identity principles. © 1995 Academic Press, Inc.

INTRODUCTION

The present research examines how perceived group variability is affected by the relative status of one's ingroup compared to a relevant outgroup and as a function of the degree of identification with the ingroup. Data are presented from two studies to show how perceptions of not only intergroup differences but also perceived intragroup homogeneity or heterogeneity can differ as a result of degree of ingroup identification, particularly for individuals belonging to low status groups. We argue that judgments of group variability, in combination with perceived intergroup differences, can reflect and be used to address social identity concerns when group identity is threatened.

Although examples of intergroup differentiation and outgroup discrimination are not hard to find in real-life groups, perhaps a more surprising feature of actual intergroup relations is the subtlety that group-favoring strategies may take. In fact there is considerable evidence that groups do not even always positively differentiate themselves from outgroups—at least not on all possible dimensions (e.g., Hewstone, Jaspars, & Lalljee, 1982; Van Knippenberg, 1984; Mummendey & Schreiber, 1983; Spears & Manstead, 1989). One reason for this is that direct discrimination is not the only way to positively differentiate one's group as is the case in the minimal group studies. Moreover, unlike minimal groups, people in natural social contexts do not always have a free hand to perceive as they would like. Rather, natural groups are often constrained by the consensual "social reality" of the status hierarchy and related differences between them.[1] Whereas high status groups may not need to exaggerate their (ascribed) superiority to gain a positive social identity, social comparisons on status-relevant dimensions may be particularly threatening for members of low status groups, and they may therefore be especially motivated to employ identity protecting or enhancing strategies. For example,

[1] The "social reality" of status differences is intended to indicate that members of both groups accept (to at least some degree) that one group is superior to the other on a relevant attribute or dimension and that this constrains judgment. These differences may in fact be unfounded or "ideological" in the sense of being a product of institutional inequalities or due to the power of the one group or a third party (such as the experimenter in the present case) to define the intergroup relation as such. This is not meant to imply any real or essential group differences in an objective sense, merely to denote the fact that the differences are more or less accepted as real by the groups involved.

Crocker and Luhtanen (1990) showed that group members high in collective self-esteem showed enhanced (trait-based) ingroup evaluations after negative feedback and Mullen, Brown, and Smith (1992) provide some meta-analytic evidence that low status groups can show even more ingroup bias than high status groups. However, once again it is also difficult, almost by definition, for low status groups plausibly to claim superiority on central status defining dimensions, especially when these status differences are consensual, stable and secure (Tajfel & Turner, 1986). For this reason, combined with the threat to identity, we would predict that members of low status groups are especially likely to adopt indirect identity management strategies[2] as well as or instead of displaying explicit ingroup bias (e.g., Van Knippenberg & Ellemers, 1990; Sachdev & Bourhis, 1987).

Social identity theorists have proposed a number of strategies for addressing negative social comparisons and have specified the likely conditions when these strategies will be used (Tajfel & Turner, 1986). For example, the person might try to leave the group and move into a higher status group ("social mobility"), or if this is impossible, to engage in intergroup action to change the status quo ("social competition"). Where these strategies are difficult, costly or prevented, people can employ various "social creativity" strategies to improve their group's standing. These include changing the dimension of comparison for a more favorable one, reevaluating the unfavorable group characteristic, or choosing another lower status group with which to compare one's own (Tajfel & Turner 1986; Van Knippenberg, 1989). Once again, compared to members of minimal groups, people in natural groups are also able to define the appropriate dimensions of comparison and their relative importance, providing some scope for identity protection (e.g., Ellemers, van Rijswijk, Roefs, & Simons, 1993; Tajfel & Turner, 1986; Oakes, Haslam, & Turner, 1994; Spears & Manstead, 1989; Van Knippenberg & Ellemers, 1990). The present paper is concerned with the closely related cognitive, motivational and strategic processes that influence group perceptions in the context of evaluative social comparisons.

Although the vast majority of studies of group perception and social stereotyping have focused on intergroup differentiation, employing mean ratings of ingroup and outgroup (or measures of "central tendency"), recent research has increasingly begun to consider the issue of perceived group

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[2] We use the term "identity management strategy" throughout this paper to denote a judgmental strategy that can be interpreted as enhancing or protecting the personal or social identity of the individual in some way (e.g., ingroup bias or emphasizing the importance of certain comparative dimensions over others, etc.). Although strategies can be regarded in terms of their directness or indirectness (ingroup bias would be relatively direct, whereas emphasizing the importance of ingroup favoring dimensions is somewhat less direct), we make no assumptions concerning the degree of conscious awareness and control of such strategies. It is entirely possible then that people who adopt such strategies are not aware of using them and do not consider themselves as being biased. This issue of awareness and control, though interesting, is not central to the current research (but see Greenwald & Banaji, 1995).

variability both in terms of the measurement and conceptualization of social stereotypes (e.g., Park, Judd, & Ryan, 1991). Research that has addressed the issue of preceived variability has concentrated on the preceived of the outgroup compared to the ingroup, and has typically found evidence for a relative outgroup homogeneity effect (see e.g., Park & Rothbart, 1982; Park et al., 1991). Much of this literature has concentrated on establishing the validity of this effect and determining the cognitive and motivational mechanisms underlying it (e.g., Linville, Salovey, & Fischer, 1986; Park et al., 1991; Quattrone, 1986). Recently, however, social identity theorists have challenged the generality of this effect (Simon and Brown, 1987; Simon, 1992) and have even questioned its validity (Haslam, Oakes, Turner, & McGarty, in press). For example, in a line of research Simon has argued that under appropriate conditions, people exhibit an *ingroup* homogeneity effect in their variability judgments, especially on positive stereotypic group attributes (Simon, 1992). In contrast to the negative association of the outgroup homogeneity, this suggests that perceptions of ingroup homogeneity can have a positive function. Other research suggests that the perceived homogeneity and heterogeneity of ingroups and outgroups is highly context sensitive, and varies depending on whether an intra- or intergroup comparative context is salient (Haslam et al., in press). In sum, research by social identity and self-categorization theorists suggests that judgments of variability may vary according to dimension and comparative context, and it has begun to question not only the generality of the previously accepted notion that outgroups are necessarily perceived as more homogeneous than ingroups, but also the assumption that group homogeneity is negative per se. Our own research does not attempt to address the conditions underlying ingroup versus outgroup homogeneity directly. However, we are concerned with whether and how perceived variability of the ingroup can differ as a function of social identity concerns, triggered by the degree of identification with the group and whether the comparative context is favorable or unfavorable for the ingroup. It is possible to distinguish several alternatives open to group members when perceiving group variability: They can perceive their group (and/or the outgroup) as relatively heterogeneous, or they can perceive their group (and/or the outgroup) as relatively homogeneous. We shall consider these possibilities in turn, together with reasons why each might be favored or perceived.

By way of example, consider the rivalry between two neighboring colleges, one with a higher status or prestige than the other, where the typical students differ from each other on dimensions relating to this status gap (e.g., in terms of entry requirements or social standing). Students from the lower status institution, for whom the social comparison is threating, may tend to stress the heterogeneity of the students in their own institution, emphasizing the overlap with students of the other institution on status-relevant dimensions, thereby undermining the significance of these status differentials. This pattern was confirmed in some of our own previous laboratory research (Doosje, Spears,

& Koomen, in press). We found that people tended to emphasize the hetero-geneity within both the ingroup *and* the outgroup when their group was portrayed in negative terms compared to the outgroup. This "heterogeneity" strategy can be regarded as having similar identity protecting functions as "disidentification" with the group. Another closely related phenomenon is the so-called "black sheep effect" (Marques, Yzerbyt, & Leyens, 1988; Marques & Paez, 1994), namely the tendency to downgrade ingroup members who do not live up to ingroup standards and judge them even more harshly than equivalent outgroup members. This perception of heterogeneity would simi-larly allow people to dissociate themselves from negative ingroup members, if not from the very central tendency of their group. In sum, emphasizing ingroup heterogeneity in the face of low group status would seem to have a clear function of protecting group members by diluting unfavorable inter-group differences, and allowing them to dissociate themselves from the negative group image. Thus for low status groups, intragroup differentiation can be seen as an indirect or subtle identity management strategy to be contrasted with the more straightforward strategy of positive intergroup differentiation or ingroup bias.

The question then concerns those conditions that increase or decrease perceived heterogeneity in the face of negative social comparisons. One possible feature of the earlier research by Doosje et al. (in press) that might cast some doubt on the reliability of this generalization is that it employed relatively "minimal" laboratory groups. It seems quite possible that people are likely to have very little commitment to, or identification with an experimental group to which they have just been assigned. Under these conditions, it might be easy to "dilute" the group distribution and dissociate oneself from the group in the process. However, it is likely that people who experience stronger involvement with their group may perceive matters differently and use differ-ent strategies to address a negative social identity. Previous research seems to suggest that people who identify strongly with their group may prefer to deal with low group status collectively, whereas people who experience less group involvement are more inclined to use individual strategies to cope with identity threat (Ellemers, 1993). Accentuating intragroup variability as a means of coping with low group status may be considered a relatively individualistic response because it may undermine the distinctiveness of the group. Returning to our example of the neighboring colleges, it is possible that students attending the lower status institution who identify strongly with their college, will engage in a competitive rivalry with their higher status neighbors. For these people attempting to emphasize group heterogeneity and overlap may threaten the very identity and integrity of their group.

In short, despite the disadvantage from an individual group member's point of view, there may be some theoretical justification in terms of social identity principles for denying group heterogeneity even in the face of unfavorable social comparisons. According to this theoretical position, the self is not just or

always defined at the level of the individual ("personal identity"), but also at the level of the group ("social identity:" Tajfel & Turner, 1986; Turner et al., 1987). In these terms the group constitutes an important part of the individual's self concept. If this social identity is very important and central to the individual as would be expected with high group identification, then we should also expect such group members to be less likely to want to "dilute" the group or dissociate themselves from it. Using group heterogeneity as a vehicle to protect the self would be counterproductive for these group members, if it were to undermine the very basis of self-categorization by eroding group distinctiveness. This provides a theoretical reason to suppose that the heterogeneity strategy may be less viable or appealing for those who identify strongly with their group. Indeed, research by Kelly (1989) and Simon and Pettigrew (1990) has found evidence of a positive relation between group identification and perceived ingroup homogeneity. However, these studies have not examined the role of relative group status and have generally obtained effects for positive stereotypic group attributes. If people were also to downplay ingroup variability for *unfavorable* comparisons, on the other hand, this would provide even more compelling evidence of ingroup homogeneity. It would suggest that the perception of ingroup homogeneity is more than simply a self-serving bias that takes advantage of positive group attributes, and imply that there may be an intrinsic value to group cohesion and distinctiveness. A relevant study was reported by Turner, Hogg, Oakes, and Smith (1984), who found evidence that ingroup cohesion increased after group failure for a chosen group membership. Although the dependent measure used in this study was not a measure of group variability, we might expect that perceived group homogeneity would increase rather than decrease for those who identify strongly with the group, as they attempt to build group cohesion.

In order to address this question it is desirable to conduct research with groups that vary not only in their relative status to each other but also in the extent to which members identify with them, making it possible to assess whether group identification influences variability judgments as a function of status. In line with the above analysis, we predict a main effect of identification on variability judgments such that high identifiers should stress group homogeneity relative to low identifiers. However, we expect this effect to be strongly qualified by group status, with this effect being only or most apparent under conditions of low group status. Here high identifiers should be no less motivated to display ingroup homogeneity, thereby maintaining the integrity of the group. Low identifiers on the other hand will by definition have little commitment to the group, and thus may be inclined to adopt the strategy of emphasizing heterogeneity in the group, as a means of coping with the unfavorable comparison (this dilution strategy being unnecessary in the case of high status and positive identity). This greater difference for high and low identifiers in the low status condition should result in a two-way interaction between status and identification.

STUDY 1

To investigate the above hypothesis, we conducted a study of perceptions of group differences and group homogeneity for an existing natural group: Psychology students. Group status was manipulated by providing favorable or unfavorable feedback concerning performance compared to a relevant comparison group (business students) on an important and status relevant dimension of comparison (intelligence). This is important because earlier studies have typically used existing status differences between natural groups as a factor so that it is not clear whether effects are the result of some factor naturally confounded with status. By selecting two groups comparable in terms of the status-defining criterion (intelligence), we were able to manipulate status in natural groups, while assessing the effect of this factor experimentally. Participants were categorized as high or low identifiers by means of a median split on our identification measure.

In addition to providing ratings of intragroup similarities, we also obtained measures of intergroup difference (central tendency) to check for evidence of more straightforward strategy of ingroup bias as a function of the independent variables. Subjects were required to rate both ingroup and outgroup on a range of comparative dimensions, related and unrelated to the status criterion, and relevant to comparisons of the two groups. We also asked participants to rate the importance of these various dimensions to check whether respondents employed the subtle strategy of enhancing the importance of dimensions seen as favoring their own group. In line with the hypothesis concerning the ratings of group variability, we would expect this strategy to be particularly evident for people whose group identity is threatened and who identify strongly with the group. Low status low identifiers by contrast, who show less commitment to the group might also show less commitment to its criterial attributes, especially if they adopt the dilution and dissociation strategy implied in the prediction concerning perceived intragroup variability.

Method

Subjects

The study was conducted with 131 first-year psychology students at the Free University of Amsterdam, who participated on a voluntary basis. They were confronted with an outgroup of business students, who were selected as a comparison group for the psychology student subjects on the basis of previous pilot research (Doosje, 1992). According to these pilot data, psychology students generally considered business students comparable as a group in terms of size and the critical status-defining dimension, intelligence. This perception of comparability in terms of intelligence is important, as it allowed us to manipulate relative group status position in a careful and credible manner, but within a "real life" setting. The sample comprised of 96 females and 35 males, with an age range of 18 to 58 (mean age 20.76).

Design and Independent Variables

The independent variables in the design were the relative status of the ingroup (higher vs lower) and the degree of identification with ingroup (high vs low); both were between subjects factors.

Group status was manipulated by means of feedback in the introduction to the questionnaire which led subjects to believe that the psychology students as a group scored generally higher *or* lower than business students on measures of intelligence. Classification by group identification was determined by means of a median split on our group identification measure. Subjects were asked to rate the ingroup (psychology students) and an outgroup (business students) on a number of dimensions. Further details of the independent and dependent variables are provided below.

Procedure

The questionnaire was administered at the beginning of a lecture session given by one of the authors. She introduced the other two researchers who were from another university (and thus unfamiliar to the students), explaining that they requested the students' participation for their research. These two researchers then handed out the questionnaires which took approximately 15 min for all students to complete. Debriefing took place in the following lecture where the course lecturer revealed her role in the research and discussed a summary of the results as part of that lecture session.

The Questionnaire

Introduction and cover story. The introduction to the questionnaire placed the research in the context of governmental concern for the quality, structure, and popularity of different university courses. It was stated that it was important for the Ministry of Education to find out more about the demands of different courses and the sorts of students choosing them; the aim was to determine the characteristics of students suited to particular courses in order to improve selection and effectivity. The previous research had ostensibly determined the typical student profiles for different course subjects, and the current questionnaire formed a follow-up study. The present research was specifically concerned with two student groups, namely psychology students and business students. These groups were allegedly chosen for comparison in this study because they were both relatively popular options which attracted and catered for similar numbers of students. It was then stated that the previous research had shown however that psychology students scored lower (higher) on intelligence tests than business students. One alleged objective of the current questionnaire was therefore to determine why less (more) intelligent students chose psychology and why more (less) intelligent students chose business studies. The questionnaire then continued with a series of questions.

Group status manipulation check. Directly following the introduction, after reiterating the intelligence difference result (the group status manipulation) respondents were asked to estimate the average intelligence of respectively psychology and business students on 7-point scales of intelligence: "not at all" (1) to "extremely" (7).

The group identification measure. Identification with psychology students was also measured on a seven-point scale by rating the applicability of four statements covering the cognitive, evaluative and affective aspects of identification ("I identify with other psychology students," "I see myself as a psychology student," "I am glad to be a psychology student," "I feel strong ties with psychology students").

Dependent Measures

Ratings on intelligence and "other" dimensions. After reminding respondents of the outcome of the previous research regarding the difference in intelligence between psychology and business students, it was stated that this difference was based on standard IQ measures of analytic and visuo-spatial intelligence. The introduction to this section then stated that, given controversy amongst experts concerning whether intelligence should be more broadly defined, the researchers were interested in how these two student groups were perceived on other aspects of intelligence in addition to those used in the original research. After rating the two groups on analytic and visuo-spatial intelligence, subjects also rated them on a number of positively evaluated intelligence

related and "other" dimensions, namely "talent for language," "creativity," flexibility," "all-around development," "social skills," "efficiency," "ambition," "understanding," "degree of interest," "self-assurance," "determination," "independence," "friendliness," "extraversion," and "spontaneity." All dimensions were pretested as being positive and were selected for their relevance to comparisons between psychology and business students (Doosje, 1992). These ratings were made on comparative 7-point bipolar scales used to indicate that the particular ability was "more characteristic of psychology students" (-3 to -1) or "more characteristic of business students" ($+1$ to $+3$), with a zero score indicating that the ability was equally characteristic for both groups. These judgments were followed by ratings of the perceived importance of each dimension in everyday life, made on 7-point scales from "of very little importance" (1) to "of very great importance" (7).

Intragroup similarity ratings. Subjects were asked to what extent they considered psychology students to be similar to each other in terms of intelligence and how similar to other psychology students they considered themselves to be in terms of intelligence. These questions were also answered on 7-point scales, ranging from (1) "not at all" to (7) "very much." We used this standard measure of variability, as introduced by Quattrone and Jones (1980) and also used in several studies by Simon (1992), rather than the measure of perceived distribution developed by Linville, et al. (1986), because subjects find it difficult to complete this task, in which they have to distribute 100 points over a scale (cf. Park & Judd, 1990, p. 175).

Results

Group Identification

The four group identification items formed a reliable scale with a Cronbach's alpha of 0.83. Subjects were divided by means of a median split at 4.25, such that people scoring above this point were classified as high identifiers and the rest as low. On the composite scale ranging from 1 (low identification) to 7 (high identification), the mean for low identifiers was 3.26, and the mean for high identifiers was 5.29 ($t(129) = 15.05$, $p < .001$). Although the identification measures were administered *after* the status manipulation, and may therefore have influenced the distribution, a Chi-square analysis, crossing this identification grouping variable with the group status manipulation, produced a fairly even distribution of subjects in the resulting 2×2 table ($\chi^2 < 1$, ns). This analysis supports the notion that our two independent variables are really independent of each other. Specifically, there were 31 *Ss* in the low/negative, 35 *Ss* in the high/negative, 26 *Ss* in the low/positive, and 39 *Ss* in the high/positive conditions.

Manipulation Check of Group Status

Subjects in the low status condition judged business students to be significantly *more* intelligent than psychology students ($M_B = 5.21$ vs $M_P = 4.92$), $t(65) = 2.06$, $p < .05$, and subjects in the high status condition judged business students to be signifcantly *less* intelligent than psychology students ($M_B = 4.66$ vs $M_p = 4.88$), $t(64) = 2.07$, $p < .05$. Indeed, analysis of variance treating target group as a within-subjects factor revealed the predicted two-way interaction between group status and target group ($F(1, 127) = 7.31$, $p < .01$).

Subsequently, the same intelligence ratings of psychology and business students were subjected to a 2 (group status) × 2 (identification) MANOVA. At the multivariate level, there were main effects for group status $(F(2, 126) = p < .005)$, and group identification $(F(2, 126) = 4.08, p < .02)$. The status main effect was not significant for the perceived intelligence of psychology students $(F(1, 127) < 1, ns)$, but it was significant for the intelligence ratings of the outgroup (the means are reported above) $(F(1, 127) = 11.50, p < .001)$. These results show that the status manipulation influenced the ratings of the outgroup, but not of the ingroup. The main effect of group identification was only significant for the perceived intelligence of psychology students. High identifiers considered the ingroup to be significantly more intelligent $(M = 5.07)$ than low identifiers $(M = 4.68)$, $(F(1,127) = 8.15, p < .005)$.

Overall Stereotypic Ratings of Psychology and Business Students

The comparative stereotypic ratings of the student groups collapsed across status and identification levels were computed for ratings of the various intelligence and other dimensions. The original scores were recoded, with positive ratings indicating that the dimension is more characteristic of psychology students and negative ratings as more characteristic of business students $(-3$ through $+3)$. Eleven of the dimensions (analytic intelligence, talent for language, creativity, flexibility, all-around development, social skills, understanding, degree of interest, friendliness, spontaneity, and extraversion) were more associated with the psychology students than business students as indicated by a significant positive deviation from the neutral midpoint. Business students were judged superior on five dimensions (visuo-spatial intelligence, efficiency, ambition, determination, and self-assurance). Accordingly, when summing over scales, the overall ratings were significantly biased in favor of the psychology students $(M = 0.30; F(1, 123) = 72.82, p < .001)$. There was also a main effect of identification, indicating that high identifiers generally showed stronger ingroup favoring biases $(M = 0.36)$ than did the low identifiers $(M = 0.21; F(1, 123) = 5.13, p < .03)$. The relevant means are listed in Table 1.

Perceived Importance of Comparison Dimensions

Overall, the eleven dimensions significantly associated with psychology students were rated as significantly more important $(M = 5.39)$ than were the five significant "business" $(M = 4.81)$ dimensions: $t(129) = 9.41, p < .001$. A 2 × 2 MANOVA on the importance ratings of "psychology" and "business" dimensions revealed significant multivariate main effects of identification $(F(2, 125) = 3.88, p < .03)$ and the group status manipulation $(F(2, 125) = 3.64, p < .03)$. At the univariate level, both effects were only significant for the psychology dimensions. Specifically, those dimensions associated with psychology students were rated as significantly more important by high identifiers

TABLE 1

OVERALL RATINGS OF PSYCHOLOGY STUDENTS (MEAN OF 16 DIMENSIONS RANGING FROM -3 "MORE CHARACTERISTIC OF BUSINESS STUDENTS" TO $+3$ "MORE CHARACTERISTIC OF PSYCHOLOGY STUDENTS")

| | Ingroup identification | |
Ingroup status	Low	High
Low	0.24	0.40
	(0.42)	(0.40)
High	0.19	0.32
	(0.34)	(0.34)
	0.21	0.36
	(0.38)	(0.37)

Note. All cell means significantly differ from zero (all *p*'s < .05). ANOVA revealed a main effect of ingroup identification (*p* < .03); standard deviations for each cell are given in parentheses.

than by low identifiers $(F(1, 126) = 7.07, p < .01)$. In addition, "psychology" dimensions were judged as more important when psychology students were defined as having higher status than business students $(F(1, 126) = 6.25, p < .02)$. However, these main effects are qualified by the interaction between group status and group identification $(F(1, 126) = 4.89, p < .03)$. Simple main effects analysis reveals that the mean perceived importance of the "psychology" dimensions is significantly lower for the low status/low identifiers $(M = 4.98)$ than the means in the adjacent cells $(Ms = 5.50$ and 5.51; see Table 2). In other words, when group status is low, low identifiers display a decrease in the perceived importance of ingroup characteristics compared to high identifiers $(F(1, 126) = 11.62, p < .001)$, or compared to low identifiers in the high status condition $(F(1, 126) = 11.18, p < .001)$.

Intragroup Similarity Ratings

The two questions intended to measure intragroup similarity (perceived similarity among ingroup members and perceived similarity of self to other ingroup members) were first subjected to principal components analysis, to check whether they indeed measure one underlying concept. It was confirmed that both questions have loadings of 0.79 on the first factor, which has an Eigenvalue of 1.24 and accounts for 62% of the variance in the separate questions. Therefore, we calculated a mean intragroup similarity rating from these two questions, which was subjected to a 2 (group status) × 2 (ingroup identification) analysis of variance.[3] This yielded a main effect of ingroup

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[3] An analysis of the two separate questions yields virtually identical results.

TABLE 2

PERCEIVED IMPORTANCE OF "PSYCHOLOGY-
DIMENSIONS" (MEAN OF 11 DIMENSIONS RANGING FROM
1 "OF VERY LITTLE IMPORTANCE" TO 7 "OF VERY GREAT
IMPORTANCE")

	Ingroup identification	
Ingroup status	Low	High
Low	4.98[a]	5.51[b]
	(0.66)	(0.54)
High	5.50[b]	5.54[b]
	(0.65)	(0.60)

Note. Analysis of simple main effects shows that
means with a different superscript differ signifi-
cantly ($p < .05$). Standard deviations are given in par-
entheses.

identification ($F(1, 127) = 8.80$, $p < .005$), which was qualified by the interac-
tion of ingroup identification with group status ($F(1, 127) = 5.78$, $p < .02$).
Analysis of simple main effects revealed that the main effect of ingroup
identification could only be traced to the low group status condition: when
group status is low, high identifiers ($M = 4.49$) perceive greater intragroup
similarity than do low identifiers ($M = 3.57$; $F(1, 127) = 14.13$, $p < .001$; see
Table 3). The level of ingroup identification did not affect subjects' intragroup
similarity ratings in the high status condition ($M_1 = 4.00$ and $M_h = 4.08$;
$F(1, 127) < 1$, ns). The simple effects comparing respectively low status and
high status within each level of identification were only marginally significant
($F(1, 127) = 3.38$, $p < .07$ and $F(1, 127) = 2.78$, $p < .10$, two-tailed).

Discussion

The status manipulation check indicated that this variable was successfully
manipulated and the median split on the group identification measure also
resulted in high and low identifiers that differed significantly in terms of their
involvement with the ingroup. Although it is hard to distinguish between
ingroup bias and real intergroup differences between real life groups, we do
believe there was evidence of an overall ingroup bias on the stereotypic ratings,
where more of these positive dimensions were associated with the psychology
student ingroup, as well as there being a very significant positive differenti-
ation effect for these scales overall. There was also evidence that this ingroup
bias in intergroup differentiation was related to group identification, with high
identifiers showing greater positive differentiation on both the intelligence
ratings used for the manipulation check measure, as well as on the other

TABLE 3
PERCEIVED INTRAGROUP SIMILARITY (MEAN OF TWO
QUESTIONS RANGING FROM 1 "NOT AT ALL SIMILAR" TO
7 "VERY SIMILAR")

Ingroup status	Ingroup identification	
	Low	High
Low	3.57[a]	4.49[b]
	(1.10)	(0.84)
High	4.00[ab]	4.08[ab]
	(1.10)	(0.96)

Note. Analysis of simple main effects shows that means with a different superscript differ significantly ($p < .05$). Standard deviations are given in parentheses.

positive dimensions. This ingroup bias effect, and evidence of a relation with group identification, is consistent with predictions deriving from social identity theory (e.g., Tajfel & Turner, 1986). Positively evaluating one's own group relative to the outgroup is one way of enhancing or protecting the group's image and thereby one's social identity, and this is likely to be particularly important for those who identify strongly with the group.

A less direct manner of protecting the group image was manifested in the tendency for subjects to rate dimensions seen as more characteristic of their own group (psychology students) as more important than dimensions characteristic of the comparison outgroup (business students). Once again this replicates earlier research (e.g., Brown & Ross, 1982; Ellemers et al., 1993; Mummendey & Schreiber, 1983; Spears & Manstead, 1989; Turner & Brown, 1978) and is in line with social identity predictions that groups will tend to value those comparative dimensions that favor their own group more highly (e.g., Lemaine, 1974). There were also main effects of status and identification on these judgments, which were qualified by an interaction between status and identification. The importance of psychology dimensions was rated higher when this group was defined as having high status. In the same vein, psychology dimensions were judged more important by high identifiers. However, the relatively low importance ratings made by the low status low identifiers appear to be responsible for both main effects. In an earlier study, Wagner et al. (1986) also report a decrease in perceived importance of discussion ability for subjects who were told their group compared negatively on this dimension. Our results would therefore seem to qualify this earlier result, suggesting that this main effect could have been caused, as is the case in our study, by low identifiers.

However, the main point of the present research was to move beyond the general evidence of positive intergroup differentiation and social creativity strategies in so far as they emphasize the differential importance of dimensions. Our primary objective was to examine how status differentials, together with differences in group identification, affect perceptions and judgements of intragroup variability. We anticipated that degree of group identification would be particularly consequential for low status group members, whose group and thus self-image were threatened. Specifically, it was hypothesized that whereas low status/low group identifiers might perceive low ingroup similarity (i.e., perceive high variability) as conscious or unconscious means of coping with the negative intergroup comparison, high identifiers should be less likely to adopt this strategy, because in doing so they may undermine the collective level of self, which is by definition important to these subjects. This prediction was borne out: on the composite measure of ingroup similarity, low status/low identifiers perceived significantly less ingroup similarity compared to low status/high identifiers, resulting in a significant two-way interaction between status and identification.

This finding is similar to the interaction obtained on the measure of perceived importance just described and both interactions are interpretable in terms of the same underlying social identity principle concerning the differential commitment to the group for high and low identifiers. If group identity is less central to the self-definition of low identifiers, resulting in greater perceived intragroup variability, it is logical that stereotypical ingroup attributes should also become less central, and especially so when they result in inferior group status. Hence low identifiers in low status groups show a reduced motivation to maintain the importance of such attributes. In the same vein, people who identify strongly with their group feel disinclined to "dilute" the group, or to deemphasize the importance of group attributes, despite the unfavorable social comparisons with the outgroup that result. In individualistic terms, this strategy might be seen as personally costly by imputing more clearly a negative evaluation on the group and its members. However, for precisely this reason, this result would seem to underline the value of a more collective level of analysis implied by the social identity approach, and provide evidence for the intrinsic value of group membership, even when the group is defined negatively (cf. Mlicki & Ellemers, 1995; Turner et al., 1984).

Although this analysis of our findings fits in with predictions based on social identity principles, it is important to be wary of overinterpreting our results. In particular, two weaknesses stand out in our design that could call into question the validity and/or generality of these findings. First of all, our study employed subjects from only one of the target groups implicated in the design so that the possibility remains that the judgements of central tendency, for example, might reflect actual differences between psychology and business students instead of reflecting ingroup bias. In order to overcome this confound

we would require data from business students in a crossed design (cf. Park & Rothbart, 1982). The fact that we were primarily concerned with variability estimates of the ingroup might seem to render this problem less serious, particularly as the subject group–target group confound cannot easily account for the predicted interactions. However, the possibility remains that this pattern is special to psychology students and that the confound interacts with identification in some way that could account for these results. A second problem is that group identification was *measured* rather than manipulated raising once again the possiblity of co-occurring and confounding factors that could explain the interaction. Although our choice of natural groups in this study was deliberately designed to introduce the variable of group identification in contrast to earlier research on laboratory groups (where we expected both less commitment and less variation on this dimension) this may pose a problem for the interpretation of our results. We therefore conducted a follow-up study in which we attempted to address both these weaknesses of the first study.

STUDY 2

In this study we address the two methodological weaknesses of the first study relating to the fact that judgments may reflect real differences or natural confounds associated with these groups, and the fact that identification was not manipulated but measured. Specifically, we employed experimental groups created in the laboratory to avoid the possibility that knowledge or other confounds associated with natural groups could explain the results. Furthermore, in this second study group identification was manipulated by means of a false-feedback procedure, reinforced by a "bogus pipeline" technique. The basic hypothesis in this study remains the same as in the first, namely of a predicted two-way interaction between group status and group identification such that when group status is low, low identifiers perceive more group variability compared to high identifiers. In this study, we also employed a more sophisticated measure of variability than the simple similarity ratings used in the first study, and asked subjects to estimate the range of group scores (i.e. upper and lower limits) on a series of dimensions. In short, the aim was to both replicate and reinforce the earlier findings using different manipulations and measures.

Method

Subjects

Subjects in the second study were 101 students of the University of Amsterdam. The sample consisted of 74 females and 27 males, distributed evenly across conditions. The mean age was 21, ranging from 18 to 35. Subjects were randomly allocated to one of the experimental conditions and were paid 15 Dutch guilders (about $ 8.50) for their participation. The number of subjects per session varied from 9 to 11 and a session lasted about 1.5 h.

Design and Independent Variables

Two independent variables were manipulated between subjects: the relative ingroup status position (high versus low) and the level of identification with the ingroup (high versus low). Relative ingroup status was induced by providing false feedback on a group task. Subjects were told that their group had either performed better than the outgroup (i.e., a high status ingroup), or worse (i.e., a low status ingroup).[4] Identification with the ingroup was manipulated by means of a "bogus pipeline" method (Gerard, 1964; Jones & Sigall, 1971). It was suggested that answers to a number of items, in combination with feedback measured by electrodes, would tap subjects' level of identification with the group. Subjects were told that they were either strongly *or* weakly involved with their group. In addition to manipulation checks, subjects rated both the ingroup and the outgroup on the status defining and alternative dimensions in terms of central tendency (mean) and perceived variability.

Procedure

Overview. In this laboratory study, about 10 subjects per session were seated in one room, partially separated by screens. The subjects were informed about the use of electrodes during the experiment and these were attached on one hand. Subjects were then ostensibly divided into two groups, named the "inductive" and "deductive" thinkers. A group task was then performed, followed by a number of general questions with regard to groups. Subsequently, subjects received bogus feedback regarding their identification with the ingroup, followed by ingroup status feedback. Finally, the dependent variables were administered and the subjects were fully debriefed and paid.

Introduction and categorization. The experiment was run using an "on-line" computer setup with subjects seated at terminals for the duration of the experiment. They were required to answer questions displayed on the screen by using the keyboard or the mouse. At the start of the session one of the experimenters explained the use of the electrodes. It was stated that they could measure the level of arousal in the body. Most of the subjects were not familiar with the use of electrodes during an experiment, so it was carefully explained that they were safe and "served to measure the Galvanic Skin Response" (GSR). Two experimenters then placed gel on the electrodes, "in order to ensure that the electrodes make contact with the skin" and subjects were instructed to position the three electrodes on certain locations on one hand. It was stated that because all three electrodes would measure the same GSR, it did not matter if one of them accidentally worked loose during the experiment. The subjects were told that they would receive further information about the electrodes and the experiment via the computer.

The research was further introduced as an experiment on the nature of two groups: "inductive thinkers" and "deductive thinkers" (see Doosje et al., in press for further details of the cover story). It was explained that for the purposes of the experiment, it was first necessary to divide the subjects into these two groups. To this end, subjects carried out an "association task" consisting of two subtests. In the first subtest, consisting of 12 items, participants were presented with a "key" word (e.g., "house"), and they had to indicate which of four alternatives they associated most strongly with it (e.g., number, street, flat, or room). In the second subtest, consisting of 10 items, subjects were required to indicate which of four numbers they associated with a key number. After both subtests were completed, it was stated that the main computer could now determine the subjects' group membership. In reality, all participants were assigned to the inductive thinkers group (a pilot study revealed no evaluative differences or expectations concerning the two group names).

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[4] In this study, the experimental nature of the groups means that status is defined somewhat more narrowly than in the first, namely in terms of relative group performance, rather than the relative standing of the groups in a more established status hierarchy. However, for the purposes of our analysis the essential feature of the situation remains the same, namely a favorable or unfavorable social comparison with the outgroup on a dimension central to the task.

Participants were informed that four of the other subjects present were in the same group. Although the exact size of the outgroup was not revealed, it was stated that previous research indicated no differences in the relative prevalence of inductive and deductive thinkers, nor was this distribution different for males and females. Subjects were told that during this experiment the size of the inductive and deductive thinker groups would most likely be similar, and that men and women would probably be equally represented in the two groups.

Group task. Next, participants performed a group task, in which they were required to solve eight "personnel problems." For each problem, two possible solutions were suggested. The subjects had to indicate which alternative they would personally choose. Subjects were then shown answers ostensibly by their fellow ingroup members (including themselves), and were asked to indicate on the basis of this information which alternative they would finally choose.[5] For each correct answer given by a group member, the group as a whole would receive points. The manner in which these points were calculated was left unspecified, in order to make later feedback on the performance on this task credible. However, it was emphasized that the final group score would be corrected for any variations in group size to allow for intergroup comparisons.

Identification manipulation. Before presenting feedback on the group task, identification with the ingroup was manipulated. Subjects were required to indicate to what extent they agreed with a number of statements, that related directly or indirectly to group membership or contact with other people in general (e.g., "Relationships with other people are very important to me," or "Sometimes I feel lonely") on 9-point scales ("not at all" to "very much"). It was stated that the computer could infer the degree to which subjects identified with their group from their answers to this questionnaire in combination with the electrode measurement during the experiment. It was not revealed exactly how the identification score was determined, although it was asserted that previous research had established norm scores for this identification measure. Subjects in the low identification condition were told that their identification with the ingroup (a score of 27) was lower than the average norm score (40). In the high identification condition, subjects were told that their identification (a score of 53) was actually higher than the average score (40). Subjects were requested to fill in this information on a separate form provided at the start of the experiment.

Status manipulation. Next, the scores on the group task were revealed. In the low status condition, the score of the ingroup (54 points) was both lower than the score of the outgroup (67 points), and the average norm score (61 points). Subjects in the high status condition were told that the score of their group (67 points) was higher than the other group (54 points), and higher than the norm score (61 points). Subjects were again required to fill in this information on the form provided.

Dependent Measures

Central tendency. Subjects were requested to judge the ingroup and the outgroup on the status defining dimension (proficiency at making personnel decisions), and four alternative dimensions (likeability, intelligence, friendliness and judgment of character). Subjects were required to locate the average position for the ingroup on a 100-point scale, ranging from 1 (not at all) to 100 (to a very great extent). Subsequently, subjects were asked to locate the outgroup on these five dimensions.

Intragroup variability ratings. For each dimension, subjects also had to indicate the range of the two groups, by positioning two extremes on the same 100-point scale that was used for the central tendency measure. That is, subjects were asked to indicate the position of the group member who would rate lowest on that particular trait, and the position of the group member with the highest

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[5] An example item is "A flower shop is not doing well. It seems that, due to the recession, flowers are the first thing that people economise on. It is only possible to ensure the future of the company if the costs of personnel are reduced. This can be achieved in two ways: (a) by discharging a small number of employees, or (b) by reducing the working hours of all employees. What would you choose, (a) or (b)?"

group rating. The same procedure was followed with respect to variability judgments of the outgroup. Thus, for each characteristic, a subject was asked to indicate the ingroup position, and then on this same scale the two most extreme group members. Subsequently, the same procedure was followed with respect to outgroup judgments.

This measure was chosen because it reflects the same dimensional or specific perception of variability as used in Study 1, instead of a general perception of variability (see Kashima & Kashima, 1993). In addition, as Park and Judd (1990) have shown, both similarity and range measures of variability load on the same "perceived dispersion" component, rather than on the different "stereotypicality" component of perceived variability. Park and Judd's (1990) analysis also demonstrated that the range measure loaded higher on the perceived dispersion component than the similarity measure. Finally, in order to increase the reliability of the measurement of perceived variability, we asked subjects to give their estimates on *five* different dimensions.

Manipulation checks. After the group assignment had been made, subjects were asked to indicate the group of which they were a member. In order to check for the manipulation of identification, subjects were requested to indicate to what extent they were involved with the ingroup, according to the information provided (1 "clearly below average" to 9 "clearly above average"). We were also interested to assess whether subjects actually displayed evidence of greater involvement with their own group, as opposed to simply reproducing the feedback information. Relying on a direct measure (as described above) alone is inappropriate, as it is difficult to know whether subjects are reporting knowledge of the manipulation information or actual experienced identification. For this reason we also employed a series of three more indirect measures, relating to identification with the *outgroup* ("I would like to see myself as a deductive thinker"; "I would like to belong to the group of deductive thinkers"; "I feel involved with the deductive thinkers", rated from 1 "not at all" to 9 "to a large extent"). The reasoning here was that genuine identification with the ingroup should result in disidentification with the outgroup, while at the same time this measure is sufficiently removed from the actual ingroup information feedback to prevent subjects from merely reproducing the feedback information. With respect to the status manipulation, it was asked how well the ingroup had performed the group task in relation to the outgroup (1 "much worse," 9 " much better"), and with respect to the norm score (1 "clearly under average," 9 "clearly above average").

Results

Manipulation Checks

The results of all checks confirm that our manipulations were successful. When asked to indicate to which group they belonged, all subjects correctly selected the group of inductive thinkers. Reliability analysis confirmed that the three questions asking subjects to what extent they identified with the other group could be reduced to mean outgroup identification score (Cronbach's $x = 0.75$) for further analysis.

Together with the three questions directly checking for the manipulations of group status and identification, the mean outgroup identification score was subjected to a 2 (group status) × 2 (group identification) MANOVA. This analysis revealed significant multivariate main effects of both factors (status $F(4, 94) = 119.68, p < .001$; identification $F(4, 94) = 136.43, p < .001$); the interaction was not significant. At the univariate level, there was a significant main effect of group identification on the question asking for involvement with the ingroup, and on the outgroup identification score. The relevant means indicate that subjects who were assigned to the low identification condition

reported less involvement with their group ($M = 2.63$) than subjects in the high identification condition ($M = 6.90$) ($F(1, 97) = 561.54, p < .001$). Furthermore, when they had been assigned to the low (ingroup) identification condition subjects reported stronger *outgroup* identification ($M = 4.33$) than did subjects in the high identification condition ($M = 3.77$) ($F(1, 97) = 4.41, p < .05$).

The two questions asking for perceived ingroup status relative to the outgroup and relative to the norm score only revealed univariate main effects of group status. Subjects in the low status condition rated the status of their ingroup relative to the outgroup as lower ($M = 3.47$) than did subjects in the high status condition ($M = 7.06$) ($F(1, 97) = 353.69, p < .001$). Similarly, ratings of ingroup status relative to the norm score were lower in the low status condition ($M = 2.78$) than in the high status condition ($M = 7.10$) ($F(1, 97) = 370.91, p < .001$).

Central Tendency

The two groups were rated on the status defining dimension (proficiency in personnel dicision making), and four alternative dimensions (likeability, intelligence, friendliness, and judgement of character). Reliability analysis revealed that the four alternative dimensions all represented one underlying construct (ingroup ratings: $\alpha = 0.78$; outgroup ratings: $\alpha = 0.77$). Therefore, further analyses were carried out with the mean ratings for these four dimensions.

Ingroup and outgroup ratings on the status defining and alternative dimensions were subjected to a $2 \times 2 \times 2$ MANOVA, with group status and group identification as between subjects factors, and target group as a within subjects factor. This analysis revealed a multivariate significant main effect of target group ($F(2, 96) = 22.24, p < .001$), and a significant interaction of target group with group status ($F(2, 96) = 3.66, p < .03$). At the univariate level, the target group main effect was significant for the status defining dimension ($F(1, 97) = 16.92, p < .001$), but this effect was qualified by the interaction of target group with group status ($F(1, 97) = 7.25, p < .01$). Analysis of simple main effects reveals that when group status was low, subjects rated their ingroup equally high on the status defining dimension ($M = 62.71$) as the outgroup ($M = 60.16$; $F(1, 97) < 1$, ns), whereas subjects in the high group status condition gave higher ratings for the ingroup ($M = 68.60$) than for the outgroup ($M = 56.22$; $F(1, 97) = 22.94, p < .001$). For the alternative dimensions there was only a univariate significant main effect of target group. Overall, subjects accorded higher ratings to the ingroup on these dimensions ($M = 62.40$) than to the outgroup ($M = 58.28$; $F(1, 97) = 29.63, p < .001$).

Intragroup Variability Ratings

From subjects' estimations of the positions of the lowest scoring and highest scoring group members, we first calculated the perceived range of group scores for each dimension (i.e., the distance between the two most extreme

group members), so that higher scores indicate greater perceived intragroup variability. Preliminary analyses revealed that subjects' variability ratings showed the same pattern for all five dimensions. Therefore, we decided to conduct further analyses with mean scores of intragroup variability ratings (ingroup ratings: $\alpha = 0.91$; outgroup ratings: $\alpha = 0.91$).

These mean variability ratings were subjected to a $2 \times 2 \times 2$ ANOVA, with group status and group identification as between subjects factors, and with target group as a within subjects factor. This revealed a significant overall main effect of group identification $(F(1,97) = 7.34, p < .01)$, and a significant interaction effect between group status and identification $(F(1,97) = 5.48, p < .03)$. This analysis did not yield any main or interaction effects of target group. When ingroup and outgroup variability ratings were analyzed separately, the identification main effect was significant both for ingroup variability ratings $(F(1,97) = 7.70, p < .01)$ and for outgroup variability ratings $(F(1,97) = 6.73, p < .01)$. However, both main effects were qualified by the interaction between identification and group status (ingroup ratings: $F(1,97) = 5.66, p < .02$; outgroup ratings: $F(1,97) = 5.11, p < .03)$.[6] Inspection of the relevant means (see Tables 4 and 5) reveals that both ingroup and outgroup ratings show the same pattern. Analysis of simple main effects indicates that when group status was high, intragroup variability ratings were not influenced by group identification (ingroup ratings for low and high identifiers were respectively 63.10 and 61.22, $F(1,97) < 1$, ns; outgroup ratings for low and high identifiers were 63.91 and 62.24, $F(1,97) < 1$, ns). However, when group status was low, subjects in the low group identification condition perceived significantly greater variability within the ingroup as well as the outgroup than subjects in the high group identification condition (ingroup ratings for low and high identifiers were respectively 72.82 and 48.34, $F(1,97) = 13.38, p < .001$; outgroup ratings for low and high identifiers were 72.09 and 47.86, $F(1,97) = 11.84, p < .001)$. The differences between levels of

[6] In principle, it is possible that subjects compress estimates of score ranges, when their central tendency ratings are close to the scale endpoints (cf. Jones, Wood, & Quattrone, 1981; Simon & Brown, 1987). In order to check whether this was the case, we conducted an ANCOVA on the range scores with the extremity of the central tendency ratings (i.e., the absolute distance between the central tendency rating and the scale midpoint) as a covariate. This analysis reveals that the extremity convariate was significant for the ingroup range scores $(F(1,96) = 4.84, p < .03)$, but not for the outgroup range score $(F(1,96) = 2.42, ns)$. More importantly, the main effect of group identification for both the ingroup range scores $(F(1,96) = 82.7, p < .005)$ and the outgroup range scores $(F(1,96) = 7.23, p < .01)$ remained significant when extremity was included as a covariate in the analysis, and the interaction between group status and group identification was even stronger for ingroup range scores $(F(1,96) = 7.07, p < .01)$ as well as outgroup range scores $(F(1,96) = 6.21, p < .015)$. Similar results are obtained when we locate subjects' central tendency estimates at the midpoint of the group extremes they provided. In other words, although it appears that the extremity of the estimated central tendency may have influenced subjects' ratings of ingroup range scores, this additional analysis confirms that the predicted effects of group status and identification on group variability cannot be ascribed to rating extremity.

TABLE 4

PERCEIVED SCORE RANGES FOR INGROUP (MEAN OF FIVE DIMENSIONS RANGING FROM 0 "NO DIFFERENCE BETWEEN MAXIMUM AND MINIMUM GROUP SCORE" TO 100 "MAXIMUM DIFFERENCE BETWEEN MAXIMUM AND MINIMUM GROUP SCORE")

Ingroup status	Ingroup identification	
	Low	High
Low	72.82[c]	48.34[a]
	(23.54)	(25.73)
High	63.10[bc]	61.22[ab]
	(23.02)	(23.07)

Note. Analysis of simple main effects shows that means with a different superscript differ significantly ($p < .05$). Standard deviations are given in parentheses.

status tended to be somewhat stronger for the high identifiers ($F(1, 97) = 3.64$, $p < .06$ and $F(1, 97) = 4.11$, $p < .05$ for ingroup and outgroup estimates respectively) than those for low identifiers ($F(1, 97) = 2.23$, ns and $F(1, 97) = 1.44$, ns for ingroup and outgroup estimates, respectively).

Discussion

In this study we attempted to manipulate both group status and group identification experimentally, using laboratory groups. Checks indicate that

TABLE 5

PERCEIVED SCORE RANGES FOR INGROUP (MEAN OF FIVE DIMENSIONS RANGING FROM 0 "NO DIFFERENCE BETWEEN MAXIMUM AND MINIMUM GROUP SCORE" TO 100 "MAXIMUM DIFFERENCE BETWEEN MAXIMUM AND MINIMUM GROUP SCORE")

Ingroup status	Ingroup identification	
	Low	High
Low	72.09[c]	47.86[a]
	(25.29)	(27.38)
High	63.91[bc]	62.24[b]
	(23.37)	(24.06)

Note. Analysis of simple main effects shows that means with a different superscript differ significantly ($p < .05$). Standard deviations are given in parentheses.

these manipulations were successful. Subjects correctly perceived the status differential in the high and low conditions, and were also aware of whether they had been categorized as exhibiting low or high group identification. Moreover, subjects reported significantly different levels of identification with not only the ingroup but also the outgroup, the less direct indicator of group indentification. The latter finding suggests that subjects were not simply reporting the recalled feedback, but had to some extent generalized and internalized the degree of involvement implied by the manipulation (and the effects on further dependent variables can be taken as further evidence for the success of this manipulation). To our knowledge, this is the first time that group identification has been manipulated in this way. Because identification is associated with particular groups and group history, this has tended to rule out experimental manipulation, with all the problems of inferring causal relationships that this entails (although the group salience manipulations employed by Oakes (1987) with success can have effects similar to those predicted for identification, the concepts are distinct with identification imply-ing a more enduring sense of commitment, which can be cued and perhaps intensified by the contextual salience of the group). The procedure adopted here suggests that group identification may be open to experimental analysis after all, making causal inferences less problematic. In the present case, taken together with the evidence of the effects of identification in the first study, the results of the second study would seem difficult to ascribe to potential confounds that may pose a problem when investigating natural groups. The fact that we employed laboratory groups, the group labels of which were pretested as being equivalent, was also an important aspect of our design. Thus expectations and real differences associated with these groups cannot account for or have contaminated these results, as could have been the case in the first study.

In terms of the ratings of the two groups on the measures of central tendency we found both evidence of an ingroup bias effect, as manifested in a target group main effect, as well as evidence that subjects acknowledged intergroup differences on the status defining dimension, as manifested by the two way interaction. On the status defining dimension, subjects in the high status group rated their group as better than the outgroup, whereas there was no significant difference for ratings of ingroup and outgroup for the low status subjects (which itself may be seen as evidence of some ingroup bias, given the status manipulation). The main effect of target group on the alternative dimensions provides clear evidence of ingroup bias as found in many intergroup studies.

The more theoretically interesting finding from the point of view of this study however concerns the ratings of ingroup (and outgroup) variability. We obtained the same two-way interaction as found in the first study. This not only replicates the earlier finding with a different social category, but as indicated above it also addresses particular methodological weaknesses of the previous study, as well as using a different and more sophisticated dependent measure.

As predicted, group identification had little or no effect on ingroup variability estimates for people belonging to a high status group. However, identification did significantly moderate variability judgements for low status group members. Whereas in low status groups low identifiers tended to emphasize the *heterogeneity* within the group, by comparison high identifiers tended to emphasize the *homogeneity* within the low status group. This effect was identical for both status-related and alternative positive dimensions, and also for judgments of the outgroup as well as the ingroup. The fact that the measure was a more sophisticated indicator of the range or variability within the group than the simple similarity scale used in the earlier study would seem to further underscore the robustness of these findings.

Once again, these findings suggest that high and low identifiers tend to have different perceptions of their groups and/or adopt different identity management strategies when their group image is threatened by unfavorable social comparisons. It would seem that high identifiers who probably feel quite committed to their group, retain faith in it in the face of negative social comparisons, and try to cope with this identity threat as a group. They stick by their group by emphasizing its homogeneity, even when this would seem costly in terms of their own and their group image. This suggests a collective strategy, whereby concerns of solidarity, cohesiveness, and self-definition in terms of one's group would seem to outweigh self-enhancement in general or individualistic terms. Low identifiers, on the other hand, do not share this commitment, and appear more predisposed to protect their own personal identity by emphasizing the heterogeneity in the group, enabling them to dissociate themselves from it as well as undermining the basis for the unfavorable intergroup differences. The effect for the low identifiers is similar to the findings of earlier research by Doosje et al. (in press), although that research employed a different paradigm, being concerned judgments on the basis of sample information, whereas the present variability judgments were more freely generated. Again, it is important to note that parallel effects were obtained for ingroup and outgroup variability ratings, indicating that group members are more concerned with emphasizing the distinctiveness (in the case of high identifiers) or the overlap (in the case of low identifiers) between the groups, than with accentuating the *relative* homogeneity or heterogeneity of the ingroup vis-à-vis the outgroup.

On this last point it is also important to emphasize that the results of the this study provide no evidence of an outgroup homogeneity effect—there was no main effect of ratings of ingroup versus outgroup variability. This tends to add weight to the arguments of social identity and self-categorization theorists that question the universality of this effect, as well as pointing to the countervailing phenomenon of ingroup homogeneity (e.g., Haslam et al., in press; Oakes et al., 1994; Simon, 1992). In a recent review Ostrom and Sedikides (1992) suggest that the outgroup homogeneity effect is less evident for minimal than for natural groups and to the extent that our results used a fairly minimal group,

they are consistent with this finding. However, the fact that we successfully manipulated identification would tend to undermine motivational explanations for this asymmetry that view outgroup homogeneity as a form of negative stereotyping stemming from (high) identification with the ingroup (see e.g., Quattrone, 1986).

GENERAL DISCUSSION

The findings from both of these studies provide support for our prediction and analysis that group identification is a crucial moderator of perceived group variability as a function of relative group status. When group status is low, low identifiers indicate greater ingroup variability. Thus, they seem to imply that although it may well be that the ingroup compares negatively to the relevant comparison group, this is not necessarily the case for all group members (cf. Doosje et al., 1993). The opportunity to set themselves apart from the rest of the group, or to blur group boundaries is one way to render ingroup inferiority more palatable. However, compared to the low identifiers, low status/high identifiers tend to emphasize group homogeneity. The solidarity with the group implied by rejecting the heterogeneity strategy suggests that social identity can have an intrinsic value to the person that outweighs considerations of positive evaluation in more individualistic terms.

Overall it is important to take the findings of both of these studies in combination, with the strengths of each complementing the weakness of the other. The first study provides evidence for the interaction of status and identification effect in a natural group and therefore lends external validity to this phenomenon. Methodological weaknesses are addressed in the follow-up study, reinforcing the internal validity of this finding. Having established evidence of this effect, certain questions remain as to the precise underlying mechanism(s). If the effects for high and low identifiers reflect the differential importance of personal and collective identity respectively, differences would be expected on measures or correlates of these. Clearly, the fact that we manipulated group identification makes measurement thereof rather tautological (indeed our manipulation reflects the assumed mediating role of this variable). A more independent indicator would however be provided by measurements of personal and collective esteem. If perceived group homogeneity reflects a strategy for asserting or protecting the collective self, we might expect this to be reflected in relatively high collective esteem compared to low identifiers (cf. Crocker & Luhtanen, 1990). However, the fact that we found an identical pattern for judgments of the outgroup in the second study suggest that such sociomotivational factors relating to the ingroup may not be the full story (although perceiving the outgroup to be homogeneous can contribute to the distinctiveness of the ingroup). The symmetrical effect for ingroup and outgroup also suggest an intergroup differentiation process, presumably facilitated by group identification and the salience of the intergroup dimension. Identification could therefore underlie both sociomoti-

vational and cognitive contributions to the perceived homogeneity of both groups, and further research might investigate the mediating role of these components in more detail.

In summary, whereas the heterogeneity strategy can be regarded as a social creativity strategy directed at enhancing self-evaluation, the relative homogeneity displayed by the low status high identifiers reflects a more group level strategy. It is important to stress the beneficial functions of such judgments for the group. Emphasizing homogeneity may not only provide solace to group members by highlighting their collective plight ("we are all in this together"), it may also enable them to "close ranks" and thereby facilitate group action directed at challenging the status hierarchy (Tajfel & Turner, 1986). Group homogeneity may therefore form an important perception that perhaps even literally prevents the group from breaking up in the face of threatening social comparisons, while providing a platform from which to challenge these comparisons in the intergroup arena.

REFERENCES

Brewer, M. B. (1979). Ingroup bias in the minimal group situation: A cognitive motivational analysis. *Psychological Bulletin*, **86**, 307–324.

Brown, R. J., & Ross, G. F. (1982). The battle for acceptance: An investigation into the dynamics of intergroup behaviour. In H. Tajfel (Ed.), *Social identity and intergroup relations* (pp. 155–178). Cambridge: Cambridge Univ. Press.

Crocker, J., & Luhtanen, R. (1990). Collective self-esteem and ingroup bias. *Journal of Personality and Social Psychology*, **58**, 60–67.

Doosje, B. (1992). *Stereotyping*. Unpublished raw data, University of Amsterdam.

Doosje, B., Spears, R., & Koomen, W. (in press). When bad isn't all bad: The strategic use of sample information in generalization and stereotyping. *Journal of Personality and Social Psychology*.

Ellemers, N. (1993). The influence of socio-structural variables on identity enhancement strategies. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 4, pp. 27–57). New York: Wiley.

Ellemers, N., van Rijswijk, W., Roefs, M., & Simons, C. (1993). *Bias in intergroup perceptions: Balancing group identity with social reality*. Research report, Free University Amsterdam.

Ellemers, N., Wilke, H., & Van Knippenberg, A. (1993). Effects of the legitimacy of low group or individual status on individual and collective identity enhancement strategies. *Journal of Personality and Social Psychology*, **64**, 766–778.

Gerard, H. B. (1964). Physiological measurement in social psychological research. In P. H. Leiderman & D. Shapiro (Eds.), *Psychobiological approaches to social behavior* (pp. 43–58). Stanford: Stanford Univ. Press.

Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, **102**, 4–27.

Haslam, S. A., Oakes, P. J., Turner, J. C., & McGarty, C. (in press). Social identity, self-categorization and the perceived homogeneity of ingroups and outgroups: The interaction between social motivation and cognition. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition* (Vol. 3). New York: Guilford.

Hewstone, M., Jaspars, J., & Lalljee, M. (1982). Social representations, social attribution and social identity: The intergroup images of "public" and "comprehensive" schoolboys. *European Journal of Social Psychology*, **12**, 241–269.

Hinkle, S., & Brown, R. (1990). Intergroup comparisons and social identity: Some links and lacunae. In: D. Abrams & M. A. Hogg (Eds.), *Social identity theory: Constructive and critical advances* (pp. 48–70). New York: Harvester Wheatsheaf.

Jones, E. E., & Sigall, H. (1971). The bogus pipeline: A new paradigm for measuring affect and attitude. *Psychological Bulletin,* **76,** 349–364.

Jones, E. E., Wood, G. C. & Quattrone, G. A. (1981). Perceived variability of personal characteristics in in-groups and out-groups: The role of knowledge and evaluation. *Personality and Social Psychology Bulletin,* **7,** 523–528.

Kashima, E. S., & Kashima, Y. (1993). Perceptions of general variability of social groups. *Social Cognition,* **11,** 1–21.

Kelly, C. (1989). Political identity and perceived intragroup homogeneity. *British Journal of Social Psychology,* **28,** 239–250.

Lemaine, G. (1974). Social differentiation and social originality. *European Journal of Social Psychology,* **4,** 17–52.

Linville, P. W., Salovey, P., & Fischer, G. W. (1986). Stereotyping and perceived distributions of social characteristics: An application to ingroup-outgroup perception. In J. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination and racism* (pp. 165–208). New York: Academic Press.

Marques, J. M., Yzerbyt, V. Y., & Leyens, J. Ph. (1988). The black sheep effect: Judgemental extremity towards ingroup members in inter- and intra-group situations. *European Journal of Social Psychology,* **18,** 1–16.

Marques, J. M., & Paez, D. (1994). The "Black Sheep effect": Social categorization, rejection of ingroup deviates, and perception of group variability. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology* (Vol 5, pp. 37–68). New York: Wiley.

Mlicki, P. P., & Ellemers, N. (1995). Being different or being better? National stereotypes and identifications of Polish and Dutch students. *European Journal of Social Psychology,* **25.**

Mullen, B., Brown, R., & Smith, C. (1992). Ingroup bias as a function of salience, relevance, and status: An integration. *European Journal of Social Psychology,* **22,** 103–122.

Mummendey, A., & Schreiber, H. J. (1983). Better or just different? Positive social identity by discrimination against or differentiation from outgroups. *European Journal of Social Psychology,* **13,** 389–397.

Mummendey, A., & Schreiber, H. J. (1984). Different just means better: Some obvious and some hidden pathways to ingroup favouritism. *British Journal of Social Psychology,* **23,** 363–368.

Oakes, P. J. (1987). The salience of social categories. In J. C. Turner, M. A. Hogg, P. J. Oakes, S. D. Reicher, & M. S. Wetherell. *Rediscovering the social group: A self-categorization theory* (pp. 117–141). Oxford: Blackwell.

Oakes, P. J., Haslam, S. A., & Turner, J. C. (1994). *Stereotyping and social reality.* Oxford: Blackwell.

Ostrom, T. M., & Sedikides, C. (1992). Outgroup homogenity effects in natural and minimal groups. *Psychological Bulletin,* **112,** 536–552.

Park, B., & Judd, C. M. (1990). Measures and models of perceived group variability. *Journal of Personality and Social Psychology,* **59,** 173–191.

Park, B., Judd, C. M., & Ryan, C. S. (1991). Social categorization and the representation of variability information. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 2, pp. 211–245). New York: Wiley.

Park, B., & Rothbart, M. (1982). Perception of outgroup homogeneity and levels of social categorization: memory for the subordinate attributes of ingroup and outgroup members. *Journal of Personality and Social Psychology,* **42,** 1051–1068.

Quattrone, G. A. (1986). On the perception of a group's variability. In S. Worchel & W. G. Austin (Eds.), *Psychology and intergroup relations* (pp.25–48). Chicago: Nelson-Hall.

Quattrone, G. A., & Jones, E. E. (1980). The perception of variability within in-groups and outgroups: Implications for the law of small numbers. *Journal of Personality and Social Psychology,* **38,** 141–152.

Sachdev, I., & Bourhis, R. Y. (1987). Status differentials and intergroup behaviour. *European Journal of Social psychology*, **17**, 277–293.

Simon, B. (1992). The perception of ingroup and outgroup homogeneity: Reintroducing the intergroup context. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 3, pp. 1–30). New York: Wiley.

Simon, B., & Brown, R. J. (1987). Perceived intragroup homogeneity in minority-majority contexts. *Journal of Personality and Social Psychology*, **53**, 703–711.

Simon, B., & Pettigrew, T. F. (1990). Social identity and perceived group homogeneity. *European Journal of Social Psychology*, **20**, 269–286.

Spears, R., & Manstead, A. S. R. (1989). The social context of stereotyping and differentiation. *European Journal of Social Psychology*, **19**, 101–121.

Tajfel, H. (1978). Social categorization, social identity and social comparison. In H. Tajfel (Ed.), *Differentiation between social groups: Studies in the social psychology of intergroup relations* (pp. 61–76). London: Academic Press.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of social conflict. In W. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations.* (pp. 33–47). California: Brooks/Cole.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *The psychology of intergroup relations* (pp. 7–24). Chicago: Nelson-Hall.

Turner, J. C. (1975). Social comparison and social identity: Some prospects for intergroup behaviour. *European Journal of Social Psychology*, **5**, 5–34.

Turner, J. C. (1981). The experimental social psychology of intergroup behaviour. In J. C. Turner & H. Giles (Eds.) *Intergroup behaviour* (pp. 66–101). Oxford: Blackwell.

Turner, J. C. (1985). Social categorization and the self-concept: A social-cognitive theory of group behavior. In E. J. Lawler (Ed.), *Advances in Group Processes: Theory and Research* (Vol. 2, pp. 77–122). Greenwich: JAI Press.

Turner, J. C., & Brown, R. J. (1978). Social status, cognitive alternatives and intergroup relations. In H. Tajfel (Ed.), *Differentiation between social groups; Studies in the social psychology of intergroup relations* (pp. 201–234). London: Academic Press.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory.* Oxford: Blackwell.

Turner, J. C., Hogg, M. A., Oakes, P. J., & Smith, P. M. (1984). Failure and defeat as determinants of group cohesiveness. *British Journal of Social Psychology*, **23**, 97–111.

Van Knippenberg, A. (1978). Status differences, comparative relevance, and intergroup differentiation. In H. Tajfel (Ed.), *Differentiation between social groups: Studies in the social psychology of intergroup relations* (pp. 171–199). London: Academic Press.

Van Knippenberg, A. (1984). Intergroup differences in group perceptions. In H. Tajfel (Ed.), *The social dimensions: European developments in social psychology* (pp. 560–578). Cambridge: Cambridge Univ. Press.

Van Knippenberg, A. (1989). Strategies of identity management. In J. P. van Oudenhoven & T. M. Willemsen (Eds.), *Ethnic minorities: A social psychological perspective* (pp. 59–76). Lisse: Swets & Zeitlinger.

Van Knippenberg, A., & Ellemers, N. (1990). Social identity and intergroup differentiation processes. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 1, pp. 137–169). New York: Wiley.

Van Knippenberg, A., & van Oers, H. (1984). Social identity and equity concerns of intergroup perceptions. *British Journal of Social Psychology*, **23**, 51–361.

Wagner, U., Lampen, L., & Syllwasschy, J. (1986). In group inferiority, social identity and ingroup devaluation in a modified minimal group study. *British Journal of Social Psychology*, **25**, 15–23.