Homogeneity Perception as a Reaction to Identity Threat: 
Effects of Status Difference in a Simulated Society Game

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Abstract

The present study examined how members of low status groups would react to a threat to their social identity. Undergraduates participated in a “simulated society game,” and were divided into four groups, each of which was assigned either a high or low status. During a series of game sessions with intergroup competition and cooperation, participants estimated the range of distributions among in-group and out-group members regarding various traits. The central tendency and variability derived from each estimate were analyzed. Members of the low status groups deprecated their in-group with respect to a status-defining trait, but showed in-group favoritism regarding alternative, status-irrelevant traits. Furthermore, the low status members judged their in-group as more homogeneous than the out-group regarding the alternative traits, particularly when they were compared to a high status group. The results were interpreted as an indication of a subtle form of maintaining positive in-group evaluations. Theoretical and methodological implications for the study of status effects are discussed.
Homogeneity Perception as a Reaction to Identity Threat:

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It is the central tenet of Social Identity Theory (SIT) that members of social groups are driven toward the enhancement of in-group evaluations (Tajfel & Turner, 1986). This theory maintained that the quest for achieving positive social identity gives rise to in-group favoritism and eventually leads to intergroup conflict. However, not every group in every context can achieve this simple form of in-group enhancement or maintenance. Rather, groups in a low status position face a dilemma between seeking positive in-group identity on one hand, and acknowledging the reality of their inferiority on the other (Ellemers, Van Rijswijk, Roefs, & Simons, 1997; Mummendey, Kessler, Klink, A., & Mielke, 1999; Sachdev & Bourhis, 1987).

As suggested by Tajfel and Turner (1986), members of groups under identity threat exhibit various ways to escape negative social identity. Substantial research has revealed the diversity of such processes, and attempts have been made to provide a framework for these findings (e.g., Blanz, Mummendey, Mielke, & Klink, 1998; Branscombe, Ellemers, Spears, & Doosje, 1999; Ellemers, 1993). The present study addressed two specific issues that still await clarification in the study of identity threat management; namely, the dimensional selectivity in group evaluations, and the perceived distinctiveness of the in-group.

Reactions to Identity Threat

A great deal of research has demonstrated that members of a low status group seek comparative dimensions that serve the achievement of positive social identity (e.g., Brewer, Manzi, & Shaw, 1993; Lemaine, 1984; Reichl, 1997; Mummendey & Simon, 1989). Members of disadvantaged groups indeed exhibit out-group favoritism along the dimension on which the status difference is defined (e.g., objective inferiority in a
tangible resource, the lack of competence in performing status-related tasks, and so forth). On the other hand, they often engage in active in-group enhancement along alternative dimensions such as morality traits including warmth, trustworthiness, and honesty (e.g., Cadinu & Cerchioni, 2001; Ellemers & Van Rijswijk, 1997; Mullen, Brown, & Smith, 1992). In fact, paying greater attention to “less competent but warmer” characteristics of low status groups is observed not only among the group members themselves, but also in an outsider’s view (e.g., Fiske, Xu, Cuddy, & Glick, 1999).

Members of low status groups may also claim the distinctiveness of their in-group, such as its homogeneity, instead of seeking positive group evaluations (Jetten, Spears, & Manstead, 1999; Karasawa, 1995; Simon, 1992). Restating this in statistical terms, positive social identity may be achieved with regard to the variability of the distribution of group characteristics, as well as to the central tendency which has traditionally been studied. In discussing group variability, it should first be noted that there is a well-established phenomenon in the social categorization literature, called the “out-group homogeneity effect” (OHE) (e.g., Ostrom & Sedikides, 1992; Park, Judd, & Ryan, 1991). That is, group members tend to regard the out-group as more homogeneous than the in-group. Furthermore, recent studies have revealed that group status is an important moderator. The OHE is especially pronounced when perceivers from a higher status group make judgments about a lower status target concerning characteristics related to the group stereotype (e.g., Brauer, 2001; Lorenzi-Cioldi, 1993). In contrast, low status group members show a reverse tendency of the “in-group homogeneity effect” (IHE). One plausible explanation for these effects is that high status perceivers holding the power to control others face a lower need to pay close attention to details (e.g., stereotype-inconsistent aspects) on the part of the target,
compared to low status or dependent perceivers (Fiske & Dépret, 1996). In addition, the status differential may impose a greater constraint on behavioral options for low status groups and may cause smaller variances of characteristics in reality (Guinote, Judd, & Brauer, 2002).

Researchers using the SIT perspective have approached the study of variability perception with a different theoretical emphasis. They maintain that the need for distinct social identity may facilitate the perception of in-group homogeneity among the members of low status groups (e.g., Simon & Brown, 1987; see also Doosje, Ellmers, & Spears, 1995; Ellemers & Van Rijswijk, 1997). Presumably, in-group homogeneity may imply the coherence or “entitativity” of the group and thus help the members acquire a sense of group distinctiveness (Simon, 1992). This SIT perspective uniquely predicts a dimensional specificity in homogeneity perception. That is, the IHE among members of an underprivileged group is more likely along dimensions that are not primarily related to the status differential. This is because acknowledging in-group homogeneity along a status-defining dimension would simply highlight an invariantly inferior characteristic of the in-group. Ellemers and Van Rijswijk (1997) demonstrated these possibilities in an experiment with a minimal group situation. Members of a high-status group perceived greater in-group homogeneity than those of low status regarding status-defining traits, whereas the pattern was reversed for status-irrelevant traits. At the same time, the high status group exhibited a greater amount of in-group favoritism than the low status group in the rating of the status-defining traits, but a reverse pattern was found for the irrelevant traits. The perception of in-group homogeneity along a status-irrelevant dimension thus appears to be related to the maintenance of positive social evaluations by the members of a low status group.
Methodological Problems

Despite these preceding attempts, a number of methodological problems make it difficult to evaluate their findings. First, studies on identity threat typically employed a two-group design with a high status in-group vis-à-vis low status out-group, or vice versa. The perceiver’s group status and the target status are completely confounded in this type of design. For instance, when high status group members show the OHE and low status group members simultaneously exhibit the IHE, we cannot determine whether one of these groups is biased, both groups are biased, or the low status group is more homogeneous in reality.

To disentangle this potential problem, Brauer (2001) employed a fully crossed 2 x 2 design. A high status group was judged by members of an equally high status group and by members of a low status group, and the same treatment was done for the low status target. The results indicated a general trend for the OHE regardless of status, but there was also a moderate tendency for low status groups to show a greater OHE than high status groups. Hence, results from the Brauer (2001) study seem to contradict, at least in part, evidence from the SIT view such as the findings by Ellemers and Van Rijswijk (1997). However, it is difficult to directly compare these studies due to a number of methodological differences. For instance, Brauer (2001) did not explicitly compare the status-relevant and irrelevant dimensions. On the other hand, Ellemers and Van Rijswijk (1997) did examine the dimensional relevance, but employed an atypical design assessing perceived variability for the in-group only and not for the out-group.

As a possible solution for this problem, the present study designed a fully-crossed high versus low status between the judge and target groups, while assessing judgments of variability for the in-group and out-group regarding both
status-defining and alternative trait dimensions. Using this method, we attempted to identify the source of the status effect on homogeneity perception and its dimensional specificity simultaneously in a single study.

Another problem addressed by the present study pertains to the types of groups to be investigated. Some previous studies have recruited participants from existing social categories and groups that are already conferred certain status, such as occupation (Brauer, 2001) and gender (Lorenzi-Cioldi, Eagly, & Stewart, 1995). However, these studies with actually existing groups are inevitably correlational, and the status variable may be contaminated by a number of extraneous variables. Also, it is generally difficult to calibrate the exact degree of “high” versus “low” status of actual groups.

Investigations with experimentally created groups can address this problem of internal validity. Yet, experiments with artificially created status differences tend to face the problem of external validity (Boldry & Kashy, 1999). Furthermore, participants in previous studies with manipulated status typically did not encounter actual group members in the experimental setting, regardless of whether the groups were drawn from natural contexts (Doosje, Ellemers, & Spears, 1995; Ellemers et al., 1997) or created using the minimal group paradigm (Doosje, Spears, & Koomen, 1995; Ellemers & Van Rijswijk, 1997; Simon & Hamilton, 1994). Research with an artificial imposition of status may be essential for the purpose of identifying the boundary conditions of investigated processes, but an important step toward the understanding of variability perception in a more natural setting is to examine judgments during on-going interactions among group members.

To achieve an optimal level of internal and ecological validity, the present study employed a simulated society game as the experimental task. This methodology
provides an excellent opportunity to examine actual intergroup and intra-group processes while allowing us to directly manipulate independent variables. Participants in this day-long simulation were divided into four groups modeling different "regions" in a global society. Two of the groups were conferred high status while the other two were assigned low status. After the first half of the game session was completed, a questionnaire was administered to assess participants’ estimates of how various traits were distributed among the in-group and out-group members. Some questions pertained to the affluence and competence in performing the game task of each region, which were directly relevant to the given group status, whereas other questions were about morality traits which were irrelevant to the status differential.

Hypotheses

To summarize the foregoing discussion, we postulated the following hypotheses on the basis of the SIT perspective with regard to judgments about the central tendency and variability in the distribution of group characteristics.

**Hypothesis 1.** In judgments of central tendency regarding status-defining traits, members of high status groups will show in-group favoritism over low status out-groups, whereas members of low status groups will exhibit out-group favoritism when compared to high status out-groups.

**Hypothesis 2.** In judgments of central tendency regarding status-irrelevant traits, low status group members will show stronger in-group favoritism than high status group members.

**Hypothesis 3.** Regarding the perception of group variability, members of the high status groups will show the OHE regarding both status-defining and irrelevant traits.

**Hypothesis 4.** Members of the low status groups will show the IHE regarding the status-irrelevant traits, but not regarding the status-defining traits.
Method

Participants

One hundred and thirty-four Japanese undergraduate students enrolled in a psychology class participated in the study as a part of their class activity. Nine respondents were excluded from the analyses because they failed to complete the questionnaires.

Experimental Material and Procedure

The present study employed the Simulated International Society (SIMINSOC) as the experimental material. The SIMINSOC was developed by Hirose (1990) and colleagues, based on other existing simulation games such as SIMSOC (Gamson, 1978) and Inter-Nation Simulation (Guetzkow, 1959) (see also Lwin & Hirose, 1997). The game consists of a series of six 50-minute long units called “phases” with a 10-minute intermission for each.

We administered four separate simulation game sessions on different days. The number of participants in each session ranged from 32 to 34. Each simulation session was made up of four “regions” named North, East, South, and West. Participants were randomly assigned to one of these as a "resident," and thus each region consisted of 7-10 residents. The North and West regions were assigned an affluent and dominant status in that they were provided, by the rules of the game, with institutions for production such as corporations and plantations. The other two regions, South and East, were deprived of such self-producing systems and typically had to provide a labor force for the higher status regions in order to gain resources for survival. Furthermore, residents of the North and West regions were given twice as many individual assets as were those in the South and East regions. Each player was given individual goals. They needed to accumulate personal profits and obtain popularity with other players.
Goals at a collective level were also institutionalized. Industry corporations had to 
maximize their profits, and the political parties needed to gain support from the 
residents for policies that they proposed. A number of other rules were specified with 
regard to employment, collective actions, public announcements, activities of political 
parties, inter-regional travel, the minimum requirement of individual assets for 
survival, and so forth.

As in other typical cases, the present game sessions generally proceeded in the 
following manner. During the early phases, each region developed their social identity, 
and inter-regional conflicts arose rapidly. The affluent regions often attempted 
exploitation of the poorer regions in order to maintain or enlarge their economic 
advantage while the latter suffered unemployment and starvation. On the other hand, 
the wealthy regions needed to avoid threats from the disadvantaged regions such as 
terrorism. The high status regions, therefore, normally shifted to intergroup 
cooperation, making efforts to share part of their profits with the disadvantaged 
regions.

After the day-long sessions were completed, participants were thoroughly 
debriefed and they discussed their experiences during the game.

**Dependent Measures**

All of the dependent variables were measured by a questionnaire called the 
“Interim Opinion Survey” which was administered during the recess between Phases 3 
and 4. The questionnaire included a range estimate task which was incorporated 
from previous studies (Jones, Wood, & Quatronne, 1981; Park & Judd, 1990). A series 
of 60 mm lines with both ends labeled by the following traits, in a mixed order, were 
presented: “affluent – poor,” “skillful at playing the game – unskillful,” “trustworthy – 
untrustworthy,” and “considerate about others – not considerate.” (The fist two traits
were defining features of the imposed status difference, whereas the latter two were irrelevant to the bases for the status differential.) On each line, participants were asked to bracket the range that they thought included all members of the in-group. They also made the judgments for an out-group. Figure 1 shows a schematic representation of how we manipulated the status of the target out-group. (For the sake of simplicity, all regions are depicted to have the same size.) Half of the participants, within the same region, were randomly assigned the out-group target which had the same status as the in-group (e.g., West for the North residents, East for the South residents). The remaining half was given one of the out-groups that had a status different from the in-group status (e.g., West or North for the East residents). The order of the in-group judgment and the out-group judgment was counter-balanced.

Because previous studies demonstrated that the strength of in-group identification was influenced by the group status (e.g., Ellemers & Van Rijswijk, 1997), we measured this variable as a potential correlate of the range estimates. The questionnaire included questions regarding the extent to which participants “felt attachment to the region,” “were glad to be a resident of the region,” and “felt unity with the region.” In order to enhance the reliability of the identification measure, these three questions were repeated in the “Post-Game Opinion Survey” which was administered after all of the phases were completed. Scores from the six responses were averaged for each respondent (Cronbach’s $\alpha = .91$).

**Experimental Design**

Each participant made range estimates for the in-group and for the out-group on all trait dimensions. Hence, the target group identity (i.e., in-group vs. out-group) and
the trait distinction (i.e., status-defining vs irrelevant) were both treated as repeated measures. Responses by participants in the same region, however, were potentially interdependent because of actual interactions. Therefore, regions, rather than individual participants, were treated as the unit of analysis.² Because we administered the simulation sessions on four separate days, there were 16 regions submitted for the analysis (i.e., n = 16). With the region as the unit of analysis, the comparison between the high status out-group condition and the low-status out-group condition should be treated as a within-region factor. (These conditions are illustrated in Figure 1 with dotted lines.) Within each region (e.g., West), ratings were combined for members rating the similar status out-group (i.e., North target), and for those rating the different status out-groups (i.e., South and East targets). This resulted in a 2 (in-group status: high vs. low) x 2 (comparative out-group status: high vs. low) x 2 (target identity: in-group vs. out-group) x 2 (judged trait: status-defining vs. irrelevant) mixed design, with the first factor as a between-region variable and the remaining as within-region variables.

Results

Scale Construction

The range estimates were converted proportionally so that scores range from 0 to 10. The data were analyzed with regard to two parameters, the mid-point (i.e., the central tendency) and the width (i.e., variability) of the estimated range. The two traits, “affluent” and “skillful players of the game,” were assumed to constitute a status-defining dimension, whereas “trustworthy” and “considerate” were considered to be irrelevant to the status differential. However, the correlations between variability scores regarding the former two items were all non-significant (.09 < rs < .44, all n.s.),
while variability scores from the latter two items were all significantly correlated ($r_s < .91$, all $p < .05$). Hence, we decided to employ affluence alone as the directly status-defining trait. We regarded this as a reasonable solution because affluence was conferred to each region by the rule of the game whereas skill needed to be inferred indirectly by the participants. As for the alternative morality dimension, we averaged trustworthiness and considerateness both in the central tendency scores and in variability scores.

**Estimates of Central Tendency**

A $2 \times 2 \times 2 \times 2$ Analysis of Variance (ANOVA) on the estimated central tendency showed significant main effects for in-group status, $F(1, 14) = 10.59$, $p < .01$, and for out-group status, $F(1, 14) = 10.80$, $p < .01$, as well as a significant in-group status x target interaction, $F(1, 14) = 15.19$, $p < .01$, and a significant out-group status x target interaction, $F(1, 14) = 21.45$, $p < .001$. Moreover, all of these effects were qualified by significant 3-way interactions involving the trait factor (i.e., in-group status x target x trait, $F(1, 14) = 13.04$, $p < .01$; out-group status x target x trait, $F(1, 14) = 35.99$, $p < .001$). Therefore, further analyses were conducted separately for the affluence and morality dimensions.

For the affluence dimension, the first four effects listed above were all significant. Most importantly, the in-group status x target interaction, $F(1, 14) = 18.26$, $p < .001$, and the out-group status x target interaction, $F(1, 14) = 53.83$, $p < .001$, were significant. As the top panel of Table 1 indicates, analyses of simple effects showed that members of high-status groups rated their in-group as more affluent than the out-group ($M_{\text{in}} = 5.45$, $M_{\text{out}} = 4.28$; $F(1, 14) = 5.82$, $p < .05$), whereas members of low-status groups showed an exactly reversed pattern ($M_{\text{in}} = 3.26$, $M_{\text{out}} = 4.85$; $F(1, 14) = 10.58$, $p < .01$). Likewise, the out-group was perceived to be more affluent than the
in-group when the out-group status was high status (M$_{in}$ = 4.26, M$_{out}$ = 5.66; F(1, 14) = 16.48, p < .01) while the results were reversed when the out-group was assigned low status (M$_{in}$ = 4.46, M$_{out}$ = 3.47; F(1, 14) = 8.25, p < .05). Thus, participants' perception of regional affluence directly reflected the reality of the imposed status relationship. These results were consistent with Hypothesis 1.

Turning to the morality traits, the ANOVA revealed that the target main effect was the only significant effect, F(1, 14) = 5.66, p < .05. Overall, the in-group was perceived to be more trustworthy and considerate compared to the out-group (M$_{in}$ = 5.14; M$_{out}$ = 4.41). Although the in-group status x target interaction did not reach significance (F < 1), planned comparisons were conducted separately for high status and low status in-group conditions in order to test Hypothesis 2. The results showed that the tendency for in-group favoritism approached significance among low status group members (M$_{in}$ = 5.17; M$_{out}$ = 4.17; F(1, 14) = 4.75, p < .07), whereas no such effect was observed among high status group members (M$_{in}$ = 5.11; M$_{out}$ = 4.65; F(1, 14) = 1.00, ns). Hence, Hypothesis 2 received support.

**Variability Judgments**

The overall 4-way ANOVA showed that interactions of in-group status x target, F(1, 14) = 7.36, p < .05, in-group status x target x trait, F(1, 14) = 4.7, p < .05, and out-group status x target x trait, F(1, 14) = 13.40, p < .01, were significant. Because higher order interactions involving trait were significant, the analyses were again conducted separately for each type of trait.

With regard to affluence, the in-group status x target interaction was the only significant effect, F(1, 14) = 15.39, p < .01. Simple effect analyses revealed that
members of high status regions estimated the out-group as less variable than the in-group ($M_{\text{in}} = 5.84; M_{\text{out}} = 4.43, F(1, 14) = 9.56, p < .01$), while the residents of low-status regions perceived the in-group and the out-group as equally variable ($M_{\text{in}} = 3.99; M_{\text{out}} = 4.49, F(1, 14) = 1.21, \text{n.s.}$) (see the top half of Table 2).

As for the morality traits, a significant 3-way interaction between in-group status, out-group status, and target was found, $F(1, 14) = 8.91, p < .01$. As the lower part of Table 2 illustrates, an IHE was found when the in-group status was low and the comparative out-group was high status ($M_{\text{in}} = 4.39; M_{\text{out}} = 5.28, F(1, 14) = 8.25, p < .05$). None of the remaining conditions produced significant differences between the in-group and out-group targets ($Fs < 1$).

Hence, Hypothesis 3, which predicted an OHE among high status group members, received limited support with regard to the status-defining trait of affluence. Hypothesis 4 predicted that low status groups would show the IHE on the alternative trait dimension of morality, and this was supported particularly when the comparison target was a high status out-group.

**Discussion**

It has been the main thrust of social identity research that group members are motivated to achieve positive in-group evaluation. This tendency has been assumed to be manifested typically as in-group favoritism in judgments and behaviour. Yet, the present results, along with findings from other studies, have shown that members of underprivileged groups may seek positive social identity in subtle manners rather than merely pursuing group superiority. As expected, this subtlety was reflected in the selectivity of a comparative dimension, and in the perception of group homogeneity.
The participants assigned to low status groups certainly acknowledged their disadvantage in resource accessibility, and deprecated the in-group. However, when the judgments involved morality traits which had no direct relevance to the status difference, they showed in-group favoritism.

Furthermore, the low status group members judged the in-group members to be more homogeneous in morality. Interestingly, this in-group homogeneity effect was significant especially when they compared themselves to a high status out-group. It seems plausible that the equally low status out-group was not a threat to positive in-group identity, and did not cause homogeneity perception. As mentioned earlier, it is a relatively common finding from previous studies that low status groups show the IHE while high status groups show the OHE (e.g., Brauer, 2001; Lorenzi-Cioldi, 1998; Guinote et al., 2002). However, the present study demonstrated that these effects were qualified by the comparison dimension. That is, the OHE among the high status groups was observed only for the status-defining trait of affluence. Also, the low status groups indeed showed a trend for the common IHE for affluence, but the effect was not statistically significant. It should be emphasized that the most notable and unequivocal result concerning perceived variability was the IHE among the low status group members regarding the morality traits. This effect was especially visible when the high status out-group was presented as the comparison target. These findings corroborate the suggestion by Ellemers and Rijswijk (1997) that the IHE is likely to take place among low status group members particularly for traits that are not status-defining.

According to the SIT view, the most plausible explanation for the present finding, namely, in-group favoritism and the IHE among low status group members in comparison with a high status out-group, seems to be a reaction to the threat to social identity. However, direct evidence for the assumed processes is yet to be obtained.
Further research is necessary to empirically test the hypothesized processes.

Another important feature of the present study lies in its methodological contribution. The above discussions were all made possible by a full factorial design in which the in-group status, out-group status, and the status-relevance of judgments were systematically manipulated. Our fully crossed design successfully disentangled the potential confound between the status of the judges’ group and that of the target group, and revealed the importance of which status was assigned to the comparison out-group. In addition, the study demonstrated that the simulated society game was useful for solving the dilemma between the need for internal validity and the problem of ecological validity. Through this methodology we established a highly naturalistic and engaging intergroup context in the experimental setting, while executing random assignment with regard to the status relationship. Efforts to provide internal as well as external and ecological validities should be continued by researchers of group status and intergroup perception.

The study of how members of a low status group react to threats to their identity has a long tradition. In accordance with the point made by Tajfel and Turner (1986) in their original formulation of SIT, evidence shows that group members exhibit many different forms of identity management. The present study demonstrated that the perception of central tendency and group variability, as well as the dimension selected for intergroup comparison, plays important roles in such attempts of achieving and maintaining positive social identity among the members of disadvantaged groups.
References


Table 1. Means of Perceived Central Tendency

<table>
<thead>
<tr>
<th>Trait</th>
<th>Target</th>
<th>In-Group Status</th>
<th>High</th>
<th>Low</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Group Status</td>
<td>High</td>
<td>Low</td>
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<td></td>
<td></td>
<td></td>
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<td>Affluence</td>
<td>In-Group</td>
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<td>5.62</td>
<td>3.23</td>
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<td>(Status-Defining)</td>
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<td>(.84)</td>
<td>(.93)</td>
<td>(.98)</td>
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<td></td>
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<td></td>
<td></td>
<td>(1.22)</td>
<td>(1.15)</td>
<td>(.72)</td>
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<tr>
<td>Morality</td>
<td>In-Group</td>
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<td>5.08</td>
<td>5.40</td>
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<td>(Alternative)</td>
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<td>(.63)</td>
<td>(.57)</td>
<td>(1.10)</td>
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<td>Out-Group</td>
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<td>4.89</td>
<td>4.29</td>
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<td></td>
<td></td>
<td>(.86)</td>
<td>(.59)</td>
<td>(.75)</td>
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- Estimated midpoints of ranges on a scale varying from 0.00 to 10.00
- Greater numbers indicate more positive ratings
- Standard deviations are given in parentheses
### Table 2. Means of Perceived Variability

<table>
<thead>
<tr>
<th>Trait</th>
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<th>In-Group Status</th>
<th>Out-Group Status</th>
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</thead>
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<td>Affluence</td>
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<td>Out-Group</td>
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<td>4.82</td>
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<td>(1.01)</td>
<td>(.86)</td>
</tr>
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</table>

- Estimated range on a scale from 0.00 to 10.00
- Standard deviations are given in parentheses
Figure Caption

Figure 1. A Schematic Representation of the Subgroups within Each Region Defined by the Out-Group Target in Ratings.

Notes. - Dotted lines represent the high versus low out-group status conditions within each region.
- All participants rated their in-group as well.
- The illustrated number of participants within each subgroup is merely an example. The actual number in the experiment varied.
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West North

High Status Regions

South East

Low Status Regions

High Status Out-Group Targets

- Participants rating North as the out-group target
- Participants rating West as the out-group target

Low Status Out-group Targets

- Participants rating East as the out-group target
- Participants rating South as the out-group target
Author Note

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Footnote

1 Because the experimental sessions had lasted three hours up to this point, participants had ample opportunities to acquire first-hand experiences with out-group members, not to mention with the in-group.

2 Concern may be raised that this procedure reduces the statistical power because of a smaller total number of “cases.” However, as Guinote et al. (2002) pointed out, averaging regional scores by combining individual responses makes the scores more stable, and hence the power of this test may not be as low as it appears. This is clearly a more recommended methodology than running the risk of treating data with dependency as if they were independent (Kenny, Kashy, & Bolger, 1998). Although it may be smaller than ideal, the present sample seems to be of reasonably acceptable size, in view of these points.

3 For the central tendency scores, generally high inter-trait correlations were found ( .31 < r < .73).

4 Other significant effects included the in-group status main effect, $F(1, 14) = 13.43$, $p < .01$, and the out-group status main effect, $F(1, 14) = 16.63$, $p < .01$. However, as evident in Table 1, these effects were completely qualified by the higher-order interactions reported in the text.

5 An additional analysis revealed that the manipulation of the in-group status also had a significant effect on the level of group identification. Members of the high status groups expressed greater group identification ($M = 3.78$) than the low status group members ($M = 3.19$) ($p < .05$). We therefore conducted a series of Analyses of Covariance (ANCOVAs) on each dependent measure, with the degree of identification as the covariate. The ANCOVA for perceived central tendency in morality showed that the in-group status x target interaction reached significance, $F(1, 13) = 8.06$, $p < .05$, and thus provided a stronger support for Hypothesis 2. For the remaining measures, namely, perceived central tendency in affluence and variability judgments in affluence and morality (which will be reported in the following section), the ANCOVAs yielded identical effects to the ones reported in the text.

6 In addition, the in-group status x out-group status interaction was significant, $F(1, 14) = 7.86$, $p < .05$, but this was unimportant because this was qualified by the 3-way interaction.