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When "Different" Means "Worse": In-group Prototypicality in Changing

Intergroup Contexts

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Abstract

An experiment with 213 participants provided evidence for in-group projection, i.e. the generalization of distinctive in-group attributes to a superordinate category. The study manipulated the frame of reference for in-group judgments (Germans) by presenting either Italians or the British as an out-group. Results showed that attributes on which Germans differed from the respective out-group were accentuated not only in in-group judgments but also when judging Europeans. By adapting features of the superordinate category to those of the in-group, the in-group's similarity to, and the out-group's deviation from, the prototype of the superordinate category were maintained, if not stressed. Further, higher in-group prototypicality – compared to out-group prototypicality - for the superordinate category was related to negative out-group attitudes. In-group projection was reduced when a complex representation of the superordinate category was primed.

Key words: IN-GROUP PROJECTION, RELATIVE PROTOTYPICALITY, SUPERORDINATE CATEGORY, INTERGROUP RELATIONS

When "Different" Means "Worse": In-group Prototypicality in Changing Intergroup

Contexts

Introduction

Real-life examples and empirical findings show that, group members often devalue and disadvantage other groups that seem different from their own. However, such social discrimination does not always occur. Our research aims to specify the conditions that produce negative attitudes and hostilities towards out-groups, as well as the conditions that allow for intergroup tolerance (for a review see Brewer & Brown, 1998). Recently, Mummendey and Wenzel (1999) suggested an in-group projection model that attempts to explain variations in how out-groups are evaluated. Based on social comparison theory (Festinger, 1954; Suls & Miller, 1977; Suls & Wheeler, 2000) and theories of intergroup relations (Tajfel & Turner, 1986; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), Mummendey and Wenzel assume that groups are compared with reference to dimensions provided by superordinate categories, which make intergroup comparisons possible. For instance, Catholics and Protestants are comparable because both groups can be regarded as examples of the superordinate category of Christians. In-group projection, according to Mummendey and Wenzel, is the tendency of group members to generalize distinctive attributes of their in-group to the superordinate category. The concept of in-group projection is distinct from the more general concept of social projection (see Allport, 1924; Campbell, Miller, Lubetsky, & O'Connell, 1964; Krueger, 1998; Mullen, Dovidio, Johnson, & Copper, 1992). Social projection operates at the interpersonal level and involves generalizing personal qualities to other individuals, often members of the in-group. In contrast, in-group projection operates at the intergroup level and involves the relationship between self-categories at different levels of inclusiveness. Ingroup

projection, just like social projection, probably reflects several motivational and cognitive processes (Krueger, 2000; Marks & Miller, 1987).

Mummendey and Wenzel's (1999) model specifies the consequences of in-group projection for the evaluation of out-groups. In-group projection increases the perception of the <u>prototypicality</u> of the in-group for the superordinate category - compared to the prototypicality of the out-group. This relative prototypicality of the in-group is the basis for ethnocentrism. Seeing the in-group as more prototypical than the out-group implies that the out-group deviates from the prototype of the superordinate category. This deviation justifies negative attitudes towards the out-group. Waldzus, Mummendey, Wenzel and Weber (2003) found, for example, that attitudes of Germans towards Poles were negatively related to the relative prototypicality for Europeans of Germans compared to Poles.

Recent studies have revealed evidence of in-group projection in several intergroup contexts (Wenzel, Mummendey, Weber, & Waldzus, 2003). In these studies, researchers compared the perspectives of two groups in an intergroup context and found that members of both groups disagreed about the relative prototypicality of their groups. The members of each group perceived their group as more prototypical for the superordinate category – compared to the out-group – than their group was perceived by members of the out-group. This divergence in perspectives is consistent with the in-group projection model. However, it is confounded with group membership, and thus does not provide unequivocal evidence for the model. Differences between natural groups in ratings on the same scale can be the outcome of other variables than those mentioned in the model, such as a different understanding of the items.

<u>Our Experiment</u>

Our experiment aims to show more directly that group members often generalize in-group attributes onto the superordinate category (in-group projection). This will be done by demonstrating that perceptions of the superordinate category depend on (varying) representations of the in-group, thus establishing and maintaining high relative in-group prototypicality. Specifically, we will show that in-group members adapt their perceptions of a <u>superordinate category</u> to context-specific in-group stereotypes. Our experiment goes beyond earlier research on in-group projection, which compared the perspectives of different groups, because it focuses on the perspective of just one group. Thus, our results will not be attributable to membership in different in-groups. While keeping the in-group constant, we will manipulate instead the <u>perceived in-group stereotype</u>. If variations in that stereotype are mirrored by variations in the attributes ascribed to the superordinate category, then generalization of in-group attributes to the superordinate category (in-group projection) will be apparent.

To manipulate in-group stereotypes while holding the in-group constant, we varied the frame of reference for intergroup comparisons (see also Diab, 1963; Haslam & Turner, 1992; Wilder & Shapiro, 1984). Comparisons with different out-groups should make different in-group attributes seem distinctive. Specifically, we asked German participants to judge their in-group and varied their frame of reference by presenting two different out-groups, namely Italians and the British. All participants had to rate Germans and one of these out-groups on a list of attributes, which included (a) stereotypical attributes that usually distinguish Germans from Italians rather than the British (Counter-Italian attributes: <u>correct, orderly, punctual, quiet, disciplined, stiff</u>) and (b) stereotypical attributes that usually distinguish

Germans from the British rather than Italians (Counter-British attributes: <u>easygoing,</u> <u>frank, companionable, in love with live, sociable, having tasty meals</u>). These 12 attributes were selected based on a pilot study with 54 German psychology students who rated Germans on a list of 20 attributes in comparison with Italians ($\underline{n}$ = 28) or with the British ($\underline{n}$ = 26). In this study, Germans were rated higher on all six counter-Italian attributes ($\underline{t}$s > 3.1 with <u>d.f.</u> = 52, $\underline{p}$s < .003) and lower on all six counter-British attributes ($\underline{t}$s < - 2.5, <u>d.f.</u> = 52, $\underline{p}$s < .014) when they were compared with Italians than when they were compared with the British.

The same accentuation of attributes was expected to emerge in ratings of Europeans, the superordinate category, because of the generalization of those in-group attributes to that category (in-group projection). Counter-Italian attributes were expected to be accentuated more strongly in judgments about Europeans when Germans compared their in-group with Italians rather than with the British. Counter-British attributes were expected to be accentuated more strongly in judgments about Europeans when Germans compared their in-group with the British rather than with Italians. Combining these opposing tendencies into one comparative hypothesis, we predicted that the accentuation of counter-British relative to counter-Italian attributes in judgments about Europeans would be stronger when Germans were compared with the British rather than with Italians (Hypothesis 1).

Waldzus and his colleagues (2003) found that a <u>complex representation</u> of the superordinate category can prevent in-group projection. In their research, Germans primed with a complex representation of Europeans perceived less relative in-group prototypicality (compared with a Polish out-group) than did Germans primed with a simple representation of Europeans. In our experiment, complexity was manipulated using the same priming procedure, and so we expected that the complexity of the

superordinate category would again moderate the generalization of in-group attributes to that category (Hypothesis 2). Specifically, different out-groups would affect the accentuation of specific attributes in ratings of Europeans when there was a simple representation of Europe, but not when that representation was complex (Hypothesis 2a). We also measured relative prototypicality of Germans (as Europeans) compared to each out-group (relative in-group prototypicality), along with attitudes towards that out-group. Complexity was expected to reduce relative in-group prototypicality (Hypothesis 2b). Moreover, we expected (as Waldzus and his colleagues found), that relative in-group prototypicality would be negatively related to attitudes towards the out-group (Hypothesis 3).

Finally, we tested whether the beneficial effects of complexity on attitudes towards the out-group are mediated by relative prototypicality (Hypothesis 4). Mummendey and Wenzel (1999) argued that a complex representation of the superordinate category would decrease in-group projection, and thereby produce more positive evaluations of the out-group.

Method

Participants

The experiment was announced as a "Europe Survey" on the Internet, with the alleged purpose of examining people's opinions about Europe, Germany and its neighbors. Participants could take part online. As an incentive, participants were included in a lottery with the chance to win 100 Euro (about 90 US$). The overall sample size was $N = 293$. Participants were later dropped from the sample if their Nationality was not German ($n = 30$), they thought that they had been influenced by participating in prior experiments ($n = 6$), they did not take our experiment seriously ($n = 7$), or they worked in the field of social psychology ($n = 36$). Participants who did

not follow the complexity manipulation instructions (as indicated by missing data) were also dropped ($\underline{n}$ = 5). Data analyses involving an extended sample ($\underline{N}$ = 258) of all German participants who followed the instructions revealed basically the same results as those reported here for our final sample ($\underline{N}$ = 213).

The 120 male and 93 female participants were between 18 and 55 years old ($\underline{M}$ = 27.97, $\underline{SD}$ = 14.93). The sample was very heterogeneous in terms of occupation and (among students), area of study. Gender and age did not differ significantly between experimental conditions and had no significant effects on the dependent variables.

Design

Aside from the two experimental manipulations, the order in which participants rated the in-group and out-group was counterbalanced and included as a further between-subjects factor. Thus, the experiment had a 2 (out-group: Italian vs. British) x 2 (complexity of superordinate category: complex vs. simple) x 2 (order of measurement: in-group first vs. out-group first) x 2 (attribute specificity: counter-Italian vs. counter-British) design with out-group, complexity and order as between subjects factors, and attribute specificity as within-subject factor. Participants were randomly assigned across the 8 conditions with 25 to 28 participants in each cell.

Dependent Measures

All ratings were made on 9-point scales ranging from – 4 (does not apply at all) to + 4 (applies very much).

Attribute accentuation. Participants had to rate the in-group (Germans), an out-group (Italian or British), and the superordinate category (Europe) on a list of attributes that included the 6 counter-Italian and 6 counter-British attributes. Ratings on counter-Italian and on counter-British attributes were averaged to create both a

counter-Italian scale and a counter-British scale (respectively) for (a) the in-group

(counter-Italian: α = .70, counter-British: α = .79); (b) the out-group (counter-Italian:

α = .88, counter-British: α = .90); and (c) the superordinate category (counter-Italian:

α = .68, counter-British: α = .85). Scores on the two scales were negatively correlated

for out-group ratings (r = - .76, p < .001), uncorrelated for in-group ratings (r = - .06,

p = .36) and positively correlated for the superordinate category (r = .24, p < .001).

Attitudes towards the out-group. Attitudes towards the out-group were

measured on an eight-item Likert-scale (α = .83) representing a broad range of issues,

such as sympathy (e.g., "I like the British [Italian] mentality"), readiness to interact

(e.g., "I think it is important to be in contact with the British [Italians]"), behavior

(e.g., "I would like to be able to speak British English [Italian]."), and tolerance (e.g.,

"With their differences, the German and British [Italian] cultures may very well be

complementary to one another").

Relative prototypicality. A relative prototypicality score was calculated from

the profiles of the attribute ratings for all groups. Profile dissimilarities between

ratings of the in-group and the out-group, and ratings of Europeans were calculated by

means of Euclidean distances[1]. The resulting distance measure could vary between 0

and 27.71, with lower scores indicating greater prototypicality for the superordinate

category. Relative prototypicality of the in-group was assessed by subtracting the

profile dissimilarity of the in-group from that of the out-group. The resulting measure

could vary between – 27.71 and 27.71, with higher scores indicating greater relative

prototypicality of the in-group.

Identification. To check the relevance of the intergroup context, levels of

identification with the in-group (α = .87) and the superordinate category (α = .92)

were assessed using two scales, each containing the same four items. These measures

only differed from one another in terms of the target group addressed: "I identify with Germans [Europeans]," "I have a negative attitude towards Germany [Europe]" (recoded), "I like being German [European]," "I feel like a German [European]."

Procedure

First, participants were asked to rate Germans and an out-group (Italian or British) on the six counter-British and six counter-Italian attribute items. The order of the attributes was randomized for each participant and each group. Moreover, the order (in-group first or out-group first) in which the two groups were rated was counterbalanced within each cell of the design.

After the in-group and out-group were rated, identification with the in-group was measured, followed by our manipulation of the complexity of the participants' representation of Europe. To prime a complex representation, participants were asked: "Please imagine, you would have to explain to somebody else what actually the diversity of Europe consists of!". To prime a simple (non-complex) representation, the word "diversity" was replaced by "unity". All participants were asked to type in some of their ideas in an open text-field on the computer screen.

The complexity manipulation was followed immediately by ratings of Europeans on the 12 attributes. Identification with the superordinate category was then measured, followed by the measurement of attitudes towards the out-group. At the end, participants were asked several control questions, which were used to exclude problematic persons (as described earlier). Finally, demographic data (age, gender, nationality) were collected and participants were asked to write comments about the study in an open text-field. These comments suggested that none of the participants had guessed our research hypotheses. Participants were also asked to type in their email addresses, which were checked to prevent anyone from participating more than

once. Later, after all data collection had ended, the winner of the 100 Euro was paid and a debriefing was sent to everyone via email.

<div align="center">Results</div>

If not otherwise noted, all significance tests were two-tailed with an alpha level of .05.

Group Identification

Identification with the in-group (M = 1.05, SD = 1.85) and with the superordinate category (M = 1.95, SD = 1.77) were not significantly affected by the experimental manipulations, Fs (2, 204) < 2.04, ps > .10. Both ratings were significantly above the scale midpoint of zero, ts(212) > 8.27, ps < .001. Thus, the participants identified with both the in-group and the superordinate category, which is – according to the in-group projection model – a necessary condition of in-group projection.

Manipulation Check

The out-group manipulation was assumed to change the accentuation of attributes for in-group ratings (the in-group stereotype). The out-group was first introduced when participants were asked to rate it on the attribute list. Recall that the order of measurement was counterbalanced (out-group first vs. in-group first). Thus, the out-group manipulation took place before in-group ratings were made in the out-group first condition, but after those ratings were made in the in-group first condition. As a result, in-group ratings in the in-group first condition measured the in-group stereotype before any explicit frame of reference was introduced, providing a baseline against which in-group ratings made in the out-group first condition could be compared.

For both order conditions, we conducted separate 2 (out-group) x 2 (attribute specificity) ANOVAs, with out-group as a between-subjects factor, attribute specificity as a within-subjects factor, and ratings of the in-group as the dependent variable. Attribute accentuation was assessed as the impact of the within-subjects factor (attribute specificity: counter-Italian vs. counter-British attributes) on participants' ratings. In the baseline analyses, including only ratings from the in-group first order condition, we found a significant main effect of attribute specificity, $F(1, 106) = 144.73$, $p < .001$, indicating a strong accentuation of counter-Italian vs. counter-British attributes. Without an explicit frame of reference, Germans were rated higher on counter-Italian attributes than on counter-British attributes (see Table 1, upper section). As expected, there was no significant main effect of out-group, nor did it interact with attribute specificity.

When we analyzed only ratings from the out-group first order condition, we found again a main effect of attribute specificity, $F(1, 103) = 69.30$, $p < .001$, and no main effect of out-group, $F(1, 106) < 1$. As expected, however, the attribute specificity effect was qualified by an interaction with out-group, $F(1, 103) = 10.42$, $p = .002$, $\eta^2 = .057$, indicating an effective manipulation. The accentuation of counter-Italian vs. counter-British attributes in ratings of the in-group (the attribute specificity effect) was much stronger when Germans compared themselves with Italians, $F(1, 103) = 63.70$, $p < .001$, $\eta^2 = .382$, rather than with the British, $F(1, 103) = 13.64$, $p = .001$, $\eta^2 = .117$. Thus, the in-group stereotype was changed by the out-group manipulation (see Table 1, out-group first condition).

Attribute Accentuation in Judgments about the Superordinate Category

In line with Hypothesis 1, in-group ratings and ratings of the superordinate category were positively correlated for counter-Italian items ($r = .37$, $p < .001$), and

for counter-British items (r = .23, p < .001). A more rigorous test of Hypothesis 1 would be the interaction between out-group and attribute specificity on ratings of Europe. A 2 (out-group) x 2 (complexity) x 2 (attribute specificity) ANOVA, with out-group and complexity as between-subjects factors, attribute specificity as a within-subjects factor, and ratings of the superordinate category as the dependent variable, yielded a significant main effect of attribute specificity, F(1, 209) = 143.42, p < .001. The superordinate category was rated lower on counter-Italian than on counter-British attributes. There were no significant main effects of out-group or complexity, and no complexity x out-group interaction. However, there was a two-way interaction between out-group and attribute specificity, F(1, 209) = 12.24, p < .001, η^2 = .033. As predicted by Hypothesis 1, the accentuation of counter-British vs. counter-Italian attributes in judgments about Europeans was stronger when Germans compared themselves with the British, F(1, 106) = 101.03, p < .001, η^2 = .484, rather than with Italians, F(1, 103) = 44.71, p < .001, η^2 = .296 (see the two right-hand columns in Table 2).

Complexity

There was no significant interaction between complexity and attribute specificity in the analysis just described. However, there was a significant three-way interaction, F(1, 209) = 4.62, p = .033, η^2 = .013, indicating that the interaction between attribute specificity and out-group was moderated by the complexity of the superordinate category (Hypothesis 2). Separate ANOVAs showed significant main effects for attribute specificity in both the simple condition, F(1, 102) = 76.08, p < .001, and the complex condition, F(1, 107) = 68.61, p < .001. However, as predicted by hypothesis 2a, there was a significant interaction between out-group and

attribute specificity when representation of Europeans was simple, $\underline{F}$(1, 102) = 17.36, $\underline{p}$ < .001, η^2 = .089, but not when it was complex, $\underline{F}$(1, 107) < 1 (see Table 2).

A 2 (out-group) x 2 (complexity) ANOVA on relative in-group prototypicality scores revealed a significant main effect of complexity, F(1, 209) = 3.77, p = .027 (one-tailed), η^2 = .017. In line with Hypothesis 2b, these scores were higher when there was a simple representation of Europeans ($\underline{M}$ = 1.52, $\underline{SD}$ = 3.09) than when that representation was complex ($\underline{M}$ = 0.69, $\underline{SD}$ = 3.23). There was also a marginal main effect for out-group, F(1, 209) = 3.81, p = .052, indicating that relative in-group prototypicality was slightly lower when Germans were compared to Italians ($\underline{M}$ = 0.67, $\underline{SD}$ = 3.47) rather than to the British ($\underline{M}$ = 1.51, $\underline{SD}$ = 2.84). The interaction between out-group and complexity was not significant.

Consequences of In-group Projection for Attitudes Towards the Out-group

Overall, attitudes towards the out-group were rather friendly ($\underline{M}$ = 1.26, $\underline{SD}$ = 1.41), significantly above the scale midpoint, $\underline{t}$(212) = 13.04, $\underline{p}$ < .001. In line with Hypothesis 3, attitudes were negatively correlated with relative in-group prototypicality ($\underline{r}$ = - .30, $\underline{p}$ < .001). One could argue that this correlation reflects a mere dissimilarity effect. However, when profile-dissimilarity between in-group and out-group attribute ratings was partialed out in a stepwise regression analysis, relative in-group prototypicality remained a significant predictor of attitudes towards the out-group (β = - .30, $\underline{p}$ < .001).

Effects of Complexity on Attitudes Towards the Out-group

In a 2 (out-group) x 2 (complexity) ANOVA for attitudes towards the out-group, there was a marginal main effect of out-group, $\underline{F}$(1, 209) = 3.23, $\underline{p}$ = .074. Attitudes were slightly more positive towards Italians ($\underline{M}$ = 1.43, $\underline{SD}$ = 1.33) than towards the British ($\underline{M}$ = 1.09, $\underline{SD}$ = 1.47). As predicted in Hypothesis 4, there was

also a main effect of complexity, $\underline{F}$(1, 209) = 3.32, p = .035 (one-tailed), η^2 = .015.

Participants had more positive attitudes towards the out-group when the

representation of Europeans was complex (M = 1.42, SD = 1.33) rather than simple

(M = 1.08, SD = 1.47). The interaction between out-group and complexity was not

significant. To test the mediation of the complexity effect by relative prototypicality,

we followed the recommendations of Kenny, Kashy, and Bolger (1998). The

significant effect of complexity on the mediator (relative in-group prototypicality) has

been shown already in the ANOVA reported earlier in this paper. In the next step, we

conducted a linear regression analyses with complexity and the mediator as predictors

and attitudes towards the out-group as criterion. We found that relative prototypicality

had a significant effect attitudes towards the out-group ($\underline{B}$ = - 0.13, $\underline{SE}$ = 0.03,

p < .001) while the direct effect of complexity on such attitudes ($\underline{B}$ = 0.23, $\underline{SE}$ = 0.19)

was partialed out. The indirect effect of complexity on attitudes toward the out-group

was calculated by combining the regression weight of complexity on relative

prototypicality ($\underline{B}$ = - 0.82, $\underline{SE}$ = 0.43) and of relative prototypicality on attitudes

towards the out-group ($\underline{B}$ = - 0.13, $\underline{SE}$ = 0.03, p < .001). This indirect effect was

significant ($\underline{B}$ = 0.11, $\underline{SE}$ = 0.06, p = .045, one-tailed), indicating a mediation by

relative in-group prototypicality (Hypothesis 4).

Discussion

This experiment provides evidence for in-group projection -- the

generalization of distinctive in-group attributes onto a superordinate category. In

previous studies, in-group projection was inferred from a discrepancy between the

perspectives of two groups in the same intergroup situation (Wenzel et al., 2003). We

took a different approach here, showing for the first time how group members can

change their perceptions of a superordinate category from one intergroup situation to

another in accordance with changes in their perceptions of the in-group. The comparison of an in-group (Germans) with different out-groups (Italians vs. British) resulted not only in the accentuation of different in-group attributes, but also in the projection of different attributes onto the superordinate category. By adapting their representation of the superordinate category, group members maintained their in-group's relative prototypicality across changing intergroup conditions. This finding substantiates the core assumption of the in-group projection model (Mummendey & Wenzel, 1999). That model also claims, and we found, that greater relative in-group prototypicality is associated with less positive attitudes towards the out-group. Finally, Mummendey and Wenzel suggested that a complex representation of the superordinate category could foster intergroup tolerance. We found support for this idea as well. The complexity of the superordinate category moderated in-group projection in our experiment. Perceptions of Europeans depended on which out-group was salient when participants had a simple representation of Europeans, but not when their representation was complex. Complexity also led to more positive attitudes towards the out-group, an effect that was mediated by projection.

We conclude that the whole configuration of in-group, out-group, and superordinate category must be taken into account when predicting intergroup behavior. This extends the traditional view of intergroup relations, which is limited to the in-group and the out-group and the relationship between them. Although the relevance of the superordinate category for intergroup comparisons is acknowledged by self-categorization theory, in-group projection makes it necessary to regard representations of the superordinate category not only as a given context for intergroup comparisons but as a variable, which is flexible and dependent on such comparisons.

The concept of the frame of reference, which is crucial in self-categorization theory, is usually assumed to depend on the out-group, which is at the same level of inclusiveness as the in-group. Perceptions of the in-group depend on the out-group with which it is compared. However, since the superordinate category is an in-group on a higher level of inclusiveness, our results suggest that the frame of reference might also be located within such an in-group: Europeans are perceived differently depending on the other Europeans with whom each nationality compares itself. Like a black sheep (Marques & Yzerbyt, 1988), who is derogated because it violates in-group norm, a sub-group might be derogated because it deviates from the prototype of the superordinate category. Focusing on one out-group rather than another influences the representation that in-group members have for the superordinate category, its prototype, and norms. Europeans are orderly, but only if Germans compare themselves with 'less orderly' Europeans, such as Italians. Similarly, Christian Americans may perceive America to be a Christian country not only in comparison with non-Christian countries, but also when they compare themselves with Muslim, Buddhist or agnostic Americans. The question of what Christianity means might itself evoke different answers, depending on the particular (less typical) Christian out-group salient in a given situation. Our experiment was limited, of course, to a particular intergroup context. Our hypotheses should be tested in other intergroup contexts.

The concept of in-group projection is also an extension of the view of intergroup relations taken in the common in-group identification model (Gaertner & Dovidio, 2000; Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993). That model also emphasizes the importance of superordinate categories, but suggests that simply making such categories salient will improve the relationships between groups. The

in-group projection model, in contrast, considers a second-order relationship (a relationship between relationships) of the in-group and out-group to the superordinate category. As a result, it is possible to make more differentiated predictions about the effects of salient superordinate categories on people displaying more or less in-group projection.

Although our results supported the in-group projection model, we did not provide evidence of causality as the metaphor of "projection" suggests. We do not know whether the transference of attributes from the in-group to the superordinate category is a unidirectional process. It is possible that there is also transference in the opposite direction, or that both kinds of transference are influenced by a third variable (see Campbell et al., 1964 for a similar discussion). In that case, in-group projection would become more like a tendency towards mutual overlap between representations of the in-group and the superordinate category (Smith, Coats, & Walling, 1999). Such an overlap might reflect cognitive anchoring effects, as suggested by research on self-anchoring (e.g., Cadinu & Rothbart, 1996; Otten & Wentura, 2001), or motivational attempts to improve positive in-group distinctiveness, as described by social identity theory (Tajfel and Turner, 1986). However, the consequences for intergroup relations (relative in-group prototypicality leading to negative out-group attitudes) would be the same.

The concept of in-group projection helps to clarify the relationship between an out-group's difference from the in-group and intergroup bias, which has been shown to be theoretically problematic and empirically complex (e.g., Jetten, Spears, & Manstead, 1998). We contend that an out-group that seems different is not automatically evaluated negatively (or positively). By considering in-group projection, and the crucial role of relative prototypicality, it is possible to predict

when "different" means "worse". Out-group differences are evaluated negatively when they are perceived to deviate from the prototype of the relevant superordinate category.

The strength of our experiment is that it demonstrates for the first time in-group projection as an adaptive psychological phenomenon, together with evidence of its predicted antecedences and consequences. A weakness of our experiment is that it does not provide conclusive evidence for the underlying motivational and cognitive processes. Researchers might, for instance, manipulate intergroup threat as a possible trigger of in-group projection to examine the link between that projection and motives for social competition, or they might study whether in-group projection an outcome of such cognitive mechanisms as heuristic information processing.

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Footnotes

[1] The formula was as follows: $d_{sup\text{-}sub} = [\Sigma((x_{sup\cdot i} - x_{sub\cdot i})^2)]^{1/2}$; with d = profile

dissimilarity, sup = superordinate category, sub = sub-in-group or sub-out-group, x_i =

value for attribute i.

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Table 1

Ratings of the in-group and the out-group on counter-British and counter-Italian

attributes under conditions with different out-groups and order of measure

Order of measure	Out-group		In-group		Out-group	
			Counter-British	Counter-Italian	Counter-British	Counter-Italian
In-group first	British	M	-0.16 [a,x]	1.67 [a, x]	-0.18 [a, x]	1.20 [a, x]
		SD	(1.02)	(1.03)	(1.14)	(1.19)
	Italians	M	-0.17 [a, x]	1.62 [a, x]	2.55 [b, y]	-1.48 [b, y]
		SD	(1.31)	(0.92)	(0.73)	(0.93)
	Total	M	-0.17 [x]	1.65 [x]	1.21 [y]	-0.16 [y]
		SD	(1.17)	(0.97)	(1.67)	(1.71)
Out-group first	British	M	0.56 [a, x]	1.36 [a, x]	-0.49 [a, y]	1.12 [a, x]
		SD	(1.26)	(1.06)	(1.27)	(1.19)
	Italians	M	-0.09 [b, x]	1.72 [b, x]	2.61 [b, y]	-1.35 [b, y]
		SD	(1.20)	(0.96)	(0.88)	(1.02)
	Total	M	0.25 [x]	1.53 [x]	0.99 [y]	-0.05 [y]
		SD	(1.27)	(1.02)	(1.90)	(1.66)

Note. Ratings from – 4 'does not apply at all' to + 4 'applies very much'. [a, b] unequal

superscripts within columns indicate significant differences (p < .05, one-tailed) between

the two out-group conditions. [x, y] unequal superscripts within rows indicate significant

differences (p < .001) between in-group and out-group ratings.

Table 2

Ratings for the superordinate category (Europeans) on counter-British and counter-Italian attributes under conditions with different out-groups and with simple vs. complex representation of the superordinate category

Out-group		Complex Representation counter-British	Complex Representation counter-Italian	Simple Representation counter-British	Simple Representation counter-Italian	Total counter-British	Total counter-Italian
British	M	1.40[a]	0.42 [a]	1.51 [a]	0.24 [a]	1.45 [a]	0.33 [a]
	SD	(0.89)	(0.72)	(1.00)	(0.73)	(0.94)	(0.73)
Italians	M	1.28 [a]	0.49 [a]	1.02 [b]	0.57 [b]	1.15 [b]	0.53 [b]
	SD	(0.92)	(0.82)	(1.03)	(0.86)	(0.98)	(0.83)
Total	M	1.34	0.45	1.26	0.41	1.30	0.43
	SD	(0.91)	(0.76)	(1.04)	(0.81)	(0.97)	(0.79)

Note. [a, b] unequal superscripts within columns indicate significant differences ($p < .05$, one-tailed) between the two out-group conditions.