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Inclusion in a superordinate category, in-group prototypicality, and attitudes towards

out-groups

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Abstract

We hypothesized that group members' attitudes towards an out-group are negatively related to the in-group's perceived relative prototypicality for a superordinate category, but only if both in-group and out-group are included in this superordinate category. In Experiment 1 ($\underline{N}$=40), Germans' attitudes towards Poles were negatively correlated with the relative prototypicality of Germans, when "Europe" (including Poles), but not when "West-Europe" (excluding Poles), was the superordinate category. In Experiment 2 ($\underline{N}$=63), female single parents' attitudes towards male single parents regarding their competence to raise children depended on the in-group's relative prototypicality for "single parents" (including fathers), but not on their relative similarity to "mothers" (excluding fathers). Both experiments showed that inclusion in a superordinate category had a more negative influence on attitudes towards the out-group if relative in-group prototypicality was high than if it was low.

Inclusion in a superordinate category, in-group prototypicality, and attitudes towards

out-groups

Intergroup research has shown that out-groups are often evaluated less positively

and treated less favorably than in-groups. Since Sumner (1906) coined the terms

in-group, out-group, and ethnocentrism, intergroup research has assumed that the

evaluation of an out-group depends on comparisons with the in-group (for reviews, see

Brewer & Brown, 1998; Messick & Mackie, 1989; Tajfel, 1982). Comparison between

the in-group and out-group serves to explain both in-group favoritism and out-group

discrimination, which are viewed as two sides of the same coin. Nevertheless, the nature

of this link between the (often positive) evaluation of the in-group and the (often

negative) evaluation of the out-group has remained unclear. We still do not know when

such comparisons are relevant for the evaluation of an out-group, and when a positive

in-group evaluation implies a negative evaluation of the out-group. The question is,

whether distinguishing the out-group from the in-group actually means "being worse," or

just "being different," or even "being better" (see Boldry & Kashy, 1999; Jost, 2001; Jost

& Burgess, 2000).

Inclusion, Relative Prototypicality, and Evaluation of the Out-group

To understand the process of out-group evaluation, we need to realize that mental

concepts, such as social categories, are always compared with respect to particular

criteria or standards (Medin, Goldstone, & Gentner, 1993; Tversky, 1977). Thus, the

evaluative implications of dissimilarity between an in-group and an out-group depend on

the comparison background. On what basis are the two groups comparable, and thus

similar or different?

For intergroup comparisons, self-categorization theory (SCT, Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) specifies this background. In SCT, it is assumed that the in-group and out-group are compared with respect to a <u>superordinate category</u> that includes both in-group and out-group members. This superordinate category provides dimensions, norms, and standards for group comparisons. For example, if Catholics are the in-group and Protestants are the out-group, then they are comparable in terms of their superordinate category, Christians. Because superordinate categories are also in-groups, which are usually positively evaluated, SCT hypothesizes that "ethnocentrism, attraction to one's own group as a whole, depends upon the perceived prototypicality of the in-group in comparison with relevant out-groups (relative prototypicality) in terms of the valued superordinate self-category that provides the basis for the intergroup comparison." (Turner, 1987, p. 61).

Adopting this hypothesis, Mummendey and Wenzel (1999) suggested a model that predicts the evaluation of out-groups. In their <u>in-group projection model</u> (IPM), they hypothesize that an "out-group's difference will be evaluated negatively if both in-group and out-group are sufficiently included in a more abstract social category and if the in-group's attributes are perceived as prototypical for the inclusive category" (p. 164). Mummendey and Wenzel assumed that (under certain circumstances) group members tend to generalize distinctive attributes of their in-group to the superordinate category (in-group projection). In-group projection increases the relative prototypicality of the in-group and leads to an overlap between the representation of the superordinate category and the representation of the in-group. As a consequence, distinguishing the out-group from the in-group implies a deviation of the out-group from the prototype of the

superordinate category. Under the condition of inclusion, the IPM can predict the evaluation of an out-group: The less prototypical (compared with the in-group) the out-group is, in terms of a positively valued superordinate category, the less positive the evaluation of the out-group will be. For instance, the IPM would predict that Catholics who assume that Catholics are more typical Christians than are Protestants will hold more negative attitudes towards Protestants than will Catholics who assume that Protestants are equally typical or even more typical than Catholics.

The IPM does not assume that members of social groups show always ingroup projection, nor does it claim that all intergroup relations can be explained by in-group projection. Instead, relative prototypicality is viewed as a variable that increases through in-group projection. The IPM specifies antecedents of in-group projection and explains how ingroup projection might lead to intergroup conflicts. For example, recent studies have shown that a complex representation of the superordinate category can reduce the level of in-group projection -- priming a complex representation of Europeans decreased the tendency of Germans to describe Europeans as more similar to Germans than to Poles (Waldzus, Mummendey, Wenzel, & Weber, 2003).

When in-group projection is shown by members of both groups in an intergroup situation, the risk of intergroup conflict increases. The two groups can be expected to disagree about their relative prototypicality, because both groups perceive higher prototypicality for their own group than is perceived by the other group (Wenzel, Mummendey, Weber, & Waldzus, 2003). This can lead to conflicts about entitlements, the legitimacy of status differences, and acceptable differences in the way members of both groups are treated (Weber, Mummendey, & Waldzus, 2002).

This paper focuses on one of the basic assumptions of the IPM. In particular, it examines the predicted relationships among <u>inclusion, relative prototypicality, and out-group-evaluation.</u> Several studies have already shown that attitudes towards out-groups are negatively correlated with the perceived relative prototypicality of the in-group for the positively evaluated superordinate category (Waldzus et al., 2003; Wenzel et al., 2003). Here we go beyond those studies by examining the particular role of inclusion. All of the earlier studies involved intergroup situations in which the in-group and out-group were included in a common superordinate category (e.g., Germans and Poles as Europeans, Psychology and Business students as Students). Relative prototypicality was operationalized as relative similarity to the superordinate category. Although prototypicality may require category inclusion, non-included exemplars may still differ in their similarity to a given category. This lack of distinction between relative prototypicality and relative similarity to the superordinate category allowed for an alternative explanation of the findings from these studies. One could argue that it was not relative prototypicality, but rather relative similarity to a positive standard that affected the evaluation of the out-group. Such a positive standard could be provided by any other in-group, or positive social category, not just the inclusive category.

Relative Prototypicality or Relative Similarity to a Superordinate Category

The first goal of this paper is to rule out this alternative explanation. We predicted that relative prototypicality for an <u>inclusive</u> superordinate category, not relative similarity to any positively evaluated social category, would negatively affect attitudes toward the out group. To test this hypothesis, we had to disentangle relative similarity (the difference between in-group similarity and out-group similarity) and relative prototypicality (the

difference between in-group prototypicality and out-group prototypicality). Both are inseparable in the case of total inclusion, but not in the case of partial inclusion, when only the in-group is included in the superordinate category. In the latter case, relative similarity cannot be regarded as relative prototypicality. Thus, we manipulated the inclusion of an out-group in a superordinate category and predicted that inclusion would moderate the relationship between relative similarity of the ingroup and attitudes toward the out-group. Relative similarity of the in-group to the superordinate category should correlate negatively with evaluations of the out-group only if the in-group <u>and</u> out-group are included in the category. Differences between the in-group and out-group in their similarity to a superordinate category should be irrelevant for evaluations of the out-group if the superordinate category does <u>not</u> include the out-group.

<u>Aims of the Current Research</u>

The current research aims to show that relative in-group prototypicality for an inclusive category negatively affects evaluations of the out-group, whereas relative in-group similarity to a non-inclusive category does not. In statistical terms, our hypothesis involves a negative interaction between category inclusion and relative in-group similarity in attitudes towards the out-group.

Experiment 1

This experiment was conducted to test the predicted interaction in a natural intergroup context. The inclusion of Poles (out-group) and Germans (in-group) in a superordinate category was manipulated by making salient either Europe (including Poles) or West-Europe (excluding Poles). The relative similarity of Germans - compared to Poles – to the superordinate category was measured, as well as attitudes towards Poles.

We hypothesized that the relationship between relative in-group similarity and attitudes towards the out-group would be moderated by inclusion. That relationship was expected to be significantly more negative, when the out-group was included in the superordinate category rather than excluded from it. In statistical terms, we expected an interaction between inclusion and relative similarity when predicting evaluations of the out-group.

Method

Participants

Forty-seven participants who stated that they did not work in the field of social psychology took part in the experiment, which was announced as a "Europe Survey" on the Internet. As a cover story, participants were told that our university was studying attitudes towards Europe (or West-Europe, depending on the experimental condition) and the relationship of Germans to their East-European neighbors. Participants could take part online. At the end of the experiment, all of the participants told us that they took part seriously and were not influenced by prior participation in any Internet experiments. The data of seven participants were excluded from analysis because these participants were not Germans. The remaining 19 male and 21 female participants were between 18 and 50 years old ($M = 27.4$, $SD = 6.71$). Participants were randomly assigned to one of the two experimental conditions. No gender or age effects were expected, nor were any observed. Thus, gender and age were omitted from later analyses. As an incentive, all participants were included in a lottery that offered a 100 Euro (90 $US) prize.

Manipulation

For participants in the inclusion condition (n = 20), Europe (including Poland) was made salient. For participants in the exclusion condition (n = 20), West-Europe

(excluding Poland) was made salient. To make one category or the other salient, participants were asked to rate the applicability of nine attributes (culture, tradition, sense of community, life-in-the-fast lane, democracy, environmental pollution, Christian values, bureaucracy, and well-being) to Europe in the inclusion condition or to West-Europe in the exclusion condition.

Dependent Measures

Unless otherwise mentioned all ratings described in this paper were made on 9-point Likert-scales ranging from – 4 (does not apply at all) to + 4 (applies completely).

Perceived inclusion. The manipulation was based on the assumption that Germans belong to both Europe and West-Europe, whereas Poles belong to Europe but not to West-Europe. To test this assumption, perceived inclusion was measured. All participants rated the inclusion of Germans and Poles in both superordinate categories on four single items: "Germans [Poles] are unequivocally Europeans [West-Europeans]."

Relative similarity of the in-group. Relative similarity of the in-group to the superordinate category was assessed by two different measures. Measure 1 was an open attribute measure that has been used in previous studies (Waldzus et al., 2003). Participants were asked to list four attributes that are characteristic of Germans compared with Poles. Then, they were asked to list four attributes that are characteristic of Poles compared to Germans. After that, all eight attributes listed were presented in a randomized order on the screen and participants had to rate their applicability for the superordinate category. The mean applicability of the four in-group attributes was taken as a measure of in-group-similarity and the mean applicability of the four out-group attributes was taken as a measure of out-group-similarity. The difference between these

two means (in-group – out-group) was Measure 1 of relative in-group similarity to the superordinate category.

Measure 2 of relative in-group similarity was based on graphical images. We used a technique for measuring interpersonal closeness (Aron, Aron, & Smollan, 1992) that has been adapted to the intergroup level (Schubert & Otten, 2002). For the in-group (Germans) and the out-group (Poles), participants were shown seven pictures representing the similarity or difference between the group and the superordinate category. In each picture, the sub-group (in-group or out-group) and the superordinate group were symbolized as a small (about one inch in diameter) and a big (about two inches in diameter) circle, respectively. The two circles were placed on a horizontal line. The seven pictures varied in the distance between the two midpoints of the circles ranging from a long distance (about 6 inches, coded as value 1), to a medium distance (about 3 inches, value 4) to zero distance (value 7). These variations in distance were pointed out to the participants. Participants were then asked to indicate which of the seven pictures best matched their beliefs about the similarity between the sub-group and the superordinate group. The difference between the closeness values for the in-group and the out-group (in-group – out-group) was our Measure 2 of relative in-group similarity.

The two measures involved quite different operationalizations and covered different aspects of relative similarity. For our purposes, however, the common variance in the two measures was relevant. Therefore, we created a Composite Score of Relative Similarity, which was the mean of the two (standardized) measures. For the sake of completeness, however, we will report correlations not only for the composite score, but

also for in-group similarity, out-group similarity, and relative similarity on both measures separately.

   Attitudes towards the out-group. Attitudes towards the out-group were measured by an eight-item scale that has been used in previous research with Germans and Poles (Waldzus et al., 2003; Wenzel et al., 2003). The items cover several aspects of attitudes towards the out-group, including sympathy (e.g., "I like the Polish mentality"), interest in intergroup contact (e.g., "I think it is important to be in contact with Poles"), favorable behavioral intentions towards the out-group (e.g., "If my financial situation permitted, I would donate money to the Society for German-Polish Friendship"), and evaluation of the out-group's difference (e.g., "I can easily accept those features that distinguish Poles from us"). The attitude scale was internally consistent ($\alpha = .92$). An overall scale score was created by averaging ratings across items.

   Group identification. A sound test of our hypotheses and an unambiguous interpretation of our findings required that the experimental manipulation not affect levels of identification with the superordinate category or with the in-group. Otherwise, inclusion would have been confounded with identification. To check this, we measured each participant's level of identification with Germans and with the superordinate category. Five items were included in each scale. The measures only differed from one another in terms of the target group (Germans vs. superordinate category). The items were: "I identify with Germans [(West-)Europeans]," "I feel that I am a German [(West-)European]," "I have a negative attitude towards Germany [(West-)Europe]" (recoded), "I feel skeptical about a German national identity [(West-)European identity]" (recoded), and "I like being German [(West-)European]." Both scales were reliable

(α = .86 for identification with Germans; α = .88 for identification with the superordinate category).

Procedure

This was a computer-based experiment that participants accessed on the Internet. All instructions were given via the computer screen. In Part 1 of the experiment, the superordinate category was made salient. After that, the relationship between different nations, in particular between Germans and Poles, was introduced as the topic of Part 2. Relative in-group similarity was assessed by Measure 1, followed by the measure of attitudes towards Poles, the identification measures, the manipulation check of perceived inclusion, and Measure 2 of relative in-group similarity. In the last part of the experiment, participants were asked to provide demographic information, their email-address, and possible comments on the study. None of the participants seemed to know or guess the real purpose of our research. Finally, participants were asked about the seriousness of their research participation, and whether they were influenced by experiences with prior Internet experiments or worked in the field of social psychology.

The data from participants were sent by email to the experimenter. After the data collection ended, 100 Euro were sent to the winner of the lottery, who was selected by a random generator, and debriefing emails were sent to all participants.

Results

Preliminary Analyses

Perceived inclusion. The measurement of perceived inclusion confirmed the effectiveness of our manipulation. The pattern of means (see first panel of Table 1) fitted our prediction -- the values for Germans and Poles on perceived inclusion in Europe were

both positive, whereas the value on perceived inclusion in West-Europe was positive for

Germans but negative for Poles. Thus, as indicated by significant differences of the

means for the whole sample from the scale midpoint, participants saw their in-group

(Germans) as belonging to Europe, $t(39) = 23.83.$, $p < .001$, and to West-Europe,

$t(39) = 7.72.$, $p < .001$, whereas they saw the out-group (Poles) as belonging to Europe,

$t(39) = 15.60.$, $p < .001$, but not to West-Europe, $t(39) = - 2.68.$, $p < .05$.

A customized contrast analysis was conducted across the four inclusion measures.

In this analysis, the weight for inclusion of Poles into West-Europe was set at $– 3$, and the

weight of each of the three other measures was set at 1. The contrast was significant, $F (1,$

$38) = 91.41$, $p < .001$, and explained about 71% of the variance in perceived inclusion.

Group identification. Identification with the in-group and with the superordinate

category were both positive (see second panel of Table 1) and significantly above the

scale midpoint of zero, $t(39) = 2.12$, $p < .05$ and $t(39) = 6.92$, $p < .001$. One-way

ANOVAs with the manipulation as factor indicated no effects of inclusion on

identification with the in-group, $F (1,38) < 1$, and on identification with the superordinate

category $F (1,38) = 1.40$, $p > .05$, $\eta^2 = .035$. Thus, identification was not affected by our

manipulation.

Inclusion, relative similarity, and attitudes towards the out-group. Relative

in-group similarity to the superordinate category was higher in the exclusion condition

than in the inclusion condition (see third panel of Table 1), but this difference was not

significant for Measure 1, $F (1,38) = 2.22$, $p > .05$, $\eta^2 = .055$, or for Measure 2,

$F (1,38) = 2.88$, $p > .05$, $\eta^2 = .071$. Attitudes towards Poles were more positive in the

exclusion than in the inclusion condition, $\underline{F}$ (1,38) = 11.30, $\underline{p}$ < .01, η^2 = .229 (see lower

panel of Table 1).

<u>Interaction between Relative In-group Similarity and Inclusion</u>

As noted earlier, we expected to find a negative interaction between inclusion and

relative in-group similarity on attitudes towards the out-group. We tested this prediction

in a hierarchical multiple regression analysis, using a product term to represent the

interaction (Aiken & West, 1991; Baron & Kenny, 1986). In the first step of the analysis,

we regressed attitudes toward the out-group on a dummy-coded variable representing

inclusion (exclusion condition = 0; inclusion condition = 1) and on the composite score

for relative similarity. In a second step, we introduced the product of inclusion and

relative similarity as an additional predictor. As Table 2 shows, the introduction of the

product term significantly increased the variance explained by the model. As expected,

that interaction was negative.

Simple tests of the relationship between relative in-group similarity and attitudes

towards the out-group were conducted within each experimental condition. The

correlations between out-group evaluations and various similarity measures are shown in

Table 3. As predicted, the relationship between attitudes toward the out-group and

relative in-group similarity was often significantly negative in the inclusion condition, but

never significantly different from zero in the exclusion condition.

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

As predicted, the relationship between relative in-group similarity to the

superordinate category and attitudes toward the out-group was moderated by the

inclusion of the out-group in the superordinate category. When the out-group (Poles) was

included, relative in-group similarity could be interpreted as relative in-group prototypicality and was (as predicted by the IPM) negatively correlated with attitudes toward the out-group. When the out-group was excluded, relative in-group similarity could not be interpreted as relative prototypicality, and the negative relationship between similarity and attitudes toward the out-group disappeared.

Experiment 2

In the second experiment, we tested the same hypothesis as in Experiment 1, but we changed the intergroup setting. Poles, Germans, and Europeans, which we studied in the first experiment, are very broad categories. Thus, our attitude measure was also very broad, and did not focus on a particular evaluative dimension. In Experiment 2, we wanted to be more specific.

We assume that superordinate categories provide evaluative dimensions for group comparisons. However, different dimensions of groups are sometimes considered at the same time. Fathers, for example, might be evaluated in terms of their ability to raise children, but also in terms of their attractiveness. In an educational context, raising children might be a relevant comparison dimension, whereas the attractiveness seems rather irrelevant. This might change in other social contexts. In terms of SCT, there can be varying degrees of normative fit between evaluative dimensions and comparative contexts (Oakes, 1987; Turner, 1987). In a context where a particular superordinate category is salient, we can distinguish between relevant (good fit) or irrelevant (poor fit) evaluative dimensions. Relevant dimensions correspond to the standard provided by the superordinate category, whereas irrelevant dimensions do not. Taking all this into account, we expected that the interaction between inclusion and relative similarity, that

we found in Experiment 1, should only occur when a relevant (fitting) evaluative dimension is considered. Inclusion should moderate the effect of relative similarity, and relative similarity should moderate the effect of inclusion, on evaluations of the out-group, in that case only. We would not expect any effects of inclusion or relative similarity on evaluations involving irrelevant dimensions.

In order to test these more focused hypotheses, we asked members of one group of single parents (in-group: single parenting women) to evaluate another group of single parents (out-group: single parenting men) in terms of a relevant evaluative dimension (ability to raise children) and an irrelevant evaluative dimension (attractiveness). As in Experiment 1, the inclusiveness of the salient superordinate category was manipulated. For half of the participants, an including category was made salient (inclusion condition: single parents), whereas for the other participants, we made salient a category that did not include the out-group (exclusion condition: mothers).

For the relevant evaluative dimension, we expected the same interaction as in Experiment 1. The relationship between relative in-group similarity and attitudes towards the out-group was expected to be negative in the inclusion condition, but near zero in the exclusion condition. For the irrelevant dimension, we did not expect this interaction to occur. Relative in-group similarity was not expected to affect evaluations of the out-group on irrelevant dimensions.

<u>Method</u>

Participants

Sixty-three female single parents were recruited through advertisements in local newspapers. As a cover story, participants were told that the Department of Social

Psychology was surveying single parents to learn their views on female and male single parents. Participants were between 20 and 53 years old ($\underline{M}$ = 35.61, $\underline{SD}$ = 7.07). They were randomly assigned to the two experimental conditions. After finishing the experiment, all participants were debriefed about its purpose. As an incentive all participants received 25 DM (about 13 Euro or 12 \$US) for their efforts.

<u>Manipulation</u>

For participants in the inclusion condition (n = 30), the category of single parents, which includes the in-group (single parenting women) and the out-group (single parenting men), was made salient. For participants in the exclusion condition (n = 33), the category of mothers, which includes only the in-group (single parenting women) was made salient.

<u>Dependent Measures</u>

<u>Relative similarity of the in-group.</u> Relative similarity of the in-group to the superordinate category was assessed by two different measures, corresponding to Measures 1 (trait ratings) and 2 (pictures) used in Experiment 1. Both measures were assessed in the same way as before, but this time they referred to "single parenting women," "single parenting men," "single parents", and "mothers" as the in-group, out-group, inclusive superordinate category and exclusive superordinate category, respectively. As before, a composite Relative Similarity score was calculated as the mean of the standardized Measures 1 and 2.

<u>Attitudes towards the out-group.</u> Attitudes towards the out-group were measured using three items that referred to a relevant (ability to raise children) and three that referred to an irrelevant dimension (attractiveness). The items measuring attitudes

towards the out-group on the relevant dimension were "I am in favor of giving the custody for children more often to single parenting men," "Often, things done in a different way by single parenting men than by single parenting women are just the right things to do," and "Often, single parenting men provide a better home than single parenting women." The items measuring attitudes toward the out-group on the irrelevant dimension were "I like single parenting men," "I would like to exchange ideas with single parenting men more often," and "I find single parenting men very attractive."

Group identification. Identification with the in-group and with the superordinate category were assessed using the same items as in Experiment 1. However, these items now referred to "single parenting women" (in-group) and "single parents" or "mothers" (superordinate categories). This time, neither of the scales was very reliable (α = .45 and α = .60). However, we were able to improve the reliability for both scales by skipping the same two items in each scale. The remaining three items were: "I identify with single parenting women [single parents, mothers]," "I feel that I am a single parenting woman [single parent, mother]," "I feel skeptical about an identity as a single parenting woman [single parent, mother]" (recoded). The revised scales were better, with α = .57 and α = .73 for identification with the in-group and identification with the superordinate category, respectively.

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

Preliminary Analyses

Group identification. Identification with the in-group and with the superordinate category were both positive (see first panel of Table 4) and significantly above the scale midpoint of zero, $\underline{t}(62)$ = 12.63, $\underline{p}$ < .001 and $\underline{t}(62)$ = 15.82, $\underline{p}$ < .001. One-way ANOVAs

with the manipulation as factor indicated no effects of inclusion on identification with the

in-group, $\underline{F}$ (1,61) < 1, and on identification with the superordinate category

$\underline{F}$ (1,61) = 2.30, $\underline{p}$ > .05, η^2 = .036. Thus, identification was not affected by our

manipulation.

      <u>Inclusion, relative similarity, and attitudes towards the out-group.</u> The relative

similarity of the in-group to the superordinate category was lower in the inclusion than in

the exclusion condition on Measure 1 (see second panel of Table 4), F (1,61) = 24.14,

p < .001, η^2 = .283. However, there was no difference between the inclusion and

exclusion conditions on Measure 2, F (1,61) < 1.

      Attitudes toward the out-group tended to be more positive in the inclusion than in

the exclusion condition (see lower panel of Table 4). However, this tendency was not

significant. It was slightly stronger for the irrelevant dimension, F (1,61) = 1.80, p > .05,

η^2 = .029, than for the relevant dimension, F (1,61) < 1.

<u>Interaction between Relative In-group Similarity and Inclusion</u>

      As in Experiment 1, we expected to find a negative interaction between inclusion

and relative in-group similarity on attitudes towards the out-group. Once again,

hierarchical multiple regression analyses were conducted, using product terms to

represent interactions. We will begin with the analysis of attitudes on the relevant

dimension, and than turn to the analysis of attitudes on the irrelevant dimension. In the

first analysis, we initially regressed attitudes towards the out-group on a dummy-coded

variable representing inclusion (exclusion condition = 0, inclusion condition = 1) and on

the composite score for relative similarity. In a second step, we introduced the product of

inclusion and relative similarity as an additional predictor. As Table 5 (upper panel)

shows, this significantly increased the variance explained by the model. As expected, that

interaction was negative. Simple tests of the relationship between relative in-group

similarity and attitudes towards the out-group were conducted within each experimental

condition. The correlations between out-group evaluations and various measures of

relative in-group prototypicality are reported in Table 6 for the relevant (first column)

and the irrelevant evaluative dimension (second column). As predicted, the relationship

between attitudes toward the out-group on the relevant dimension and relative in-group

similarity was often significantly negative in the inclusion condition, but never

significantly different from zero in the exclusion condition.

The same regression analyses for out-group evaluations on the irrelevant

dimension did not reveal any significant main effects or interactions (see lower panel of

Table 5). The relationship between relative in-group similarity and attitudes toward the

out-group did not vary across conditions on the irrelevant dimension.

To test the hypothesis that there is a negative interaction between inclusion and

relative similarity on out-group evaluations only when the dimension is relevant, but not

when it is irrelevant, we conducted a 2 x 2 x 2 ANOVA with inclusion (inclusion vs.

exclusion) and relative similarity (high vs. low) as between subjects factors and type of

dimension (relevant vs. irrelevant) as within-subject factor. For the purpose of this

analysis, we split the composite score of relative similarity at the median and created a

categorical variable representing high (n = 33) vs. low (n = 30) relative similarity by.

Only type of dimension had a significant main effect, $\underline{F}$ (1, 59) = 48.92, $\underline{p}$ < .001,

η^2 = .43. There were no main effects of inclusion, $\underline{F}$ (1, 59) < 1, or relative similarity,

$\underline{F}$ (1, 59) = 1.58, $\underline{p}$ > .05, η^2 = .019, and no two-way interactions between type of

dimension and inclusion, $\underline{F}$ (1, 59) < 1, or relative similarity, $\underline{F}$ (1, 59) < 1, or between

inclusion and relative similarity, $\underline{F}$ (1, 59) = 1.72, $\underline{p}$ > .05, η^2 = .019. As expected,

however, we found a significant 3 way interaction, $\underline{F}$ (1, 59) = 4.35, $\underline{p}$ < .05, η^2 = .039,

between all three factors. Separate 2 x 2 ANOVAs with inclusion and relative in-group

similarity as between subjects factors revealed a significant interaction between inclusion

and relative similarity on out-group evaluations when the dimension was relevant, $\underline{F}$ (1,

59) = 4.61, $\underline{p}$ < .05, η^2 = .07, but not when it was irrelevant, $\underline{F}$ (1, 59) < 1 (confirming the

results of the regression analyses).

These findings are in line with our hypothesis, which predicted that inclusion

would moderate the relationship between relative in-group similarity and evaluations of

the out-group on the relevant dimension, but not on the irrelevant dimension.

Discussion

As predicted, we found a moderation of the impact of relative in-group similarity

by inclusion, and a moderation of the effect of inclusion by relative similarity, when

predicting attitudes towards the out-group on the relevant dimension. On that dimension,

the attitudes of single parenting women (in-group) towards single parenting men

(out-group) were negatively related to perceived relative in-group similarity to an

inclusive superordinate category (single parents), but not to an exclusive superordinate

category (mothers). Moreover, the inclusion of the out-group in an inclusive category

made attitudes towards the out-group worse when relative in-group similarity was high.

Attitudes towards the out-group on the irrelevant dimension (attractiveness) were not

affected by inclusion or related to the relative similarity of the in-group. These results

clearly support the IPM.

General Discussion

Earlier studies showed that the relative prototypicality of an in-group for an inclusive superordinate category is negatively related to evaluations of its out-group. At issue here was whether these findings could be explained by the fact that the superordinate category provides a positive standard, and that differences between in-group and out-group in prototypicality might simply represent differences in similarity to this positive standard. This alternative explanation seems plausible when relative prototypicality is operationalized as relative similarity of the in-group to the superordinate category when both groups are included in that category. The explanation assumes that evaluations of the out-group deteriorate as a consequence not only of relative ingroup prototypicality, but of relative in-group similarity, whether or not the superordinate category includes the out-group. We can now rule out this alternative explanation. In both experiments, we predicted and found that the relationship between out-group evaluation and relative similarity of the in-group to a superordinate category was moderated by the inclusion of the out-group in that category. The relation between relative in-group similarity and out-group evaluation was only negative when the out-group was included, but disappeared when the out-group was not included, or (as in Experiment 2) when the evaluative dimension was irrelevant for the superordinate category. Thus, the superordinate category is used as a referent for evaluative judgments only when it includes both the in-group and the out-group. Inclusion in the superordinate category turns relative similarity into relative prototypicality, which forms the basis (according to the IPM) for out-group evaluations.

The interaction between category inclusion and relative similarity on outgroup evaluations, which was found in both experiments, is also important in another way. Whereas the common in-group identity model (CIIM, Gaertner & Dovidio, 2000; Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993) emphasizes the positive effect of recategorization of in-group and out-group into a common inclusive in-group, the IPM suggests a more skeptical view of that process. Although both models are based on social identity theory (Tajfel & Turner, 1986) and SCT, they make different predictions regarding the effects of inclusion. The CIIM predicts that inclusion into a common superordinate category improves the relationship between in-group and out-group members -- in-group favoritism is generalized to out-group members if they are perceived to be members of the common in-group. Thus, the CIIM would predict that attitudes toward out-group members are more positive when the in-group and the out-group are perceived as part of a common superordinate in-group. However, we found that attitudes towards Poles were <u>less</u> positive in the inclusion than in the exclusion condition in Experiment 1, and that there was no significant main effect of inclusion on attitudes towards single parenting men in Experiment 2.

In contrast to the CIIM, the IPM suggests that inclusion provides criteria for intergroup comparison and enables in-group members to see their group as more prototypical than the out-group, resulting in the maintenance or exacerbation of in-group favoritism. The IPM assumes that the effect of inclusion depends on the extent of in-group projection. Perceived relative in-group prototypicality leads to out-group devaluation when the out-group is included in the superordinate category. Thus, when in-group projection is strong, inclusion can lead to more negative attitudes toward the

out-group, compared to when the out-group is excluded. Therefore, the CIIM and IPM make competing predictions about the role of a common in-group identity for intergroup attitudes, at least when there is a high level of in-group projection. A post-hoc interpretation of the interaction between relative in-group similarity and inclusion is consistent with the assumption of the IPM. In simple slope analyses of the multiple regression models used in the two experiments, we examined the inclusion effect on out-group attitudes when perceived relative similarity was high versus low. The effect of the inclusion factor was estimated at the two cut points located one standard deviation above and below the mean of the composite score of relative similarity (see Aiken & West, 1991). In Experiment 1, we found a negative inclusion effect on attitudes towards the out-group (final β = - .82, p < .001) when relative in-group similarity was high, but no inclusion effect (final β = - .22, p = .29) when relative in-group similarity was low. In Experiment 2, the inclusion effect on attitudes on the relevant dimension was also negative (β = - .35, p = .05) when relative in-group similarity was high, but positive (β = .29, p = .10) when it was low. Thus, the inclusion of both the in-group and out-group in a superordinate category has a detrimental effect on evaluations of the out-group (on relevant dimensions) when the in-group seems prototypical compared to the out-group. This supports the IPM, but partly contradicts the CIIM, which hypothesizes that attitudes towards out-group members benefit from inclusion in a common social category. In our experiments, such inclusion did not improve evaluations of the out-group, as the CIIM would predict. On the contrary, the out-group was evaluated about the same, or even worse (if relative in-group similarity was high) when it was included in a superordinate category. Thus, even though there is a considerable record in the literature of positive

inclusion effects, as predicted by the CIIM, our results support the IPM instead. How can this apparent contradiction be resolved?

We think that one important difference between our research and research supporting the CIIM is the meaning of the superordinate category for the distinction between groups. In our research, the superordinate category provides relevant dimensions for intergroup comparisons. In contrast, most of the CIIM-research involves superordinate categories that are defined in ways that differ from the dimensions on which the groups are distinguished. For instance, "over-estimators" vs. "under-estimators" (Dovidio, Gaertner, Validzic, & Matoka, 1997), or "republicans" vs. "democrats" (Gaertner et al., 1999) were recategorized on the basis of common fate in a lottery, or interaction in the experimental session, a process unrelated in any clear way to the differences between those groups. In another study, membership in a multicultural high school defined the superordinate category and ethnicity defined the membership in different groups (Gaertner, Rust, Dovidio, & Bachman, 1994). Dimensions associated with membership in the high school (e.g., attending the same classes, competing with other schools) can hardly be used as the bases of ethnic differentiation. As a consequence, when membership in these superordinate categories is made salient, the focus shifts away from comparisons between the groups. The superordinate category itself becomes focused and, this way, <u>substitutes</u> the sublevel ingroup as a category that provides meaning to the social context and to ones social identity, independent on comparisons between groups within the inclusive category. In contrast, the inclusive categories in our research often provide a meaningful frame of reference for group comparisons, making such comparisons even <u>more relevant</u>. Someone, who is pro-European and defines

Europeans in terms of Christian values, democratic institutions, and prosperity, might thus use these features as comparison dimensions for distinguishing among different European countries. Experiment 2 illustrates this point, because the inclusion effect on out-group evaluations there was only moderated by relative similarity when the evaluative dimension was relevant for the superordinate category. Future research should manipulate the function or fit of the inclusive superordinate category directly in order to test the different predictions of the CIIM and the IPM.

Most of our findings were consistent across the two experiments, which is remarkable, given the different intergroup contexts. One difference, however, was that we found a (marginal) positive inclusion effect when relative in-group similarity was low in Experiment 2, but not in Experiment 1. A post-hoc explanation might be that the superordinate category (single parents) was a minority group in Experiment 2. Some of the participants' comments suggested that when relative in-group similarity was low, the positive recategorization effect might have been boosted by the common fate of single parents in a society that often provides little support for this group.

One limitation of our research is that our manipulation of inclusion involved switching from one superordinate category to another. Thus, inclusion was confounded with all other variables that vary between the two superordinate categories. It would be better to manipulate inclusion without these confoundings. Moreover, although we assume that IPM can be generalized to the more extreme case of explicit out-group derogation, we used positive out-group evaluation items. Researchers should include measures that directly assess out-group derogation, such as the negative treatment of out-group members.

We also did not consider what might predict out-group evaluations in the case of exclusion. Perhaps instrumental concerns (Wenzel, 2002), basic cognitive principles like high accessibility of learned stereotypes, or other factors are important. Although excluded out-groups are sometimes viewed with indifference when it comes to comparisons with the in-group, other factors than intergroup comparisons can lead to positive or negative evaluations. This is important because one might conclude from the negative inclusion effects on outgroup attitudes in our research that exclusion is a pathway to intergroup tolerance. We think that this should be considered with caution. Exclusion might be a way to avoid negative intergroup comparisons and thus create a more relaxed relationship between different groups. However, it might also imply that excluded out-groups do not deserve the rights, privileges, and resources reserved for members of the inclusive category. In the extreme case of moral exclusion (Opotow, 1995), basic human rights may be withheld from members of an excluded out-group. Thus, from a practical point of view, it seems to be more desirable to develop possibilities for tolerant inclusion, such as changing the representation of the superordinate category in a way that enables out-group typicality (Waldzus et al., 2003).

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Table 1

Perceived Inclusion, Group Identification, Attitudes towards Poles and Relative

Similarity of Germans to the Superordinate Category in Experiment 1

	Experimental condition			
	Inclusion		Exclusion	
	(Europe)		(West- Europe)	
	M	SD	M	SD
Perceived inclusion				
"Germans unequivocally belong to the Europeans"	3.35	1.27	3.85	0.37
"Germans unequivocally belong to the West-Europeans"	2.80	2.09	2.30	2.11
"Poles unequivocally belong to the Europeans"	2.65	1.35	3.55	1.00
"Poles unequivocally belong to the West-Europeans"	-1.20	2.91	-1.00	2.29
Group identification				
Identification with ingroup	0.49	2.18	0.70	1.29
Identification with superordinate category	1.44	2.04	2.03	0.90
Relative similarity of IG to the superordinate category				
Measure 1	1.13	2.28	2.26	2.49
Measure 2	1.00	2.15	1.95	1.28
Evaluation of OG				
Attitudes toward Poles	0.00	1.90	1.84	1.53

Table 2

<u>Hierarchical Multiple Regression Analysis of how Inclusion and Relative Similarity</u>

<u>Affected Attitudes towards the Out-group in Experiment 1</u>

	B	Beta	p-value
Step One			
Inclusion	- 2.06	-.54	.001
Relative Similarity	- 0.44	.19	.21

The overall regression equation for Step One was significant, $\underline{F}$ (2, 37) = 6.56,

$\underline{p}$ = .004, with an R^2 of .26, and an adjusted R^2 of .22

	B	Beta	p-value
Step Two			
Inclusion	- 2.00	- .52	.001
Relative Similarity	0.35	.15	.50
Inclusion X Relative Similarity	- 1.37	- .43	.05

The overall regression equation for Step Two was significant, $\underline{F}$ (3, 36) = 6.10,

$\underline{p}$ = .002, with an R^2 of .34, and an adjusted R^2 of .28. The change in R^2, from Step

One to Step Two was also significant, $\underline{F}$ (1, 36) = 4.09, $\underline{p}$ = .05.

Table 3

Correlations between Attitudes towards the Out-group and Relative Similarity in the two

Conditions of Experiment 1

Experimental Condition: Inclusion (Europe, n = 20)

	AttOG	SIGattr	SOGattr	RelSim1	SIGpic	SOGpic	RelSim2
SIGattr	.02						
SOGattr	.34	- .42					
RelSim1	- .22	.79***	- .88***				
SIGpic	- .26	.14	- .33	.30			
SOGpic	.40	- .23	- .08	- .07	.20		
RelSim2	- .50*	.28	- .25	.31	.76***	- .48*	
RelSim	- .46*	.62**	- .65**	.76***	.68***	- .37	.86***

Experimental Condition: Exclusion (West-Europe), n = 20

	AttOG	SIGattr	SOGattr	RelSim1	SIGpic	SOGpic	RelSim2
SIGattr	.05						
SOGattr	- .18	- .52*					
RelSim1	.14	.86***	- .88***				
SIGpic	.11	.63**	- .26	.50*			
SOGpic	- .04	.07	- .12	.11	.48*		
RelSim2	.15	.59*	- .15	.42	.58*	- .43	
RelSim	.17	.88***	- .69***	.90***	.63**	- .13	.77***

Note. AttOG: Attitudes towards the out-group, SIGattr: Similarity of in-group attributes,

SOGattr: Similarity of out-group attributes, RelSim1: Relative similarity Measure 1

(SIGattr - SOGattr), SIGpic: Similarity of in-group on pictorial measure, SOGpic:

Similarity of out-group on pictorial measure, RelSim2: Relative similarity Measure 2

(SIGpic – SOGpic), RelSim: Relative Similarity composite score * $p < .05$, ** $p < .01$,

*** $p < .001$ (two-tailed)

Table 4

Group Identification, Attitudes Towards Single Parenting Men and the Relative

Similarity of Single Parenting Women to the Superordinate Category in Experiment 2

	Experimental condition			
	Inclusion (single parents)		Exclusion (mothers)	
	M	SD	M	SD
Group identification				
Identification with ingroup	2.52	1.40	2.40	1.69
Identification with superordinate category	2.54	1.63	3.08	1.16
Relative similarity of IG to the superordinate category				
Measure 1	1.37	1.95	3.92	2.15
Measure 2	1.03	1.73	0.91	1.53
Evaluation of OG				
Attitudes toward OG on relevant dimension	0.39	1.92	0.11	1.50
Attitudes toward OG on irrelevant dimension	2.01	1.31	1.52	1.59

Table 5

Hierarchical Multiple Regression Analyses of how Inclusion and Relative Similarity

Affected Attitudes towards the Out-group on Relevant and Irrelevant Dimensions

Effects on attitudes on relevant dimensions

	B	Beta	p-value
Step One			
Inclusion	- 0.06	- .02	.89
Relative Similarity	- 0.69	.31	.02

The overall regression equation for Step One was not significant, $\underline{F}$ (2, 60) = 3.03,

$\underline{p}$ = .06, with an R^2 of .09, and an adjusted R^2 of .06

Step Two			
Inclusion	- 0.06	- .03	.82
Relative Similarity	- 0.02	.01	.96
Inclusion X Relative Similarity	- 1.43	- .43	.01

The overall regression equation for Step Two was significant, $\underline{F}$ (3, 59) = 4.42,

$\underline{p}$ = .01, with an R^2 of .18, and an adjusted R^2 of .14. The change in R^2, from Step

One to Step Two was also significant, $\underline{F}$ (1, 59) = 6.64, $\underline{p}$ = .01.

Effects on attitudes on irrelevant dimensions

	B	Beta	p-value
Step One			
Inclusion	0.34	.12	.39
Relative Similarity	- 0.32	- .16	.22

The overall regression equation for Step One was not significant, $\underline{F}$ (2, 60) = 1.68,

$\underline{p}$ = .19, with an R^2 of .05, and an adjusted R^2 of .02

Step Two

Inclusion	0.33	.11	.40
Relative Similarity	- 0.12	- .06	.72
Inclusion X Relative Similarity	- 0.42	- .14	.42

The overall regression equation for Step Two was not significant, $\underline{F}$ (3, 59) = 1.33,

$\underline{p}$ = .27, with an R^2 of .06, and an adjusted R^2 of .02. The change in R^2, from Step

One to Step Two was also not significant, $\underline{F}$ (1, 59) < 1.

Table 6

Correlations between Attitudes towards the Out-group on Relevant and Irrelevant

Dimensions and Relative Similarity in the two Conditions of Experiment 2

Experimental Condition: Inclusion (single parents), n = 30

	AttOGr	AttOGi	SIGattr	SOGattr	RelSim1	SIGpic	SOGpic	RelSim2
AttOGi	.40*							
SIGattr	- .19	- .01						
SOGattr	.42*	.17	.10					
RelSim1	- .48**	- .15	.50**	- .81***				
SIGpic	- .16	- .11	.01	- .29	.25			
SOGpic	.30	.25	.21	.12	.02	.17		
RelSim2	- .37*	- .29	- .17	- .31	.16	.56**	- .72***	
RelSim	- .55**	- .30	.15	- .68***	.68***	.56**	- .52**	.83***

Experimental Condition: Exclusion (mothers), n = 33

	AttOGr	AttOGi	SIGattr	SOGattr	RelSim1	SIGpic	SOGpic	RelSim2
AttOGi	.31							
SIGattr	- .11	- .32						
SOGattr	.01	.08	- .40*					
RelSim1	- .07	- .23	.83***	- .84***				
SIGpic	.17	.28	- .01	- .07	.04			
SOGpic	.13	.16	- .23	.30	- .32*	.32		
RelSim2	.05	.13	.17	- .30	.28	.68***	- .48**	
RelSim	- .01	- .06	.61***	- .70***	.79***	.46**	- .51**	.81***

Note. AttOGr: Attitudes towards the out-group on relevant dimensions, AttOGi:

Attitudes towards the out-group on irrelevant dimensions, SIGattr: Similarity of in-group

attributes, SOGattr: Similarity of out-group attributes, RelSim1: Relative similarity

Measure 1 (SIGattr - SOGattr), SIGpic: Similarity of in-group on pictorial measure,

SOGpic: Similarity of out-group on pictorial measure, RelSim2: Relative similarity

Measure 2 (SIGpic – SOGpic), RelSim: Relative Similarity composite score

* p < .05, ** p < .01, *** p < .001 (two-tailed)