The Ingroup as *Pars Pro Toto*: Projection From the Ingroup Onto the Inclusive Category as a Precursor to Social Discrimination

Michael Wenzel
Australian National University

Amélie Mummendey
Ulrike Weber
Sven Waldzus
University of Jena, Germany

In an approach to intergroup discrimination and tolerance, it is assumed that the outgroup's difference from the ingroup is evaluated with reference to the prototype of the higher-order category that includes both groups. Two correlational studies yielded evidence that (a) group members tend to perceive their ingroup as relatively prototypical for the inclusive category (projection), (b) members highly identified with both ingroup and inclusive category (dual identity) tend to project most, and (c) relative prototypicality is related to negative attitudes toward the outgroup. The latter relation was further specified in Study 3, manipulating the valence of the inclusive category. Projection was related to more negative attitudes toward the outgroup when the inclusive category was primed positively but to more positive attitudes when it was primed negatively. The meaning of dual identities for intergroup relations is discussed.

Keywords: intergroup relations; social discrimination; self-categorization; prototypicality; dual identity

Social psychological analyses of stereotyping and categorization processes have greatly contributed to our understanding of intergroup relations (see Brewer & Brown, 1998; Fiske, 1998; Oakes, Haslam, & Turner, 1994). However, once we have categorized others as different from us and ascribed certain attributes to them, in contrast to us, what determines our evaluation of the outgroup? Intergroup difference seems to have a Janus-faced character and can elicit negative as well as positive reactions in us (Graumann, 1992; Mummendey, 1993). We contend that specific differences between groups may be evaluated differently depending on the norma-tive prescriptions that are perceived to apply in that situation. Given that, per definition, ingroup and outgroup are perceived to be different, we assume that the processes underlying the evaluation of intergroup difference are central for an understanding of social discrimination and, conversely, a concept of intergroup tolerance (see also Brewer, 1996).

With regard to social discrimination, the minimal group experiments of Tajfel and his colleagues (Billig & Tajfel, 1973; Tajfel, Billig, Bundy, & Flament, 1971) and many studies thereafter demonstrated the role of categorization and identification in terms of social categories for ingroup favoritism (see Brewer, 1979; Brown, 1995; Messick & Mackie, 1989). However, as clearly formulated in social identity theory (SIT) (Tajfel & Turner, 1979), processes of categorization impact on intergroup behavior only in meaningful interaction with the social context. In certain contexts, ingroup and outgroup may in fact agree on their relative status and no conflict emerges. As Mummendey and colleagues showed, for truly aversive discriminatory behavior to occur, categorization alone is not sufficient but rather subjective legitimation seems to be required (e.g., Mummendey et al.,

1992; Otten, Mummendey, & Blanz, 1996; for a review, see Mummendey & Otten, 1998). We assume that members do not simply react to mere categories but rather to the meaning of categories, to the attributes, values, and beliefs that they perceive to be the content of these categories. When they perceive the outgroup's differing attributes, values, or beliefs to be norm-deviating and negative, they regard it as legitimate to devalue and disadvantage the outgroup. Evaluation of intergroup difference would be an essential process for social discrimination.

With regard to intergroup tolerance, various models suggest that intergroup contact can improve relations between social groups insofar as the contact experience counteracts the ingroup-outgroup categorization, either through personalization (Brewer & Miller, 1984), recategorization (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993), or cross-categorization (Migdal, Hewstone, & Mullen, 1998). However, one important problem of these models is that categories have a social reality and may not be easily abolished in intergroup encounters (for critical reviews, see Hewstone, 1996; Vivian, Hewstone, & Brown, 1997). Indeed, attempts to suppress the relevance of group memberships may actually backfire and increase their salience (Schofield, 1986). Hence, it seems crucial for positive intergroup relations, and for a true model of tolerance that acknowledges intergroup difference, that group members learn to positively evaluate the outgroup's differences without necessarily giving up the ingroup's positive distinctiveness (Hewstone & Brown, 1986). Evaluation of intergroup difference would be an essential process for intergroup tolerance.

A THEORETICAL PERSPECTIVE ON THE EVALUATION OF INTERGROUP DIFFERENCE

To better understand the process of evaluating intergroup difference, Mummendey and Wenzel (1999) recently developed a theoretical framework based on self-categorization theory (SCT) (Oakes et al., 1994; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). In SCT, it is assumed that people use social categorizations to define and orient themselves in a given social context (Turner, 1987a). Social categories are hierarchically structured and people categorize themselves at various levels of abstraction, depending on the social context. They may categorize themselves as individuals different from other individuals, as members of social groups different from other social groups, or at an even higher level of abstraction, as humans different from other species of animals. Categories of a given level of abstraction are compared in terms of a salient superordinate category that includes them both. Thus, higher-level categories furnish relevant dimensions for comparisons between the included lower-level categories. It is further assumed that persons who categorize themselves in a more inclusive way tend to perceive that self-category as positive and regard its prototypical positions as normative in the given social context. Thus, a higher-level category also furnishes the norms and values according to which its members and subcategories are evaluated. This general perspective, with relevant norms and comparative dimensions being derived from salient self-categories, has fundamental implications for an understanding of social influence (Turner, 1987b, 1991), group cohesion (Hogg, 1987, 1992, 1993), and social discrimination.

Specifically, Turner (1987a) hypothesized "that ethnocentrism . . . depends upon the perceived prototypicality of the ingroup in comparison with relevant outgroups (relative prototypicality) in terms of the valued superordinate self-category that provides the basis for the intergroup comparison" (p. 61). Thus, in accordance with our previous discussion, the self-category (as such usually positively valued) in which ingroup and outgroup are included provides the comparison dimensions and norms for relative evaluations of both groups. The prototype of the inclusive category constitutes the norm against which both groups are compared. The group that is more similar to the prototype of the positively valued higher-order self-category, and thus is more relatively prototypical for that inclusive self-category, will be evaluated more positively.[1]

This is the first assumption of SCT on which Mummendey and Wenzel (1999) based their analysis: Ingroup and outgroup are evaluated in terms of their relative prototypicality for a salient inclusive self-category. A second relevant SCT assumption is "that self-categories tend to be evaluated positively" (Turner, 1987a, p. 57), which has its roots in SIT (Tajfel & Turner, 1979) and its proposition that group members strive toward a positive social identity. Mummendey and Wenzel (1999) took these two assumptions to the logical conclusion that group members would tend to perceive their own group as more prototypical for the inclusive category than the outgroup. This is also in line with SCT's understanding of prototypes as neither objective nor fixed but as a subjective representation of a category that depends on the social context as well as norms and consensus within one's ingroup (Oakes, Haslam, & Turner, 1998). As such, prototypes can be subject of dispute and divergence between groups. Because both groups want to be considered as the more (or not much less) prototypical subgroup, group members tend to perceive their own group's attributes as relatively prototypical and thus project their ingroup's attributes onto the inclusive category. Through projection, each group tries to increase its relative social status. This pro-

cess may be regarded as a group-level equivalent to the well-known false consensus effect (FCE) (Ross, Greene, & House, 1977) for which, indeed, similar explanations in terms of self-esteem and validation of views have been proposed (Agostinelli, Sherman, Presson, & Chassin, 1992; Marks & Miller, 1987). Because the projection process should hold for both groups, it is likely that their members disagree on the valid representation of the inclusive category. Thus, we hypothesize (H1) that group members of a salient intergroup situation will perceive their ingroup to be more prototypical for the inclusive category than outgroup members perceive it to be.

We can further specify the predictions by adding two corollaries to the two SCT assumptions. The first assumption stated that salient inclusive self-categories would be the background for intergroup evaluations. That is, not any inclusive category will function as an evaluative backdrop but rather the inclusive category has to be a salient self-category in the given context. Members need to define themselves in terms of the inclusive category and identify with it for it to have normative relevance (see Turner, 1987b, 1991). Similarly, the second assumption stated that members are motivated to evaluate their ingroup positively. Again, this requires that members indeed define themselves in the given context as members of that group. To be motivated toward a positive social identity, "individuals must have internalized their group membership as an aspect of their self-concept" (Tajfel & Turner, 1979, p. 41). Taking these two corollaries together, processes of projection should hold in particular when there is sufficient identification with both the sublevel ingroup and the inclusive category. Thus, we hypothesize (H2) that group members will perceive their ingroup as relatively prototypical for the inclusive category in particular when they are simultaneously strongly identified with their ingroup and with the inclusive category (dual identity).

An ingroup that is perceived to be relatively prototypical for the inclusive category (relative to the outgroup) is considered to conform better to the relevant norms and values of the inclusive category, whereas the outgroup is regarded as deviating from these norms and values. Thus, directly from our first SCT assumption follows the hypothesis (H3) that the extent to which the ingroup is perceived to be relatively prototypical is significantly related to the relative evaluation and treatment of the outgroup. The more relatively prototypical the ingroup is perceived to be, the more negatively the outgroup is evaluated and treated. All of our hypotheses are clearly directional and will therefore be tested by means of one-tailed significance tests (all other significance levels reported in this article that are not related to tests of our hypotheses will be two-tailed).

STUDY 1

In a first study, we referred to business administration students and psychology students as subgroups of the inclusive category students. Both student groups traditionally hold rather negative stereotypes of each other that are typically based on their different values and attitudes concerning appearance, style, personal goals, and so forth. Relations between the groups are not overly marked by conflict but are relevant enough for sufficient levels of identification. Being a student (i.e., the inclusive social category) is certainly an important part of the students' identities. Participants were asked about their representations of both subgroups and the inclusive category, about their various attitudes toward the respective outgroup, and about their degrees of identification with their own subgroup (ingroup) and the inclusive group.

Method

PARTICIPANTS

One hundred and sixty-six students participated in the study, comprising 112 business administration students and 54 psychology students (the difference in number of participants from these groups was simply due to different availability). Participants had been studying their subjects as majors for at least 2 years, which should guarantee, overall, a sufficient degree of identification with their subjects of study. The participants were between the ages of 20 and 35 years; 91 were men, 75 were women. The gender proportions differed between the two samples: Whereas only 30% of the business students were women, 76% of the psychology students were women. These proportions corresponded approximately to the distribution of gender in the student populations. Students participated voluntarily in the study and received for their participation a ticket for a lottery that could win them either 50 or 25 German Marks.

QUESTIONNAIRE

The questionnaire consisted of three parts. In the first part, participants were given a list of 24 attributes. For this list to be balanced with regard to stereotypicality and valence, attribute selection had been based on pretests that asked business and psychology students to categorize given attributes as either being typical for business students, psychology students, both groups, or neither group and to rate their valence on scales ranging from negative to positive. Ten attributes had been selected that were typical and distinct for business students (2 negative), 10 attributes that were typical and distinct for psychology students (2 negative), and 4 that were typical for both or neither group (2 negative). The attributes were as follows (translated from German): arrogant (–), businesslike, career-oriented, detached, goal-oriented,

neat, political, resolute, selfish (–), successful (all stereotypical for business students); chaotic (–), creative, emotional, environmentalist, imaginative, scientific, self-critical, sociable, social, unorganized (–) (all stereotypical for psychology students); committed, insecure (–), open-minded, sloppy (–) (stereotypical for neither or both).

This list of attributes was presented three times: participants were asked to indicate the extent to which the attributes applied to business students, psychology students, and students in general (1 = *not at all*, 5 = *very much*). The sequence of the evaluations of business and psychology students was randomized; students in general were always evaluated last. In the second part of the questionnaire, participants were asked to indicate on a number of items their attitudes toward the student outgroup. Part three measured levels of identification with the ingroup (business students or psychology students) and the inclusive category (students).

Prototypicality. On the basis of the attribute ascriptions, we received an attribute profile for each social group (business students, psychology students, and students in general). As a standard measure of dissimilarity between profiles (Bortz, 1993), we calculated the square root of the sum of squared attribute differences between the profiles of each subgroup and the inclusive category.[2] We obtained for both business and psychology students a measure of their profile dissimilarity to students in general. The reverse of this measure reflects how similar to students in general, or how typical for students in general, each subgroup was considered to be. Thus, we defined a subgroup's prototypicality for the inclusive category as the reverse of the profile dissimilarity between this subgroup and the inclusive category. Subtracting the ingroup's profile dissimilarity from the outgroup's profile dissimilarity, we obtained a measure of relative prototypicality of the ingroup for the inclusive category.

Identification. Participants' identification with the inclusive category and their respective ingroup were each measured by four items (e.g., "I identify with students [business students, psychology students]", 1 = *not at all*, 5 = *very much*). The identification scale proved to be reliable both for the inclusive category (α = .80) and the ingroup (α = .80). Scale scores were thus obtained by averaging responses across the four items, respectively.

Intergroup attitudes. To measure attitudes toward the outgroup in their different facets, we used items that were constructed according to four subconcepts, namely, sympathy (e.g., as applied to psychology [business] students, "I feel business [psychology] students to be very likeable"), readiness to engage in contact (e.g., "I would like to get to know more business [psychology] students"), behavior (e.g., "When I meet somebody at a

party who is studying business [psychology], I try to have a conversation with him/her"), and tolerance (e.g., "Psychology and business students may learn a lot from each other"). A factor analysis revealed a strong first factor (eigenvalue: 5.0), explaining 42% of the variance, on which all 11 items loaded greater than .50. Hence, we did not further differentiate between the subconcepts but rather treated all items as indicators of a general concept of intergroup attitudes (α = .86). Scale scores were computed by averaging responses across items.

Results and Discussion

At first, levels of identification with ingroup and inclusive category were inspected. Identifications with the ingroup and the inclusive category were significantly correlated with each other (r = .52, p < .01). For both self-categories, participants indicated identifications significantly above the midpoint of the scales; for the ingroup, $t(165)$ = 13.12, p < .01 (M = 3.78, SD = .97); for the inclusive category, $t(165)$ = 10.42, p < .01 (M = 3.93, SD = .92). An analysis of variance with the factors participant group (business/psychology) and level of categorization (ingroup/inclusive category) showed that identification with the inclusive category was slightly stronger than identification with the ingroup, $F(1, 164)$ = 3.29, p < .08. Also, psychology students generally indicated a stronger identification than business students, $F(1, 164)$ = 3.70, p < .06 (for ingroup Ms = 3.98 and 3.69, for inclusive category Ms = 4.09 and 3.86, respectively). The latter result had implications for median-splits based on identification scores, relevant to our test of Hypothesis 2; namely, we used different medians for the two student groups.

DIVERGENCE ON PERCEIVED PROTOTYPICALITY

According to our first hypothesis, we tested whether both student groups would consider their respective ingroup as more prototypical for the inclusive category than the respective outgroup. The profile dissimilarities of business and psychology students (target group) with respect to the inclusive category students, from the perspectives of business and psychology students (participant group), were subjected to a 2 (participant group) × 2 (target group) ANOVA, with repeated measures on the latter factor. The analysis yielded a significant main effect of target group, $F(1, 157)$ = 8.66, p < .01. Psychology students were regarded as less different from, and thus more prototypical for, the inclusive category (M = 5.27, SD = 1.74) than business students (M = 5.50, SD = 1.83). This effect, however, was moderated by a significant interaction effect, $F(1, 157)$ = 18.75, p < .01. In line with Hypothesis 1, psychology students perceived psychology students to be more prototypical for the inclusive category (M = 4.65, SD = 1.44) than did business students (M = 5.57, SD = 1.80); simple effect: $F(1, 160)$ =

9.83, $p < .01$. In contrast, business students perceived business students to be more prototypical for the inclusive category ($M = 5.34$, $SD = 1.84$) than did psychology students ($M = 5.83$, $SD = 1.78$); simple effect: $F(1, 161) = 4.09$, $p < .05$. Hypothesis 1 was supported but the main effect reminds us that social reality may constrain the possibility to project ingroup attributes onto the inclusive category (see Ellemers, Van Rijswijk, Roefs, & Simons, 1997).

IMPACT OF IDENTIFICATION ON
PERCEIVED RELATIVE PROTOTYPICALITY

In our second hypothesis, we predicted that the ingroup would be regarded as particularly prototypical for the inclusive category when participants were simultaneously strongly identified with their ingroup and the inclusive category. Using separate median splits for the two student groups, we built a posteriori factors for identification with the ingroup (low/high) and identification with the inclusive category (low/high). According to our specific hypothesis, we applied a contrast analysis that compared the three conditions where identification with either ingroup or the inclusive category or both was low with the one condition where both ingroup and inclusive identification were high (–1, –1, –1, 3). The contrast effect was significant, $t(155) = 1.67$, $p < .05$, and the pattern of means was in line with Hypothesis 2 (see Figure 1): Perceived relative prototypicality of the ingroup was higher in the dual identification condition than in the other three conditions.

Alternatively, the pattern of means may suggest that the ingroup also was regarded as relatively prototypical when ingroup identification was low but inclusive identification was high. However, this alternative was ruled out. Testing for residual between-group differences of our first contrast, the contrast between low ingroup/high inclusive identification and the two conditions involving low inclusive identification (–1, 2, –1, 0) was not significant, $t(155) = .97$, ns. Overall, the residual between-group differences of our predicted contrast were not significant, $F(2, 155) = .62$, ns. Hence, the relation between level of identification and degree of projection is best described in the way we predicted. The ingroup's perceived relative prototypicality for the inclusive category is most pronounced under the condition of dual identity, that is, simultaneous identification with the ingroup and the inclusive category.

RELATIVE PROTOTYPICALITY
AND INTERGROUP ATTITUDES

In our third hypothesis, we predicted a negative correlation between perceived relative prototypicality of the ingroup and intergroup attitudes. Indeed, there was a significant negative correlation between both ($r = –.24$, $p < .01$). When the ingroup was regarded as relatively
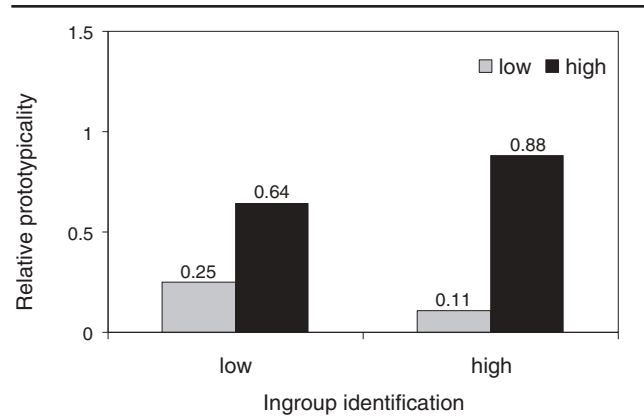

Figure 1   Relative prototypicality of the ingroup as a function of ingroup identification and inclusive identification in Study 1.

prototypical for the inclusive category, attitudes toward the outgroup were more negative. Although the difference measure of relative prototypicality is a strict operationalization of our theoretical concept, we also explored the independent effects of its two components and thus avoided possible problems involved in the use of difference measures as predictor variables (see Cohen & Cohen, 1983). We regressed intergroup attitudes onto profile dissimilarities between inclusive category and sublevel ingroup, on one hand, and between inclusive category and sublevel outgroup, on the other hand. Dissimilarity of the outgroup had a significant negative effect on intergroup attitudes ($\beta = –.26$, $p < .01$), whereas the effect of dissimilarity of the ingroup was positive but not significant ($\beta = .13$, $p = ns$). The findings suggest that the outgroup's deviance was more important than the ingroup's normativeness for intergroup attitudes. This could be due to our use of intergroup attitudes that referred to the outgroup only but not to preferences for the ingroup (over the outgroup). Alternatively, norm deviance might be given greater weight in one's attitude formation than norm congruence (see also Miller, Taylor, & Buck, 1991). Future research needs to investigate this issue further.

STUDY 2

Study 1 yielded empirical support for our approach in a specific, rather nonconflictual, and it could be objected, trivial intergroup setting. It is important to test whether the predictions generalize to other, presumably more involving and relevant intergroup contexts. In Study 2, we applied our approach to an intergroup context of a larger scale and with a political dimension, namely, to the European context. Due to recent political developments toward a European unification, the salience and relevance of a European identity has generally increased. Against the European background, we

studied the relations between the subgroups of Germans and Poles. We chose Poles because they could be considered a relevant, neighboring, and often negatively viewed outgroup for German participants. In contrast to the first study, we focused on the perspective of only one subgroup, namely, Germans. We thus did not test the first hypothesis again but focused on Hypotheses 2 and 3, which speak more directly to the assumed significance of perceived relative prototypicality for social identity and intergroup relations.

Method

PARTICIPANTS

Ninety-two psychology students participated in the study. The participants were between 18 and 32 years old; 69 were women and 23 were men. Students participated voluntarily in the study as a partial fulfillment of their course requirements.

QUESTIONNAIRE

The questionnaire consisted of the same three parts as the previous study. In the first part, participants were given a list of 20 attributes that was again, according to pretests, balanced with respect to stereotypicality and valence. Eight attributes were considered typical and distinct for Poles (four negative), eight attributes were typical and distinct for Germans (four negative), and four attributes were equally typical for both groups (two negative). The attributes were as follows (translated from German): affectionate, backward (–), family-oriented, inventive, lazy (–), modest, superficial (–), thieving (–) (stereotypical for Poles); bureaucratic (–), hardworking, honest, narrow-minded (–), obsessed with success (–), realistic, selfish (–), well organized (stereotypical for Germans); creative, nationalistic (–), stiff and formal (–), tolerant (stereotypical for neither or both).

The list of attributes was presented three times, whereby the participants were asked to indicate the extent to which the attributes applied respectively to Poles, Germans, and Europeans (1 = *not at all*, 5 = *very much*). The sequence of the evaluations of Poles and Germans was randomized, whereas Europeans were always evaluated last. In the second part of the questionnaire, participants were asked to indicate on a number of items their attitudes toward the outgroup. The third part consisted of measures of identification with the ingroup (Germans) and the inclusive category (Europeans).

Prototypicality. As in the previous studies, we calculated a measure of relative prototypicality, defined as the difference between the outgroup's (Poles) and the ingroup's (Germans) profile dissimilarities to Europe.

Identification. Participants' identifications with the inclusive category and their ingroup were each measured by five items (e.g., "I feel like a European [German]," 1 = *not at all*, 5 = *very much*). The identification scale proved to be reliable for both the inclusive category (α = .85) and the ingroup (α = .89). Scale scores were obtained by averaging responses across the five items, respectively.

Intergroup attitudes. As a measure of intergroup attitudes, we again intended to cover various facets. The items we used were constructed according to four subconcepts, namely, sympathy (e.g., "I like the Polish mentality"), readiness to contact (e.g., "I think it is important to be in contact with Poles"), behavior (e.g., "I would like to be able to speak the Polish language"), and tolerance (e.g., "With their differences, the German and Polish cultures may very well be complementary to one another"). A factor analysis revealed a strong first factor (eigenvalue: 3.6), which explained 45% of the variance and on which all eight items loaded greater than .48. We ignored a weaker second factor that emerged (eigenvalue: 1.1) and treated the eight items as indicators of a general concept of intergroup attitudes (α = .80). Scale scores were computed by averaging responses across items.

Results and Discussion

The levels of ingroup and inclusive identification were significantly correlated with each other (r = .30, $p <$ .01). According to t tests, the level of European identification was significantly above the scale midpoint, $t(91)$ = 8.20, $p < .01$ (M = 3.71, SD = .83), whereas the level of German identification was not, $t(91)$ = –.69, ns (M = 2.93, SD = .95). Participants showed a significantly stronger level of identification with Europe than with Germany, $t(91)$ = 7.05, $p < .01$. The moderate level of identification with Germany is consistent with the notion of Germans having, for historical reasons, a problematic relationship toward their national identity (Simon, Pantaleo, & Mummendey, 1995). Nonetheless, all possible levels of German identification (from 1 to 5) were represented in our sample.

IMPACT OF IDENTIFICATION ON PERCEIVED RELATIVE PROTOTYPICALITY

To test our hypothesis about the impact of dual identification on perceived relative prototypicality, we used median splits to build a posteriori factors for identification with the ingroup (low/high) and identification with the inclusive category (low/high). According to our specific hypothesis, we applied a contrast analysis that compared the three conditions where identification with either ingroup or the inclusive category or both was low with the one condition where both ingroup and inclusive identification were high (–1, –1, –1, 3). The contrast effect was significant, $t(87)$ = 1.76, $p < .05$, and the pattern of means was in line with Hypothesis 2 (see Figure

2). The residual between-group differences were not significant, $F(2, 87) = .03$, *ns*. Participants regarded the ingroup as most relatively prototypical when they identified strongly with both ingroup and inclusive category. Perceived relative prototypicality was second highest in the condition of double-low identification, but the residual contrast between low ingroup/low inclusive identification and the two conditions involving low/high or high/low identification $(2, -1, -1, 0)$ was not significant, $t(87) = .41$, *ns*. Thus, the results were consistent with the hypothesis and replicated the findings of Study 1.

RELATIVE PROTOTYPICALITY AND INTERGROUP ATTITUDES

In accordance with our third hypothesis, there was a significant negative correlation between perceived relative prototypicality and intergroup attitudes ($r = -.21$, $p < .03$). The more relatively prototypical the ingroup was perceived to be, the more negative were attitudes toward the outgroup. As in Study 1, we also regressed intergroup attitudes onto the two components of our relative prototypicality difference measure. The outgroup's dissimilarity to the inclusive category had a significant negative effect on intergroup attitudes ($\beta = -.23$, $p < .05$), whereas the effect of dissimilarity of the ingroup was positive but not significant ($\beta = .13$, $p = ns$). Again, the findings of Study 1 were replicated. As predicted, perceived relative prototypicality of the ingroup was negatively related to attitudes toward the outgroup. This effect was mainly due to the impact of the outgroup's perceived dissimilarity to, or deviance from, the relevant inclusive category.

STUDY 3

The first two studies provided empirical evidence for the role of relative ingroup prototypicality in intergroup relations. However, our theoretical and empirical approaches so far were simplified by the assumption that the inclusive self-category would be evaluated positively. That is, when referred to as normative background, attributes of the inclusive category would be considered positive reference standards. This is a sensible generalization within our framework, because it is itself an application of the second of our SCT assumptions. In fact, Turner (1987a) contends that "self-categories do tend to be positive (and are probably *more likely to be so the more superordinate they are*)" (pp. 58-59, emphasis added).

However, despite this tendency, in some contexts an (inclusive) self-category may indeed be evaluated negatively (Turner, 1987a) and yet members may identify with it and regard it as a relevant reference group (Mlicki & Ellemers, 1996; see the notion of a negative social identity, Mummendey, Kessler, Klink, & Mielke, 1999). However, when ingroup and outgroup are compared in
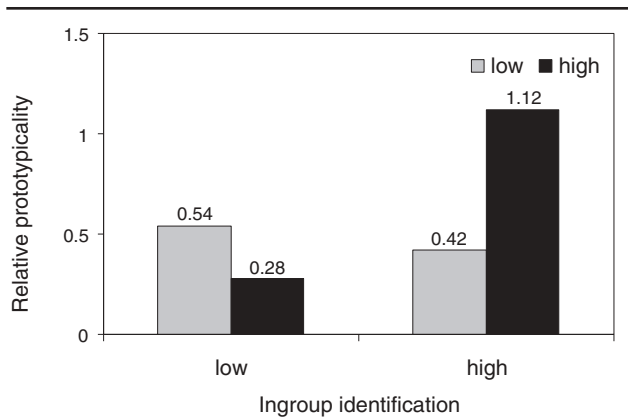

Figure 2   Relative prototypicality of the ingroup as a function of ingroup identification and inclusive identification in Study 2.

terms of a negatively evaluated inclusive category, the meaning of prototypicality changes. Prototypicality for a negative inclusive category would reflect negatively on one's ingroup; there should be a motivation among identified ingroup members to distance their group from the inclusive category rather than projecting ingroup attributes. Likewise, when the inclusive category is evaluated negatively, perceived relative prototypicality of the ingroup should be correlated with favorable outgroup attitudes, whereas, as we saw, it should be related to outgroup derogation when the inclusive category is positive. In any case, the predictions are consistent with our theoretical view that ingroup and outgroup are evaluated in terms of their relative prototypicality for a salient inclusive category. The evaluation of the inclusive category, however, moderates the meaning of prototypicality.

In Study 3, we primed a negative versus positive evaluation of the inclusive category to test these more precise predictions: When the inclusive category is primed positively, subgroup members will project more the more strongly they identify with their ingroup. When the inclusive category is primed negatively, subgroup members will project less the more strongly they identify with their ingroup (Hypothesis 2). Moreover, when the inclusive category is primed positively, the ingroup's perceived relative prototypicality for the inclusive category will be related to negative attitudes toward the outgroup. When the inclusive category is primed negatively, the ingroup's perceived relative prototypicality for the inclusive category will be related to positive attitudes toward the outgroup (Hypothesis 3).

The experimental approach of this study would furthermore address a possible objection to the earlier findings, namely, that these reflected only spurious relationships. For instance, it could be argued that the projection finding in Study 1 was merely a result of a

common tendency to evaluate one's ingroups positively. The same more positive attributes would be attributed to both sublevel ingroup and inclusive category while the same more negative attributes would not be attributed to either self-category. However, empirical evidence for our moderation hypothesis would support our interpretation of the findings as instances of ingroup projection because it would demonstrate its functionality for the ingroup's positive distinctiveness. Only when the inclusive category is positive will the ingroup's relative prototypicality for the inclusive category be functional for the motivation of identified members to construe their ingroup as positively distinct. With a negative inclusive category, it would be more functional to distance the ingroup from the inclusive category. Hence, a moderation effect of the primed evaluation of the inclusive category would demonstrate the context-dependence of the construal of the relation between ingroup and inclusive category, indicating a functionality in line with our approach.

To preserve comparability with the previous studies, beyond some necessary procedural changes, we used the same intergroup context as in Study 2 (Germans and Poles against the background of Europe). Although the general procedure was still very similar to the other studies, we introduced a manipulation of the evaluation of the inclusive category and also used a different measure of relative prototypicality. Because we used a priming manipulation whose effects are usually of limited duration and strength, it appeared wise to include a more concise measure of relative prototypicality (remember that in the earlier studies participants had to evaluate each of the three groups on 20 or more attributes).

Method

PARTICIPANTS AND DESIGN

Sixty students from various faculties participated in the study. The participants were between 18 and 30 years old; 32 were women, 28 were men. Students participated voluntarily in the study and received 10 German Marks for their participation. Participants were randomly allocated to the two experimental conditions of a one-factorial between-subjects design (negative vs. positive priming of the inclusive category).

PROCEDURE AND VARIABLES

The study was computer based. After arriving, participants were separately seated at personal computers. They read instructions and questions on the computer screen and entered their responses via keyboard. At first, they were briefly introduced to the topic of the study, namely, Europe and Germany's relationship to its neighbor countries. Then, as their first task, participants were instructed to think about and type in either what were

negative aspects of Europe or what were positive aspects of Europe, imagining they were asked to explain them to somebody else. This way, a negative or positive evaluation of Europe was primed and experimentally manipulated. In another task, relative prototypicality was measured. Participants were asked to type in three or four attributes that they thought were characteristic of Germans in contrast to Poles and three or four attributes that they thought were characteristic of Poles in contrast to Germans. These six to eight attributes were then presented again in random order and participants were instructed to rate on 9-point scales to what extent each attribute applied to Europeans ($-4 =$ *not at all*, $4 =$ *very much*). In further parts of the study, participants were asked to indicate on a number of items their attitudes toward the outgroup and their identification with the ingroup (Germans) and the inclusive category (Europeans).

Relative prototypicality. Based on the typicality ratings for the self-generated attributes, Germans' relative prototypicality for Europeans was defined as the difference between the mean typicality of distinctive German attributes and the mean typicality of distinctive Polish attributes.

Identification. Levels of identification with the inclusive category and their ingroup were measured by the same five items as in Study 2, however, on 9-point scales ($-4 =$ *not at all*, $4 =$ *very much*). The identification scale proved to be reliable for both the inclusive category ($\alpha =$ .82) and the ingroup ($\alpha =$ .89). Scale scores were obtained by averaging responses across the five items, respectively.

Intergroup attitudes. Participants' attitudes toward Poles were measured by the same eight items as in Study 2 but on 9-point scales ($-4 =$ *not at all*, $4 =$ *very much*). Only one item that referred to the willingness to learn the Polish language was slightly changed to improve its distribution ("If I had time, I would like to learn the Polish language"). A factor analysis revealed a strong first factor (eigenvalue: 4.1) that explained 51% of the variance and on which all eight items loaded greater than .50. We ignored a weaker second factor (eigenvalue: 1.2) and treated all eight items as indicators of a general concept of intergroup attitudes ($\alpha =$ .84). Scale scores were computed by averaging responses across items.

Results and Discussion

A negative priming of the inclusive category could mean that respondents identified less with the inclusive category. Thus, they would not necessarily regard it as a relevant comparison background for ingroup-outgroup relations anymore and we could not expect the hypothesized reversal of effects in the negative as compared to

the positive priming condition. We tested, therefore, whether our priming manipulation had an effect on identification with the inclusive category. A *t* test revealed no significant effect of priming on the identification as a European, $t(58) = .16$, *ns*. The finding is in line with the argument that people can and do identify with groups that are negatively valued (Mlicki & Ellemers, 1996). Important for the present study, a negatively and positively primed inclusive category may be equally likely referred to as a comparison background for intergroup evaluations. We could thus now test the moderating effects of evaluation of the inclusive category on ingroup projection and its consequences, in line with our theoretical argument. Given their apparent conceptual distinctiveness, future studies should also investigate how identification with and evaluation of the inclusive category interact with each other.

IMPACT OF PRIMING ON PERCEIVED RELATIVE PROTOTYPICALITY

To test the hypothesis that the primed evaluation of the inclusive category moderates the relation between ingroup identification and projection, we regressed the ingroup's perceived relative prototypicality for Europe on ingroup identification and the priming factor in a first step and the product of ingroup identification and priming in a second step. The consideration of the interaction term led to a significant increase in variance explained, $F_{change}(1, 56) = 6.61$, $p < .02$, so that we need to focus on the second step, $F(3, 56) = 2.25$, $p < .10$, $R^2 = .11$. The only significant effect was the one of the interaction term ($\beta = .36$, $p < .01$). To illustrate the meaning of this effect, we calculated the simple regressions of relative prototypicality on ingroup identification for the two levels of our experimental factor, that is, negative and positive priming. When the inclusive category was negatively primed, ingroup identification was negatively related to relative prototypicality of the ingroup ($\beta = -.34$, $p < .04$); when the inclusive category was positively primed, ingroup identification was positively related to relative prototypicality of the ingroup ($\beta = .32$, $p < .05$). Confirming the significant interaction effect, the regression coefficients differed significantly from each other, $t(56) = 3.03$, $p < .01$, according to the formula proposed by Cohen and Cohen (1983). The findings confirmed our hypothesis that the evaluation of the inclusive category would moderate the tendency to perceive the ingroup as relatively prototypical.

IMPACT OF PRIMING ON THE ATTITUDINAL IMPLICATIONS OF RELATIVE PROTOTYPICALITY

To test the hypothesis that relative prototypicality of the ingroup would have different implications for attitudes toward the outgroup depending on the primed evaluation of the inclusive category, we regressed inter-group attitudes on perceived relative prototypicality and the priming factor in a first step and the product of relative prototypicality and priming in a second step. The consideration of the interaction term led to a significant increase in variance explained, $F_{change}(1, 56) = 7.12$, $p < .01$, so that we need to focus on the second step, $F(3, 56) = 2.48$, $p < .10$, $R^2 = .11$. The only significant effect was the one of the interaction term ($\beta = -.34$, $p < .01$). To illustrate the meaning of this effect, we calculated the simple regressions of intergroup attitudes on relative prototypicality for both negative and positive priming. When the inclusive category was negatively primed, relative prototypicality of the ingroup was related to more positive attitudes toward the outgroup ($\beta = .44$, $p < .01$); when the inclusive category was positively primed, relative prototypicality of the ingroup was related to more negative attitudes toward the outgroup ($\beta = -.22$, *ns*). The regression coefficients differed significantly from each other, $t(56) = 2.74$, $p < .01$. Although one of the simple regression coefficients was not significant, the significant interaction effect and the comparison between the coefficients confirmed our hypothesis that the evaluation of the inclusive category would moderate the relation between perceived relative prototypicality of the ingroup and intergroup attitudes. These findings corroborate our view that the inclusive category constitutes the normative background that furnishes the values for intergroup evaluations, whether these values are negative or positive.

GENERAL DISCUSSION

In the present article, we empirically tested an approach to intergroup relations proposing that ingroup and outgroup are evaluated on the basis of their relative prototypicality for a salient higher-order inclusive category. The inclusive category tends to be represented in a way that renders the ingroup the more prototypical, thus more normative and positive, subgroup (positive social identity), in particular when respondents identify with both the ingroup and the inclusive category (dual identity). The evidence was consistent with our approach across three studies and two different intergroup contexts.

Specifically, the first study confirmed that two salient groups tend to disagree on the representation of their relation to a salient inclusive group, because either group perceives itself to be more similar to, typical or normative for, the inclusive category than the other group does. Such a divergence between both groups is, from our perspective, an essential condition for the experience of social discrimination (Mummendey & Wenzel, 1999; Turner, 1996; see also Markovsky, 1991; Mummendey & Otten, 2001; Otten & Mummendey, in press). Based on ethnocentric representations of the

inclusive category, one group would consider itself to be superior and entitled to better treatment because it presumably better represents the values and norms of the inclusive category (Wenzel, 2001, 2002). Thus, it would deem it legitimate to devalue the outgroup and treat it negatively. Members of the other group, however, would disagree with this representation of the inclusive category, view their group as more relatively prototypical and more deserving, and feel discriminated against. This perspective is reminiscent of Sumner's (1906) well-known concept of ethnocentrism but goes beyond it in that it specifies the process of generalizing one's own group's attributes and values through projecting them onto the inclusive category. Projected onto the inclusive category, these are seen as applicable to and normative for other included groups. As claimed in the introduction, these more precise assumptions about the processes also would allow for predictions concerning the limits of ethnocentrism and possibilities of intergroup tolerance and appreciation. We will come back to this point further below.

Studies 1 to 2, furthermore, yielded evidence for our prediction that the ingroup would be regarded as most relatively prototypical when respondents identified highly with both the ingroup and inclusive category. The findings corroborate our view, adopted from SCT (Turner, 1987a), that relative prototypicality for the inclusive category is the basis of ingroup attraction and the means to establish positive distinctiveness of one's group. Because their group's relative distinctiveness is more relevant for their self-concepts, and because they feel more committed to ingroup norms, highly identified group members are more highly motivated to perceive their group as relatively prototypical for the inclusive category. However, they only do so when they also identify with the inclusive category and thus feel committed to it as a normative background.

Moreover, they should only do so when relative prototypicality for the inclusive category has positive implications for the ingroup, that is, when the inclusive category is positively valued. This was clearly demonstrated in Study 3: Highly identified group members claimed their group to be prototypical when the inclusive category was evaluated positively but they distanced their group from an inclusive category having negative connotations. The findings suggest that perceived prototypicality and ingroup projection are functional for group members' construal of their social identity and legitimation of higher ingroup status.

Indeed, all three studies also supported the prediction that perceived relative prototypicality of the ingroup would be related to ingroup favoritism and negative attitudes toward the outgroup, at least when the inclusive category is evaluated positively, as is normally the case when members identify with this category. When, however, the inclusive category is evaluated negatively, relative prototypicality of the ingroup has negative value connotations and the outgroup's relative nonprototypicality has positive connotations. Therefore, as shown empirically in Study 3, relative prototypicality of the ingroup is related to more positive attitudes toward the outgroup. The findings are consistent with our view that the evaluation of groups is based on their perceived relative standing with respect to the norms and attributes of the inclusive category.

Although our theoretical approach would propose a causal relationship (i.e., at least, a bi-directional relationship) between projection and intergroup attitudes, as well as between identification and projection, the present data are clearly correlational and thus forbid any causal interpretations. Thus, conclusions from the present studies have to be more modest and further research is required to address the causal role of relative prototypicality and dual identity (Waldzus, Mummendey, & Rosendahl, 2002). Similarly, the moderation of ingroup projection by dual identification and evaluation of the inclusive category is consistent with our social identity analysis, but further work is required to identify the motivational versus cognitive underpinnings of the projection effect (cf. Clement & Krueger, 2000; Krueger, 1998). Furthermore, we have to acknowledge that the empirical relationships found were of modest size. For instance, the correlations between relative prototypicality and intergroup attitudes were typically between .20 to .25 and, thus, following the convention according to Cohen (1977), rather small effects. From a social policy perspective, conclusions drawn from these data would have to be modest again. However, the present studies were specifically designed to test basic theoretical predictions by means of a rather confined methodology. Even small but significant effects constitute empirical support for an underlying theoretical approach that predicted these effects whereas others did not.

As a final weakness discussed here, it may be criticized that all three studies used basically the same methodology, which bears the danger that the effects could be limited to this specific methodology. The problem cannot be ruled out on the basis of the present data and further studies, using different paradigms, are certainly necessary. The third study did use a measure of relative prototypicality different from Studies 1 and 2, and independent from the measure used, the findings were consistent with the predictions. However, it might be problematic that all three studies used the same order of tasks: relative prototypicality was measured first, then outgroup attitudes. This could have prompted a relationship that would not otherwise hold. In other research, however, we varied the order of tasks and did

not find any order effect (Waldzus, Mummendey, Wenzel, & Weber, 2003).

Taken together, our findings seem to suggest that group members with dual identities, in terms of subordinate ingroup and inclusive category, are particularly likely to project ingroup attributes and thus to discriminate against salient outgroups. This suggestion contrasts with the many viewpoints stressing the positive effects of dual identities for individuals (LaFromboise, Coleman, & Gerton, 1993), social harmony in societies (Huo, Smith, Tyler, & Lind, 1996), acculturation (Berry, 1984), and intergroup contact (Gonzales & Brown, 1999; Hornsey & Hogg, 2000). Most directly, it seems to contradict the position of the common ingroup identity model (e.g., Gaertner et al., 1993), which assumes that an inclusive categorization, that is, the perception of both groups' members as belonging to one higher-order group rather than two separate groups, would lead to more positive attitudes toward outgroup members. Notably, Gaertner and colleagues propose that for recategorization to be effective, it would not be necessary to give up one's subgroup identity. Rather, the maintenance of the subgroup identity is assumed to be beneficial for the generalization of recategorization effects from the immediate situation to other outgroup members not present (Dovidio, Gaertner, & Validzic, 1998; Gaertner et al., 1993).[3] By contrast, according to our theoretical view and the present findings, simultaneous identification with both the inclusive category and the subordinate ingroup increases the danger of projection processes that lead to ingroup favoritism and outgroup derogation.

A full discussion of this contradiction is beyond the scope of the present article. However, we want to emphasize that from our perspective, ingroup projection and negative outgroup attitudes are not automatic consequences of dual identification. For instance, under certain circumstances, ingroup and outgroup may develop a shared representation of the inclusive category and thus a consensual view of the value of subgroup attributes. Status relations would be regarded as legitimate and there would be little intergroup conflict. Such a consensus would seem more likely for complex representations where one group could not claim to represent the whole and where defining attributes of both groups could be considered as normative for the inclusive category (Waldzus et al., 2003), allowing for positive mutual intergroup differentiation (Hewstone & Brown, 1986). Gaertner, Dovidio, and Bachman (1996) seem to figure a similar condition when they discuss the different connotations of "team" as compared to "group," both used in different studies of theirs, that could account for different effects of dual identification in their studies.

Although future studies will address these further implications of our ingroup projection approach, the present findings constitute promising evidence for the general perspective. The studies provided empirical support for the notion that differences between ingroup and outgroup are evaluated against the background of a salient higher-order category that is perceived to include both. The groups are evaluated and treated on the basis of their relative prototypicality for the inclusive category, which may be construed ethnocentrically and referred to as legitimation for outgroup antagonism and social discrimination.

NOTES

1. To better distinguish the two levels of self-categorization throughout our further discussion, we will refer to "ingroup" (vs. outgroup) at the level of those two (sub)groups whose relations are at stake, whereas at the inclusive level we will speak of the "inclusive (self-) category" as the background for the subgroups' relation, even if it also constitutes an ingroup in some sense.

2. Adapted to our own purposes, the formula for profile dissimilarity was as follows: $d_{inc-sub} = [\Sigma(x_{inc \bullet i} - x_{sub \bullet i})^2]^{1/2}$; with d = profile dissimilarity, inc = inclusive category, sub = sub-ingroup, and x_i = value for attribute i.

3. Gaertner, Dovidio, Anastasio, Bachman, and Rust (1993) suggest, however, that there might be a trade-off between, on one hand, complete recategorization having maximally positive effects on attitudes toward the outgroup members immediately present and, on the other hand, maintenance of subgroup identities being beneficial to the generalization of these effects.

REFERENCES

Agostinelli, G., Sherman, S. J., Presson, C. C., & Chassin, L. (1992). Self-protection and self-enhancement biases in estimates of population prevalence. *Personality and Social Psychology Bulletin*, *18*, 631-642.

Berry, J. W. (1984). Cultural relations in plural societies: Alternatives to segregation and their sociopsychological implications. In N. Miller & M. B. Brewer (Eds.), *Groups in contact: The psychology of desegregation* (pp. 11-27). New York: Academic Press.

Billig, M. G., & Tajfel, H. (1973). Social categorization and similarity in intergroup behaviour. *European Journal of Social Psychology*, *3*, 27-52.

Bortz, J. (1993). *Statistik für Sozialwissenschaftler* [*Statistics for social scientists*]. Berlin: Springer.

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

Brewer, M. B. (1996). Managing diversity: The role of social identities. In S. E. Jackson & M. N. Ruderman (Eds.), *Diversity in work teams: Research paradigms for a changing workplace.* Washington, DC: American Psychological Association.

Brewer, M. B., & Brown, R. J. (1998). Intergroup relations. In D. G. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 2, 4th ed., pp. 554-593). Boston: McGraw-Hill.

Brewer, M. B., & Miller, N. (1984). Beyond the contact hypothesis: Theoretical perspectives on desegregation. In N. Miller & M. B. Brewer (Eds.), *Groups in contact: The psychology of desegregation* (pp. 281-302). New York: Academic Press.

Brown, R. J. (1995). *Prejudice: Its social psychology.* Oxford, UK: Blackwell.

Clement, R. W., & Krueger, J. (2000). The primacy of self-referent information in perceptions of social consensus. *British Journal of Social Psychology*, *39*, 279-299.

Cohen, J. (1977). *Statistical power analysis for the behavioral sciences.* New York: John Wiley.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Dovidio, J. F., Gaertner, S. L., & Validzic, A. (1998). Intergroup bias: Status, differentiation, and a common in-group identity. *Journal of Personality and Social Psychology, 75,* 109-120.

Ellemers, N., Van Rijswijk, W., Roefs, M., & Simons, C. (1997). Bias in intergroup perceptions: Balancing group identity with social reality. *Personality and Social Psychology Bulletin, 23,* 186-198.

Fiske, S. T. (1998). Stereotyping, prejudice, and discrimination. In D. G. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 2, 4th ed., pp. 357-411). Boston: McGraw-Hill.

Gaertner, S. L., Dovidio, J. F., Anastasio, P. A., Bachman, B. A., & Rust, M. C. (1993). The common ingroup identity model: Recategorization and the reduction of intergroup bias. In W. Strobe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 4, pp. 1-26). Chichester, UK: Wiley.

Gaertner, S. L., Dovidio, J. F., & Bachman, B. A. (1996). Revisiting the contact hypothesis: The induction of a common ingroup identity. *International Journal of Intercultural Relations, 20,* 271-290.

Gonzales, R., & Brown, R. (1999, July 6-11). *Reducing intergroup conflict by varying the salience of subgroup and superordinate group identifications.* Paper presented at the 12th general meeting of the European Association of Experimental Social Psychology, Oxford.

Graumann, C. F. (1992). *Xenophobia: A challenge to social psychology.* Invited lecture presented at the 9th East West Meeting of the European Association of Experimental Social Psychology in Münster, Germany.

Hewstone, M. (1996). Contact and categorization: Social psychological interventions to change intergroup relations. In C. N. Macrae, C. Stangor, & M. Hewstone (Eds.), *Stereotypes and stereotyping* (pp. 323-368). New York: Guilford.

Hewstone, M., & Brown, R. (1986). Contact is not enough: An intergroup perspective on the "contact hypothesis." In M. Hewstone & R. Brown (Eds.), *Contact and conflict in intergroup encounters* (pp. 1-44). Oxford, UK: Basil Blackwell.

Hogg, M. A. (1987). Social identity and group cohesiveness. In J. C. Turner, M. A. Hogg, P. J. Oakes, S. D. Reicher, & M. S. Wetherell (Eds.), *Rediscovering the social group: A self-categorization theory* (pp. 89-116). Oxford, UK: Basil Blackwell.

Hogg, M. A. (1992). *The social psychology of group cohesiveness.* London: Harvester Wheatsheaf.

Hogg, M. A. (1993). Group cohesiveness: A critical review and some new directions. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 4, pp. 85-111). Chichester, UK: Wiley.

Hornsey, M. J., & Hogg, M. A. (2000). Subgroup relations: A comparison of mutual intergroup differentiation and common ingroup identity models of prejudice reduction. *Personality and Social Psychology Bulletin, 26,* 242-256.

Huo, Y. J., Smith, H. J., Tyler, T. R., & Lind, E. A. (1996). Superordinate identification, subgroup identification, and justice concerns: Is separatism the problem; is assimilation the answer? *Psychological Science, 7,* 40-45.

Krueger, J. (1998). On the perception of social consensus. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 30, pp. 163-240). San Diego, CA: Academic Press.

LaFromboise, T., Coleman, H. L. K., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin, 114,* 395-412.

Markovsky, B. (1991). Prospects for a cognitive-structural justice theory. In R. Vermunt & H. Steensma (Eds.), *Social justice in human relations* (Vol. 1, pp. 33-58). New York: Plenum.

Marks, G., & Miller, N. (1987). Ten years of research on the false-consensus effect: An empirical and theoretical review. *Psychological Bulletin, 102,* 72-90.

Messick, D. M., & Mackie, D. M. (1989). Intergroup relations. In M. R. Rosenzweig & L. W. Porter (Eds.), *Annual review of psychology* (Vol. 40, pp. 45-81). Palo Alto, CA: Annual Reviews.

Migdal, M. J., Hewstone, M., & Mullen, B. (1998). The effects of crossed categorization on intergroup evaluations: A meta-analysis. *British Journal of Social Psychology, 37,* 303-324.

Miller, D. T., Taylor, B., & Buck, M. L. (1991). Gender gaps: Who needs to be explained? *Journal of Personality and Social Psychology, 61,* 5-12.

Mlicki, P. P., & Ellemers, N. (1996). Being different or being better? National stereotypes and identifications of Polish and Dutch students. *European Journal of Social Psychology, 26,* 97-113.

Mummendey, A. (1993). Fremde im Spiegel sozialer Vorurteile [Strangers as reflected in social prejudices]. In Ruprecht-Karls-Universität Heidelberg (Eds.), *Erfahrungen des Fremden: Studium Generale an der Ruprecht-Karls-Universität Heidelberg* [*Experiences of the foreign: General studies at the University of Heidelberg*] (pp. 127-138). Heidelberg, Germany: Heidelberger Verlagsanstalt.

Mummendey, A., Kessler, T., Klink, A., & Mielke, R. (1999). Strategies to cope with negative social identity: Predictions by social identity theory and relative deprivation theory. *Journal of Personality and Social Psychology, 76,* 229-245.

Mummendey, A., & Otten, S. (1998). Positive-negative asymmetry in social discrimination. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 9, pp. 107-143). Chichester, UK: Wiley.

Mummendey, A., & Otten, S. (2001). Aversive discrimination. In R. Brown & S. Gaertner (Eds.), *Blackwell handbook on social psychology* (Vol. 4, pp. 112-132). Oxford, UK: Basil Blackwell.

Mummendey, A., Simon, B., Dietze, C., Grünert, M., Haeger, G., Kessler, S., Lettgen, S., & Schäferhoff, S. (1992). Categorization is not enough: Intergroup discrimination in negative outcome allocation. *Journal of Experimental Social Psychology, 28,* 125-144.

Mummendey, A., & Wenzel, M. (1999). Social discrimination and tolerance in intergroup relations: Reactions to intergroup difference. *Personality and Social Psychology Review, 3,* 158-174.

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

Oakes, P. J., Haslam, S. A., & Turner, J. C. (1998). The role of prototypicality in group influence and cohesion: Contextual variation in the graded structure of social categories. In S. Worchel, J. F. Morales, D. Paez, & J.-C. Deschamps (Eds.), *Social identity: International perspectives* (pp. 75-92). London: Sage Ltd.

Otten, S., & Mummendey, A. (in press). Social discrimination and social aggression: A matter of perspective-specific divergence? In C. F. Graumann & W. Kallmayer (Eds.), *Perspectives and perspectivation in discourse.* Amsterdam, the Netherlands: Benjamins.

Otten, S., Mummendey, A., & Blanz, M. (1996). Intergroup discrimination in positive and negative outcome allocations: Impact of stimulus valence, relative group status, and relative group size. *Personality and Social Psychology Bulletin, 22,* 568-581.

Ross, L., Greene, D., & House, P. (1977). The "false consensus effect": An egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology, 13,* 279-301.

Schofield, J. W. (1986). Causes and consequences of the colorblind perspective. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 231-254). Orlando, FL: Academic Press.

Simon, B., Pantaleo, G., & Mummendey, A. (1995). Unique individual or interchangeable group member? The accentuation of intragroup differences versus similarities as an indicator of the individual self versus the collective self. *Journal of Personality and Social Psychology, 69,* 106-119.

Sumner, W. G. (1906). *Folkways.* New York: Ginn.

Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology, 1,* 149-178.

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

Turner, J. C. (1987a). A self-categorization theory. In J. C. Turner, M. A. Hogg, P. J. Oakes, S. D. Reicher, & M. S. Wetherell (Eds.), *Rediscovering the social group: A self-categorization theory* (pp. 42-67). Oxford, UK: Blackwell.

Turner, J. C. (1987b). The analysis of social influence. In J. C. Turner, M. A. Hogg, P. J. Oakes, S. D. Reicher, & M. S. Wetherell (Eds.), *Rediscovering the social group: A self-categorization theory* (pp. 68-88). Oxford, UK: Basil Blackwell.

Turner, J. C. (1991). *Social influence.* Milton Keynes, UK: Open University Press.

Turner, J. C. (1996, September 22-26). *Social identity theory and the concept of prejudice.* Paper presented at the 40th Congress of the German Psychological Society, Munich, Germany.

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

Vivian, J., Hewstone, M., & Brown, R. (1997). Intergroup contact: Theoretical and empirical developments. In R. Ben-Ari & Y. Rich (Eds.), *Enhancing education in heterogeneous schools: Theory and application. Studies in memory of Yehuda Amir* (pp. 13-46). Ramat-Gan, Israel: Bar-Ilan University Press.

Waldzus, S., Mummendey, A., & Rosendahl, J. (2002). *Dual identity increases an in-group's prototypicality, counteracting the positive effect of common in-group identity on intergroup attitudes.* Manuscript submitted for publication.

Waldzus, S., Mummendey, A., Wenzel, M., & Weber, U. (2003). Towards tolerance: Representations of superordinate categories and perceived ingroup prototypicality. *Journal of Experimental Social Psychology, 39*, 31-47.

Wenzel, M. (2001). A social categorization approach to distributive justice: Social identity as the link between relevance of inputs and need for justice. *British Journal of Social Psychology, 40*, 315-355.

Wenzel, M. (2002). What is social about justice? Inclusive identity and group values as the basis of the justice motive. *Journal of Experimental Social Psychology, 38*, 205-218.