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Superordinate identities and intergroup conflict: The ingroup projection model

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Abstract

This chapter summarizes results from a research program on the psychological basis of tolerance and discrimination in intergroup relations, with particular consideration of the role of superordinate identities. According to the Ingroup Projection Model, a relevant superordinate group provides dimensions and norms for comparisons between ingroup and outgroup. Groups gain positive value or status when they are considered prototypical for the (positively valued) superordinate group. Group members tend to generalize (project) distinct ingroup characteristics onto the superordinate category, implying the relative prototypicality of their ingroup. To the extent that outgroup difference is regarded as a deviation from the ethnocentrically construed prototype it is evaluated negatively. Our research studied consequences and determinants of ingroup projection, as well as moderators of its implications. The findings contribute to a deeper understanding of the processes involved in intergroup discrimination and indicate new pathways for the reduction of prejudice, towards mutual intergroup appreciation and tolerance.

At an ever increasing rate, today's world brings together people of different groups and origin. Communication across the globe is possible by a mere tap of your finger. Technology and growing mobility make our societies increasingly diverse. This has not rendered national, cultural or religious identities obsolete though, and conflicts between social groups abound. Arguably, however, these social trends have made our world more colourful and interesting, and we may indeed not really wish away people's differences, their diverse heritage and culture. This is so, at least, if we can tolerate and appreciate their differences and do not regard them as threats. It requires a notion of tolerance that does not merely accept others inasmuch as they are like us, but that rather accepts or respects their differences from us.

The persistence of intergroup conflict in an increasingly diverse society is not a surprise. It has been an early insight of social psychology that intergroup contact per se is not sufficient for improving relations between members of different social groups (Allport, 1954). Rather, the specific conditions of the contact are crucial, as is whether these facilitate psychological processes that are considered beneficial for positive intergroup relations (see Brown & Hewstone, 2005, for a review). Specifically, it is frequently assumed that contact between members of different groups should be designed to reduce the categorization into ingroup and outgroup and/or change the negative stereotypes that the groups hold of each other. Indeed, much social psychological research has shown that the social categorization into "us" and "them" lies at the heart of intergroup conflict and prejudice. Tajfel's classic minimal group experiments (Tajfel, Billig, Bundy, & Flament, 1971) demonstrate that even the categorization into two groups that are void of history and prior meaning can instigate bias in favour of one's own group. In social identity theory, Tajfel and Turner (1986) argue this is the case because people's group memberships provide them with a sense of who they are, a social identity that they are motivated to give positive value to by favourably differentiating it

from relevant comparison outgroups. Likewise, social categorization brings about stereotypes and group representations that tend to favour the ingroup over the outgroup (see Fiske, 1998).

With categorizations and their cognitive representations apparently being at the core of the problem, it seems a reasonable suggestion that contact, or any measure to reduce social discrimination and intergroup conflict, should help change those stereotypes or reduce the use and salience of the problematic ingroup-outgroup distinction. Specific suggestions range from personalizing contact conditions that foster the mutual perception as individuals rather than group members (Brewer & Miller, 1984) and the development of cross-group friendships (Pettigrew, 1998), to cross-cutting social categorizations that reduce the salience of the problematic ingroup-outgroup distinction (Migdal, Hewstone, & Mullen, 1998) and the presentation of outgroup exemplars that are inconsistent with existing stereotypes about the outgroup (Hewstone, 1994). Alternatively, it has been suggested that outgroup members be recategorized as fellow members of a higher-order common ingroup (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993; Gaertner & Dovidio, 2000). This approach, it has been argued, holds particular promise because it utilizes the positive implications of a shared group identity, such as commitment, cooperation and mutual liking, by extending them to former outgroup members.

However, the general logic of eliminating or changing a problematic ingroup-outgroup categorization is not without problems. Specifically, because members may feel attached to their given ingroup, they may be reluctant to give up their ingroup identity. Indeed, they may regard measures designed to take that social identity away from them as illegitimate and resist them with even stronger attempts to maintain the ingroup/outgroup differentiation (Hornsey & Hogg, 2000a). Likewise, when the ingroup/outgroup distinction is played down in contact situations and the contact partners no longer see each other as members of those different groups, their positive contact experience is unlikely to be generalized to the groups as a whole

and will thus have only limited effect (Brown & Hewstone, 2005). For these reasons, Hewstone and Brown (1986) argued that contact should not be designed to reduce the salience of the ingroup/outgroup categorization; on the contrary, the contact partners should interact with each other explicitly as members of their respective groups. Rather than playing down differences between the groups, the contact should enable the members to acknowledge mutual superiorities and inferiorities. For example, they may favour the ingroup on dimensions of importance to the ingroup and favour the outgroup on dimensions of importance to the outgroup (although claims for what exactly is important to whom may still allow for subtle forms of ingroup-favouritism; Mummendey & Schreiber, 1983, 1984; Mummendey & Simon, 1989). Members can thus gain a positive social identity from their ingroup's positive attributes, while at the same time appreciating positive features of the outgroup.

In their recent integrative review, Brown and Hewstone (2005) admit that, since their original theoretical statement in 1986, their research has largely focused on the claim that the salience of intergroup categorization is beneficial for contact effects, but little progress has been made on the process of "mutual positive intergroup differentiation". Indeed, we may ask: How exactly are groups able to appreciate mutual superiorities? The theoretical analysis and empirical research that we review in this article basically aims to elucidate this process (while not restricting it to situations of intergroup contact). The question requires us to rethink how group members give value to ingroup and outgroup features at all. The psychological principles we consider need to speak to both sides of the coin: Why is it that ingroup members often tend to have a positive view of their own group and evaluate an outgroup's differences negatively? And how, when and through which process, can they appreciate an outgroup and ascribe positive value to its attributes? The answers proposed to these issues, we claim, will provide a more detailed understanding of the processes that underlie ingroup favouritism and

social discrimination. At the same time, they will suggest how positive intergroup relations are possible without playing down intergroup differences and sacrificing one's ingroup identity, by moving towards a true notion of tolerance that, accepting the intergroup distinction, appreciates and values the differences (as recently also demanded by Park & Judd, 2005).

Our theoretical analysis, which since its original statement (Mummendey & Wenzel, 1999) has been dubbed the *ingroup projection model*, is strongly founded in self-categorization theory (Turner, 1987). Its basic argument is that group members derive evaluations of the ingroup's and outgroup's relative attributes from a higher-order social category that includes both groups. While the superordinate group provides the frame of reference for the evaluation of intergroup differences, it itself is not static or objective but rather subject to the social perception from diverging vantage points of ingroup and outgroup perceivers. In the remainder of this article, we will first outline the theoretical model, then review empirical evidence gathered since its inception, and finally discuss implications and limitations of the research.

The Ingroup Projection Model

The ingroup projection model owes much to Turner's (1987) ingenious theoretical analysis of the role of self-categorization processes in group formation and intergroup as well as intragroup processes. According to Turner, individuals use categories to structure and give meaning to their social world; they also categorize themselves and derive from this a sense of self. Specifically, they can see themselves as a member of variously inclusive social categories; for example, as a unique individual (where they are the only category member), as a human being (where all other human beings are included), or as a member of a social group at any intermediate level of inclusiveness (e.g., as a social scientist). Self-categorization leads to an accentuation of similarities within the self-category and an accentuation of differences

from other relevant categories. As members of a social group, individuals will thus tend to see themselves as relatively interchangeable with other members of their group, and this depersonalization is considered the core process underlying group phenomena, including cooperation and cohesiveness within groups. Because the process applies to social self-categories at any level of inclusiveness, individuals who may have been regarded as outgroup members before will be met with greater cooperation, empathy or liking, once they are recategorized as members of a social category that includes ingroup and outgroup. Thus, it can be argued that the benefits of developing a common identity (Gaertner & Dovidio, 2000) derive from this process of depersonalization, of seeing oneself as interchangeable with members previously regarded as an outgroup (Turner, 1981). Similarly, a shared superordinate identity of ingroup and outgroup members implies a psychological equivalence from which entitlements to equal treatment can be derived (Wenzel, 2000, 2004).

Relative Prototypicality and Intergroup Evaluation

Turner (1987) continues, however, that more inclusive social categories also provide the background (dimensions and norms) for comparisons between the lower-order categories they include. First, social categories are comparable only to the extent that they share inclusion in a higher-order category (which means apples and oranges can be compared after all, when thought of as instances of the category fruit; Turner, 1987). Second, social categories tend to be compared on dimensions that apply to and define the relevant higher-order category (such as sweetness or tanginess in the case of fruit). Third, the prototypical position on these comparison dimensions is the valued standard and relevant norm. A prototype can be defined as the ideal-type member of a category that best represents its identity in a given context and frame of reference (Oakes, Haslam, & Turner, 1998). Because a higher-order self-category that includes ingroup and outgroup is itself an ingroup (only a more inclusive one), it tends to be evaluated positively and its prototype tends to be a positive

reference standard. Ingroup and outgroup are then evaluated positively to the extent that they are regarded as prototypical for the relevant higher-order category that includes them both. For example, natural and social scientists are likely to compare themselves in terms of their shared identity as scientists. They will compare themselves on dimensions that are used to define and describe scientists; and their evaluation of ingroup and outgroup will be based on the degree to which each group resembles the prototypical or ideal scientist.

In line with self-categorization theory, it has been found that these processes have implications for various group phenomena. Intragroup liking and attraction, attributions of leadership and charisma, persuasiveness and social influence, are based on perceptions of prototypicality for a relevant shared ingroup (e.g., Hains, Hogg, & Duck, 1997; Hogg & Hains, 1996; Hogg, 2001; Oakes et al., 1998; Platow, van Knippenberg, Haslam, van Knippenberg, & Spears, 2006; Turner & Haslam, 2001; van Knippenberg, 2000). Less attention, however, has been paid to these processes as they apply to relations between groups, even though Turner (1987) explicitly hypothesized that “ethnocentrism, attraction to one’s own group as a whole, 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 of the intergroup comparison” (p. 61). This argument forms the core of the present approach, and in this sense we define an ingroup’s relative prototypicality as the degree to which the ingroup is perceived to be more (or less) prototypical for a given superordinate group than the outgroup.

Moreover, relative prototypicality is not only the basis of the evaluation of individuals and groups, but also their perceived entitlements (Wenzel, 2004). While, on the one hand, shared membership in a social category justifies entitlement to equal treatment to the extent that it implies psychological equivalence of those included, it suggests, on the other hand, dimensions and standards (in terms of its prototype) for a differentiation of its members or

subgroups and their entitlements. In general, the more prototypical member or subgroup will be perceived as more entitled to the privileges or resources associated with membership in the superordinate category (Wenzel, 2001, 2002; for a detailed account, see Wenzel, 2004).

Similarly, an ingroup's perceived relative prototypicality (compared to the outgroup) should entitle it to better outcomes or legitimize its higher status. For example, the relative prototypicality (being scientific) of natural sciences (compared to social sciences) may be seen as entitling them to a greater share of research funding and as justifying their higher reputation and greater representation in top-tier journals like *Science* or *Nature*.

Ingroup-Favouring Perceptions of Prototypicality

The evaluation of ingroup and outgroup (including the ascription of status and entitlements) thus depends on the groups' relative prototypicality for a relevant higher-order category that includes them both. If the groups have a consensual view about the prototype of the superordinate category and the groups' relative prototypicality, they should also agree on the relative value and status of the two groups. Even if the two groups differed in their status, power or other outcomes, both groups could regard this situation as legitimate based on the groups' different prototypicality for the superordinate category and neither group would argue that the unequal treatment was unjustified or discriminatory (see Mummendey & Otten, 2001). Yet, the representation of social categories, however inclusive, is not objectively given but rather a social construction from the specific perspective of the perceiver (in interaction with the situation and social realities; Oakes et al., 1998). Social categories can be represented in ways that serve the goals of the perceiver (Reicher & Hopkins, 2001). Social groups may thus not only have biased perceptions of each other but also of the comparative framework, the superordinate category, from which they derive their relative value and status.

Following social identity theory (Tajfel & Turner, 1986), group members generally prefer their ingroup to be relatively positively valued, as this contributes to a positive social

identity. A distinctive hypothesis of our model is that group members will therefore tend to perceive their ingroup as relatively prototypical for the relevant superordinate category. If the situation allows it (and the superordinate category is positively valued), they will perceive their ingroup as more prototypical than the comparison outgroup. It would appear as if group members generalize, or *project*, distinctive characteristics of their ingroup to the superordinate category. By claiming that the prototype of the relevant superordinate category is defined by attributes that are distinctive of the ingroup in relation to the given outgroup, the ingroup is declared as being more prototypical than the outgroup and thus of more positive value (of higher status, more deserving, etc.). Relative prototypicality, in this sense, is the equivalent of positive distinctiveness (Turner, 1987). We refer to this process as *ingroup projection*.

The idea of ingroup projection follows the tradition of research on social projection and the well known false consensus effect (Allport, 1924; Ross, Greene, & House, 1977; for reviews see Krueger, 2000, 2007; Marks & Miller, 1987; Mullen & Hu, 1988). However, those older phenomena, if they were studied in the context of groups at all, referred to the projection from the individual self to the ingroup (Clement & Krueger, 2002; Krueger, 2007; Mullen, Dovidio, Johnson, & Copper, 1992). Thus, whereas social projection has implications for the representation of an ingroup's prototype, ingroup projection applies to the representation of a relevant superordinate category and is relevant to the relations between the groups included. While the term projection suggests a process of induction, a generalization from an exemplar or subgroup to a more inclusive group, we accept that group members may also claim relative prototypicality for their group by assimilating the perception of their ingroup to the prototype of the superordinate group. Corresponding to the notion of self-stereotyping at the level of individual group members (Turner, 1987), this refers to a deductive process of attributing prototypical characteristics of a superordinate category to a

lower-level self-category. While there is evidence for self-stereotyping at the level of the individual (e.g., Onorato & Turner, 2004), we are not aware of any evidence so far for the corresponding process at the subgroup level. Yet we are not ruling out this possibility (similarly, self-categorization theorists accept that both introjective and projective processes may play a role in the depersonalization of individual group members; Onorato & Turner, 2004). In fact, in our research we cannot always distinguish between these two possibilities; rather, we use the term ingroup projection as a short general label for *the perception, or claim, of the ingroup's greater relative prototypicality for the superordinate group*.

Through ingroup projection, members regard attributes that are, in a given context, stereotypical and distinctive of their ingroup as prototypical and, thus, normative and positive. Because the outgroup is, by definition, different from the ingroup, this process implies that the outgroup's attributes are then regarded as less prototypical for the inclusive category. Due to the normative force of the inclusive category and its prototype, the outgroup's difference becomes deviance. The outgroup is evaluated negatively exactly *because* it shares with the ingroup the inclusion in a higher-order group, whose norms and values supposedly apply to all its subgroups. The outgroup's difference may be considered a violation of the norms implied in the superordinate category. Thus, ethnocentrism, ingroup favouritism and devaluation of outgroups can be outcomes of inclusion in a superordinate category when the latter is ethnocentrically represented by the ingroup. Note, at this point we understand devaluation of the outgroup as a relatively negative or non-positive evaluation; the extent to which ingroup projection also leads to aversive treatment of the outgroup in an absolute sense is beyond the scope of this paper (Brewer, 1999; Mummendey & Otten, 2001).

Again, one's own group's claim of greater prototypicality (and the ensuing favouritism of one group over the other) is not necessarily discriminatory; but the other group is likely to call it discrimination when they dispute such a claim. Thus, social discrimination

is an attribution that stems from a disagreement between two groups about their relative prototypicality and the implied difference in value. Because processes of ingroup projection generally apply to both groups from their respective perspectives, such disagreements should be regular occurrences. Referring to our previous example, natural scientists may have a different idea about what it means to be a prototypical scientist than social scientists do. As a consequence, natural scientists may believe social scientists are less prototypical (relative to them) than social scientists themselves think they are. Such a disagreement about prototypicality may lead to divergent judgments about the legitimacy of the distribution of research funding and other resources. Natural and/or social scientists may claim that they deserve more than they receive and may feel discriminated against.

Limits to Ingroup Projection and the Prospect of Intergroup Tolerance

Ingroup projection is not an automatic or ubiquitous process but rather depends on certain conditions. The ingroup projection model suggests two classes of predictors of ingroup projection: social identification and features of category representation. Conversely, these arguments suggest possible avenues towards greater tolerance and appreciation of intergroup differences, namely through interventions that counteract the conditions that are conducive to ingroup projection (Mummendey & Wenzel, 1999).

Social Identification

First, we can derive the hypothesis that group members who identify with both the superordinate category and the sub-level ingroup should show the strongest tendency toward ingroup projection. On the one hand, group members need to identify with the superordinate category for it to be self-relevant and referred to as a reference point for subgroup comparisons. On the other hand, group members who identify with their ingroup and feel committed to it will be more strongly motivated to give it positive value and further its relative status. Thus, we would predict that a dual identity, the simultaneous identification

with both the superordinate group and the sub-level ingroup, will promote ingroup projection and, mediated by this process, lead to ingroup favouritism and outgroup devaluation. This prediction is quite at odds with the view held by other theorists that dual identification benefits positive intergroup relations (e.g., Dovidio, Gaertner, & Validzic, 1998; Gonzales & Brown, 2003; Hogg & Hornsey, 2000a). For example, Gaertner and Dovidio (2000) argue that a dual identity has the advantage of reaping the benefits of recategorizing the outgroup and seeing it as part of a common ingroup identity, without the threatening demand that group members forsake their ingroup identity. The common identity implies a psychological equivalence of the subgroups that has benefits for intergroup liking (*we are the same*), while the subgroup identity simultaneously maintains distinctiveness and continuity. In contrast, according to our model, the superordinate identity implies a shared standard that can turn the continued distinctiveness of the subgroups into a value difference and competition between the groups (*we should be the same - namely like us*). We will discuss the apparently contradictory predictions about the benefits versus risks of dual identity later in more detail.

If the shared membership in a superordinate category is a problem because it involves the two groups in a conflict and competition over the category's prototype representation, one might argue that a more tolerant relation between the groups could be achieved by downplaying their shared inclusion. If the groups see each other as not sharing a common ground, as being fundamentally different and incomparable, then there would be no debate about which group is more prototypical. There could be no claim that one's own characteristics are the standards by which the other group should be evaluated (Mummendey & Wenzel, 1999). However, this would seem a questionable path to tolerance because it does not imply respect for the other group, not to mention appreciation of its differences, but merely the perception of its irrelevance for one's own group. Moreover, it means that the benefits of a shared identity are forsaken, such as feelings of empathy towards the other group

because it is fundamentally similar to oneself, or the granting of basic, equal rights. Most importantly, as argued at the beginning of this article, not least due to increasing globalisation and migration the inclusion of diverse groups in a single society remains a fact and thus the real challenge.

Superordinate Category Representation

As a second boundary condition, it should only be possible to claim relative ingroup prototypicality if it is assumed that there is, or can be, a clear and unequivocal prototype of the superordinate category. Conversely, if the superordinate category is believed to not have a well-defined prototype and to be indefinable (vague representation) or, in fact, to be characterized by multiple prototypes (complex representation), ingroup projection should be reduced (Mummendey & Wenzel, 1999). The ingroup can hardly claim to represent the prototype of the superordinate group, if it is accepted (in a meta-cognitive sense) that there is no clear notion of such a prototype (e.g., the ingroup recognizes even internal dissent about it), or that the prototype is so complex that it cannot be embodied by a single subgroup alone (e.g., the superordinate identity is defined by the diversity of its subgroups).

These assumptions about the role of representational features of the superordinate category suggest another avenue towards intergroup tolerance. In particular, the assumption of a complex representation of the superordinate category implies that the ingroup is not its only normative subgroup; rather, other subgroups may also be acceptable and, indeed, needed to reflect its scope and variability. In our example, those natural scientists who strongly identify with natural scientists as well as with scientists in general should show the highest level of ingroup projection. However, if they represent the superordinate category of scientists as a diverse group, with the undeniable existence of different types of sciences and scientists, their tendency towards ingroup projection may be weaker and they may consider social scientists as being equally prototypical to natural scientists.

Summary

From the perspective of the ingroup projection model, the evaluation of intergroup differences depends, first, on whether the ingroup and outgroup are perceived to be included in a shared superordinate category. If not, there is no expectation that the outgroup comply with the same norms or values as the ingroup. The outgroup's difference is not identity-threatening and can be observed in a neutral or even interested way, as something irrelevant or perhaps exotic. If, however, ingroup and outgroup are perceived to be included in a superordinate category, the value or status differentiation between the groups depends on their relative prototypicality for the superordinate group. If there is agreement between the groups about the representation of the superordinate group and the subgroups' relative prototypicality, the implied value differentiation will be regarded as legitimate and will be non-conflictual. If, however, there is a tendency for one group or both groups to project their own group's characteristics onto the superordinate group, basically representing it in their own group's image, the two groups will likely disagree about their subgroups' relative prototypicality, value and status, implying intergroup conflict and intergroup discrimination. The tendency towards ingroup projection depends on the levels of identification with the ingroup and the superordinate group (dual identity) as well as representational features of the superordinate category. Within these parameters, however, ingroup projection is also constrained by social realities such as consensually accepted status relations and power differentials, as will be discussed below.

Our theoretical model thus specifically addresses the challenge of multicultural systems where subgroup identities remain distinct and salient within a superordinate identity. Different from the common ingroup identity model (Gaertner & Dovidio, 2000), our model argues that merely sharing a superordinate identity is not sufficient for the development of positive intergroup relations; on the contrary, under certain conditions, such a shared identity

can intensify conflict and social discrimination (see also Jetten & Spears, 2003). Rather, for more harmonious intergroup relations, it is necessary that the groups develop a shared understanding and consensual representation of their superordinate identity, allowing them to regard corresponding status differentiations between the groups as legitimate. Moreover, for the two groups to arrive at mutual positive intergroup differentiation as envisaged by Hewstone and Brown (1986), where groups mutually attribute valuable features to each other, they need to represent the superordinate identity in a way that allows the two groups to be regarded as similarly prototypical and normative of the superordinate category.

Empirical Evidence

Several aspects of the ingroup projection model have been put to the test. We will now review the evidence, beginning with empirical support for the phenomenon of ingroup projection itself and, second, its consequences. Third, we will discuss findings regarding the determinants of ingroup projection, including dual identification and the representation of the superordinate group. Fourth, we will discuss moderators of the effects of ingroup projection, focussing on perceived inclusion and the evaluation of the superordinate category.

Ingroup Projection: The Phenomenon

There are two types of evidence for the phenomenon of ingroup projection. One involves the divergent perspectives of two groups in a given intergroup context; the other involves the shifting views of the same group in different intergroup contexts. First, ingroup projection implies that group members hold a more favourable view of their ingroup's relative prototypicality, compared to the level of relative prototypicality attributed to them by others and by the respective outgroup in particular. A series of studies confirmed that the members of two groups in a salient intergroup context tend to disagree about the relative prototypicality of their groups. For instance, in one study (Wenzel, Mummendey, Weber, & Waldzus, 2003, Study 1), business administration students and psychology students were asked to rate

business administration students, psychology students, and students in general on a list of 24 attributes (the order of ingroup and outgroup was counterbalanced, while the superordinate category was always rated last). The profile dissimilarity between the attribute ratings of the superordinate category (students) and each of the subcategories (business administration students, psychology students) was calculated as the sum of squared differences between subgroup and superordinate ratings across attributes, of which we took the square root. This profile dissimilarity was used as an inverse indicator of prototypicality (and, for the present article, it was reverse-scored by subtracting scores from the theoretical maximum). The more similar a subgroup's profile was to the profile of the superordinate category, the higher was its prototypicality. Results for this measure showed a significant interaction effect of group membership and target group, indicating a disagreement between the two groups about their respective prototypicality. Psychology students perceived psychology students to be more prototypical for the superordinate category than business administration students did, and business administration students perceived business administration students to be more prototypical than psychology students did (Figure 1).

Using the same method (profile dissimilarity across attribute ratings), Waldzus, Mummendey, Wenzel and Boettcher (2004, Study 2) found a significant disagreement between different subgroups of teachers in Germany. Primary-school teachers and high-school teachers were considered to be more prototypical for the superordinate category by ingroup members than by their respective outgroup. This perspective divergence was also found when prototypicality was measured in a different way (Waldzus et al., 2004, Study 1). Namely, members of different subgroups of bikers (chopper bikers and sport bikers) were asked to write down four attributes that characterized their ingroup in contrast to the outgroup, and four attributes that characterized the outgroup in contrast to the ingroup. They were then asked how much each of these attributes fitted the superordinate category of bikers.

Ratings were averaged across the four distinctive attributes of each group as an indicator of their respective prototypicality. Again, both subgroups were considered to be significantly more prototypical by ingroup members than by outgroup members (Figure 2).

It should be noted that, while we generally expect two salient groups to disagree about their relative prototypicality, ingroup projection does not necessarily imply that both groups consider themselves to be more prototypical than the outgroup in *absolute* terms. Social reality may put constraints on ingroup projection, where common sense (widely shared beliefs about reality) might make it seem preposterous for a group to claim to be more prototypical than the other (e.g., in many majority/minority contexts). Nevertheless, even when both sides agree about which of them is the more prototypical group, ingroup projection may manifest itself in a perspective divergence about the degree of relative prototypicality: group members will tend to attribute a higher *relative* prototypicality to their ingroup than is attributed to them by outgroup members. For instance, in one study (Waldzus et al., 2004, Study 3), conducted after the political unification in Germany, East-Germans and West-Germans agreed that West-Germans were more prototypical Germans than East-Germans were. Nevertheless, both sides significantly disagreed about the difference in prototypicality, with West Germans believing that they were even more prototypical for Germans in general than East Germans conceded this to be the case (Figure 3).

The measures of relative prototypicality used in all these studies involved ratings of the ingroup and outgroup and/or the superordinate group on given or self-generated attributes. From these we derived indirectly, and relatively unobtrusively, an indicator of relative prototypicality. Of course, it is also possible to ask participants directly, and more blatantly, how typical they think the ingroup and outgroup are for the superordinate category. Waldzus, Mummendey, Wenzel and Weber (2003) included such a measure towards the end of their studies (when it no longer mattered if the measure perhaps betrayed the purpose of the

studies) and found that it correlated moderately highly with, and thus validated, the more indirect measure ($r = .39$ and $.35$, respectively). Alternatively, it is possible to measure relative prototypicality even more unobtrusively than per attribute ratings, for example, by using implicit measurement approaches. Using a sequential priming technique, Bianchi, Mummendey, Steffens and Yzerbyt (2007, Study 1) found evidence that ingroup projection also occurred spontaneously at an automatic level. In a lexical decision task, a subliminal superordinate category prime “European” (compared to a neutral prime “XXXXXXXX”) facilitated Italian participants’ recognition of stereotypically Italian attributes (but not German attributes) and German participants’ recognition of stereotypically German attributes (but not Italian attributes). Thus ingroup attributes seemed to be spontaneously associated with the superordinate category.

Similarly, Devos and Banaji (2005) found that White Americans implicitly associated their own ethnic group more strongly with Americans than they associated African Americans and Asian Americans. African Americans, in contrast, associated their own group no less strongly with Americans than they associated White Americans, and more strongly than Asian Americans. Again, this indicates, at an implicit level, a perspective-related difference in the representation of a superordinate category that favours the respective ingroup, in line with our model. Interestingly, Asian American participants showed a similar pattern to White respondents and associated their own group less strongly with Americans than they associated Whites Americans, but no less than African Americans. Thus, their implicit responses indicated a refutation of the views held by the other minority, African Americans, claiming at least equal prototypicality for their own group. However, in line with our earlier qualification, their responses also suggest that certain social realities (e.g., history, power and status) made them agree and see White Americans as more prototypically American than their own group (see also Krueger, 1996).

A second type of evidence for ingroup projection applies even when considering only a single group's perspective. Contextual changes in a group's self-stereotype should lead to corresponding changes in their stereotype of the superordinate group, if – as we argued – the latter is to claim prototypicality for situationally distinct ingroup attributes. In an experimental study, Waldzus, Mummendey and Wenzel (2005) manipulated the stereotype of Germans by varying the salient comparison outgroup; German participants were asked to compare their ingroup either with Italians or with the British. The groups were rated on a list of stereotypical attributes that, according to pilot tests, distinguish Germans from Italians (*counter-Italian attributes*: e.g., correct, orderly, punctual) and stereotypical attributes that distinguish Germans from the British (*counter-British attributes*: e.g., easygoing, frank, companionable). The manipulation check showed that the stereotype of Germans was indeed more strongly characterized by counter-Italian attributes when they were compared with Italians, and more by counter-British attributes when they were compared with the British. More importantly, the stereotype of the superordinate category Europeans shifted in the same direction. That is, from the perspective of the German participants, not only Germans, but also Europeans became less similar to Italians when Germans were compared with Italians than when they were compared with the British, and vice versa (see Figure 4). In other words, the distinctive attributes of the ingroup, whatever they were in a given intergroup context, were projected onto the superordinate category, making the ingroup more prototypical and normative.

This methodological paradigm thus provided further evidence for ingroup projection and, in this case, also showed more clearly the direction of the process from the ingroup onto the superordinate category. Bianchi et al. (2007, Study 2) used a similar approach in combination with their implicit measurement of ingroup projection. In a lexical decision task, a subliminal prime “European” (compared to a neutral prime “XXXXXXXX”) facilitated German participants' recognition of counter-British attributes when the British were a salient

outgroup, and counter-Italian attributes when Italians were the salient outgroup. Thus, attributes that defined the ingroup stereotype relative to an outgroup salient in the given context were spontaneously associated with the superordinate category.

Consequences of Ingroup Projection

Under the condition that ingroup and outgroup are included in a superordinate category, the ingroup projection model assumes that group members' perception of their ingroup's relative prototypicality will affect their evaluation of the outgroup. The higher the perceived relative prototypicality of the ingroup, the more the outgroup deviates from the superordinate prototype. Given that the superordinate category is usually positively evaluated, one can predict a negative relationship between relative ingroup prototypicality and outgroup evaluation. In almost all of our studies on ingroup projection conducted so far, we measured both relative ingroup prototypicality and outgroup evaluation (see Table 1). The measures of outgroup evaluation were similar in all studies and covered a broad concept of attitudes towards the outgroup, including aspects of intergroup liking, desire for intergroup contact, favourable intentions towards the outgroup and tolerance towards the outgroup's difference from the ingroup (e.g., Wenzel et al., 2003, Waldzus et al., 2003). Relative ingroup prototypicality was always a difference score between the ingroup's prototypicality and the outgroup's prototypicality for the superordinate category (for detailed descriptions of these measures see, e.g., Wenzel et al., 2003; Waldzus et al., 2003, 2005). As can be seen in Table 1, the correlation between intergroup attitudes and relative prototypicality (r_{dif}) was negative in most studies, consistent with our model. A meta-analysis of all the studies revealed a significant effect of moderate size (Table 2).

For a more detailed understanding and to avoid possible problems involved in the use of difference measures, we explored the relationship between intergroup attitudes and prototypicality separately for ingroup and outgroup. Although both components of relative

prototypicality contributed significantly to the negative relation between relative prototypicality and outgroup evaluations, outgroup evaluations were more strongly correlated with outgroup prototypicality than with ingroup prototypicality (see Tables 1 and 2). Moreover, the data on the relationship between outgroup prototypicality and outgroup evaluations were homogeneous (Table 2), whereas the findings for the relationship between ingroup prototypicality and outgroup evaluations were heterogeneous. Because our measures of intergroup attitudes always referred to the outgroup only, it may come as no surprise that these were more clearly related to perceived outgroup prototypicality, given that they share the same referent.

A related prediction of the ingroup projection model is that perceived relative prototypicality should affect views about the legitimacy of status relations. Higher-status groups could justify their position by claiming higher prototypicality, whereas lower-status groups might claim to be equally prototypical (or at least less a-prototypical than the outgroup claims they are) and thus regard their lower status as unjustified. Hence, for higher-status groups we would expect a positive relationship between relative ingroup prototypicality and legitimacy, and for lower status groups a negative relationship. Weber, Mummendey and Waldzus (2002) tested this hypothesis in different intergroup contexts. Study 1 referred to business administration students as the superordinate group. Participants were business administration students studying at university, who were generally regarded as having higher status than business administration students studying at advanced technical colleges, who were the salient outgroup in this study. Among other variables, intergroup status, relative ingroup prototypicality and the legitimacy of the status relationship were measured. Sixty-three out of 67 participants agreed that university business administration students had a higher status than those from advanced technical colleges. These 63 participants considered their ingroup's higher status to be the more justified, the more relatively prototypical they

perceived their ingroup to be ($r = .30$). In another study, Weber et al. (2002, Study 3) created artificial groups by false feedback about results from an alleged perception task. Participants were told that they were members of a group with “visualizing perception style” in contrast to people with “verbalizing perception style”. It was then explained that people with visualizing perception style could be subdivided into two subgroups: those with “figure-based” versus those with “ground-based perception style”. Participants were told to which group they belonged. Ingroup status was manipulated by informing participants that their ingroup had either better chances (higher status) or worse chances (lower status) on the job market than members of the outgroup. A manipulation of relative ingroup prototypicality was only partially successful; therefore, the measured relative ingroup prototypicality was used post-hoc. As predicted, ingroup status moderated the relationship between relative prototypicality and perceived legitimacy of the status relation. When status was high, the ingroup’s relative prototypicality was associated with high legitimacy of their relative status. When status was low, the relationship between relative ingroup prototypicality and legitimacy was negative.

All in all, there is good evidence consistent with the view that perceptions of relative ingroup prototypicality underlie attitudes towards outgroups and views about the legitimacy of the status relation between ingroup and outgroup. However, correlational evidence is of course not conclusive as to the presumed causal role of relative prototypicality. An experimental method is required here where relative ingroup prototypicality is manipulated in order to observe its effects on outgroup evaluations. Initial studies pursuing such an approach showed that it is not easy to manipulate relative ingroup prototypicality independent from existing status relations and unconfounded by identification with the superordinate group (Weber, 2001, Study 4). For example, as mentioned above, in a study with artificial groups Weber et al. (2002, Study 3) were not successful in clearly manipulating relative prototypicality using a false feedback technique.

In another attempt, Waldzus and Mummendey (2002) adopted a different approach. To manipulate the prototypicality of Germans relative to the British for the superordinate category Europeans, the German participants were asked to produce arguments either for the high prototypicality of both subgroups (low relative prototypicality condition), for the high prototypicality of Germans and low prototypicality of the British (high relative prototypicality condition 1), or for the higher prototypicality of Germans compared with the British (high relative prototypicality condition 2). The manipulation proved successful: there was an increasing linear trend for perceived relative ingroup prototypicality from the low relative prototypicality condition to the high prototypicality condition 1 and the high prototypicality condition 2. With the data of 48 participants included in the analysis (others were excluded because they indicated that they were not of German nationality or were negatively identified with Germans), the manipulation of relative prototypicality significantly affected intergroup attitudes. Intergroup attitudes were significantly more biased against the outgroup in the two conditions where the ingroup was primed as being more prototypical relative to the outgroup, compared to the condition where ingroup and outgroup were primed as being equally prototypical (Figure 5). This study thus provides direct evidence for the causal effect of ingroup projection on intergroup attitudes.

Determinants of Ingroup Projection

Dual Identification

According to the ingroup projection model, group members who identify with both the superordinate category and their sub-level ingroup should have a stronger tendency to show ingroup projection than group members who do not identify with either the superordinate category or their ingroup. Several studies yielded support for this prediction. Wenzel et al. (2003, Study 1) measured psychology students' and business administration students' level of identification with their respective ingroup and with the superordinate category, students.

Median-splits were used to divide participants into four sub-samples, depending on whether they identified strongly or weakly with the sub-level ingroup and the superordinate category. As predicted, students who identified strongly with both groups showed significantly higher ratings of relative ingroup prototypicality than the other three sub-samples. Referring to a different intergroup setting, Wenzel et al. (2003, Study 2) asked German participants for judgments about Germans (ingroup), Poles (outgroup) and Europeans (superordinate category). Participants who identified strongly with both Germans and Europeans perceived their ingroup to be more relatively prototypical for Europeans than the other participants did (Figure 6; for further evidence, see Waldzus et al., 2003).

Because these results were based on post-hoc measures of identification they do not allow inferences about causality and, thus, whether identification is actually a determinant of ingroup projection or rather a consequence or mere concomitant of the latter. To obtain clearer evidence for the theoretically claimed causality, Waldzus, Mummendey and Rosendahl (2007) manipulated identification by means of false feedback, combined with a bogus-pipeline procedure (see Ellemers, Spears, & Doosje, 1997). In a computer-based experiment, forty biology undergraduates were questioned about their ingroup (biologists), a superordinate category (natural scientists) and about their self-image, while an apparatus was allegedly measuring the skin resistance of the non-dominant hand. A computer ostensibly aggregated the psychological and physiological data and calculated from this the participants' levels of identification. Participants received feedback about how strongly they identified with biologists and natural scientists (strongly versus moderately), in their combination creating four experimental conditions. Manipulation checks indicated that the feedback had the desired effects, at least temporarily establishing different levels of identification with the ingroup and superordinate category. A measure of relative ingroup prototypicality showed that, consistent with the hypothesis, dual identifiers (i.e., who were told they identified strongly with both

groups) indicated a higher level of relative ingroup prototypicality than participants in the remaining three conditions.

If dual identification tends to increase ingroup projection and ingroup projection is associated with a more negative attitude towards the outgroup, one would expect a negative impact of dual identification on intergroup attitudes. Indeed, Waldzus et al. (2003) found an indirect negative effect of dual identification via relative prototypicality on outgroup evaluations. As mentioned before, such a negative relationship between dual identification and intergroup attitudes seems inconsistent with Gaertner and Dovidio's common ingroup identity model (CIIM; Gaertner et al., 1993; Gaertner & Dovidio, 2000; Gaertner, Dovidio, Nier, Ward, & Banker, 1999), which argues that a dual identity is conducive to positive attitudes towards the outgroup. According to this model, identification with a superordinate group means that former outgroup members are re-categorized as members of a common ingroup, and positive sentiments are extended to them as, now, fellow ingroup members. Such superordinate identification and re-categorization of the outgroup, it is argued, do not require that one gives up one's social identity as a member of the original ingroup (Gaertner & Dovidio, 2000; Gaertner, Dovidio, Nier et al., 1999). Indeed, interventions that promote a dual identity and allow for the maintenance of one's sub-level ingroup identity might have benefits, because they would use the beneficial effects of a common ingroup identity without threatening a valued subgroup identity (Crisp, Stone, & Hall, 2006). Moreover, a salient subgroup identity may aid the generalization of intervention effects to outgroup members outside the immediate contact situation (Dovidio et al., 1998).

Hence, the CIIM and the ingroup projection model make opposite predictions about the benefits or risks of dual identification for intergroup attitudes. Whereas the ingroup projection model predicts highest levels of ingroup projection and, in turn, more negative attitudes towards the outgroup for dual-identified group members, the CIIM assumes that

these group members should hold more positive outgroup attitudes than others because of re-categorization. How can these two predictions, both supported by empirical research, be reconciled? First, it could be argued that both models rely on different mediating processes that are not mutually exclusive and can operate simultaneously. Indeed, both processes were specified by Turner (1987) in his self-categorization theory: (1) the depersonalization of self, as a consequence of which others are regarded as interchangeable and similar to oneself and, thus, are evaluated favourably as part of one's more inclusive self; and (2) the intragroup differentiation of self from others with reference to the prototype of the shared group, where – according to our model – a positive prototype tends to be claimed for one's sub-level self-category. Hence, to the extent that a dual identity implies perceived intergroup similarity and interchangeability it leads to more positive intergroup attitudes; but to the extent that it encourages intergroup differentiation with reference to a superordinate prototype, and conflict over the definition of that prototype, it leads to more negative intergroup attitudes.

Second, it might depend on moderating conditions whether a dual identity has positive or negative effects, such as the particular constellation of subgroups and superordinate group. For example, it appears that a dual identity tends to show positive effects consistent with the CIIM, whenever the presumed superordinate identity is not fully inclusive of the two subgroups, but rather more alike an alternative, cross-cutting categorization. An identity as a member of a particular high-school, for instance, is not truly inclusive of one's ethnic ingroup and outgroups because these extend beyond the high school (see Gaertner et al., 1994). In this situation, the common identity could not be a reference background to which all ingroup and outgroup members refer. It is irrelevant and unrelated to the two subgroups and merely provides an alternative identity locally shared in the given context (see also Hall & Crisp, 2005). In contrast, in studies supporting the ingroup projection model, and in empirical tests of the CIIM that yielded theory-inconsistent, negative effects of dual identity (e.g., a bank

merger study by Bachman, 1993), the superordinate category was truly inclusive and the subgroups were completely nested within it. Here, the superordinate category is more likely to be a relevant comparison background for the two groups, which each of the two groups might want to capture for their own interest – due to ingroup projection, the dual identity might have negative effects. A study by Meiser, Mummendey and Waldzus (2004) yielded initial evidence for this reasoning. In an intergroup context of chemistry versus biology students, participants (chemistry students) showed strong ingroup projection when the salient superordinate category was fully inclusive (students of the natural sciences) but no significant ingroup projection when the salient superordinate category was only cross-cutting, locally shared but not completely inclusive of both groups (students of the University of Jena).

Third, the effects of dual identity might also depend on whether either the superordinate group or the subgroup level is more focal; thus, it might depend on finer gradations of *relative* category salience. If the superordinate identity is the figure against a background of two lower-level subgroups, the notion of a common identity might dominate and positively affect evaluations of the outgroup. However, if the two subgroups are the figure against a background of shared inclusion, the subgroup differentiation dominates and the competition between ingroup and outgroup might be further spurred by the common identity (Gaertner, Dovidio, Riek, Mania, & Lamoreaux, 2005).

Fourth, what Gaertner, Dovidio and colleagues referred to as a dual identity representation could have two different meanings. On the one hand, it could indeed mean the simultaneous salience of superordinate and subgroup identities, as when two formerly separate organizations are in the process of merging into one (Bachman, 1993). Here, with the ingroup-outgroup distinction continuing to be salient, the intergroup conflict could be exacerbated and turn into a conflict over being the more prototypical subgroup. On the other hand, the supposed dual identity measure could actually refer to the superordinate category

alone and its particular representation. Specifically, it might indicate that the superordinate category is not homogenous but is made up of different, complementary parts. Notably, in their multicultural high school study, Gaertner et al. (1994) worded the dual identity representation measure as different groups playing on the same *team*. The metaphor of a team means that different groups with different strengths work together and complement each other. The players on a team may have different roles; when one role is not filled the team is incomplete and no role can represent the team in its entirety. With such a representation of the superordinate category, ingroup projection should be less possible and the dual identity should yield more positive effects in line with the CIIM. To the extent that a dual identity implies a superordinate identity that is defined by complementary, equally indispensable subgroups, ingroup projection should be inhibited and no longer compromise the positive effects of a shared commitment to a common identity.

Representation of the Superordinate Category

Indeed, representational features of the superordinate category could be a further determinant of ingroup projection. Theories, ideologies, or norms about the nature of the superordinate category could define its properties in ways that make ingroup projection more or less possible (Mummendey & Wenzel, 1999). Specifically, the very idea of ingroup projection requires the notion that the superordinate category has a clearly defined prototype. In contrast, the representation of the superordinate category could be considered *undefined* or vague; for example, it might be assumed that few people agree on the stereotype or meaning of the superordinate group. Or, the representation of the superordinate category could be considered *complex*; for example, it might be assumed that the superordinate category is represented by several prototypes (e.g., the category “automobile” contains different prototypes, such as the typical family car, truck, racing car, all of which may make up the superordinate category). In these two cases, ingroup projection should be reduced.

In a study with 63 German participants, the representation of the superordinate category was manipulated by suggesting either a well-defined or an undefined prototype of Europeans, before participants were then asked for judgments about Germans (ingroup), Poles (outgroup) and Europeans (Waldzus et al., 2003, Study 1). The manipulation used a false-feedback procedure, where participants were first asked to rate Europeans on a list of nine attributes. Next, they were told their own ratings would be compared with the ratings found in previous studies. A diagram showed their own profile of ratings and several other profiles, allegedly representing the mean ratings from earlier studies. In the well-defined condition, all profiles, including the participant's own ratings, were very similar, suggesting a strong consensus about what Europeans were like. In contrast, in the undefined condition, all profiles were very different from each other, suggesting that there was no clear consensus about what Europeans were like. Next, relative ingroup prototypicality was measured by asking the participants to type in distinctive attributes of ingroup and outgroup (four attributes for each group), on which the superordinate category (Europeans) was then rated. The ratings on outgroup attributes were subtracted from the ratings on ingroup attributes to obtain a measure of relative ingroup prototypicality. As predicted, relative ingroup prototypicality was lower in the undefined condition than in the well-defined condition. That is, when group members sense that a superordinate European identity is a vague notion on which few people actually agree, the projection of ingroup attributes would seem pointless as it lacks a shared normative quality (and, with little ingroup support, members might also lack trust in their own projections).

An even stronger effect was found when the representation of the superordinate category was manipulated to be either simple or complex (Waldzus et al., 2003, Study 2). Eighty-eight participants were asked to imagine they had to explain to another person what either the unity (simple) or the diversity (complex) of Europe is. The same measure of relative

prototypicality was used as in the previous study. In line with the prediction, ingroup prototypicality of Germans relative to Poles was lower in the complex condition than in the simple condition. When diversity is made a defining attribute of the superordinate category, ingroup projection would again seem pointless because the superordinate category could not be represented by a single (unitary) subgroup but rather requires multiple differing subgroups that, by implication, are equally indispensable and prototypical.

In both studies, outgroup evaluations were negatively correlated with relative ingroup prototypicality, as expected. As a consequence, there was an indirect effect of the manipulation of the representation of Europeans on evaluations of Poles via the relative prototypicality of Germans: outgroup evaluations were more positive when the superordinate category representation was undefined or complex, to the degree that this representation reduced ingroup projection. While there were no total effects of representation on outgroup evaluations in these two studies, Waldzus et al. (2005) replicated the complexity effect in another study with Germans as ingroup and the British or Italians as outgroup, and found not only an indirect, but also a total positive effect, of complexity on outgroup evaluations.

These findings not only add a further piece of evidence to the case for our theoretical framework, but they also have practical implications and suggest new avenues for the reduction of prejudice. It should be added that Mummendey and Wenzel (1999) discussed two other representational features: A prototype with a small scope, defined only by a single or few dimensions (e.g., a German is someone who has a German passport – full stop), has limited prescriptive value; and a broad prototype, characterized by great variance around the central tendencies on its defining dimensions, implies a broad notion of what is normal for the inclusive category. Both representational features could likewise reduce ingroup projection and improve intergroup attitudes, but this needs to be tested empirically in future research.

Representation of the Sub-level Ingroup

It is important to distinguish the notion of superordinate category complexity just discussed from the notion of identity complexity recently advanced by Roccas and Brewer (2002). These authors argue that, while individuals usually consider themselves as members of various ingroups, their subjective representations of their *multiple group identities* can vary in complexity. On the one hand, they can perceive their multiple ingroups as strongly correlated and overlapping; on the other hand, they can perceive them as largely independent and cross-cutting. A more complex social identity representation, with many independent and cross-cutting ingroups, is more likely to yield greater tolerance towards outgroups, because any single ingroup-outgroup distinction is likely to be less salient and less important for the person's self-evaluation, and the person's overall social identity is more inclusive (Brewer & Pierce, 2005). This identity complexity thus derives from the dissimilarity and lack of overlap between multiple ingroups that are not necessarily nested; hence, it may only indirectly imply a sense of complex superordinate identity.

However, in addition to the complexity of a superordinate identity, or one deriving from multiple ingroups, a single salient ingroup at the sub-group level can also be represented as being more or less complex and heterogeneous. From the perspective of the ingroup projection model, this might have two possible implications for ingroup projection and outgroup attitudes. First, the complexity of the ingroup could be represented as an abstract ingroup attribute and itself be projected onto the superordinate category, rendering the prototype of the latter more complex; consistent with the discussion in the previous section, this should yield more tolerant attitudes towards the outgroup. Second, a complex or heterogeneous representation of the ingroup could mean that the ingroup's relative prototypicality for the superordinate category is not a reliable basis for a differential

evaluation of ingroup and outgroup. Hence, perceived relative ingroup prototypicality should be less predictive of intergroup attitudes.

Machunsky, Meiser and Mummendey (2007) tested these predictions in two studies by using subtyping tasks. Subtyping refers to the process of identifying stereotype-inconsistent group members and mentally isolating them from the rest of the group. Subtyping discounts stereotype-inconsistent members as “special cases” or exceptions, leaving the existing stereotype intact and yielding a rather homogenous and less complex group representation (see Richards & Hewstone, 2001). Machunsky et al. manipulated ingroup subtyping by asking participants to list subtypes within their ingroup (Study 1) or to sort attributes between the proper ingroup and a given subtype (Study 2). It was found that ingroup subtyping (i.e., reduced ingroup complexity) did not affect perceptions of relative ingroup prototypicality, which was inconsistent with the possibility that complexity would be projected as an ingroup attribute onto the superordinate category. However, subtyping did increase the correlational link between relative prototypicality and intergroup attitudes: with a subtyped and, thus, more homogenous ingroup, relative ingroup prototypicality was more strongly related to negative intergroup attitudes than in the no-subtyping control condition. Relative prototypicality was a stronger basis for intergroup evaluations when the sub-level ingroup was less complex.

To summarize, the degree of identification with ingroup and superordinate category affects ingroup projection, with dual identification making ingroup projection more likely. Representational features of the superordinate category, such as complexity and vagueness, inhibit ingroup projection, while the complexity of the ingroup appears to reduce the importance of relative prototypicality for intergroup evaluations.

The Role of Inclusion of Ingroup and Outgroup in a Superordinate Category

Inclusion as a Moderator

Following our theoretical approach, for relative ingroup prototypicality to be relevant to the evaluation of an outgroup, it is important that ingroup and outgroup are actually included in a shared superordinate category (Mummendey & Wenzel, 1999). All the studies reviewed so far in this article were conducted in intergroup situations where ingroup and outgroup were obviously included in the superordinate category. While they yielded evidence consistent with the concept of ingroup projection, they did not provide direct support for the assumed role of shared inclusion. Given that prototypicality was always measured as similarity to the superordinate category and this superordinate category was usually positive, one could indeed argue that inclusion is not necessary to find a negative relationship between relative ingroup prototypicality and outgroup evaluation. Instead, one could argue, the perception that the ingroup, compared to the outgroup, is more similar to *any* positive standard should be related to negative evaluations of the outgroup. The superordinate category (or, better, the more abstract category) would only be relevant because it provides such a positive standard, but it should not matter whether ingroup and outgroup are included in it or not.

The following two experiments provided evidence against this alternative explanation (Waldzus & Mummendey, 2004). In both experiments, the inclusion of ingroup and outgroup in the same category was manipulated by referring to different superordinate categories. In Study 1, German participants were asked to judge Germans and Poles after the category of either Europeans (including the outgroup) or West-Europeans (excluding the outgroup) was made salient. As predicted, the relative similarity of Germans to the superordinate category was negatively correlated with evaluations of Poles, but only under the condition of inclusion ($r = -.46, n = 20$). In the West-Europe condition, the similarity to the (non-inclusive)

superordinate category was not correlated with outgroup evaluations. Thus, the inclusion of ingroup and outgroup in a superordinate category moderated the impact of relative prototypicality on intergroup attitudes.

This effect was replicated in a different intergroup context (Waldzus & Mummendey, 2004, Study 2). Female single parents were asked about their attitudes towards male single parents. In one condition (inclusion) “single parents” was referred to as superordinate category; in the other condition (exclusion) it was the group of “mothers”, which obviously excludes male single parents. As an additional within-subjects factor the relevance of the evaluative dimension was varied by assessing evaluations on relevant dimensions (e.g., parenting children well) and irrelevant dimensions (e.g., general liking). As expected, relative prototypicality was negatively correlated with outgroup evaluations only in the inclusion condition and only on relevant dimensions ($r = -.55$, $n = 30$). In the exclusion condition the correlation was non-significant; and evaluations on irrelevant dimensions were not significantly correlated with relative prototypicality, either in the inclusive or in the exclusive condition. We can conclude from these two experiments that outgroup evaluations are not simply based on the ingroup’s and outgroup’s similarity to any positive group, but rather on their relative prototypicality for an inclusive superordinate category that includes both groups, in line with the ingroup projection model.

Evaluation of the Superordinate Category as a Moderator

The crucial role of inclusive, superordinate categories not only becomes evident when considering the inclusion structure of the intergroup situation but also the evaluations people hold towards such superordinate categories. So far, we have only considered superordinate categories that were basically positively valued. Indeed, generally, group members should tend to value superordinate categories favourably, as is the case with all self-categories; prototypicality for the superordinate category would thus have positive value implications.

However, it is not impossible for individuals to evaluate themselves, and their more or less inclusive self-categories, negatively (Turner, 1987). For instance, because of the problematic history of Germany during the 20th century, many Germans hold a very critical view of their own nationality. In this case, being prototypical for a negative category should have negative value implications and, according to the ingroup projection model, we would expect that relative prototypicality has then the opposite meaning for outgroup evaluations, as already anticipated by Turner (1987, p. 58): “[An] ingroup may be perceived as less prototypical of and thus compare favourably in terms of a negatively valued superordinate category”. Conversely, the greater the ingroup’s relative prototypicality for a negative superordinate category, the more positively should the outgroup be evaluated. Members who feel strongly committed to their group should therefore not engage in ingroup projection, but rather distance the superordinate group prototype from their group.

These two hypotheses were supported by an experiment in which the evaluation of the superordinate category was manipulated (Wenzel et al., 2003, Study 3). Europe was chosen as superordinate category because in the process of integration in the European Union most citizens in Europe were aware of positive as well as negative aspects of Europe. The evaluation of Europeans (superordinate category) was manipulated by activating either positive or negative aspects. Sixty German participants were asked to think about and briefly describe in an open text field what they thought were, depending on the experimental condition, either positive or negative aspects of Europe. Subsequently, participants rated Germans (ingroup) and Poles (outgroup) and indicated, among other things, their level of identification with the ingroup. As in other studies reported above, a measure of relative prototypicality was obtained by letting the participants first report distinct ingroup and outgroup attributes and then rate Europeans on these same attributes.

As predicted, the evaluation manipulation significantly moderated the relation between ingroup identification and relative ingroup prototypicality: when Europe was positively primed, ingroup identification was positively related to relative ingroup prototypicality ($\beta = .32$), whereas the two were negatively related when Europe was negatively primed ($\beta = -.34$). Similarly, the evaluation of the superordinate group significantly moderated the relation between relative ingroup prototypicality and attitudes towards the outgroup: when Europe was positively primed, relative ingroup prototypicality was negatively related to outgroup evaluations ($\beta = -.22$, ns), but when Europe was negatively primed relative ingroup prototypicality was related to more positive outgroup evaluations ($\beta = .44$). Equivalent results were found for perceived status legitimacy as the dependent variable (Weber et al., 2002, Study 2). When Europe was positively primed, Germans' higher status was regarded as more legitimate, the more prototypical Germans were considered to be relative to Poles ($\beta = .32$); in contrast, when Europe was negatively primed, Germans' higher status was regarded as more legitimate, the less prototypical Germans were relative to Poles ($\beta = -.30$).

To sum up, the findings reviewed in this section demonstrate some instructive boundary conditions of ingroup projection, which, however, are completely consistent with the theoretical framework and further demonstrate its validity. That is, higher-order self-categories that are not inclusive of ingroup and outgroup are not a relevant reference point for comparisons between the groups; their relative prototypicality for that higher-order group is irrelevant for evaluations of the two groups. Moreover, when the superordinate group is inclusive of both ingroup and outgroup but negatively valued, the meaning of relative prototypicality is reversed and committed ingroup members are likely to engage in the opposite to ingroup projection: the distancing of their group from the superordinate prototype.

Conclusions and Future Directions

The research reviewed in this article supports our notion that superordinate identities play a complex role in the relations between groups. Not only does a superordinate identity mean the inclusion of the sub-level outgroup in one's extended self, implying that positive sentiments, cooperation, empathy, altruism, and so on, will likely be extended to those outgroup members, but a superordinate category also provides the comparative frame for the differentiation between sub-level groups. The representation of a superordinate category implies dimensions and norms with reference to which the included groups are compared and evaluated, and it may thus indeed become the battlefield for a conflict between ingroup and outgroup. Either group will want to see and portray itself as prototypical for the superordinate group (at least, more prototypical than the other outgroup groups it to be the case) in order to claim relatively greater value, status and entitlements for their own group. It is a conflict about which group embodies better the value ideals attributed to the superordinate group; it is a conflict about superordinate values that give value to subordinate groups.

We need to emphasize again that the motivational processes suggested in our model do not mean that ingroup projection is automatic and inevitable (Waldzus et al., 2004). Rather, ingroup projection is a contestation of the social world that needs to take certain realities into account, in order not to be absurd, easily refuted or unpersuasive. After all, the reference to a shared superordinate identity makes the relation between the two included groups, in a way, an *intra*-group process at a more abstract level, where social influence about the definition of the social world takes the form of persuasion – not mere assertion and coercion (see Turner, 2005). But of course, once such a contestation of reality is won, it is likely to *empower* the ingroup (see Simon & Oakes, 2006; Turner, 2005).

While the present review demonstrates converging evidence for the usefulness of our approach, there are still many questions that need to be addressed. For example, much of our

research has so far focused on the perspective of majorities, but it is minorities in particular who are likely to find social reality to be a stumbling block for claims of prototypicality. A majority may claim relative ingroup prototypicality to argue for the legitimacy of status relations, whereas for minorities ingroup projection amounts to a challenge of the status quo. Likewise, developing a more complex representation of the superordinate category implies a more equal status of the included groups; the majority will probably perceive this as a relative status loss, whereas the minority should see it as a status gain. Thus, the complexity of the superordinate group could itself become an issue of contention and conflict, reflected in the finding that majorities tend to prefer assimilation, and minorities multiculturalism, as a model for group relations (Gaertner & Dovidio, 2000). Future research on the ingroup projection model should explicitly compare majority and minority perspectives.

Further, as presented here, our analysis implies that ingroup and outgroup refer to the same superordinate category in a given situation; however, this as well could be a matter of contention between the groups (Mikula & Wenzel, 2000). Although our model assumes that the process of ingroup projection unfolds in particular when members identify strongly with both their sub-level and superordinate groups, which means these groups are likely to be salient self-categories in the given situation, it is still conceivable that the two groups disagree on the relevant superordinate category. If, among different options available, groups strategically choose a superordinate reference category that advances their goals and entitlements (e.g., it facilitates their claim of prototypicality), this could further compound the divergence between the groups about their relative prototypicality and contribute to intergroup conflict (see also Wenzel & Mikula, 2006).

Another limitation of our research is the lack of evidence for the exact processes that underlie ingroup projection. Our theorizing has very much focused on motivational processes, but, as is the case with the individual-level false consensus effect (see Krueger, 2000; Marks

& Miller, 1987), there might also be purely cognitive processes at work, such as differential accessibility of ingroup versus outgroup exemplars or inductive reasoning (Krueger & Clement, 1996). The observation that ingroup projection is a function of ingroup identification (e.g., Wenzel et al., 2003) suggests that identity motives and group goals affect perceptions of relative prototypicality; but the possibility of cognitive processes cannot be excluded. Two recent studies by Ullrich, Christ and Schlüter (2006) provide further evidence for motivational processes, based on the notion of group threat. A manipulation that made the threats to Germans of the European Union's Eastern enlargement salient led to negative attitudes towards relevant outgroups in particular when German respondents identified strongly at both the sub-level and superordinate group level, with a similar effect emerging for ingroup projection in Study 2. Similarly, in a laboratory simulation of a merger between two groups, Finley (2006) found that participants felt a significant degree of positive distinctiveness threat to their ingroup identity (relative to a control no-merger condition where ingroup and outgroup remained separated). Positive distinctiveness threat was, in turn, positively related to perceived ingroup prototypicality, implying an indirect effect of the merger on ingroup projection via social identity threat. Ingroup projection thus seemed to be motivated by a desire to repair or maintain one's group's positive distinctiveness (see also van Leuven, van Knippenberg, & Ellemers, 2003). The cognitive, motivational and strategic aspects of ingroup projection require more research.

Interestingly, group projection itself may be a source of threat; that is, a threat to the relevant other group whose members could, in turn, respond with ingroup projection. This scenario would give full meaning to our view that a shared superordinate group could become the subject of contestation between two groups. In a study by Finley and Wenzel (2003), psychology students were given information about how economics students allegedly rated both groups and the superordinate group students. The information indicated that economics

students regarded their own group as more prototypical students than psychology students or, in the control group, as equally prototypical. Highly identified psychology students confronted with group projection on the part of the outgroup showed significantly greater ingroup projection (which, in turn, was related to less positive evaluations of the outgroup). Hence, it appears that an outgroup's projection can motivate ingroup members to make a counterclaim and defend their group's relative prototypicality and positive value. As another line of future research, it would be worthwhile investigating such *perceived projection* by the outgroup as an attribution made by the ingroup: When do ingroup members *believe* that an outgroup engages in projection and attempts to hijack the superordinate identity for their own goals? And how will they respond? As a rather amusing example, at the 32nd annual Santa Claus World Conference the Finnish delegation claimed that Santa Claus' home was not Greenland but Finnish Lapland and only the Finnish represented the true Santa (McIvor, 1995, cited in Harrison, 2002). For this act of projection by the outgroup, other conference delegates wanted to have them excommunicated!

Finally, however, we want to emphasize again that our theoretical model, rather than being a defeatist model of inevitable intergroup discord, holds promise for harmonious intergroup relations. Specifically, it has implications for intergroup harmony without requiring the subgroup members to deny or give up their identities. The most promising measure to reduce ingroup projection is in our view the establishment of a more complex representation of the superordinate group, made up of different prototypes, where a single group cannot reasonably claim to be the part that represents the whole. While other authors have argued for the benefits of dual identities, of maintaining subgroup identities within a superordinate identity in line with a multiculturalist approach (Berry, 1984; Hornsey & Hogg, 2000b; Huo, Smith, Tyler, & Lind, 1996; Park & Judd, 2005), our model suggests that, to avoid the pitfalls of ingroup projection, this requires the formation of a superordinate identity

where the subgroups are (more or less) equally prototypical. Merely allowing groups to co-exist within a shared social system might not be sufficient and could promote intergroup conflict. Rather, the groups need to define their common identity as representing, and being represented by, all groups equally. As a potential caveat, however, future research should consider whether complex representations, while inhibiting ingroup projection, might have the negative side-effect of reducing the entitativity and salience of the superordinate category, undermining the common identity of ingroup and outgroup members and the positive benefits that flow from it (Gaertner & Dovidio, 2000).

If complex superordinate category representations are a promising pathway to intergroup harmony, another question for future research will be how they are best established. As a representational feature of a category, we would argue complexity is generally based on processes of social construction and social influence, and affected by norms, theories and ideologies shared within one's relevant reference groups. It is certainly possible that the interactions involved in intergroup contact, under the right conditions, can help group members develop a more complex view of their superordinate identity. Indeed, when positive contact effects have been found to be mediated by a representation as different groups playing on the same team (Gaertner & Dovidio, 2000), this might have involved a more complex understanding of the superordinate category. The concept of superordinate category complexity is also related to Haslam's (2004) idea of organic pluralism, however the latter more specifically involves a functional interdependence between included subgroups. This version of complexity would suggest that intergroup contact should involve experiences of mutual complementarity, where superordinate goals could indeed not be achieved if the subgroups were all the same, but only *because* they are different, have different strengths and fulfil different roles. Cooperative learning and the jigsaw classroom (e.g., Aronson & Patnoe, 1997) could be situations where beliefs in complementarity could be fostered; but

importantly, following our approach, these would need to feed into a complexly represented common identity. Future research should investigate under which conditions intergroup contact yields a more complex superordinate category representation, and to which degree this mediates positive effects on intergroup attitudes. Generally, we will need a better understanding of the processes and mechanisms through which a complex representation of a superordinate identity can be brought about (for an approach in organizations, see Haslam, Eggins, & Reynolds, 2003).

To conclude, according to the ingroup projection model a superordinate identity is not per se a solution to intergroup conflict. Rather, it may become, under certain conditions, precisely the battleground for groups to claim their superiority by representing the superordinate group exclusively in their own group's image and portraying their ingroup as the more normative and positive subgroup. Yet, the model points to ways in which such ingroup projection can be avoided by advancing a more complex representation of the superordinate category, which implies that neither group can singularly represent the essence of the superordinate category and both groups acknowledge their mutual superiorities and inferiorities (Hewstone & Brown, 1986). While the model points to risks in dual identification, it does not reject the position of multiculturalism. On the contrary, it can be seen as a theoretical argument for a proper and serious multiculturalism, where groups do not merely coexist within the boundaries of a common group but rather develop a superordinate identity that allows them to value and respect each other with and in their differences.

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Table 1

Correlations between Attitudes towards the Out-group and Relative Prototypicality (r_{dif}), Prototypicality of the Ingroup (r_{IG}), and Prototypicality of the outgroup (r_{OG}) in 26 Studies with 28 Samples

<i>Study</i>	<i>IG</i>	<i>OG</i>	<i>Sup. category</i>	<i>N</i>	<i>r_{dif}</i>	<i>r_{IG}</i>	<i>r_{OG}</i>
Wenzel et al. (2003)							
Study 1	business	psychology	students	108	-.201	-.078	.157
	students	students					
Study 1	psychology	business	students	51	-.284	.218	.325
	students	students					
Study 2	Germans	Poles	Europeans	91	-.205	-.035	.174
Study 3	Germans	Poles	Europeans	30	-.220	-.191	.164
Waldzus et al. (2003)							
Study 1	Germans	Poles	Europeans	63	-.351	-.205	.363
Study 2	Germans	Poles	Europeans	88	-.239	-.133	.267
Waldzus & Mummendey (2004)							
Study 1	Germans	Poles	Europeans	20	-.461	-.168	.549
Study 2	female single	male single	single parents	30	-.546	-.253	.486
	parents	parents					
Waldzus, Mummendey & Wenzel (2005)							
pre-study	Germans	British	Europeans	26	-.579	-.082	.290
	Germans	Italians	Europeans	28	-.208	.175	.244
main	Germans	British	Europeans	108	-.206	.038	.262

study							
	Germans	Italians	Europeans	105	-.371	-.154	.302
Weber et al. (2002)							
Study 1	business students (university)	business students (adv. tech. coll.)	business students	63	.073	-.021	.106
Waldzus, Mummendey & Rosendahl (2007)							
pre-study	psychology students	economy students	students	46	-.292	.128	.302
main study	biology students	self selected	natural scientists	40	.121	.284	.077
Mummendey & Waldzus (2004)							
Study 4	Germans	British	Europeans	39	-.482	-.445	.408
Study 4	Germans	Italians	Europeans	35	-.594	-.576	.465
Weber (2001) unpublished dissertation							
Study 2	professors (university)	professors (techn. college)	professors	65	-.030	.217	.196
Study 4	Germans	Poles	Europeans	56	-.226	.003	.313
Unpublished Report (2000) for the German Science Foundation							
Study 4	psychology- students	economy- students	students	94	-.263	-.126	.166
Study 7	Germans	Poles	Europeans	104	-.125	-.066	.143
Study 8	Germans	Poles	Europeans	38	-.230	-.174	.195
Study 9	Germans	Poles	Europeans	134	-.107	-.072	.097

Study 10	Germans	Poles	Europeans	61	-.167	-.196	.076
Study 11	Germans	Poles	Europeans	80	.132	.178	-.025
Unpublished Report (2002) for the German Science Foundation							
Study 1	Germans	British	Europeans	48	-.369	-.288	.328
Study 2	Germans	British	Europeans	61	-.288	-.157	.330
Study 3	human med. students	dentistry students	medicine students	70	-.121	.292	.336
Finley & Wenzel (2003)							
Study 1	psychology students	economy students	students	60	-.243	.164	.290

Table 2

Meta-Analysis of Correlations between Attitudes towards the Out-group and Relative Prototypicality (r_{dif}), Prototypicality of the Ingroup (r_{IG}), and Prototypicality of the Outgroup (r_{OG}) in 27 Studies, with 29 Hypothesis Tests and a Total N of 1842 Participants

	r_{dif}	r_{IG}	r_{OG}
<i>Fishers z (for unweighted mean r)</i>	-0.259	-0.063	0.266
<i>Fishers z (for pop. eff.size)</i>	-0.219	-0.047	0.233
<i>Population effect size r</i>	-0.216	-0.047	0.228
<i>Test of homogeneity Q (df = 28)</i>	51.59	60.59	27.73
<i>Significance p</i>	0.004	0.0003	0.49
<i>Homogeneity</i>	heterogeneous	heterogeneous	homogeneous

Unweighted Analysis:

<i>Population effect size (unweighted mean r)</i>	-0.254	-0.063	0.260
<i>Explained variance r^2</i>	0.064	0.004	0.067
<i>Corresponding Z in Normal Distribution z</i>	-11.06	-2.72	11.34
<i>Significance p</i>	<0.00001	0.003	<0.00001
<i>Observed variance of effect sizes</i>	0.041	0.047	0.021
<i>Observed standard deviation</i>	0.202	0.217	0.144
<i>95% confidence interval of pop. effect size:</i>	from -0.297 to -0.209	from -0.110 to -0.017	from 0.216 to 0.303

Binomial effect size display (BESD (Rosenthal)):

	<i>Success rate</i> from 0.63 to 0.37	from 0.54 to 0.46	from 0.37 to 0.63
<i>Fail Safe N for critical r of .05</i>	118	8	122
<i>Fail Safe N for critical r of .10</i>	44	--	46
<i>Fail Safe N for critical r of .15</i>	20	--	21
<i>Fail Safe N for critical r of .20</i>	8	--	9

Note: Analysis with Fishers z-Transformation (see Hedges & Olkin, 1985, p. 229-236).

Figure 1. Perspective divergence in terms of prototypicality measured as profile similarity to the superordinate category students. Theoretically, scores could range from 0 to 19.956, higher scores meaning higher prototypicality (Wenzel et al., 2003, Study 1).

Figure 2. Perspective divergence in terms of prototypicality measured as ratings of the superordinate category bikers on subgroup specific attributes. High values (min = 1, max = 5) represent high prototypicality (Waldzus et al., 2004, Study 1).

Figure 3. Perspective divergence in terms of prototypicality measured as profile similarity to the superordinate category Germans. Theoretically, scores could range from 0 to 17.889, higher scores meaning higher prototypicality (Waldzus et al., 2004, Study 3).

Figure 4. Ratings of the superordinate category (Europeans) on counter-British and counter-Italian attributes when the British versus Italians are the salient outgroup for German participants (min = -4, max = 4) (Waldzus et al., 2005).

Figure 5. Intergroup bias depending on the manipulation of relative ingroup prototypicality in a study by Waldzus and Mummendey (2002). High values represent more negative attitudes towards the outgroup and more positive attitudes towards the ingroup.

Figure 6. Relative prototypicality of the ingroup (Germans) for the superordinate category (Europeans) as a function of ingroup identification and superordinate identification (Wenzel et al., 2003, Study 2).











