

# **What Do You Mean by European?**

## **Spontaneous Ingroup Projection: Evidence from Sequential Priming.**

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## 1 Introduction

*But one of the basic features of the mind is its keenness  
to construct wholes out of fragmentary parts.  
We catch part of a word and hear the whole  
...we constantly fill in blanks.*

*Jonathan Franzen*

We all seem to know what social entities consist of, even complex ones that subsume groups on different lower levels (i.e., European). Their mental representation, however, is not so clear. For example, what are Europeans like? How do Europeans define themselves? Given that Europe as a whole and the European Union as a specific political entity are composed of several and diverse nations (27 states in the EU with a population of ca. 494,700,000—about 7.5 % of the world’s population—according to the EUROSTAT, First Demographic Estimates for 2006), it could be rather difficult to have an easy and clear answer. Over the last few years, Europeans have been debating about a constitution for the EU (18/07/2003 European Convention in Salonnico). Two perspectives would seem to clash when it comes to the definition of “being European”, namely, the secular one and the Christian one. Supporters of these two views each attempted to explain how and why their *own* definition of European was the right one and to show the misconceptions of the *other* definition. They tried to describe why their characterization of “being European” had to be included in the *constitutional* type. To make things even worse, a series of problems emerged after the EU Commission decided to use “only” three languages (English, French, and German) in the press conference of the Commission (15/02/05). Spain, Portugal, and Italy officially stood against this choice and claimed their centrality to the EU. Among a series of others, these events illustrate a particularly interesting inter-group situation, one in which two (or more) groups struggle to impose their particular viewpoint regarding the definition of the superordinate category, here the European Union.



Psychologists have long tried to find solutions to conflicting inter-group relations (Hewstone & Greenland, 2000). Some models stress how a common identity can improve the relationship between members of different groups (Common Ingroup Identity Model, Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993; Dual Identity Model, Gonzalez & Brown, 2003). The encouraging results of this line of work notwithstanding, Mummendey and Wenzel proposed a model that further points out the perils of being in the same superordinate category: the Ingroup Projection Model (IPM; Mummendey & Wenzel, 1999; Wenzel, Mummendey, Weber, & Waldzus, 2003). Rooted in Self-Categorization Theory (Turner, Hogg, Oakes, Reicher, & Wetherel, 1987), the IPM proposes that ingroup members evaluate an outgroup in a less positive way when both groups are included in a superordinate category. For example, single mothers evaluated single fathers less positively when they were both included in the category “single parents” in comparison to a situation when the relevant categorization was “mothers” (Waldzus & Mummendey, 2004). According to the IPM, this pattern emerges because group members project ingroup features onto the superordinate category. The more ingroup members consider their own group as relatively prototypical of the superordinate category, the less positively they evaluate an outgroup. Although researchers accumulated substantial evidence in favour of the IPM, little is known about the processes underlying the phenomenon.

The major aim of this dissertation is to investigate the process of ingroup projection. Based, on one hand, on the assumption of the Ingroup Projection Model (Mummendey & Wenzel, 1999) about the existence of a tendency for people to generalize the features of the ingroup to the superordinate category, and, on the other hand, on the literature on automatic stereotyping (Banaji & Hardin, 1996; Banaji, Hardin, & Rothman, 1993; Devine, 1989), in this dissertation I show evidence for “spontaneous ingroup projection”. That is, I demonstrate how ingroup projection onto a superordinate category can also operate at an implicit level.

As I have underlined, the central process for the IPM is the generalization of the prototype of the ingroup instead of the prototype of the outgroup to the superordinate category. Therefore, the image of one’s own group is crucial in defining what the superordinate category is like. However, research rooted in Self-Categorization Theory (Turner et al., 1987) highlighted that what is believed to be true for the ingroup depends on the particular frame of reference participants are embedded in. For example, national stereotypes

(e.g., Scottish as a whole) for an ingroup member (e.g., a Scottish person) vary as a function of who is the “Other” (e.g., Greeks vs. English) they are compared to (Hopkins, Regan, & Abell, 1997). Moreover, when an inter-group context is present, the degree of ingroup-outgroup differentiation on several characteristics significantly increases and becomes meaningful in comparison to a “solo” ingroup context (Hopkins & Murdoch, 1999). Therefore, a second aim of this dissertation is to investigate whether an inter-group setting is a pre-condition for the process of ingroup projection to occur.

The process of ingroup projection implies a directional hypothesis, that is, ingroup members should use the prototype of the ingroup to define the inclusive category and not vice versa. The directional hypothesis is also examined in the present dissertation.

The following chapters 2, 3, and 4 present the theoretical background relevant to the outlined research questions and specify the main research hypotheses. Theories and models illustrating the role of a superordinate category in inter-group relations are presented in chapter 2. Chapter 3 summarizes the relevant theoretical and empirical insights of dual-system models focusing on the process of stereotyping. Based on chapters 2 and 3, chapter 4 delineates the developed research paradigm and the related hypotheses. Chapter 5, 6, 7, and 8 provide empirical tests of the research hypotheses. The empirical results are discussed in a final chapter with reference to remaining questions and theoretical implications.

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## **2 The Role of a Superordinate Category in Inter-Group Relations: Theories and Models**

Despite a constant decrease in the number of armed conflicts over the past years (e.g., the number of armed conflicts around the world has declined by more than 40% since the early 1990s, according to the Human Security Report 2005), conflicting inter-group relations are a vivid reality of our globalized world. Conflicts between groups are not always taking such dramatic forms as wars or genocides but they are a pervasive presence in our daily lives, examples are migration problems (e.g., citizenship issues), denied rights for minorities (e.g., marriage and adoption for homosexual couples), and unequal distribution of resources between social classes (e.g., students with higher-earning parents are better-educated and tend to achieve higher results, according to the PISA report 2003; as a concrete example of what this means, in Italy a child of professionals has 50% probabilities to get a degree, on the contrary a child of workers has a probability of 7-8%; Pisati & Schizzerotto, 2005).

Improving inter-group relations has been one of the core issues for social psychology since the traumatic experience of the Second World War (for a review see Brewer & Brown, 1998). Some models tried to identify the requirements for improving group relations, while others focused more on the processes underlying them. During the last twenty years, research on inter-group relations focusing on the beneficial consequences of having an inclusive category had a large impact on the field.

In this chapter, several models dealing with the effects of a superordinate category on inter-group relations are taken into account. First, two theoretical accounts (i.e., the Common Ingroup Identity Model and the Dual Identity Hypothesis) pointing to the beneficial effects of the presence of an inclusive category in improving groups' interaction and decreasing inter-group bias will be presented. Second, a model (the Ingroup Projection Model) that deals with the negative side effects for groups being included in a superordinate category will be discussed.

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## 2.1 The Common Ingroup Identity Model

In his seminal book “The Nature of Prejudice”, Allport proposed one of the most influential ideas in social psychology: the *contact hypothesis* (Allport, 1954). According to the *contact hypothesis*, the most powerful way to diminish prejudice and inter-group bias is to bring groups into contact. As Allport specified, mere contact is not enough to reduce hostility. Several pre-conditions have been identified for the inter-group contact to be successful in reducing prejudice. Four conditions are necessary in order to improve inter-group relations via contact, which are the following: 1) equal status between the groups within the situation, 2) cooperation between the groups, 3) opportunities for personal acquaintance between ingroup and outgroup members, and 4) egalitarian institutional support. Recently a meta-analysis by Pettigrew and Tropp (2006) showed that the four pre-conditions significantly lead to prejudice reduction. However, they seem not to be “*essential* for inter-group contact to achieve positive outcome” (Pettigrew & Tropp, 2006, p.766).

The Common Ingroup Identity Model (CIIM; Gaertner, Dovidio, & Bachman, 1996; Gaertner et al., 1993; Gaertner, Mann, Murrell, & Dovidio, 1989) offers an explanation of the process underlying the positive results of contact between groups made on the pre-conditions enlightened by the contact hypothesis. Based on Social Categorization and Social Identity Theories (Tajfel & Turner, 1979; Wilder, 1981), the model takes into account the role of group representations in inter-group bias. According to the model, the causal relation between the pre-condition of contact and the effect of decreased inter-group bias is mediated by the change in group’ members representation of the situation from a two group into a one (common) group perspective. In Gaertner and Dovidio’s words, “bias can be reduced by factors that transform members’ perceptions of group boundaries from “us” and “them” to a more *inclusive* “we”” (Gaertner et al., 1993, p. 1). Hence, the CIIM suggests re-categorization of the ingroup-outgroup distinction to a superordinate group level as a powerful mean to reduce inter-group bias. The new superordinate group encompasses the previous sub-groups distinction, creating a new inclusive ingroup and thus augmenting the positive attitudes towards former outgroup members (Gaertner et al., 1993). The model has obtained evidence both in experimental and in field settings. For example, participants in a lab were divided into two groups of three members each and involved in a discussion. Gaertner and colleagues

systematically varied some contact factors (e.g., inter-group cooperation) in order to modify the cognitive representation of the situation (i.e., separate individuals vs. two groups vs. one inclusive group). Afterwards, attitudes towards the lab created groups were measured. Overall, the authors found an increase of the positive attitude towards the outgroup in the common group condition (i.e., one-group) in comparison with the other conditions (i.e., separate individuals and two-groups). Moreover, group representation significantly mediated the association between the contact conditions and inter-group bias (Gaertner & Dovidio, 2005). This mediation pattern was replicated in field studies with several kinds of groups, such as students from different ethnicities in a mixed high school, members of bank mergers, and supporters of soccer teams (Gaertner & Dovidio, 2000).

Gaertner and Dovidio (Dovidio, Gaertner, & Validzic; 1998) recently argued that for a generalization of positive attitudes to outgroup members in general to occur, it is better that the initial group identities are maintained within a context of a salient superordinate category. This hypothesis is known as Dual-Identity Hypothesis.

## **2.2 The Dual-Identity Hypothesis**

According to the Mutual Intergroup Differentiation Model (Hewstone & Brown, 1986), inter-group contact should happen without threatening the group identities in order to be successful. In other words, the contact situation should preserve the salience of the original groups. According to Gonzalez and Brown (2003; 2006), the Dual-Identity Hypothesis is a combination of the CIIM and the Mutual Intergroup Differentiation Model. In line with the analysis done by Hornsey and Hogg (2000), Gonzalez and Brown argue that an inter-group contact that allows people to maintain a dual identity (i.e., simultaneous awareness of subordinate and superordinate categories) within a superordinate category frame is beneficial for several reasons. First, and in line with the CIIM, the dual identity permits the generalization of positive inter-group attitude beyond the contact situation. Second, and in line with the Mutual Intergroup Differentiation Model, it provides the opportunity to preserve group differences.

Following a procedure similar to the one used by Gaertner and colleagues, Gonzalez and Brown (2003) created two lab groups in their studies. The authors used several strategies to change participants' cognitive representation of the lab situation, adding to the contact representations analyzed by Gaertner and colleagues a condition of dual identity, that is, a condition in which participants identify high both with the sub-group and with the superordinate group (i.e., separate individuals vs. two groups vs. one inclusive group vs. dual-identity). The results showed the beneficial effect of a dual identity for the generalization of the inter-group attitudes.

### **2.3 Stressing the Perils of Being in an Inclusive Category: The Ingroup Projection Model**

In the previous paragraphs, some theoretical accounts that highlight the positive aspect of diverse groups sharing the same superordinate category were considered. Although there are several empirical evidences for this line of research, the fact of sharing a superordinate category can also have negative side effects for the images of the outgroups included. In the following paragraphs the Ingroup Projection Model (IPM, Mummendey & Wenzel, 1999), a theoretical account that points out the perils of being in a superordinate category, will be presented.

#### *2.3.1 Theory and Empirical Evidence*

In their theoretical paper on social discrimination and tolerance, Mummendey and Wenzel (1999) suggest that inter-group differences not always lead to negative evaluations of the outgroup. As an example, the authors claim that many German people generally have negative attitudes towards Turkish people living in Germany, but yet spend time in Turkey for holidays and probably have a positive attitude towards Turks there.

Based on Self-Categorization Theory (SCT, Turner et al., 1987), the authors assert that the evaluation of inter-group differences is based on the ingroup and outgroup relation to an inclusive superordinate category. According to SCT, people classify and define themselves into hierarchical social categories, depending on the relevant context: from a subordinate level

of personal self-categorization as an individual to a superordinate level of the self as human being, with a level of ingroup-outgroup categorization falling in between. According to the theory, people compare ingroups and outgroups using a common superordinate category that provides standards and norms on which their evaluation of the social groups rests. Ingroup and outgroup are evaluated positively to the degree that they are perceived as prototypical of the superordinate category. In other words, the prototype of the superordinate category constitutes the norm against which both groups are compared. Further, the groups are evaluated in terms of their relative prototypicality for the superordinate category. Another relevant assumption in SCT is that self-categories tend to be evaluated positively (Tajfel & Turner, 1979).

The Ingroup Projection Model incorporated and extended these assumptions (Mummendey & Wenzel, 1999; Wenzel et al., 2003). The model posits that group members tend to perceive their own group as more prototypical of the inclusive category than the outgroup if both the ingroup and the superordinate category are psychologically relevant to the self (i.e., high identification) and positively evaluated. Members of both subgroups have a motivation to perceive their own group as being prototypical for the superordinate category. Hence, the IPM claims that people who belong to a group tend to generalize typical ingroup characteristics to the superordinate category. In other words, they project ingroup features (the prototype) onto the inclusive category (Wenzel et al., 2003). As a consequence of this process, the more group members perceive their ingroup as relatively prototypical of the superordinate category, the more negative are their attitudes towards an outgroup (Waldzus & Mummendey, 2004). Consistent with SCT, the valence of the superordinate category has a considerable impact on the projection process in the IPM, moderating the relationship between ingroup prototypicality and outgroup evaluation. As being prototypical for a negative evaluated superordinate category has negative consequences for the image of the ingroup, ingroup members should be motivated to distance their ingroup from the inclusive category instead of generalizing ingroup features. Moreover, ingroup's perceived relative prototypicality for a negatively evaluated superordinate category is related to positive attitudes towards the outgroup, while ingroup's relative prototypicality for a positive superordinate category is related to negative attitudes towards the outgroup (Wenzel et al., 2003). Reality constraints related to the social context are another important factor to be taken into account for the process of ingroup projection and the perception of group prototypicality. There are social

situations in which members of a group perceive the outgroup as more prototypical than the ingroup for the superordinate category, for example when the ingroup has a low status position compared to an outgroup (Weber et al., 2002). Other factors that could potentially moderate the process of ingroup projection rest on the way in which the prototype of the superordinate category is defined. An inclusive category prototype might be more or less clear, with a small or a large scope, narrow or broad, simple or complex (Mummendey & Wenzel, 1999). These structural properties of the prototype representation have an impact on the perceived relative ingroup prototypicality with consequences on inter-group evaluation (Wenzel et al., 2002). A narrow, clear, and simple prototype representation seems to be one of the preconditions for the perception of relative ingroup prototypicality (Mummendey & Wenzel, 1999).

Evidences were found sustaining the model. Research has demonstrated the tendency to perceive the ingroup as more prototypical than the outgroup for an inclusive superordinate category in various context, for example, between students of different subjects or using nationality as a criterion (Waldzus & Mummendey, 2004; Waldzus & Mummendey, Wenzel, & Boetcher, 2004; Waldzus, Mummendey, & Wenzel, 2005, Weber et al., 2002; Wenzel et al., 2003). Relative ingroup prototypicality has been found to be especially high for those ingroup members that identify strongly with both the ingroup and the superordinate category (Waldzus et al., 2003; Wenzel et al., 2003) and to be related to less positive evaluations of the outgroups (Waldzus & Mummendey, 2004; Waldzus et al., 2005; Wenzel et al., 2003) and to perceptions of legitimacy concerning status differences (Weber et al., 2002). Moreover, ingroup prototypicality seems to be directly related to the representation of a simple and positively evaluated superordinate prototype (Waldzus et al., 2005; Waldzus et al., 2003; Weber et al., 2002; Wenzel et al., 2003).

As we have seen, the IPM stresses the possible negative consequences of being in an inclusive superordinate category on inter-group differences evaluation. However, the Common Ingroup Identity Model and the Dual-Identity Hypothesis show that ingroup-outgroup re-categorization into a common group is an effective way to reduce inter-group bias. Both the Ingroup Projection Model and the Common Ingroup Identity Model have found evidences for across studies. How then can the apparent contradictions between the divergent theoretical accounts be resolved? Meiser, Mummendey, and Waldzus (2006) demonstrated that the relevance of a superordinate category for the actual inter-group comparison determines the



effects that an inclusive common ingroup has on inter-group relations. That is, as far as relevant dimensions for inter-group comparisons are concerned (e.g., study domain for the comparison between natural sciences and business students), the salience of an inclusive superordinate category leads to a stronger perception of ingroup prototypicality with the consequence of ingroup bias. On the contrary, a common inclusive category has beneficial effects on content dimensions that are irrelevant to the inter-group comparison (e.g., life style domain for the comparison between natural sciences and business students).

### *2.3.2 Processes and Measures in the IPM*

As stressed by Mummendey and Wenzel (1999), the central concepts of the model are both the inclusion in a superordinate category, that is, group members must have the perception that both groups are part of the same inclusive category, and the relative prototypicality of the groups with the inclusive category. As stated by the authors, through the process of ingroup projection “specific ingroup attributes are rendered as general norms claiming validity and superiority”. Again, “in contrast, differing outgroups in the inclusive category, for whom these norms should also apply, are considered nonnormative and inferior and their positions are deemed false” (Mummendey and Wenzel, 1999, p. 165).

It is obvious that the core and basic process in the model is ingroup projection. Ingroup projection refers to the process of ascribing ingroup typical characteristics (e.g., prototype) to the inclusive superordinate category. It is important here to stress that the notion of a prototype is conceptually overlapping with the notion of stereotypes. Prototypes combine the most representative attributes of a category (Rosch, 1973), and, referring to social groups, prototypes can be conceptualized as cognitive representations of stereotypes (Stangor, 2000). From these premises, ingroup projection can be defined as the process of ascribing ingroup stereotypes, instead of outgroup stereotypes, to a superordinate category encompassing both the ingroup and the outgroup.

Although the ingroup projection process is at the center of the model, no direct test of an association between the inclusive category and ingroup or outgroup features has been conducted so far. To look further into the process of ingroup projection is the major aim of this dissertation.

Research to date focused on the distance between the ratings of the superordinate category and the ratings of either the ingroup or the outgroup on different features, as well as on the relationship between these distances and group attitudes (Waldzus et al., 2003; Weber et al., 2002). Previous research on IPM used explicit measures that comprised a series of typicality scales on which participants had to indicate for the ingroup, the outgroup, and the superordinate category how characteristic of the group a series of attributes was. On the basis of these typicality ratings, the relative distance between the superordinate category and the ingroup versus the outgroup was calculated as an index of relative prototypicality. In some studies, the attributes were selected via a previous pre-test on the relevant features for the groups under consideration, but in most cases the attributes used in the studies were features that had previously been generated by the participants themselves. Thus, this kind of procedure might suffer from a confound between typicality and valence. That is, when asked to generate typical ingroup attributes, an ingroup member might have come up with more examples of positive rather than negative traits. On the contrary, when asked to generate typical outgroup attributes, an ingroup member might have come up with more examples of negative rather than positive traits. In addition, even when the studies used pre-tested negative and positive typical attributes, the valence dimension was not taken into account in the data analysis. As a result, this did not permit a clear distinction between the supposed ingroup projection process and a spurious valence artifact, that is to say, the tendency to view one's own group as positive. Moreover, the order of presentation of the typicality scales might have an impact on the findings. Another problematic issue is the direction of the projection. For the procedure used in previous research, it is not clear whether we can talk about projection from the ingroup onto the inclusive category or, vice versa, an assimilation of the ingroup to the superordinate category prototype.

Taking into account the limitations mentioned here, this dissertation -with its focus on the process of ingroup projection- aims, first, to show the association between the ingroup prototype and the superordinate category; second, to take into account the possible confounds due to typicality, order effects and, most importantly, valence; and, last but not least, to provide evidence for the directional hypothesis, that is, the projection *from* the ingroup *onto* the inclusive category.

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### 3 Deliberate vs. Spontaneous Processing: Dual-System Models

*The external social world...ends up shaping the workings of the more personal, private, intuitive associative system, importing social influence into every aspect of our mind's operation.*

*Eliot Smith & Jamie DeCoster*

How do people form impressions of (social) reality? Are people always in control of their behaviors? These questions are typical examples of issues in psychology. Despite the broad array of topics, over the last 30 years several models taking into account two major distinctive processing routes (e.g., controlled vs. automatic) have been developed in different fields of social and cognitive psychology.

Due to the focus of this dissertation on the *process* of ingroup projection, it is important to consider whether the hypothetical generalization of the ingroup prototype onto the superordinate category might follow one or both modes of processing. Specifically, in this dissertation the idea that ingroup projection can happen in a spontaneous fashion is presented and investigated. Furthermore, the conceptual overlap between groups' prototypes and groups' stereotypes encourages paying particular attention to the process of stereotyping.

In this chapter, an overview of the basic assumptions of dual-system models is presented, focusing particularly on stereotyping and its consequences for behavior.

#### 3.1 Dual-System Models: An Overview

Imagine you are done with your job and want to go home. So you leave the office, enter your car and start driving. While driving you start thinking about what to cook that evening, maybe the nice pasta you ate at your friend's place last week so you plan to call him and ask for the

recipe, oh you could invite him for dinner and what about a movie and...suddenly you find yourself in front of your house without remembering anything about the route you took to get there. Probably all of us have experienced how sometimes behavior (even a complex sequence of behaviors like driving a car) becomes automated, mechanical, without need of awareness or control.

The shift from a more controlled to a more automated way to deal with reality has been addressed widely in social and cognitive psychology. Persuasion (Chaiken, 1980; Petty & Cacioppo, 1981), stereotyping (Devine, 1989), attitude change (Fazio, 1990; Wilson, Lindsey, & Schooler; 2000), and social behavior (Strack & Deutsch, 2004) are just few instances of the extensive collection of phenomena where the application of dual models was prominent in recent years (for a review, Chaiken & Trope, 1999; Wegner & Bargh, 1998). All the specificities notwithstanding, it seems that the majority of models have central common features. First, the models recognize two specific processing modes, on the one hand, a spontaneous (or automatic – heuristic – impulsive – associative) mode and, on the other hand, a deliberate (or controlled – systematic – reflexive – rule based) mode of information processing. Second, the models generally agree on the fundamental qualities of the two modes (Smith & DeCoster, 2000). Processing compatible with the spontaneous mode is related to the automatic activation of knowledge or affective reactions based on cues salient in the current context. The associations between specific cues and knowledge or affect are established and strengthened by many experiences over time (e.g., the classical conditioning by Pavlov, 1927). Activation of the knowledge is preconscious, that is, “it becomes subjectively part of the stimulus information” (Smith & DeCoster, 2000, p. 124), no awareness or control is needed to instigate the process. Importantly, once activated, the knowledge configuration can affect people’s feelings, thoughts or behaviors. In contrast, the deliberate mode of processing is based on symbolically represented rules (e.g., reasoning based on syllogistic rules, according to Strack & Deutsch, 2004). Deliberate processing is conscious, controlled, and effortful. This kind of processing is strategic in the sense that it is shaped by the goals of the individual in the situation, the peculiarity of the context, and the demands of the task. In contrast with the spontaneous processing mode, deliberate processing can be learned with just one or few experiences (e.g., a new game with cards).

The relations between the two processing modes are somehow different from model to model. However, it seems that how people process information is strongly related to the ability or cognitive capacity of the individual in the specific situation (e.g., time pressure, distraction from other stimuli) and the motives of the individual (e.g., willingness to perform one task adequately). A lack of capacity or/and motivation less likely leads to a deliberate processing route. Moreover, some models stress that the two modes work in sequence, with a chronological advantage for the spontaneous processing (e.g., Devine, 1989), while others underline the parallel and simultaneous occurrence of the modes (e.g., Strack & Deutsch, 2004).

Although the dual modes processing framework has been challenged recently by new unimodal theorizing (Kruglanski et al., 2003), evidences from neuropsychology and cognitive neuroscience (Birnboim, 2003; Chiu, Hua, Chen, Hwu, Kao, & Chen, 2006) offers support for a distinction between automatic and controlled information processing (e.g., role of the frontal lobes in controlled processing).

### **3.2 Stereotypes and Spontaneous Processing: Automatic Stereotyping**

During the last 20 years, there has been abundant evidence of the automaticity of stereotyping (Banaji & Hardin, 1996; Banaji, et al., 1993; Dovidio, Evans, & Tyler, 1986). Specifically, research has shown that perceiving a stimulus that is related to a social group, such as a category label, may spontaneously activate the representation of the social group in question. Moreover, this process can occur in the absence of subjective awareness, as shown by research using subliminal priming (Bargh, 1999; Devine, 1989). One of the most challenging and influential models in dealing with the controlled and automatic components in stereotyping is Patricia Devine's *dissociation model* (1989). In her model, the author makes a distinction between stereotypes as cultural believes and personal believes. Divine argues that, although personal believes have become more egalitarian over the years in general, cultural stereotypes remained stable in the American society. According to the model, cultural and personal believes are conceptually separate cognitive structures and "each structure represents only part of an individual's entire knowledge base of a particular group" (Devine & Elliott, 2000, p. 87).

People in a society share the same cultural knowledge. Through socialization, individuals form stereotypes as associations between group labels and collections of characteristics, but people additionally possess personal beliefs not necessarily fitting the cultural stereotypes. Thus, on the one hand, people have a common set of cultural knowledge, working in an associative and spontaneous manner, and, on the other hand, people have personal beliefs, which they endorse and recognize as true. Hence, according to the model, the spontaneous activation of cultural stereotypes occurs for all the individuals in a specific society (no matter, for example, whether they are high or low on prejudice) as soon as a category cue is encountered. However, the acceptance and use of the cultural stereotypes depend on the idiosyncratic beliefs held by the individual (low prejudice individuals may think that the cultural stereotypes are not true, for example). The inevitability of automatic stereotyping has been challenged in recent years (Lepore & Brown, 1997; Macrae, Bodenhausen, Milne, Thorn, & Castelli, 1997; Wittenbrink, Judd, & Park, 2001; for a review see Blair, 2002). However, evaluations and cognitions related to a social category seem to be quickly activated following exposure to category stimuli or exemplars (Ito, Thompson, & Cacioppo, 2004). Despite the fact that automatic stereotyping can be more or less malleable, it has been shown to have deleterious effect on different life domains. A glaring example is the so-called shooter bias and its relevant implication for members of a stigmatized group (Correll, Park, Judd, & Wittenbrink, 2002). Current research has found evidence for a particular form of bias that occurs when people in videogame simulations have to decide whether to “shoot” or “not shoot” armed vs. unarmed targets. It has been demonstrated that both White- and African-American participants made correct and faster decisions to “shoot” an armed target if the target was African-American. On the contrary, participants decided to “not shoot” an unarmed target more quickly if the target was White-American. Moreover, they shot non-hostile targets more often when the target was African- instead of White-American (Correll et al., 2002). Noticeably, this kind of bias has been found for trained policemen and explained with the spontaneous activation of racial stereotypes (i.e., African-American). Indeed, participants who showed higher levels of automatic stereotyping showed a higher shooter bias (Wittenbrink, Correll, Park, & Judd, 2005).

As we have seen, the distinction between automatic and controlled forms of stereotyping potentially has major consequences for social judgments and behavior. In the

following chapter, this view will be integrated with the assumptions made by the IPM. The principal hypotheses of the present work drawn from the integration of the two theoretical accounts will also be presented.

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## 4 Ingroup Projection at the Implicit Level

### 4.1 Main Hypotheses

This work rests on two main assumptions. On the one hand, and in line with the Ingroup Projection Model, I assume that people use the ingroup prototype in order to define the superordinate category. On the other hand, the work on stereotyping reveals that stereotypes can be unintentionally activated. Combining these two assumptions led to predict “spontaneous” ingroup projection. This is to say, I expected that group members would spontaneously activate the ingroup as opposed to the outgroup prototype in response to a superordinate category stimulus. To the extent that group prototypes are defined as “mental representations consisting of a collection of associations between group labels (e.g., Italians) and the features that are assumed to be true of the group (e.g., “romantic”)” (Stangor & Schaller, 2000, p. 67), my first hypothesis is that ingroup projection should result in marked associations between the superordinate category label and the features that are believed to be true of the ingroup (e.g., ingroup stereotypes). In other words, group members are predicted to spontaneously rely on ingroup rather than outgroup characteristics when portraying the superordinate category.

If, as I believe, the process of ingroup projection is a spontaneous one, an implicit priming technique is an adequate way to investigate the ingroup projection process. In terms of dual-system models, the process of ingroup projection should occur at the impulsive level (Strack & Deutsch, 2004), outside the subjective awareness and in an unintentional manner. In contrast, as we have seen, previous research on IPM only used explicit measures of typicality to calculate an index of relative prototypicality on the distances between ingroup or outgroup and superordinate category (Waldzus, et al., 2003; Weber et al., 2002). In addition, the attributes used in most of the studies were features that had previously been generated by the participants themselves and not selected on the basis of a pre-test. Thus, this sort of procedure might suffer from a confound between typicality and valence.



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In order to examine the process of ingroup projection at the spontaneous level and to address limitations enlightened in Chapter 2, I decided to rely on sequential priming techniques. These techniques have been used in the context of research on implicit stereotyping precisely because they provide strong tests for the existence of an association between two concepts (Bargh & Chartrand, 2000). Specifically, I adapted a procedure from Wittenbrink and colleagues (Wittenbrink, Judd, & Park, 1997). Wittenbrink, Judd, and Park subliminally presented a prime (the word “black” or “white”) to their participants (white Americans). This prime was followed by a target stimulus. The target stimuli were attributes varying in stereotypicality for White and African Americans. Participants’ task was to decide whether the stimulus word was or was not a word (lexical decision task). The authors showed reliable stereotyping effects in the sense that participants were faster in making a decision in response to an attribute stereotypically associated with African (vs. White) Americans presented after the ‘black’ (vs. ‘white’) than after the ‘white’ (vs. ‘black’) prime.

In the following experiments, I examined whether there was a spontaneous association between a superordinate category and the ingroup or the outgroup stereotypes. Concretely, I tested whether a superordinate category prime, namely European, facilitated the processing of ingroup rather than outgroup stereotypical attributes (Hypothesis 1). Moreover, controlling for a possible confound between typicality and valence, a general effect of ingroup projection was expected on both positive and negative ingroup traits (Hypothesis 2).

Due to its focus on inter-group relations, in IPM research the context used has always been an inter-group one, that is, one group was always compared to another group (e.g., “chopper-bikers vs. sport-bikers” or “primary-school teachers vs. high-school teachers”; Waldzus et al., 2004). So, the effect of ingroup prototypicality - perceiving the distance between the ingroup and the superordinate category as smaller than the distance between the outgroup and the superordinate category - might have been depended on the particular context (i.e., an inter-group one). With hypothesis 3 I tested whether the process of spontaneous ingroup projection would occur in the absence of an inter-group context. Some hints concerning the *direction* of the process will be also presented (hypothesis 4). In accordance with the IPM, ingroup members should use the ingroup prototype to define the inclusive category and not vice versa. Moreover, prototypes of groups might be not fixed entities. Indeed, they could vary with the frame of reference emerging from the context (Haslam,

Turner, Oakes, McGarty, & Hayes, 1992). For example, the label “German” might have a different meaning for German people depending on the reference group in an inter-group comparison. For instance, in a German-Italian inter-group comparison “German” might imply something different than the same label in a German-British inter-group context. The directional hypothesis was investigated using a manipulation of the context. Following an idea by Waldzus et al. (2005), I hypothesised an association between the inclusive category and the ingroup prototype that would be salient in the specific inter-group context (e.g., Germans vs. Italians or Germans vs. British).

## **4.2 Overview of the Studies**

In the following experiments, I examined whether there was a spontaneous association between a superordinate category and the ingroup or the outgroup stereotype.

Experiment 1 consisted of two parts. In each part, I relied on participants from a different population, Italian versus German students, and examined the association between the superordinate category (*European*) and the ingroup (*Italy* or *Germany*, respectively) or the outgroup (*Germany* or *Italy*, respectively) prototype. I expected Italian (German) participants to be faster in associating the prime European with Italian (German) typical traits rather than the German (Italian) typical traits. Valence was expected not to have an impact on the results.

I further investigated whether the process of spontaneous ingroup projection would occur in the absence of an inter-group context. In order to do so, first it has been tested whether ingroup members (i.e., German undergraduate students) would use the same traits to define what is typical for the ingroup as a whole (i.e., Germans) in an intra- vs. inter-group context (Experiment 2). Subsequently, ingroup projection was investigated at the implicit level in an intra-group context (Experiment 3). In Experiment 4, spontaneous ingroup projection was investigated comparing directly an intra- with an inter-group context.

As it was mentioned, ingroup stereotypes have been shown to be determined by the frame of reference emerging from the context (Haslam & Turner, 1992). Findings such as these suggest that changing the context could change the prototype of the ingroup with an impact on the features associated with the superordinate category (Waldzus, et al., 2005).

Different from Experiments 2, 3, and 4, in Experiment 5 two different inter-group contexts were compared (e.g., Germans vs. Italians or Germans vs. British). I hypothesized that the association between the superordinate category and the ingroup prototype would prove to be sensitive to the particular inter-group context taken into account.

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## 5 Spontaneous Ingroup Projection in two Different Populations: Experiments 1a and 1b

### 5.1 Introduction

Experiment 1 consisted of two parts. In each part, I relied on participants from a different population, Italian versus German students, and examined the association between a superordinate category (*European*) and the ingroup (*Italy* and *Germany*, respectively) or the outgroup (*Germany* and *Italy*, respectively) prototype. Using a semantic priming paradigm, a prime was presented to participants for a short time (15 ms), followed by a target stimulus requiring a lexical decision. Primes comprised two group labels (i.e., “Italian”, “German”), one superordinate category label (i.e., “European”), and a neutral prime (i.e., “XXXXXXX”). The target stimuli were attributes that had been selected on the basis of two pretests and that varied in their valence as well as in their relevance to the groups. I expected to find a stronger association between the superordinate category prime (i.e., *European*) and the stereotypic ingroup attributes (i.e., typical Italian or German traits) rather than the stereotypic outgroup attributes (i.e., typical German or Italian traits). Specifically, I predicted participants to be able to decide faster that ingroup rather than outgroup traits are words after the presentation of the prime *European*.

### 5.2 Methods

#### *Participants*

Participants were 95 undergraduate students ( $N = 52$  in Experiment 1a and  $N = 43$  in Experiment 1b) from either University of Padova (Experiment 1a) or Friedrich-Schiller-University (FSU) Jena (Experiment 1b) who participated on a voluntary basis in exchange of money (3-5 EURO). Two persons were excluded from the analyses of Experiment 1a and four

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were excluded from the analyses of Experiment 1b because their nationality was not Italian and German, respectively.

### *Procedure*

In both experiments, upon their arrival at the laboratory, participants were told that they would take part in a study on cognitive processes, which comprised three experimental tasks. First, they were asked to complete two identification scales, one with Italy or Germany (i.e., *ingroup*), and the other one with Europe (i.e., *superordinate category*). Participants' identification with the superordinate category and the ingroup were each measured by means of 5 items (e.g., "I identify with the Italians") using a scale ranging from 1 (= *not at all*) to 7 (= *very much*). Both scales proved reliable ( $\alpha s > .80$ ) in both samples.

Next, participants completed the lexical decision task (LDT) modeled after Wittenbrink et al. (1997). They were seated at a distance of 50 cm in front of a computer monitor and informed that they would have to judge a large number of letter sequences that would appear on the screen. They were told that they would first see a sign (+) at the center of the screen (for 1000 ms) followed by a letter sequence (for 250 ms). Their task was to judge, as quickly and accurately as possible, whether the sequence did or did not constitute a word (cf. Wittenbrink et al., 1997). Participants were then shown 96 lexical-decision trials. The target stimuli of the LDT were either traits that were typical of Italians (and atypical of Germans), traits that were typical of Germans (and atypical of Italians), irrelevant attributes, or non-words. For each LDT trial, a prime referring to a social group (European, Italian, or German) or a neutral prime (XXXXXXXX) appeared for 15 ms right before the string of letters. Participants' two index fingers had previously been positioned on the two response keys (i.e., letter *S* and *L* on an QWERTY keyboard). Once participants had responded by pressing one of the two keys, corresponding to a word or non-word decision, the fixation point reappeared on the screen.

Finally, participants completed a questionnaire that comprised a series of typicality scales of the target groups (Italy, Germany, and Europe) on the same adjectives used in the LDT as well as attitude scales towards the target groups. For the typicality scales, participants had to indicate how characteristic a series of attributes were for the ingroup, the outgroup, and the superordinate category on a scale ranging from 1 (= *not at all characteristic*) to 7 (=

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*extremely characteristic*) (for both studies, all  $\alpha$ s > .75). Attitudes towards Germans and Italians were measured by means of 5 items (e.g., “I like the German mentality”) on a scale ranging from 1 (= *not at all*) to 7 (= *very much*). Both attitude scales were internally consistent in both experiments (all  $\alpha$ s > .80).

Upon completion of this questionnaire, participants were asked whether they were familiar with a LDT and whether or not they had seen something appearing on the screen prior to the string of letters. In case of an affirmative answer to the previous question, they were asked to indicate what they had seen on the screen. None of the participants was able to identify any of the primes. Participants were then fully debriefed, thanked, and dismissed.

### *LDT Stimuli*

The entire presentation of the experimental stimuli as well as the data collection was conducted by means of the SUPERLAB software package on a laptop computer equipped with a 16-inch color monitor. All stimuli were presented using the 22-point Times font.

The experiment included four subliminal prime words, each presented on one fourth of the trials, namely *European* (in Italian: *Europeo*; in German: *Europäer*), *Italian* (in Italian: *Italiano*; in German: *Italiener*), *German* (in Italian: *Tedesco*; in German: *Deutscher*), and the neutral prime XXXXXXXX. Each prime was presented on 24 different trials. The prime was followed by a word on one half of the trials and a non-word on the remaining half. Words and non-words were paired for length.

The target words were either traits typical of Italian people (and atypical of German people), traits typical of German people (and atypical of Italian people), irrelevant attributes, or non-words. The target words were selected on the basis of 2 pretests (one conducted at University of Padova,  $N = 14$ , the other conducted at FSU Jena,  $N = 16$ ). Pretest participants judged how characteristic each of 70 adjectives were for Germans, Italians, and Europeans using a scale ranging from 1 (= *not at all characteristic*) to 7 (= *extremely characteristic*). I selected eight traits that were characteristic of Italians (above the midpoint of the scale pertaining to Italians,  $ps < .05$ ) and not characteristic of Germans (below the midpoint of that scale,  $ps < .05$ ), eight that were characteristic of Germans (above the midpoint of the scale pertaining to Germans,  $ps < .05$ ) and not characteristic of Italians (below the midpoint of that scale,  $ps < .05$ ), and eight that were irrelevant (not different from the midpoint of either scale,

$ps > .05$ ). Importantly, none of the traits in the pretest was judged as characteristic of Europeans (they were not different from the midpoint of the scale pertaining to Europeans,  $ps > .05$ ). Half of the traits in each category were judged positive (different from the midpoint of the scale,  $ps < .05$ ) on an evaluation scale ranging from - 3 (= *extremely negative*) to 3 (= *extremely positive*), half were judged negative (different from the midpoint of the scale,  $ps < .05$ ). All stimuli are shown in Table 1 and Table 2.

*Table 1*

Study 1a. Target Items used in the Reaction Time Task for Italian Participants.

Typical Italian	Typical German	Irrelevant
<i>Positive</i>		
Elegant	Hard-work	Sincere
Warm	Efficient	Kind
Sociable	Strong	Good
Cheerful	Punctual	Trustful
<i>Negative</i>		
Jealous	Cold	Stingy
Lazy	Stiff	Sad
Liar	Picky	Rude
Chaotic	Hard	Violent

*Table 2*

Study 1b. Target Items used in the Reaction Time Task for German Participants.

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Typical Italian	Typical German	Irrelevant
<i>Positive</i>		
Emotional	Hard-working	Inventive
Warm	Efficient	Clever
Friendly	Organized	Sporty
Hot-blooded	Clean	Companionable
<i>Negative</i>		
Jealous	Obedient	Weak
Noisy	Stiff	Sad
Aggressive	Pedantic	Slow
Crazy	Hard	Without-style

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*Design*

Following Wittenbrink et al.'s (1997) procedure, I computed a facilitation score by subtracting the response latencies in the social groups prime condition (*European, Italian, German*) from those in the non-word prime condition (XXXXXXX). Larger values indicate greater response facilitation due to the specific prime<sup>1</sup>.

Three factors were manipulated within participants, namely the type of prime, with three levels (*European vs. Ingroup vs. Outgroup*), the type of trait, with two levels (*typical*

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<sup>1</sup> Before analyzing the response latencies, responses associated with errors and outliers' latencies of more than three standard deviations beyond each participant's mean were excluded from the analysis (Experiment 1a: 1.7% errors, 2.6% outliers; Experiment 1b: 2.2% errors, 2.1% outliers).



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Ingroup vs. typical Outgroup), and trait valence, with two levels (positive vs. negative). Although the main hypothesis concerned the prime European, I included the ingroup and the outgroup primes in the analysis of the LDT data as a check for the validity of the procedure.

### 5.3 Results

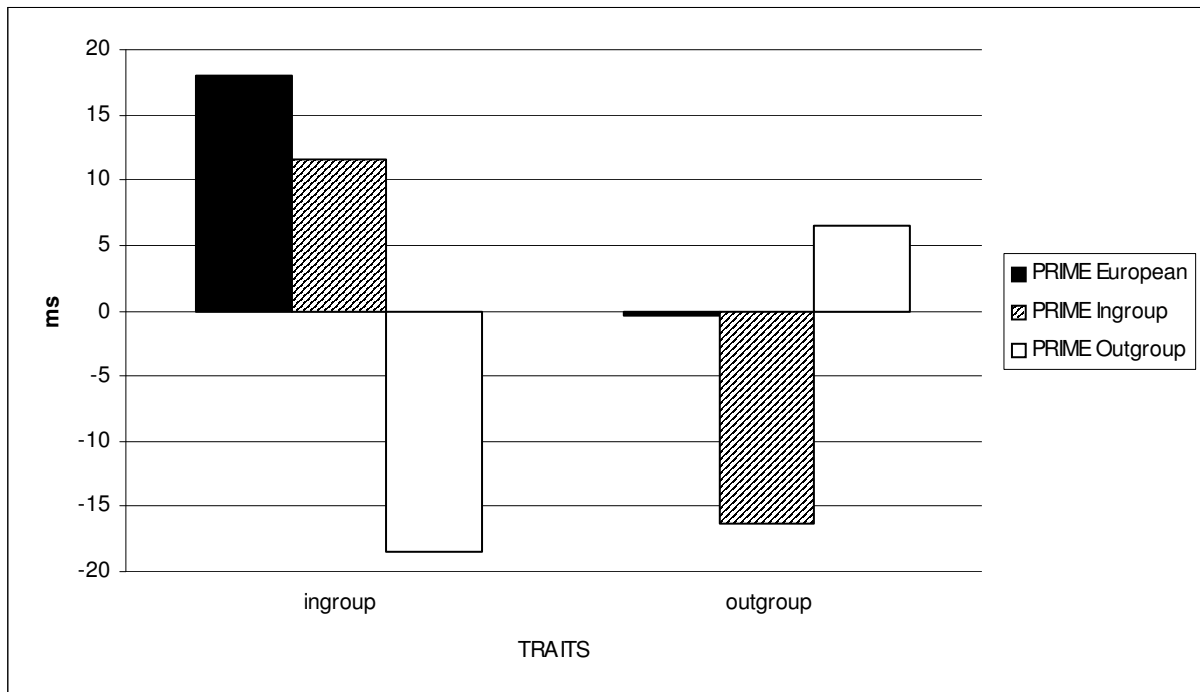
All statistical tests were carried out with  $p \leq .05$ . Therefore, individual p-values are omitted. As a measure of the effect size,  $\eta^2$  is reported. Given the positive skewness of response latencies, I log-transformed the data (Ratcliff, 1993) before conducting the analyses. For ease of understanding, I report the data after retransforming them in the original metric.

I analyzed participants' facilitation indexes by means of a 3 (prime: European vs. Ingroup vs. Outgroup) x 2 (type of trait: typical Ingroup vs. typical Outgroup) x 2 (item valence: positive vs. negative) ANOVA with all factors varying within participants.

#### *Experiment 1a: Italian Participants.*

The ANOVA revealed a significant main effect of prime,  $F(2,48) = 6.43$ ,  $\eta^2 = .12$ . More importantly, I found a reliable interaction between prime and type of trait,  $F(2,48) = 21.08$ ,  $\eta^2 = .30$ . There were no other statistically significant effects, all  $F_s \leq 1$ .

As can be seen in Figure 1, the data replicate the implicit stereotyping effect (Wittenbrink et al., 1997). Specifically, the data showed a difference between ingroup and outgroup primes on ingroup and outgroup traits with the facilitation score on ingroup traits being larger for the ingroup than for the outgroup prime and the facilitation score on outgroup traits being larger for the outgroup than for the ingroup prime. I therefore tested the implicit stereotyping effect via two within-subject contrasts. First, I compared the average facilitation score for the ingroup prime on ingroup traits with the average facilitation score for the outgroup prime on ingroup traits. Second, I compared the average facilitation score for the outgroup prime on outgroup traits with the average facilitation score for the ingroup prime on outgroup traits. These two contrasts proved to be highly significant,  $t(48) = 5.66$ , and  $t(48) = 4.28$ , respectively, statistically confirming the established ingroup stereotyping effect.



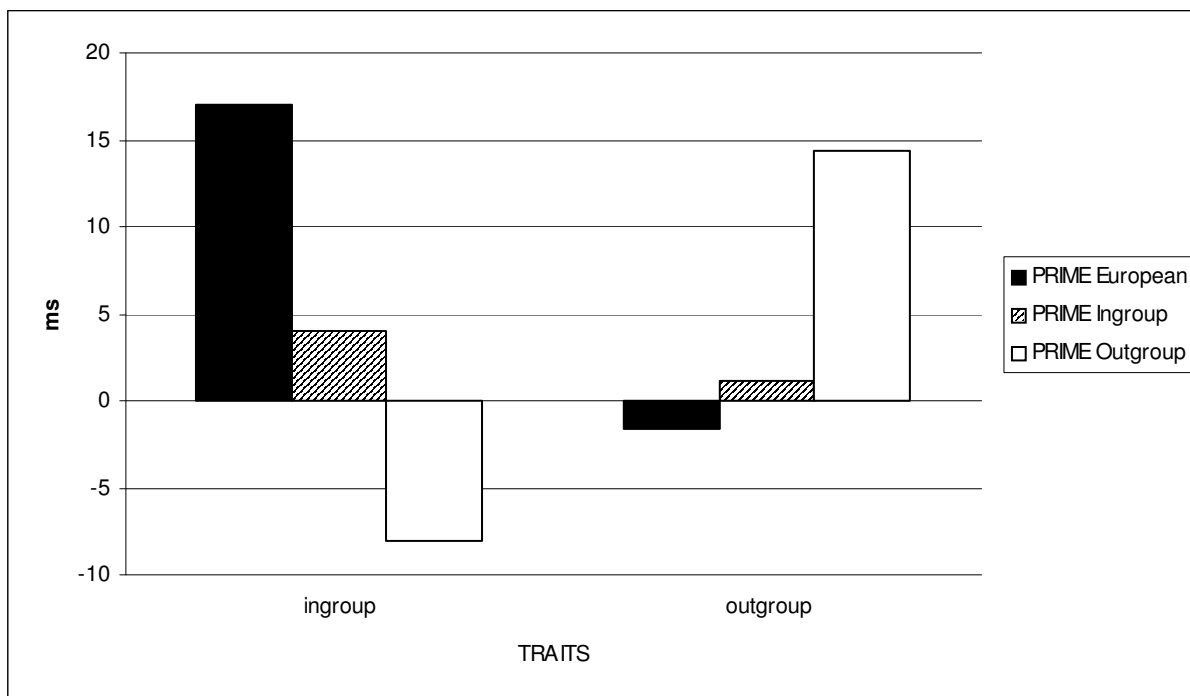
*Figure 1.* Italian Participants' Response Facilitation (in Millisecond) as a Function of Prime and Trait.

It was hypothesized (hypothesis 1) that the prime European would facilitate the processing of stereotypic ingroup attributes (i.e., Italian traits) but not the processing of stereotypic outgroup features (i.e., German traits). To test this hypothesis, I first took into consideration whether or not there was facilitation in an absolute sense for different types of traits in the presence of the European prime. I thus tested whether these average facilitation scores were different from 0. I found a reliable difference for ingroup traits,  $M = 18.01$ ,  $t(48) = 2.43$ , but no difference for outgroup traits,  $M = -.43$ ,  $t < 1$ . Using a within-subject contrast, I then tested whether these two means were statistically different from each other. As predicted, I found a reliable difference between ingroup traits and outgroup traits,  $t(48) = 2.17$ .

According to the IPM, ingroup members should project the ingroup prototype onto the superordinate category, irrespective of the valence of the attributes included in the prototype (hypothesis 2). In line with this conjecture, there was no difference between the facilitation scores related to the prime European on positive ( $M = 20.33$ ) and negative traits ( $M = 15.69$ ),  $t < 1$ .

*Experiment 1b: German Participants.*

With German undergraduate students, I replicated the significant interaction between prime and type of traits that was found in Experiment 1a,  $F(2,38) = 8.70$ ,  $\eta^2 = .19$ . There were no other statistically significant main effects or interactions, all  $F_s \leq 1$ . The relevant facilitation scores are presented in Figure 2.



*Figure 2.* German Participants' Response Facilitation (in Millisecond) as a Function of Prime and Trait.

With two planned within-subject contrasts I again tested whether the facilitation scores on ingroup traits were larger for the ingroup than for the outgroup prime and whether the facilitation scores on outgroup traits were larger for the outgroup than for the ingroup prime. The result of these two contrasts,  $t(38) = 1.83$ , one-tailed, and  $t(38) = 1.94$ , respectively, were significant suggesting an implicit stereotyping effect.

I again tested the key hypothesis by taking into consideration whether or not there was facilitation in an absolute sense for different type of traits related to the European prime. So I again tested whether these average facilitation scores were different from 0. It was predicted

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that a facilitation effect occurs for ingroup traits but not for outgroup traits (hypothesis 1). I found a reliable difference from 0 for ingroup traits,  $t(38) = 2.49$ , but not for outgroup traits,  $t < 1$ , confirming that the processing of ingroup ( $M = 17.01$ ) but not of outgroup traits ( $M = -1.62$ ) was facilitated by the prime European. A within-subject contrast further indicated that these facilitation scores were statistically different from each other,  $t(38) = 2.20$ . As for the Italian sample, there was no difference between the facilitation scores related to the prime European on positive ( $M = 15.15$ ) and negative traits ( $M = 18.86$ ),  $t < 1$  (hypothesis 2).

The questionnaire data are presented in Chapter 8 together along with those of Experiments 3, 4, and 5.

## 5.4 Discussion

Experiment 1 aimed at testing whether a superordinate category prime would facilitate the processing of ingroup as opposed to outgroup attributes. I found strong evidence in support of this hypothesis. Moreover, I obtained the same pattern of results in two different populations, namely Italian and German undergraduate students. For Italian participants, I observed a spontaneous association between the prime European and typical Italian characteristics. In contrast, for German participants, I found a spontaneous association between the prime European and typical German characteristics. These results are clearly in line with the predictions made by the IPM concerning the projection of the ingroup prototype, rather than the prototype of the outgroup, onto the superordinate category (Mummendey & Wenzel, 1999). Importantly, Experiment 1 constitutes the first test of an association between a superordinate category and the ingroup prototype using implicit measures. Moreover, the convergence in findings coming from two different populations make it unlikely that the results were due to unknown stimulus confounds.

It is noteworthy that I found a replication of the implicit stereotyping effect reported by Wittenbrink et al. (1997). As a matter of fact, participants were faster in reacting to the typical features of the ingroup (outgroup) and slower in reacting to the typical features of the outgroup (ingroup) when confronted with the ingroup (outgroup) prime. This clearly speaks to the validity of the procedure and materials that I relied upon in the study.

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The central process for the IPM is the generalization of the prototype of the ingroup instead of the prototype of the outgroup to the superordinate category. Hence, the image of the ingroup is fundamental in defining what the superordinate category is like. According to Self-Categorization Theory, the “psychological group formation takes place to the degree that (...) people come to perceive and define themselves in terms of some shared ingroup-outgroup categorization” (Turner, 1987, p. 51). In other words, the formation of an ingroup involves a divergent outgroup. Research on ingroup stereotypes indicates that the definition of ingroup characteristics is context-dependent (Doosje, Haslam, Spears, Oakes, & Koomen, 1998; Haslam & Turner, 1992; Haslam, Turner, Oakes, McGarty, & Hayes, 1992). This line of research enlightened how the image people have of their own group depends on the presence of a different group. It seems that the image of the ingroup is determined by which “other” is present in the context. Not only the content of the ingroup image changes (e.g., psychology students perceive their group as less “scientific” if compared with physics students but more “scientific” if compared with art students, see van Rijswijk et al., 2006) but also the degree to which the ingroup is construed in stereotypical terms (Haslam, Oakes, Turner, & McGarty, 1995) and the degree to which people differentiate the ingroup from an outgroup (Hopkins & Murdoch, 1999) are built upon the particular inter-group context.

Given that inter-group relations are at the heart of the IPM, the context used in IPM research has always been an inter-group one. That is, one group was always compared to another one (e.g., Germans versus Poles, Waldzus et al., 2003). As defined in the IPM, ingroup prototypicality is relative, that is, perceiving the distance between the ingroup and the superordinate category as smaller than the one between the outgroup and the superordinate category. I think that in such inter-group contexts people maximized the differences between the groups under investigation leading participants to have a “clearer” idea about what their ingroup was and, consequently, to enable the process of ingroup projection.

Given that the process of ingroup projection is intertwined with what is believed to be prototypical for the ingroup, in the next experiments I want to investigate whether the process of ingroup projection would occur in the absence of an inter-group context and to compare an intra- with an inter-group condition.

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## **6 Defining the Ingroup in an Intra- vs. Inter-group Context: Impact on Spontaneous Ingroup Projection (Experiments 2, 3, and 4)**

### **6.1 Introduction**

Implicit measures have been proved to be sensitive to the change in context (Fazio & Olson, 2003). Moreover, there is increasing evidence that automatic stereotyping is malleable and not a fixed process (Blair, 2002). Given that the process of ingroup projection is intertwined with what is believed prototypical for the ingroup, in the current chapter I want to investigate whether the process of spontaneous ingroup projection would occur in the absence of an inter-group context (hypothesis 3). In order to do so, I first tested whether ingroup members (i.e., German undergraduate students) would use the same traits to define what is typical for the ingroup as a whole (i.e., Germans) in an intra- vs. inter-group context (Experiment 2). Subsequently, I investigated ingroup projection at the implicit level in an intra-group context (Experiment 3) and compared an intra- with an inter-group context (Experiment 4).

### **6.2 Ingroup Typicality in Intra- vs. Inter-group Contexts: Experiment 2**

The aim of the Experiment 2 was to investigate whether the typical traits group members (i.e., German undergraduate students) choose to define their ingroup (i.e., Germans as a whole) in an intra-group situation were the same as those chosen in an inter-group situation (i.e., Germans vs. Italians). In order to do so, participants were asked to judge how characteristic for the group of Germans in general several traits were. The context of presentation was manipulated, so that half of the participants were in an intra-group condition (i.e., German group), and half in an inter-group condition (i.e., Germans vs. Italians).

Based on the SCT, I expected participants to enhance their typicality ratings on ingroup traits in an inter-group in comparison to an intra-group context. The effect was expected to be present on both positive and negative traits.

### 6.2.1 Methods

#### *Participants*

Participants were 42 undergraduate students from Friedrich-Schiller-University (FSU) Jena who participated on a voluntary basis in exchange for a chocolate bar. Two persons were excluded from the analyses because they were not German.

#### *Procedure*

Participants were told that they would take part in a short study on stereotypes and were asked to complete a brief questionnaire. Half of the participants received a questionnaire with a sentence explaining that our research group in Jena was conducting a study on stereotypes. At the bottom of the front page a German flag was depicted. The other half of the participants had on the front page of the questionnaire a sentence saying that our research group in Jena was collaborating with a research group from the University of Padova (Italy). The bottom of the front page showed two flags, the German flag and the Italian one. These instructions allowed to manipulate the type of context made salient (either intra- or inter-group).

At first participants were asked to think about Germans as a whole. After having spent few moments on that, participants were asked to complete a typicality scale. For the typicality scales, participants had to indicate how characteristic for the group of Germans in general a series of attributes was on a scale ranging from 1 (= *not at all*) to 7 (= *completely*). The attributes were either traits typical of Italian people, traits typical of German people or irrelevant attributes. Half of the traits were positive, the other half were negative. The target words were the same as in Experiment 1b, selected on the basis of a pretest conducted at FSU Jena in which both the ingroup (Germans) and the outgroup (Italians) were rated (inter-group situation). Participants were then fully debriefed, thanked, and dismissed.

#### *Design*

Three factors were manipulated, namely the type of context, with two levels (intra- vs. inter-group), the type of trait, with two levels (typical Ingroup vs. typical Outgroup), and trait

valence, with two levels (positive vs. negative), with the first factor manipulated between participants and the last two factors within participants.

### 6.2.2 Results and Discussion

All statistical tests were carried out with  $p \leq .05$ . Therefore, individual p-values are omitted.

The relevant typicality ratings are presented in Figure 2. It appears from the figure that indeed, the typicality ratings on ingroup traits are higher in the inter-group than the intra-group context, both for positive and for negative traits. In the intra-group context, the typicality of negative ingroup traits is close to the scale midpoint.

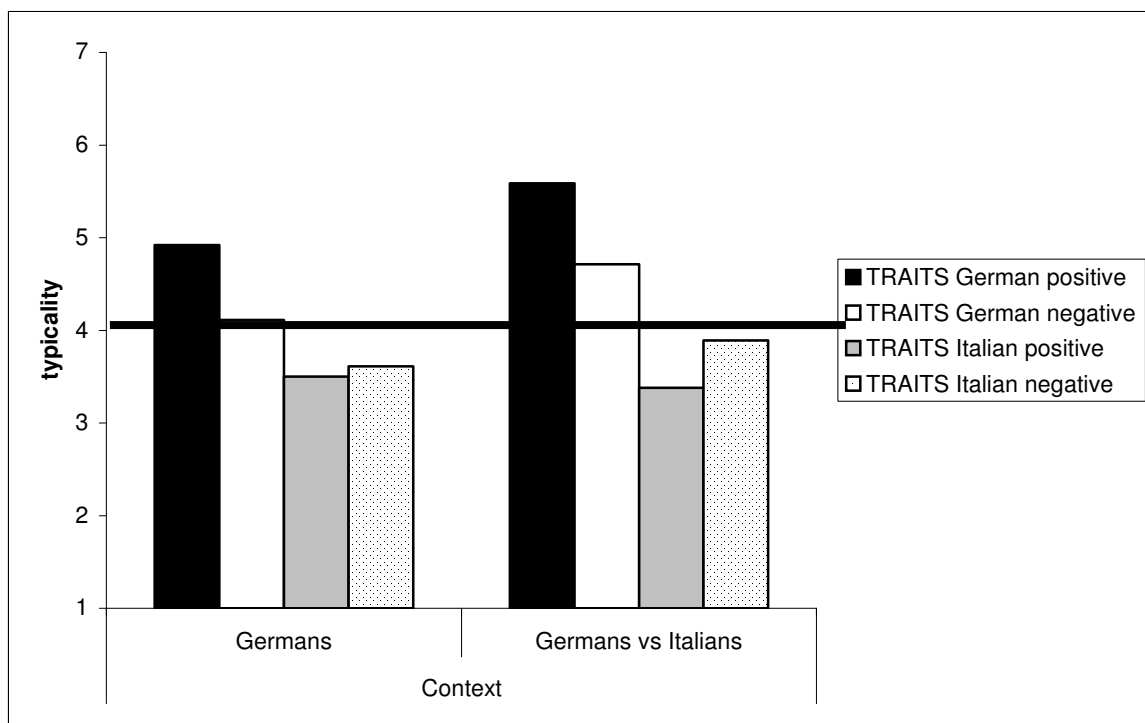


Figure 3. Experiment 2. Participants' Typicality Ratings as a Function of Type of Context, Type of Trait, and Item Valence.

In order to test whether ingroup members (i.e., German undergraduate students) would use the same traits to define what is typical for the ingroup as a whole (i.e., Germans) in an intra- vs. inter-group context, I checked which ratings on the typicality scales were



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significantly above the midpoint of the scale in the two conditions. In the intra-group condition the only rating being larger than the scale midpoint was the mean on ingroup positive traits,  $M = 4.92$ ,  $t(19) = 3.93$ , there was no difference from the scale midpoint for the mean on ingroup negative traits,  $M = 4.11$ ,  $t < 1$ . However, as expected, in the inter-group condition both the ratings on ingroup positive and ingroup negative traits,  $M = 5.59$  and  $M = 4.71$ , respectively, were significantly larger than the scale midpoint,  $t(19) = 7.92$ , and  $t(19) = 6.11^2$ .

I expected the ratings for positive and negative ingroup traits to be higher in the inter-group in comparison to the intra-group condition. I therefore performed two t-tests for independent samples that showed the expected results. A difference between conditions on the negative,  $t(38) = 2.16$ , and on the positive ingroup traits,  $t(38) = 2.50$ , was found. I controlled for whether there was a difference on the outgroup positive and negative traits between conditions. No difference on outgroup traits was found,  $t < 1$ . Hence, what was judged as really typical for Germans as a group seemed to vary with the type of context: in the intra-group context Germans were rated typical on the ingroup positive traits, while in the inter-group context Germans were rated typical on both positive and negative traits.

Experiment 2 aimed at testing whether there was a difference between an intra- and an inter-group situation on the traits used by group members to depict their ingroup. I found evidence in support of this supposition. In an inter-group situation, German undergraduate students rated Germans as a whole really typical on positive and negative ingroup traits. In contrast, in an intra-group situation, participants used only positive ingroup traits to depict Germans in general.

In Experiment 1 I found evidence for a spontaneous ingroup projection, that is, group members spontaneously activated the ingroup rather than the outgroup prototype in response to a superordinate category stimulus. In Experiments 1a and 1b the valence of the traits belonging to a group prototype had no impact on the results. I believed this happened as a consequence of the inter-group context presented to the participants. In both of the experiments an inter-national context was implicitly offered to the participants (subliminal group primes such as the words “Italian” or “German”). In Experiment 3, the process of

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<sup>2</sup> The data regarding the single traits showed in a reliable manner the same pattern as the aggregate traits in both intra- and inter-group context conditions.

spontaneous ingroup projection in the absence of an inter-group context was examined. Based on Experiment 2, the activation of only positive ingroup traits was expected in the absence of such inter-group context.

### **6.3 Spontaneous Ingroup Projection in an Intra-group Context: Experiment 3**

Experiment 3 examined the association between a superordinate category (*European*) and the ingroup (*Germans*) or the outgroup (*Italians*) prototype in an intra-group situation. Using the same procedure as Experiment 1, a prime was presented to participants for a short time (15 ms), followed by a target stimulus requiring a lexical decision. These time primes comprised only two labels, one superordinate category label (i.e., “European”) and a neutral prime (i.e., “XXXXXXXX”). The target stimuli were the same attributes used in Experiments 1 and 2, and varied in their valence as well as in their relevance to the sub-groups (Germans and Italians).

On the basis of Experiments 1 and 2, I expected to find a stronger association between the superordinate category prime (i.e., *European*) and the stereotypical positive ingroup attributes (i.e., organized for Germans) rather than the stereotypical negative ingroup attributes (i.e., stiff for Germans). Specifically, I predicted participants to be able to decide faster, after the presentation of the prime European, that ingroup positive rather than ingroup negative traits were words.

#### *6.3.1 Methods*

##### *Participants*

Participants were 81 undergraduate students from FSU Jena who participated on a voluntary basis in exchange for a small amount of money (3 EURO). Five persons were excluded from the analyses because they were not German, and two because they were able to report the prime.

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### *Procedure*

Upon their arrival at the laboratory, participants were told that they would take part in a study on cognitive processes, which comprised two experimental tasks. Participants were asked to complete two identification scales, one with Germany (i.e., *ingroup*), and the other one with Europe (i.e., *superordinate category*). Participants' identification with the superordinate category and the ingroup were each measured by means of 5 items (e.g., "I identify with the Germans") using a scale ranging from 1 (= *not at all*) to 7 (= *completely*). Both scales proved reliable ( $\alpha > .80$ ). Half of the participants completed the identification scales first and then participated in a lexical decision task. The other half completed the identification scales after having participated in a lexical decision task.

The LDT procedure was the same as in Experiment 1. After the LDT, participants completed a questionnaire similar to the one used in Experiment 1 that comprised a series of typicality scales of the target groups (Italy/England, Germany, and Europe) on the same adjectives used in the LDT, and a series of attitude scales towards the target groups (all  $\alpha > .70$ ).

Upon completion of the questionnaire, participants were asked whether they were familiar with a LDT and whether or not they had seen something appearing on the screen prior to the string of letters. In case of an affirmative answer to the previous question, they were asked to indicate what they had seen on the screen. Participants were then fully debriefed, thanked, and dismissed.

### *LDT Stimuli*

The entire presentation of the experimental stimuli as well as the data collection was conducted by means of the DIRECTrt software package on laptop computers equipped with a 16-inch color monitor. All stimuli were presented using the 22-point Times font.

The experiment included two subliminal prime words, each presented on half of the trials, namely *European* (in German, *Europäer*) and the neutral prime XXXXXXXX. Each prime was presented on 48 different trials. The prime was followed by a word on one half of the trials and a non-word on the remaining half. Words and non-words were paired for length.

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The target words were either traits typical of Italian people (and atypical of German people), traits typical of German people (and atypical of Italian people), irrelevant attributes, or non-words. The target words were the same as in Experiments 1 and 2.

### *Design*

Following Wittenbrink et al.'s (1997) procedure, I computed a facilitation score by subtracting the response latencies in the social group prime condition (*European*) from those in the non-word prime condition (XXXXXXX). Larger values indicate greater response facilitation due to the specific prime<sup>3</sup>.

Three factors were manipulated within participants, namely the order of the identification scales, with two levels (before vs. after the LDT), the type of trait, with two levels (typical Ingroup vs. typical Outgroup), and trait valence, with two levels (positive vs. negative).

### *6.3.2 Results and Discussion*

All statistical tests were carried out with  $p \leq .05$ . Therefore, individual p-values are omitted. Given the positive skewness of response latencies, I log-transformed the data (Ratcliff, 1993) before conducting the analyses. For ease of understanding, I report the data after retransforming them in the original metric.

I predicted that the prime European would facilitate the processing of stereotypic positive ingroup attributes (i.e., German positive traits) in comparison with the other features (i.e., German negative traits and Italian negative or positive traits) independently of the order of the identification scales. I thus expected a two-way interaction between the factors type of trait and item valence. To test this hypothesis, I submitted participants' facilitation scores to a 2 (order of identification scales: before vs. after) x 2 (type of trait: typical Ingroup vs. typical Outgroup) x 2 (item valence: positive vs. negative) repeated measures ANOVA with the first factor varying between participants and the remaining factors varying within participants.

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<sup>3</sup> Experiment 3: 2.3 % errors, 2.7 % outliers.

The ANOVA showed a reliable interaction between type of trait and item valence,  $F(1,72) = 5.90$ ,  $\eta^2 = .08$  (see Figure 4). There were no other statistically significant effects, all  $F_s < 2.5$ .

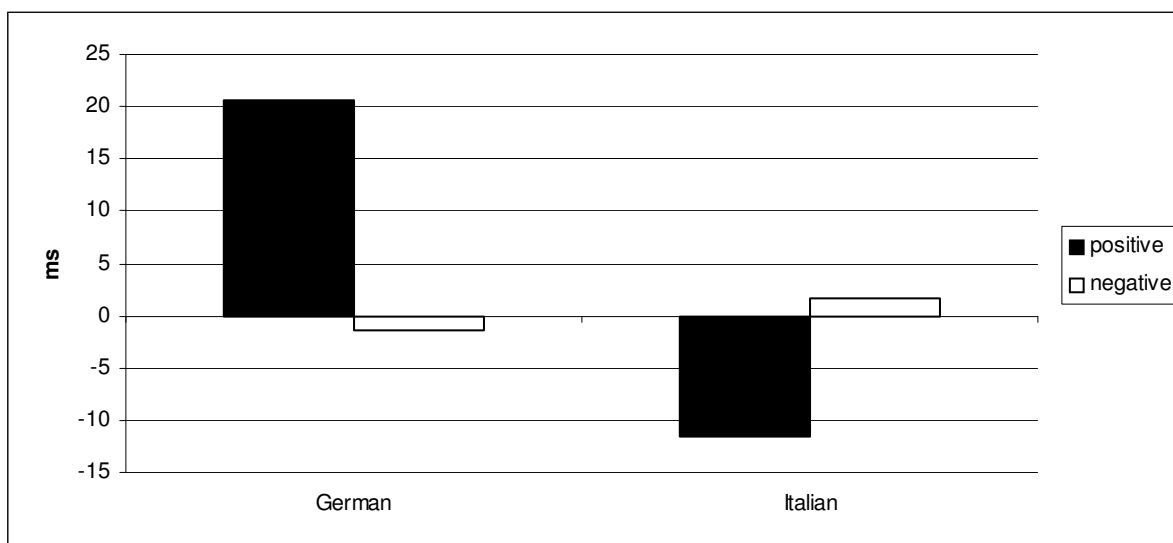


Figure 4. Experiment 3. Participants' Response Facilitation (in Millisecond) as a Function of Type of Trait and Item Valence.

To test the hypothesis, I first took into consideration whether or not there was facilitation in an absolute sense for different types of traits in the presence of the European prime. I predicted that the European prime would facilitate the processing of ingroup positive but not ingroup negative or outgroup traits.

I thus tested whether these average facilitation scores were different from 0. I found a reliable difference for ingroup positive traits,  $t(73) = 2.56$ , but no difference for the other traits,  $t_s < 1$ . Using a within-subject contrast, I then tested whether the facilitation score for ingroup positive traits ( $M = 20.68$ ) was statistically different from the facilitation scores for ingroup negative traits ( $M = -1.50$ ). As predicted, I found a reliable difference between ingroup positive and ingroup negative traits,  $t(72) = 2.28$ .

Based on the findings of Experiment 2, Experiment 3 aimed at testing whether a superordinate category prime would facilitate the processing of ingroup positive as opposed to ingroup negative attributes in the absence of an inter-group context. I found strong evidence in

support of this hypothesis. I observed a spontaneous association between the prime European and typical German positive characteristics.

I assumed the context in Experiment 3 to have been an intra-group one because of not mentioning any ingroup-outgroup relationship. However no direct comparison had been made between an intra- and an inter-group situation. In Experiment 4, I examined implicit ingroup projection while manipulating the type of context (intra- vs. inter-group).

#### **6.4 Intra- vs. Inter-group Context: Experiment 4**

The aim of Experiment 4 was to directly compare the spontaneous ingroup projection changing the type of context participants were presented to (i.e., intra- vs. inter-group context). In order to do so, I used the same paradigm as in Experiment 1 and 3 with the same manipulation as in Experiment 2. In other words, a prime was presented to participants for a short time (15 ms), followed by a target stimulus requiring a lexical decision. Primes comprised two labels, one superordinate category label (i.e., “European”) and a neutral prime (i.e., “XXXXXXXX”). The target stimuli were the same attributes used in Experiments 1, 2, and 3. Before the LDT, I manipulated the context of presentation, so that, half of the participants were in an intra-group condition (i.e., German group), and half in an inter-group condition (i.e., Germans vs. Italians).

I expected to replicate the findings of Experiment 3 in the intra-group condition, this is to say, the prime European was expected to facilitate the positive rather than the negative ingroup attributes. For the inter-group condition, a stronger association between the superordinate category prime (i.e., *European*) and the stereotypical ingroup attributes (i.e., stiff) independently from the valence of such attributes (as in Experiment 1) was expected.

### 6.4.1 Methods

#### *Participants*

Fifty-three students of FSU Jena took part in the experiment in exchange for 3 EURO or course credit. Five persons were excluded from the analyses because they were not German and two because they were able to report the prime.

#### *Procedure and Materials*

Upon their arrival at the laboratory, participants were told that they would take part in a study on cognitive processes. Before participants started the lexical decision task (LDT), they read on the screen that the study was conducted either by our research group in Jena or in collaboration with a research group from the University of Padova. The bottom of the screen showed some flags depending on conditions, only the German flag in the first condition, and the German and the Italian one in the other condition. These instructions allowed to manipulate the group context (either *intra-* or *inter-*group). The LDT was identical to the one in Experiment 3. After the LDT, participants completed a questionnaire similar to the one used in Experiments 1 and 3 that comprised of identification scales (with Germany and Europe), typicality scales of the target groups (Italy/England, Germany, and Europe) on the same adjectives used in the LDT, and a series of attitude scales towards the target groups (all  $\alpha$ s > .70). At the end of the questionnaire, participants were also asked whether or not they had seen something appearing on the screen prior to the string of letters in the LDT. Participants were then fully debriefed, thanked, and dismissed.

#### *Design*

The design comprised three manipulated factors, namely the type of context (*intra-* or *inter-*group), which varied between participants, the type of trait (*ingroup* vs. *outgroup*), and the item valence (*positive* vs. *negative*), which varied within participants.

### 6.4.2 Results and Discussion

As in Experiment 3, a facilitation score was computed by subtracting the response latencies in the superordinate category prime condition (*European*) from those in the non-word prime condition (XXXXXXX). Higher values indicate greater response facilitation due to the superordinate category prime<sup>4</sup>. Again, given the positive skewness of response latencies, I log-transformed the data (Ratcliff, 1993) before conducting the analyses. For ease of understanding, I report the retransformed data. All statistical tests were carried out with  $p \leq .05$ . Therefore, individual p-values are omitted.

I first submitted participants' facilitation scores to a 2 (type of context: intra- vs. intergroup) x 2 (type of trait: ingroup vs. outgroup) x 2 (item valence: positive vs. negative) mixed-model ANOVA with the last two factors varying within participants. The facilitation scores of the full design are reported in Figure 5.

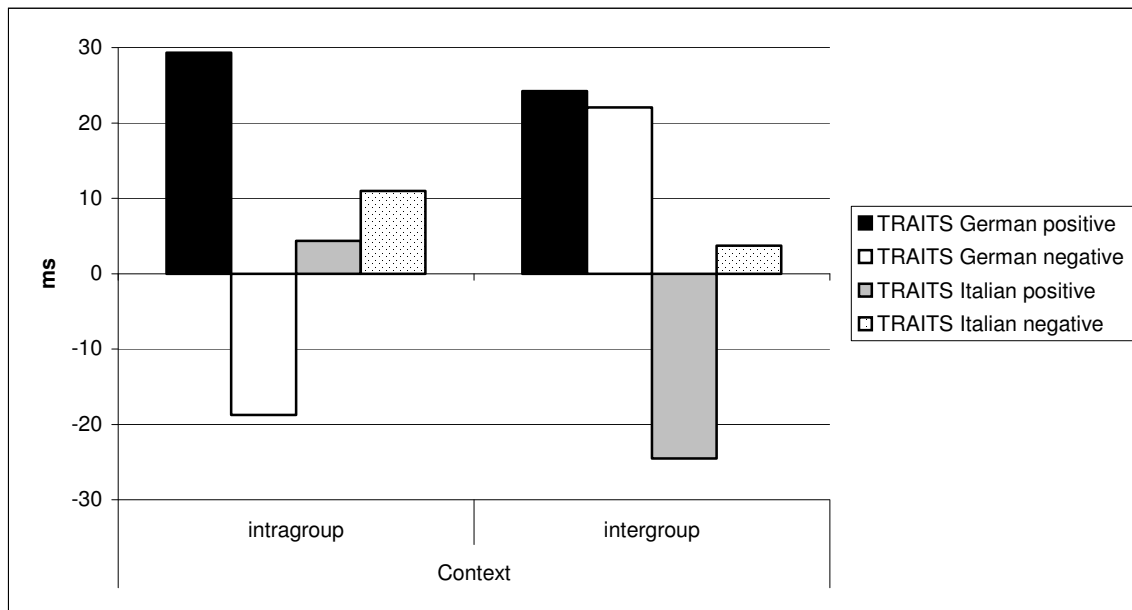


Figure 5. Experiment 4. Participants' Response Facilitation (in Millisecond) as a Function of Type of Context, Type of Trait, and Item Valence.

<sup>4</sup> Experiment 4: 2.3 % errors, 2.7 % outliers.



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The ANOVA showed a significant main effect of type of trait,  $F(1,44) = 3.93$ ,  $\eta^2 = .082$ , indicating that participants globally reacted faster when the target word was an ingroup rather than an outgroup trait. Moreover, two significant interactions were found, one between type of traits and type of context,  $F(1, 44) = 4.97$ ,  $\eta^2 = .10$ , the other one between item valence and type of context,  $F(1, 44) = 5.41$ ,  $\eta^2 = .11$ .

In order to delineate the interactions, the data were split by type of context. Two separate 2 (type of trait: ingroup vs. outgroup) x 2 (item valence: positive vs. negative) mixed-model ANOVAs were run. For the intra-group condition, a significant main effect of item valence was found,  $F(1,22) = 8.42$ ,  $\eta^2 = .28$ , indicating that participants globally reacted faster when the target word was positive rather than negative. This main effect was significantly qualified through a reliable interaction between type of traits and item valence,  $F(1, 22) = 4.62$ ,  $\eta^2 = .17$ . As in Experiment 2, in this condition I predicted that the European prime would facilitate the processing of ingroup positive but not ingroup negative traits.

To test the hypothesis, I first took into consideration whether or not there was facilitation in an absolute sense for different types of traits in the presence of the European prime. I thus tested whether these average facilitation scores were different from 0. A reliable difference for ingroup positive traits was found,  $t(22) = 3.20$ , but no difference for the other traits,  $t < 1$ . Using a within-subject contrast, I then tested whether the facilitation score for ingroup positive traits ( $M = 29.31$ ) was statistically different from the facilitation scores for ingroup negative traits ( $M = -18.74$ ). As predicted, a reliable difference between ingroup positive and negative traits was found,  $t(22) = 3.42$ .

For the inter-group condition, a significant main effect of type of traits was found,  $F(1,22) = 8.88$ ,  $\eta^2 = .29$ , indicating that participants globally reacted faster when the target words were ingroup rather than outgroup traits. There were no other statistically significant main effects or interactions, all  $F_s \leq 1$ . I tested whether there was facilitation in an absolute sense for both ingroup positive and ingroup negative traits. A reliable difference for both ingroup positive,  $t(22) = 2.23$ , and ingroup negative traits,  $t(22) = 2.22$ , was found. Using a within-subject contrast, I then tested whether the facilitation score for ingroup positive traits ( $M = 24.24$ ) was statistically different from the facilitation scores for ingroup negative traits ( $M = 22.07$ ). As predicted, I did not find a reliable difference between ingroup positive and negative traits,  $t < 1$ .

In a supplementary test of the hypothesis, a difference on the facilitation scores related to the negative ingroup traits between the intra- and the inter-group conditions was expected. No difference was expected between conditions on the facilitation scores related to the positive ingroup traits. I therefore performed two t-tests for independent samples that showed the expected results. I found a difference between conditions on the negative ingroup traits,  $t(44) = 2.42$ , but no difference on the positive traits,  $t < 1$ .

## **6.5 Summary of the Results and Discussion**

The aim of the present set of experiments was to, first, test the effect of spontaneous ingroup projection in the absence of an inter-group context and, second, directly compare the implicit association between a superordinate category prime and the ingroup prototype in an intra- vs. an inter-group context. As for Experiment 1, I hypothesized an effect of spontaneous ingroup projection, that is, it was expected that group members would spontaneously activate the ingroup rather than the outgroup prototype in response to a superordinate category stimulus. Moreover, I hypothesized that which ingroup features would be associated with the superordinate category depended on the context (intra- vs. an inter-group context).

In Experiment 2, I first looked whether the features judged typical for an ingroup (i.e., Germans as a whole) were the same in an intra- and in an inter-group (i.e., Germans vs. Italians) context. In order to verify the idea, participants were asked to rate how characteristic for Germans as a whole a list of attributes was. The attributes comprised a series of traits that varied in their valence as well as in their relevance to the ingroup (Germans) or to an outgroup (Italians). Before completing the typicality scale, the context that participants were presented to was manipulated. For half of the participants at the bottom of the front page there was a German flag (i.e., intra-group condition). The other half of the participants had on the front-page of the questionnaire two flags, the German flag and the Italian one (i.e., inter-group condition). The results showed that what was judged typical for Germans varied with the type of context participants were presented with. In the intra-group context Germans were rated typical on the ingroup positive traits, while in the inter-group context Germans were rated typical on both positive and negative traits. Moreover, in line with the hypothesis that ingroup-

outgroup differentiation increases in an inter-group context, evidence was found for a significant increase of the typical ingroup traits in the inter-group as opposed to the intra-group context.

Based on the results of Experiment 2, with Experiment 3 I wanted to test whether in the absence of an inter-group context a superordinate category prime would facilitate the processing of the ingroup positive rather than the processing of the ingroup negative traits. In order to test this idea I used the same sequential priming technique as in Experiment 1. Specifically, I looked at how fast participants recognized strings of letters as words vs. non-words after being exposed to a subliminal prime (the word *European*). In Experiment 3, the target stimuli included the same attributes as in Experiment 2. The results clearly confirmed the hypothesis. German participants were faster in associating the prime European and the typical German positive characteristics. No facilitation on the negative ingroup traits was found. The results of Experiments 3 support both the assumptions made by the IPM regarding the fact that people project the prototype of the ingroup but not the prototype of the outgroup onto the superordinate category and the results of Experiment 2, showing that what was relevant for the ingroup in an intra-group context were the positive ingroup traits.

Building on these findings, Experiment 4 tested directly whether the effect of spontaneous ingroup projection would indeed be changing in an intra-group compare to an inter-group context. I expected participants to spontaneously associate only positive ingroup traits (e.g., organized for Germans) with a superordinate category prime (e.g., European) when the context was an intra-group one. On the contrary, I expected to find an association with both positive and negative (e.g., organized and stiff for Germans) ingroup traits when the context was an inter-group one. The findings provided strong evidence for this hypothesis, showing that the existence of spontaneous association between the prime European and the prototype of the ingroup is dependent on the intra- vs. inter-group context that participants are presented with.

Automatic stereotyping has shown to be malleable to the context (Wittenbrink et al. 2001). Furthermore, as it was argued, ingroup stereotypes seem to depend on the particular frame of reference resulting from the context (Haslam et al., 1992). Waldzus et al. (2005) suggest that changing the inter-group context could change the prototype of the ingroup with an impact on the features associated with the superordinate category. Indeed, Waldzus and

colleagues manipulated the frame of reference for in-group (German) judgments by presenting either Italians or the British as an out-group. This allowed to manipulate the prototype of the ingroup so that it would maximize the difference between ingroup and outgroup on several attributes (e.g., quiet). Results showed that attributes on which Germans differed from each out-group were accentuated not only in in-group judgments but also when judging Europeans. After having tested whether spontaneous ingroup projection would occur in the absence of an inter-group context (Experiment 3 and 4), in Experiment 5, I examined “spontaneous” ingroup projection comparing two different inter-group contexts. It was hypothesized that the association between the superordinate category and the ingroup prototype would prove sensitive to the specific inter-group context (e.g., Germans vs. Italians or Germans vs. British).

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## **7 The Role of “Others” on Spontaneous Ingroup Projection: Comparing two Different Inter-group Setting (Experiment 5)**

### **7.1 Introduction**

An important aspect of group stereotypes is that they should not be seen as comprising a fixed set of attributes. Indeed, several studies reveal that what constitutes a typical feature of a group is likely to depend on the frame of reference imposed by the specific comparative context (Haslam et al., 1992). For example, in the context of an inter-group comparison between Germans and Italians, Germans may have an idea about what is typical German that is somewhat different from what would be the case in a situation in which Germans are compared to the British. Therefore, in Experiment 5, I examined implicit ingroup projection while manipulating two comparative contexts (i.e., Germans vs. Italians and Germans vs. Brits).

In Experiment 5, the prototype that was made salient in a specific context for the very same group (i.e., Germans) was manipulated. I again predicted a spontaneous association between the superordinate category prime and the prototype of the ingroup. However, the prototype of the ingroup was expected to be the one made available in the particular context. Specifically, I hypothesized that those traits (e.g., “organized”) that are deemed typical of the ingroup (e.g., “Germans”) in a given context (e.g., “Germans vs. Italians”) would be made particularly accessible by the superordinate category prime (European). In contrast, the access to these same traits would not be as much facilitated in a context that renders these traits less typical for the ingroup (e.g., “Germans vs. British”). Henceforth, when it comes to defining the group of Germans, for the sake of clarity, I refer to “counter-Italian” traits to indicate that these traits are perceived to be more characteristic of Germans in comparison to Italians (e.g., disciplined) and to “counter-British” traits to indicate that these traits are perceived to be more characteristic of Germans when the British are the comparison group (e.g., easy-going). Therefore, the prototype of the ingroup was the one that maximized the difference between ingroup and outgroup on several characteristics in a given context (Waldzus et al., 2005).

## 7.2 Methods

### *Participants*

Sixty students of FSU Jena took part in the experiment in exchange of 5 EURO or course credit. Six persons were excluded from the analysis because they were not German and three because they were able to report the prime.

### *Procedure and Materials*

Upon their arrival at the laboratory, participants were told that they would take part in a study on cognitive processes, which comprised two experimental tasks. Before participants started the lexical decision task (LDT), they read on the screen that the research group in Jena was collaborating either with a research group from the University of Padova or with a research group from the University of Sussex. The bottom of the screen showed two flags, the German flag and, depending on conditions, the Italian or the British flag. These instructions allowed to manipulate the inter-group context (either Germans vs. Italians or Germans vs. British).

The LDT included 2 subliminal primes, namely *European* and *XXXXXXXX*. The target stimuli for the LDT were taken from a study by Waldzus and colleagues (Waldzus et al, 2005) and comprised a series of traits that were typical of Germans when compared to Italians (counter-Italian traits: disciplined, punctual, correct, quiet, and hard-working) or typical of Germans when compared to Brits (counter-British: easy-going, frank, sociable, cheerful, companionable).

After the LDT, participants completed a questionnaire similar to the one used in Experiments 1, 3, and 4 that comprised identification scales (with Germany and Europe), typicality scales of the target groups (Italy/England, Germany, and Europe) on the same adjectives used in the LDT, and a series of attitude scales towards the target groups (all  $\alpha$ s > .70). At the end of the questionnaire, participants were also asked whether or not they had seen something appearing on the screen prior to the string of letters in the LDT. Participants were then fully debriefed, thanked, and dismissed.

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### *Design*

The design comprised two manipulated factors, namely the type of context (Germans vs. Italians or Germans vs. British), which varied between participants, and the type of trait (counter-Italian vs. counter-British), which varied within participants.

## **7.3 Results and Discussion**

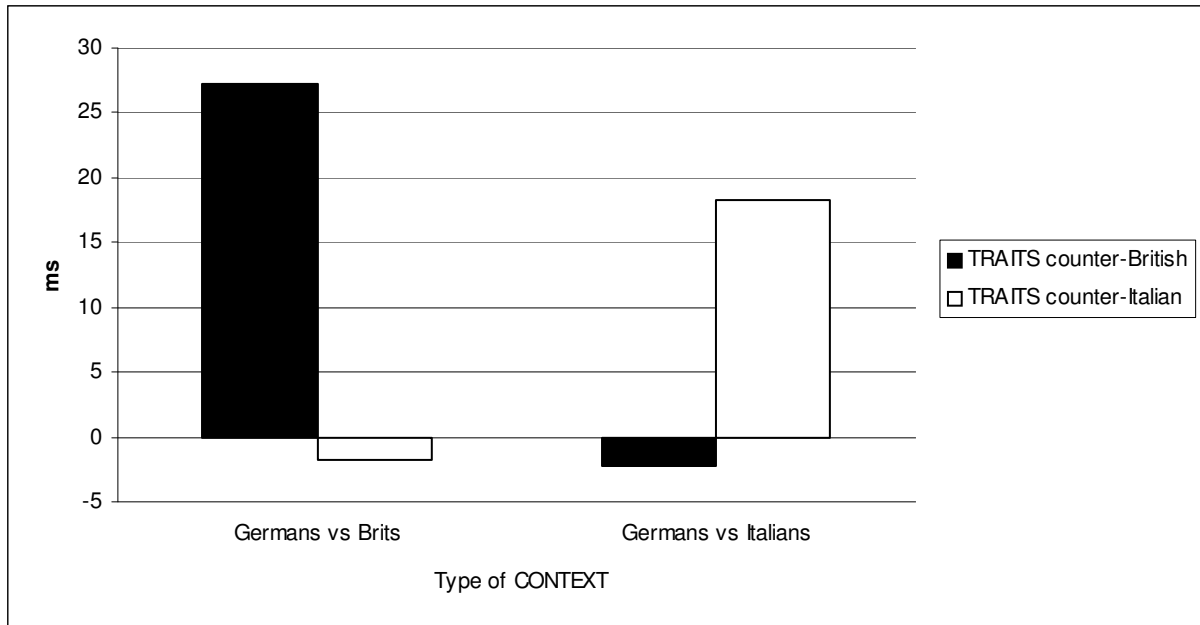
As in the previous experiments, I computed a facilitation score by subtracting the response latencies in the superordinate category prime condition (*European*) from those in the non-word prime condition (XXXXXXX). Higher values indicate greater response facilitation due to the superordinate category prime<sup>5</sup>. Again, given the positive skewness of response latencies, I log-transformed the data (Ratcliff, 1993) before conducting the analyses. For ease of understanding, I report the retransformed data. All statistical tests were carried out with  $p \leq .05$ . Therefore, individual p-values are omitted.

It was predicted that the counter-Italian German traits would be facilitated by the prime European when the inter-group context showed Germans and Italians but that the counter-British German traits would be facilitated by the prime European when the inter-group context showed Germans and Brits. A two-way interaction between the type of context and the type of trait was thus expected. To test this hypothesis, I submitted participants' facilitation scores to a 2 (type of context: Germans vs. Italians or Germans vs. British) x 2 (type of trait: counter-Italian vs. counter-British) mixed-model ANOVA with the second factor varying within participants. The predicted interaction between type of context and type of traits was significant,  $F(1,49) = 5.16$ ,  $\eta^2 = .09$ . Figure 6 displays the relevant facilitation scores.

I found a reliable difference from 0 for counter-British traits (e.g., *sociable*) ( $M = 27.34$ ) when the inter-group context was Germans vs. British,  $t(29) = 2.46$ , but no difference for counter-Italians traits (e.g., *correct*) ( $M = -1.79$ ). In contrast, when the inter-group context was Germans vs. Italians, the prime European facilitated decisions for counter-Italian traits ( $M = 18.26$ ),  $t(20) = 1.79$ , one-tailed, but not for counter-British traits ( $M = -2.32$ ).

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<sup>5</sup> Experiment 5: 2.3 % errors, 4.1% outliers



*Figure 6.* Participants' Response Facilitation (in Millisecond) as a Function of Type of Context and Type of Trait.

In line with the predictions, changing the inter-group context had a strong impact on the features that were associated with the superordinate category. Participants in a German-Italian context showed a facilitated access to counter-Italian German traits (e.g., *correct*) after being exposed to a superordinate category prime. Quite a different picture emerged when participants found themselves in a German-British comparative context. These participants more easily accessed counter-British German traits (e.g., *sociable*) after being exposed to the superordinate category prime. The obtained pattern showed that the prime European automatically activates the prototype of the ingroup that is being made available in the context, irrespective of the particular content of such a prototype.



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## 8 Relationship Between LDT Results and Explicit Questionnaire Measures

### 8.1 Introduction

In all experiments, after or before the LDT, participants answered a questionnaire that comprised a series of typicality measures using the same traits as the ones presented in the LDT for the ingroup, the outgroup, and Europeans, their identification with the ingroup and Europeans, and their attitudes towards the ingroup and the outgroup.

My specific interest resided in the relation between these explicit measures and spontaneous ingroup projection.

### 8.2 Results and Discussion

In order to examine the correlation between these two types of measures, I first computed an indicator of individual spontaneous ingroup projection, subtracting the facilitation score due to the prime European on *outgroup* traits from the facilitation score due to the prime European on *ingroup* traits (i.e., the within-subject contrast I used in order to test the hypothesis). I then correlated this indicator with an explicit measure of relative typicality<sup>6</sup>, the attitude toward the ingroup, the attitude toward the outgroup, an index of ingroup bias, and the identification measures. The resulting correlations are presented in Table 3.

These correlations reveal a clear pattern across the experiments. Looking at the overall correlations, a significant relation between spontaneous ingroup projection and ingroup, but not outgroup attitudes was found. Moreover, the data showed a reliable positive correlation between spontaneous ingroup projection and an index of ingroup bias, that is, the more participants associated the prime European with the ingroup instead of the outgroup prototype, the higher their index of ingroup bias. Finally, in line with the IPM, an overall correlation with

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<sup>6</sup> The formula for relative prototypicality for the subgroups with the superordinate category was as follows:  $d_{\text{sup-sub}} = [\sum(x_{\text{sup-i}} - x_{\text{sub-i}})^2]^{1/2}$ ; with  $d$  = profile dissimilarity,  $\text{sup}$  = superordinate category,  $\text{sub}$  = sub-ingroup,  $x_i$  = value for attribute  $i$  (Wenzel et al., 2003).

both identification measures was found. Participants who showed higher levels of identification with the ingroup or with Europeans showed a higher activation of the ingroup instead of the outgroup prototype related to the prime European.

*Table 3. Correlations Between Implicit and Explicit Measures.*

Measure	Spontaneous Ingroup Projection:					Overall N=261
	EXP. 1a N=50	EXP. 1b N=40	EXP. 3 N=74	EXP. 4 N=46	EXP. 5 N=51	
Relative Ingroup Prototypicality	-.02	.06	.12	.06	.18	.04
Ingroup Attitude	.36*	.32*	.17	.20	.35*	.26*
Outgroup Attitude	-.10	-.03	-.18	-.13	.13	-.04
Ingroup Bias	.31*	.27 <sup>+</sup>	.29*	.30*	.19	.24*
Ingroup Identification	.31*	.11	.09	.21*	.28*	.12*
European Identification	.37*	.10	.17	.18	.18	.13*

\*  $p < .05$

<sup>+</sup>  $p < .10$

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## 9 What Do You Mean by European? – Summary and Discussion of the Research Findings

### 9.1 Summary of the Presented Studies

The aim of the present set of experiments was to directly test the association between a superordinate category prime and the ingroup as opposed to the outgroup prototype by means of an implicit measure. The Ingroup Projection Model (Mummendey & Wenzel, 1999) posits the existence of a tendency for people to generalize the features of the ingroup to the superordinate category. Building upon the literature on automatic stereotyping, an effect of “spontaneous ingroup projection” was predicted. That is, I hypothesized that group members would spontaneously activate the ingroup rather than the outgroup prototype in response to a superordinate category stimulus (Hypothesis 1).

In order to test the idea I used a sequential priming technique. Specifically, I looked at how fast participants recognized strings of letters as words vs. non-words after being exposed to a subliminal prime (the word *European*). In Experiment 1, the target stimuli included attributes that varied in their valence as well as in their relevance to the ingroup (Italy or Germany) or to the outgroup (Germany or Italy). The pattern of results found in two different populations, namely Italian (Experiment 1a) and German (Experiment 1b) undergraduate students, clearly confirmed the hypothesis. Italian participants were faster in associating the prime European with the typical Italian rather than the typical German characteristics. In contrast, for German participants a spontaneous association between the prime European and typical German characteristics was found. One of the aims of Experiment 1 was to disentangle possible confounds between typicality and valence. That is to say, it was hypothesized that ingroup projection would occur for positive and negative ingroup traits (Hypothesis 2). Indeed, valence had no impact on the results. The results of Experiments 1a and 1b support the assumptions made by the IPM regarding the fact that people project the prototype of the ingroup but not the prototype of the outgroup onto the superordinate category. As far as I know, this represents the first test showing the existence of an association between a

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superordinate category and the ingroup prototype using implicit measures. It should be noted that Experiment 1 also replicated the implicit stereotyping effect. In other words, participants were faster to make a decision in response to attributes stereotypically associated with Italians (Germans) presented after the ‘Italian’ (‘German’) than after the ‘German’ (‘Italian’) prime.

Research rooted in Self-Categorization Theory (Turner et al., 1987) highlighted that what is believed to be true of the ingroup depends on the particular frame of reference participants are embedded in. It might be that, in the absence of an inter-group context, people do not have a clear idea about the image of their own group. As a consequence, a “fuzzy” ingroup prototype could unblock the process of ingroup projection. One of the aims of this dissertation was, therefore, to investigate whether an inter-group setting was a pre-condition for the process of ingroup projection to occur. With Experiments 2, 3, and 4 my goal was to investigate the process of spontaneous ingroup projection in the absence of an inter-group context (Hypothesis 3) and to compare this “solo” situation with a situation in which the ingroup is compared with an other group. In Experiment 2, I first looked whether the features judged typical for an ingroup (i.e., Germans as a whole) were the same in an intra- and in an inter-group (i.e., Germans vs. Italians) context. In order to test the idea, participants were asked to rate how characteristic a list of attributes was for Germans as a whole. The attributes comprised a series of traits that varied in their valence as well as in their relevance to the ingroup (Germans) or to an outgroup (Italians). Before completing the typicality scale, the context that participants were presented to was manipulated. For half of the participants there was a German flag (i.e., intra-group condition) at the bottom of the front page. The other half of the participants had on the front-page of the questionnaire two flags, the German flag and the Italian one (i.e., inter-group condition). The results showed that what was judged typical for Germans varied with the type of context participants were presented to. Germans as a whole were rated typical on the ingroup positive traits in the intra-group context, while they were rated typical on both positive and negative traits in the inter-group context. Moreover, in line with the hypothesis that ingroup-outgroup differentiation increases in an inter-group context, I found evidence for a significant increase of the typical ingroup traits in the inter-group as opposed to the intra-group context.

Based on the results of Experiment 2, I wanted to test whether in the absence of an inter-group context a superordinate category prime would facilitate the processing of the

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ingroup positive rather than the processing of the ingroup negative traits (Experiment 3). In order to test the idea, I used the same procedure as in Experiment 1. Specifically, I looked at how fast participants recognized strings of letters as words vs. non-words after being exposed to a subliminal prime (the word *European*). In Experiment 3, the target stimuli included the same attributes as in Experiments 1 and 2. The results clearly confirmed the hypothesis. German participants were faster in associating the prime *European* and the typical German positive characteristics. No facilitation on the negative ingroup traits was found. The results of Experiments 3 support both the assumptions made by the IPM regarding the fact that people project the prototype of the ingroup but not the prototype of the outgroup onto the superordinate category and the results of Experiment 2, showing that what was relevant for the ingroup in an intra-group context were the positive ingroup traits.

Building on these findings, Experiment 4 tested directly whether the effect of spontaneous ingroup projection would indeed be context-dependent. I expected participants to spontaneously associate only positive ingroup traits (e.g., organized for Germans) with a superordinate category prime (e.g., *European*) when the context was an intra-group one (e.g., “solo” Germans). On the contrary, I expected to have an association with both positive and negative ingroup traits (e.g., organized and stiff for Germans) when the context was an inter-group one (e.g., Germans versus Italians). The findings showed support for the hypothesis, showing that the existence of spontaneous association between the prime *European* and the prototype of the ingroup is dependent on the context that participants are presented with (intra- vs. inter-group).

As has been mentioned repeatedly, stereotypes are not fixed entities: they seem to vary with the inter-group context (Haslam et al., 1992). Waldzus and colleagues (2005) showed that a change in the inter-group context influences the prototype of the ingroup that is made salient and that this has an impact on the specific characteristics associated to the superordinate category. Building on these findings, Experiment 5 tested whether the effect of spontaneous ingroup projection would be dependent on the group present in the context. I expected participants to spontaneously associate some ingroup traits (e.g., organized for Germans) made relevant in a specific inter-group context (e.g., “Germans vs. Italians”) with a superordinate category prime (e.g., *European*). In contrast, the processing of these same traits would not be facilitated in an inter-group context (e.g., “Germans vs. British”) in which these traits would

be less relevant for the ingroup. The findings provided strong evidence for the existence of spontaneous association between the prime European and the prototype of the ingroup that is made relevant in the context, regardless of the particular content of such a prototype. These results not only corroborate earlier empirical efforts but they also constitute an important extension of the findings obtained in the other experiments. Indeed Experiment 5 is in line with the directional hypothesis, this is to say, a generalization *from* the ingroup *to* the inclusive category.

Last but not least, over the experiments reliable correlations between “spontaneous ingroup projection” and several explicit measures were found. Overall, a consistent pattern emerged in which the effect of spontaneous ingroup projection was positively correlated with ingroup attitudes, ingroup bias, and identification measures (with the ingroup and with Europeans).

## **9.2 Limitations of the Presented Studies and Further Research Questions**

The main limitation of this set of experiments is the fact that only one domain was taken into account, that is, national stereotypes in relationship with a supra-national inclusive category: Europe. Although extremely relevant, the setting used in the presented experiments does not permit a full generalization to other settings where different reality constrains might be present. Further research is needed in this direction.

In the present set of experiments potential reasons for the process of ingroup projection to occur have not been investigated. According to the IPM, the driving force for the occurrence of the generalization to the superordinate category of the ingroup prototype is the motivation to have a positive social identity. In our case, I believe other motives, such as the reduction of uncertainty (Hogg, 2000; Reid & Hogg, 2005) could be added to explain the process. Given that the European Union is quite a recent and rather abstract political entity composed of several and “different” nations, it could be difficult for any specific individual to have a clear and established understanding of what European means. In order to “reduce the uncertainty” (Hogg, 2000; Reid & Hogg, 2005) due to the complexity of the situation, people

may rely on ingroup projection. I certainly see this alternative account as posing a fascinating challenge for future research.

### **9.3 Discussions and Conclusion**

This research is clearly related to recent work by Devos and Banaji (2005). Both in the studies of these authors and in the present one, the relationship between subgroups and a superordinate category was investigated using an implicit measure. Using an Implicit Association Test (IAT), Devos and Banaji (2005) found an association between the concept of American and the ethnic group of white Americans. In order to define the groups in the IAT, Devos and Banaji used pictures of members of the ethnic groups under study. Although these authors refer to the IPM in their discussion of the results, the IPM is not at the heart of their research endeavor. Moreover, their studies and the present ones differ on a number of important features. First, it should be noted that they rely on target groups, which are characterized by a numerical disproportion in American society (there are 4.3% of Asian Americans and 74.7% of White Americans in the U.S.A. according to the US Census Bureau, 2005 American Community Survey). Clearly, the availability heuristic (Tversky & Kahneman, 1973) would lead us to expect that it is far easier to retrieve a White face than an Asian American one from memory when thinking about an American person. Further, it is worth noting that Devos and Banaji (2005) relied on pictures of members of the subordinate groups under consideration to examine the representation of the superordinate group. In sharp contrast, in the present experiments participants were confronted with attributes that were deemed typical of the groups. In this manner, it was possible to directly test the semantic association between the superordinate concept (European) and a series of characteristics that were typical either of the ingroup or of the outgroup. In spite of these differences, the pattern of findings is remarkably coherent. I think the best explanation for the presented findings is the process of projection from the ingroup onto the superordinate category as proposed by the IPM.

The findings presented in this dissertation replicated the implicit stereotyping effect shown by Wittenbrink and colleagues (1997). In their paper, these authors also obtained

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evidence for implicit prejudice, that is, they found implicit associations distinctively for the Black prime and negative Afro-American traits and the White prime and the positive White-American traits. I checked to see if the data revealed a similar effect, that is to say, I checked whether the ingroup prime (e.g. German) facilitated the positive (e.g. efficient) rather than the negative (e.g. stiff) ingroup traits and the outgroup prime (e.g. Italian) facilitated the negative (e.g. noisy) rather than the positive (e.g. friendly) outgroup traits. I did not find any support for such an effect in the present data<sup>7</sup>. A possible explanation is that the ingroup-outgroup context in the present experiments was really different from the context in the Wittenbrink et al. (1997) study. They relied upon an intra-national context in which a large cultural consensus exists as far as the negative view about the minority is concerned (African-Americans). In my case, I considered a supra-national context and no strong consensus can be expected to exist regarding the valence attached to the target group.

Experiments 3, 4, and 5 showed that subtle variations in the context had an influence on an automatic process such as subliminal priming. The findings of Experiments 3, 4, and 5 are in line with research showing the malleability of automatic processes. As reviewed by Blair (2002), there are increasingly evidences for moderators of automatic stereotyping and prejudice. Important for this discussion are contextual factors. For example, Wittenbrink and colleagues (study 2; 2001) showed that different social contexts (i.e. Caucasian vs. African-American faces in different backgrounds - church interior vs. street context) moderate the automatic evaluation processes. In the present experiments, I found that what was automatically associated with the label European depended on the particular context subjects were presented with. More precisely, and in line with the IPM, what was associated with Europeans depended on the particular ingroup image emerging from the context.

One of the rationales for my research was to test whether the process of ingroup projection would occur in the absence of an inter-group context. Based on the idea that the image of the ingroup depends on the specific outgroup it is compared to, I thought that in the situation in which no specific outgroup was present, the image of the ingroup might not have been so clear. As a result, a “fuzzy” ingroup image might possibly have hindered the generalization process to the superordinate category. The results, however, suggest that which

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<sup>7</sup> The implicit prejudice effect was tested via a within-subject contrast (Wittenbrink et al., 1997).  $t_s < 1$  for both Experiment 1a and 1b.



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characteristics of the ingroup are projected onto a superordinate category depends on the specifics of the situation. Although not central, some ideas are presented about the reason why participants chose in Experiment 2 those distinct positive traits (i.e. hard-working, efficient, organized, clean) as typical for the ingroup (i.e. Germans as a whole) in an intra-group context (“solo” ingroup) in comparison to an inter-group context (Germans vs. Italians). First, I cannot be sure that participants did not compare Germans to another national group while they were asked to think about Germans as a whole. It might be that they had on mind a specific contrasting outgroup (e.g. Turkish for Germans) that made the ingroup-outgroup differentiation more defined on positive rather than negative traits (e.g. indeed Turkish are perceived more threatening than Italians by Germans; Rohmann, Florack, Piontkowski, 2006). It could be that in a “solo-ingroup” situation people have a default contrasting group in mind when asked to define the image of their group. Extending this idea further, it could be hypothesized that a specific, shared contrasting outgroup -as a default for building the image of one’s own group- is an essential part of the process of ingroup-stereotyping. That is, the stereotype of the ingroup might include already in itself a socially relevant contrasting outgroup. A second possible reason is related to the content instead of the valence of the dimensions used by participants. In psychological literature there are two fundamental dimensions proposed in person- and group-perception: warmth and competence (Fiske, Cuddy, & Glick, 2002). Research in person-perception showed how people habitually employ different dimensions to judge the self or another person, using more a competence dimension for self-judgment and morality (warmth) for other-judgment (Wojciske, 2005). On a group perspective, it seems that characteristics related to competence are more desirable for ingroup members and characteristics related to warmth for outgroup members (Phalet & Poppe, 1997). Given that the positive stereotypes of Germans are often related to competence, it could be that in the intra-group context used in Experiments 2, 3, and 4 there was an overlap between the relevant dimension for that situation (i.e., competence) and what was rated typical of Germans as a whole. This overlap might have had an impact on the presented findings. Third, there is a line of research that takes into account a different perspective on how the image of the ingroup is built (Cadinu & Rothbart, 1996; Krueger & Clement, 1996; Otten & Wentura, 2001). According to this line of research, the self is the locus of consciousness and direct phenomenal experience and self-referent knowledge is deeply encoded, highly structured, and

readily accessible so that the people anchor their social predictions on such self-referent knowledge. As a consequence, it is likely that people derive their ingroup representation largely from the self-perception. In other words, it is hypothesized that people seem to generalize their own personal characteristics onto the ingroup. Moreover, outgroup judgments are the ones contrasted away from an ingroup construal (Gawronski, Bodenhausen, & Banse, 2005). It is possible that participants in the presented experiments generalized those ingroup traits that they perceived important for themselves. Since participants were undergraduate students, it is reasonable to think that the characteristics they chose (e.g. hard-working, etc.) for the ingroup, were features important for them during that period of their life.

The first experiment confirmed the presence of spontaneous ingroup projection in two different populations. In Experiments 2, 3, and 4, the image of the ingroup in an intra- vs. inter-group context was taken into account. In Experiment 5, I held the target group constant but changed the prototype of the group itself by means of a manipulation of the inter-group context. Using the very same group in the context of different outgroups allowed to control for several variables that could moderate the process of ingroup projection such as the status of the group as member of the superordinate category. Moreover, these findings are congruent with the directional hypothesis claiming a generalization *from* the ingroup *to* the superordinate category.

Experiment 5 offers some indications about the perception of similarity or deviation of a member of a third party sharing a superordinate category. Suppose you were a German person finding yourself in England, you would probably define what it means to be European (e.g., sociable) in a manner that is different from what you would do if you were in Italy. Now, suppose, still as a German person in England, that you meet a Portuguese person there. I may expect that you would feel more similar to this Portuguese than if you were to meet the same Portuguese in Italy. This effect, I think, rests on the combination between, on the one hand, the particular definition of European emerging from the ingroup projection process in a particular context and, on the other hand, the stereotype of the group of the person you are encountering. The stereotype of the third group could be congruent or incongruent with the definition of the superordinate category due to a particular context and this would influence the judgment of similarity of the person, in our case, the Portuguese woman.

To conclude, the present set of studies is the first to provide evidence for a spontaneous association between the ingroup prototype and a superordinate category label. In a world in which experiences of migration and cultural encounters are becoming more and more frequent, where mergers between organizations are an everyday reality, where political nations organize themselves in even more inclusive categories (e.g. African Union), it is crucial to better understand the way people define the abstract superordinate category and the consequences this may have for their dealings with other groups in this larger category.

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## APPENDIX

### Scales used in Experiment 1.

#### *Identification with the superordinate Category*

Ti senti parte del gruppo degli europei?

Ti senti orgoglioso di far parte del gruppo degli europei?

Essere europeo/a influenza sempre il tuo modo di essere?

Ti senti fiero di essere uno/a europeo/a?

Ti senti tipico del gruppo degli europei?

#### *Identification with the ingroup*

Ti senti parte del gruppo degli italiani?

Ti senti orgoglioso di far parte del gruppo degli italiani?

Essere italiano/a influenza sempre il tuo modo di essere?

Ti senti fiero di essere uno/a italiano/a?

Ti senti tipico del gruppo degli italiani?

#### *Attitudes towards the groups*

Mi piace la mentalità degli italiani (tedeschi).

Ho una opinione positiva dei tedeschi (italiani) in generale.

Mi piace come agisce l'italiano (tedesco) tipico.

Il modo in cui i tedeschi (italiani) tipicamente agiscono mi fa reagire in una maniera poco amichevole.

Mi piacciono i tedeschi (italiani)

### **Scales used in Experiment 3, 4 and 5.**

#### *Identification with the superordinate Category*

Ich fühle mich der Gruppe der Europäer zugehörig.

Ich bin gerne Europäer.

Manchmal bedaure ich, Europäer zu sein.

Ich identifiziere mich mit der Gruppe der Europäer.

Ich fühle mich typisch Europäisch.

#### *Identification with the ingroup*

Ich fühle mich der Gruppe der Deutschen zugehörig.

Ich bin gerne Deutscher.

Manchmal bedaure ich, Deutscher zu sein.

Ich identifiziere mich mit der Gruppe der Deutschen.

Ich fühle mich typisch Deutsch.

#### *Attitudes towards the groups*

Ich mag Deutsche (Italiener).

Die italienische (deutsche) Mentalität ist mir irgendwie sympathisch.

Auf die Art und Weise, wie Italiener (Deutsche) sich normalerweise benehmen, reagiere ich unfreundlich.

Ich mag wie sich typische Deutsche (Italiener) benehmen.

Ich habe eine positive Meinung über Deutsche (Italiener).

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## SUMMARY

Despite a constant decrease in the number of armed conflicts over the past years, conflicting intergroup relations are a vivid reality of our globalized world. Psychologists have long tried to find solutions to conflicting intergroup relations (Hewstone & Greenland, 2000). Some models highlight how a common identity can improve the relationship between members of different groups (Common Ingroup Identity Model, Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993; Dual Identity Model, Gonzalez & Brown, 2003). The encouraging results of this line of work notwithstanding, Mummendey and Wenzel (1999) proposed a model that points out the perils of being in the same superordinate category: the Ingroup Projection Model (IPM; Wenzel, Mummendey, Weber & Waldzus, 2003). Rooted in Self-Categorization Theory (Turner, Hogg, Oakes, Reicher, & Wetherel, 1987), the IPM proposes that ingroup members evaluate an outgroup in a less positive way when both groups are included in a superordinate category. For example, German participants evaluated Poles less positively when the frame of reference was Europe rather than Western Europe (Waldzus & Mummendey, 2004). According to the IPM, this pattern emerges because group members project ingroup features onto the superordinate category. The more ingroup members consider their own group as relative prototypical of the superordinate category, the less positively they evaluate an outgroup. Although researchers accumulated substantial evidence in favor of the Ingroup Projection Model, little is known about the processes underlying the phenomenon. The aim of the present dissertation is to investigate the process of ingroup projection. The major goal is to show that ingroup projection onto a superordinate category also operates at an implicit level. Evidences are presented that the superordinate category automatically activates the ingroup and that it does so more than the outgroup prototype.

Research to date focused on the distance between the ratings of the superordinate category and the ratings of either the ingroup or the outgroup on different features as well as on the relationship between these distances and group attitudes (Waldzus, Mummendey, Wenzel & Weber, 2003; Weber, Mummendey & Waldzus, 2002). No research has directly tested the association between the superordinate category and the ingroup or outgroup prototype. This is what it is undertaken in the present series of experiments. To the extent that group prototypes are defined as “mental representations consisting of a collection of



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associations between group labels (e.g., Italians) and the features that are assumed to be true of the group (e.g., “romantic”)” (Stangor & Schaller, 2000, p. 67), my hypothesis is that ingroup projection should result in marked associations between the superordinate category label and the features that are believed to be true of the ingroup (e.g. ingroup stereotypes). This work on the differential association between superordinate category cues and the ingroup versus outgroup prototype rests on two assumptions. On the one hand, and in line with the IPM, it is assumed that people use the ingroup prototype in order to define the superordinate category. On the other, the work on stereotyping reveals that stereotypes can be unintentionally activated. Combining these two assumptions led to predict “spontaneous” ingroup projection. This is to say, it was expected that group members would spontaneously activate the ingroup as opposed to the outgroup prototype in response to a superordinate category stimulus.

In order to examine the process of ingroup projection at the implicit level, I decided to rely on sequential priming techniques. These techniques have been used in the context of research on implicit stereotyping precisely because they provide strong tests for the existence of an association between two concepts (Bargh & Chartrand, 2000). Specifically, I adapted a procedure from Wittenbrink, Judd and Park (1997). In Experiment 1 (N=95), it has been examined whether there was a spontaneous association between a superordinate category and the ingroup or the outgroup stereotypes. Concretely, it has been tested whether a superordinate category prime, namely European, facilitated the processing of ingroup rather than outgroup stereotypical attributes in two different populations, namely Italian and German undergraduate students. Research rooted in Self-Categorization Theory (Turner et al., 1987) highlighted that what is believed to be true of the ingroup depends on the particular frame of reference participants are embedded. With experiment 2 (N=42), 3 (N=81), and 4 (N=53), my goal was to investigate the process of spontaneous ingroup projection in the absence of an inter-group context and to compare this “solo” situation (i.e., intra-group context) with a situation in which the ingroup is compared with an other group (i.e., inter-group context). Interestingly, research shows that stereotyping can be context-sensitive (Wittenbrink, Judd, & Park, 2001). Along similar lines, ingroup stereotypes have been shown to be determined by the frame of reference emerging from the context (Haslam & Turner; 1992). Different from Experiments 2, 3, and 4, in Experiment 5 two different inter-group contexts were compared (e.g., Germans vs. Italians or Germans vs. British).

The pattern of results found in two different populations, namely Italian (Experiment 1a) and German (Experiment 1b) undergraduate students, clearly confirmed the hypotheses. Italian participants were faster in associating the prime European and the typical Italian rather than the typical German characteristics. In contrast, for German participants we found a spontaneous association between the prime European and typical German characteristics. Valence had no impact on the results. The results of Experiments 1a and 1b support the assumptions made by the IPM regarding the fact that people project the prototype of the ingroup but not the prototype of the outgroup onto the superordinate category. This represents the first test showing the existence of an association between a superordinate category and the ingroup prototype using implicit measures. Experiment 2 showed that what was judged typical for the ingroup (i.e. Germans as a whole) vary with the type of context participants were presented to. In the intra-group context Germans were rated typical on the (ingroup) positive traits, while in the inter-group context Germans were rated typical on both positive and negative traits. Based on the results of Experiment 2, Experiment 3 showed that in an intra-group context the positive ingroup traits were the ones projected onto a superordinate category. Experiment 4 showed that the existence of spontaneous association between the prime European and the prototype of the ingroup is dependent on the intra- vs. inter-group context that participants are presented with. That is to say, in an intra-group context only the positive ingroup traits were projected, whereas, in an inter-group context both the positive and the negative ingroup traits were generalized to the superordinate category. In experiment 5 participants were expected to spontaneously associate some ingroup traits (e.g. organized for Germans) made relevant in a specific intergroup context (e.g. “Germans vs. Italians”) with a superordinate category prime (e.g. European). In contrast, the processing of these same traits would not be facilitated in an intergroup context (e.g. “Germans vs. British”) in which these traits would be less relevant for the ingroup. The findings provided strong evidence for the existence of spontaneous association between the prime European and the prototype of the ingroup that is made relevant in the context, regardless of the particular content of such a prototype. Moreover, using the very same group in the context of different outgroups allowed us to control for several variables that could moderate the process of ingroup projection such as the status of the group as member of the superordinate category.

To conclude, the present set of experiments is the first one to provide evidence for a spontaneous association between the ingroup prototype and a superordinate category label. In a world in which experiences of migration and cultural encounters are becoming more and more frequent, where mergers between organizations are an everyday reality, where political nations organize themselves in even more inclusive categories (e.g. African Union), it is crucial to better understand the way people define the abstract superordinate category and the consequences this may have for their dealings with other groups in this larger category.

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## ZUSAMMENFASSUNG

Trotz der in den letzten Jahren kontinuierlich sinkenden Anzahl bewaffneter Konflikte, sind Konflikte zwischen sozialen Gruppen weiterhin Realität der globalisierten Welt. Psychologen versuchen seit langem, Lösungen für konflikthafte Beziehungen zwischen Gruppen zu finden (Hewstone & Greenland, 2000). Das *Common Ingroup Identity Model* beispielsweise betont die positive Wirkung einer gemeinsamen übergeordneten Kategorie, der sowohl die Eigengruppe als auch die Fremdgruppe angehören (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993; siehe auch *Dual Identity Model*, Gonzalez & Brown, 2003). Im Gegensatz zum *Common Ingroup Identity Model* postulieren Mummendey und Wenzel (1999) negative Effekte im Falle der Zugehörigkeit zu einer gemeinsamen übergeordneten Kategorie. Das von Mummendey und Wenzel (1999) entwickelte *Ingroup Projection Model* (IPM; siehe auch Wenzel, Mummendey, Weber & Waldzus, 2003) basiert auf der *Self-Categorization Theory* (Turner, Hogg, Oakes, Reicher & Wetherell, 1987) und nimmt an, dass Eigengruppen-Mitglieder eine Fremdgruppe weniger positiv bewerten, wenn beide Gruppen einer übergeordneten Kategorie angehören. Beispielsweise bewerteten deutsche Teilnehmer die Gruppe der Polen weniger positiv wenn der Bezugsrahmen „Europa“ im Vergleich zu „Westeuropa“ war. Die schlechtere Bewertung der Fremdgruppe im Falle einer gemeinsamen übergeordneten Kategorie führt das IPM auf die Projektion von Eigenschaften der Eigengruppe auf die übergeordnete Kategorie zurück, denn je prototypischer die eigene Gruppe für die übergeordnete Kategorie wahrgenommen wird, desto weniger positiv wird die Fremdgruppe bewertet. Obgleich empirische Studien die Annahmen und Vorhersagen des IPMs unterstützen, ist wenig über die zugrunde liegenden Prozesse des Phänomens bekannt. Ziel der vorliegenden Dissertation ist die Untersuchung der zugrunde liegenden Prozesse von Eigengruppenprojektion. Dabei steht die Annahme im Vordergrund, dass Eigengruppenprojektion auch auf impliziter Ebene stattfindet. Es werden Ergebnisse präsentiert, die zeigen, dass die übergeordnete Kategorie automatisch den Prototypen der Eigengruppe aktiviert und zwar in einem stärkeren Ausmaß als der Prototyp der Fremdgruppe aktiviert wird.

Bisher fokussierte die Forschung auf die Distanz zwischen den Einschätzungen für die übergeordnete Kategorie und den Eigengruppen- bzw. Fremdgruppen-Einschätzungen auf

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einer Reihe von Eigenschaften als Maß für die Prototypikalität der Eigengruppe relativ zur Fremdgruppe, sowie auf die Beziehung zwischen Distanz und Gruppenbewertung (Weber, Mummendey & Waldzus, 2002; Waldzus, Mummendey, Wenzel & Weber, 2003). Die Assoziation zwischen der übergeordneten Kategorie und dem Prototypen der Eigen- bzw. Fremdgruppe wurde bisher nicht direkt empirisch überprüft. Dies ist das Ziel der vorliegenden Dissertation. Im Sinn der Definition von Prototypen sozialer Kategorien als „mental representations consisting of a collection of associations between group labels (z.B. Italiener) and the features that are assumed to be true of the group (z.B. „romantisch“)" (Stangor & Schaller, 2000, S. 67), postuliere ich, dass Eigengruppenprojektion zu einer Assoziation zwischen der übergeordneten Kategorie und den der Eigengruppe zugeschriebenen Eigenschaften (d.h. dem Eigengruppen-Stereotyp) führt. Die Hypothese bzgl. der stärkeren Assoziation zwischen Eigengruppe und übergeordneter Kategorie relativ zur Assoziation zwischen Fremdgruppe und übergeordneter Kategorie basiert auf zwei Annahmen. Einerseits, in Übereinstimmung mit dem IPM, wird angenommen, dass der Prototyp der Eigengruppe genutzt wird, um die übergeordnete Kategorie zu definieren. Andererseits wird davon ausgegangen, dass Stereotype unwillkürlich aktiviert werden können, wie die Stereotyp-Forschung gezeigt hat. Aus der Integration dieser beiden Annahmen ergibt sich die Hypothese "spontaner" Eigengruppenprojektion. Das heißt, es wurde erwartet, dass Gruppenmitglieder als Reaktion auf die übergeordnete Kategorie spontan den Eigengruppen-Prototypen (im Gegensatz zum Fremdgruppen-Prototypen) aktivieren.

Um den Prozess der „spontanen“ Eigengruppenprojektion zu untersuchen, wurde die sequentielle Priming-Technik eingesetzt, die im Kontext der impliziten Stereotyp-Forschung verwendet wird, da sie das Bestehen einer Assoziation zwischen zwei Konzepten zuverlässig erfasst (Bargh & Chartrand, 2000). In der vorliegenden Arbeit wurde ein Verfahren von Wittenbrink, Judd und Park (1997) adaptiert. In Experiment 1 (N = 95) wurde überprüft, inwiefern eine spontane Assoziation zwischen einer übergeordneten Kategorie und dem Stereotyp der Eigengruppe bzw. dem Stereotyp der Fremdgruppe vorliegt. Bei italienischen und deutschen Studierenden wurde untersucht, ob die Darbietung der übergeordneten Kategorie „Europäer“ die Verarbeitung von stereotypen Attributen der Eigengruppe oder der Fremdgruppe erleichtert. Forschung zur *Self-Categorization Theory* (Turner et al., 1987) zeigt, dass die der Eigengruppe zugeschriebenen Attribute stark vom aktuellen Kontext abhängig

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sind. In Experiment 2 (N = 42), 3 (N = 81) und 4 (N = 53) wird die spontane Eigengruppenprojektion in Abwesenheit einer Fremdgruppe (d.h. in einem Intragruppen-Kontext) mit der spontanen Eigengruppenprojektion in einer klassischen Intergruppen-Situation verglichen. Andere Untersuchungen zeigen, dass sowohl die Stereotypisierung anderer Gruppen (Wittenbrink, Judd, & Park, 2001) wie auch der Eigengruppe kontextsensitiv ist (Haslam & Turner; 1992). In Experiment 5 (N = 60) wird untersucht, ob die spontane Assoziation zwischen der übergeordneten Kategorie und dem Prototypen der Eigengruppe für den Kontext im Sinne der Anwesenheit unterschiedlicher Fremdgruppen sensitiv ist. Das heißt, die Eigengruppe „Deutsche“ wurde entweder der Fremdgruppe „Italiener“ oder „Briten“ gegenübergestellt.

Die Ergebnisse sowohl der italienischen (Experiment 1a) wie auch der deutschen (Experiment 1b) Stichprobe, bestätigen klar die Hypothese: Italienische Teilnehmer assoziieren schneller die prototypischen italienischen Eigenschaften als die prototypischen deutschen Eigenschaften mit dem Prime „Europäer“. Demgegenüber wurde bei den deutschen Teilnehmern eine spontane Assoziation zwischen dem Prime „Europäer“ und den prototypisch deutschen Eigenschaften beobachtet. Die Valenz der Eigenschaften hatte keine Auswirkung auf die Ergebnisse. Die Experimente 1a und 1b stützen die Annahmen des IPM, dass Personen den Prototypen der Eigengruppe, aber nicht der Fremdgruppe, auf die übergeordnete Kategorie projizieren. Meines Wissens stellt dies die erste Untersuchung dar, die das Bestehen einer Assoziation zwischen der übergeordneten Kategorie und dem Prototypen der Eigengruppe mittels impliziter Maße nachweist. Experiment 2 zeigt, dass die Beurteilung eines Attributs als prototypisch für die Gruppe der Deutschen mit dem Kontext variiert. Im Intragruppen-Kontext wurden lediglich positive Eigenschaften als charakteristisch für die Eigengruppe „Deutsche“ eingeschätzt, wohingegen im Intergruppen-Kontext sowohl die positiven wie auch die negativen Eigenschaften als charakteristisch für die Eigengruppe beurteilt wurden. Die Ergebnisse zeigen, dass in einem Intragruppen-Kontext vor allem die positiven Eigenschaften der Eigengruppe von Bedeutung sind. Basierend auf den Ergebnissen von Experiment 2, zeigte sich in Experiment 3, dass in einem Intragruppen-Kontext lediglich die positiven Attribute der Eigengruppe auf die übergeordnete Kategorie projiziert werden. Auch Experiment 4 bestätigt die Hypothese, dass die spontane Assoziation zwischen dem Prime „Europäer“ und dem Prototypen der Eigengruppe vom Intra- versus Intergruppen

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Kontext abhängig ist, und zwar derart, dass in einem Intragruppen-Kontext lediglich die positiven Eigenschaften projiziert werden wohingegen in einem Intergruppen-Kontext sowohl positive wie auch negative Eigenschaften der Eigengruppe projiziert werden. In Experiment 5 wurde erwartet, dass spezifische Merkmale der Eigengruppe „Deutsche“, wie beispielsweise das Attribut "organisiert", in dem Intergruppen-Kontext Deutsche versus Italiener mit der übergeordneten Kategorie Europäer assoziiert werden, wohingegen die Verarbeitung der gleichen Attribute in dem Intergruppen-Kontext Deutsche versus Briten nicht erleichtert wird, da die Merkmale in letzterem Kontext die Eigengruppe weniger von der Fremdgruppe differenzieren und somit weniger relevant erscheinen. Diese Ergebnisse sprechen eindeutig für das Bestehen einer spontanen Assoziation zwischen dem Prime „Europäer“ und dem *relevanten* Prototypen der Eigengruppe. Dabei tritt die Assoziation unabhängig von einem spezifischen Inhalt des Prototypen auf. Darüber hinaus konnte durch die Verwendung der gleichen Eigengruppe im Kontext unterschiedlicher Fremdgruppen für verschiedene andere Variablen, die bekanntermaßen den Eigengruppenprojektionsprozess moderieren (wie zum Beispiel Gruppenstatus), kontrolliert werden.

Die vorliegende Dissertation weist in einer Reihe experimenteller Studien erstmalig die spontane Assoziation zwischen dem Prototypen der Eigengruppe und der übergeordneten Kategorie nach. In einer Welt, in der Migration und interkulturelle Begegnungen immer häufiger werden, in der Fusionen zwischen Organisationen alltägliche Realität sind, in der Nationen sich zu immer inklusiveren Kategorien zusammenschließen (wie z.B. der afrikanischen Union), ist es entscheidend, besser zu verstehen, wie Menschen abstrakte übergeordnete Kategorie definieren und welche Konsequenzen daraus möglicherweise für den Umgang mit anderen Gruppen innerhalb der gemeinsamen, inklusiven Kategorie erwachsen.

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## Curriculum Vitae

Name: Bianchi Mauro

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### Schullaufbahn:

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Unterschrift



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## **Ehrenwörtliche Erklärung**

Ich erkläre hiermit, dass mir die geltende Promotionsordnung der Fakultät für Sozial- und Verhaltenswissenschaften bekannt ist.

Ferner erkläre ich, dass ich die vorliegende Arbeit selbst und ohne unzulässige Hilfe Dritter angefertigt habe.

Bei der Durchführung der empirischen Studien haben mir folgende Personen in der jeweils beschriebenen Weise geholfen:

1. Für die Übersetzung der Versuchsmaterialien vom Englischen ins Deutsche half mir Carola Leicht.
2. Bei der Rekrutierung von Versuchspersonen für die Studien 2, 3, 4, 5, und 6 halfen Carolin Richter, Maria Klaus, und Kristin Schenk mit.

Weitere Personen waren an der inhaltlich-materiellen Erstellung der Arbeit nicht beteiligt.

Alle von mir verwendeten Hilfsmittel und Quellen sind in der Arbeit angegeben. Insbesondere habe ich hierfür nicht die Hilfe eines Promotionsberaters in Anspruch genommen und Dritte haben weder unmittelbar noch mittelbar geldwerte Leistungen von mir für Arbeiten erhalten, die im Zusammenhang mit dem Inhalt der vorgelegten Dissertation stehen.

Die Arbeit wurde weder im Inland noch im Ausland in gleicher oder ähnlicher Form einer anderen Prüfungsbehörde vorgelegt. Weder früher noch gegenwärtig habe ich an einer anderen Hochschule eine Dissertation eingereicht.

Ich versichere, dass ich nach bestem Wissen die reine Wahrheit gesagt und nichts verschwiegen habe.

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Ort, Datum

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