

# Personalized versus Generalized Benefits of Stereotype Disconfirmation: Trade-offs in the Evaluation of Atypical Exemplars and Their Social Groups

Herbert Bless

*University of Mannheim, Mannheim, Germany*

Norbert Schwarz

*University of Michigan*

Galen V. Bodenhausen

*Northwestern University*

and

Lutz Thiel

*University of Heidelberg, Heidelberg, Germany*

Received December 9, 1999; revised August 28, 2000; accepted August 28, 2000; published online April 3, 2001

We report two studies investigating the impact of how a stereotype-inconsistent exemplar is categorized. In both studies, participants were presented with a description about a specific target and worked on different categorization tasks. Categorization tasks eliciting an inclusion of the target into the group category resulted in less stereotypic judgments about the group and in more stereotypic judgments about the target compared to categorization tasks eliciting exclusion of the target from the category. The results suggest that under exclusion conditions, a stereotype-inconsistent exemplar can increase stereotypic judgments about the group (Experiment 1). Experiment 2 shows that these categorization effects are attenuated if participants' processing motivation is increased at the encoding stage. The importance of a range of psychological variables that can influence the categorization, and thus the impact, of atypical exemplars is discussed. © 2001 Academic Press

It is widely believed that used car salesmen are greedy, untrustworthy, and notoriously dishonest. The accuracy of this stereotype is open to question, but even if these beliefs were largely correct, there surely would be at least one or two exceptions. What happens when perceivers encounter individuals who clearly defy stereotypes about their social groups, such as a generous and scrupulously ethical used car

salesman? How would such a person be evaluated, given both his positive personal qualities and his simultaneous association with a negatively evaluated group? And how might evaluations of used car salesmen in general be affected by encountering this atypical group member? The question of how disconfirming evidence affects our beliefs has a long history in psychology (e.g., Piaget, 1952). In the domain of social psychology, the contact hypothesis proposed that positive regard for atypical group members can generalize to the group as a whole, at least under certain circumstances (e.g., equal-status, cooperative contact in a positive climate; see Amir, 1969; Brewer & Miller, 1988; Rothbart & John, 1985).

The reported research was supported by grants Bl 289/5 from the Deutsche Forschungsgemeinschaft to H. Bless, N. Schwarz, and M. Wänke.

Address correspondence and reprint requests to Herbert Bless, Fakultät für Sozialwissenschaften, Universität Mannheim, D-68131 Mannheim, Germany. E-mail: [hbless@sowi.uni-mannheim.de](mailto:hbless@sowi.uni-mannheim.de).

This optimistic view of intergroup relations has been called into question on several fronts (for a recent review, see Stephan & Stephan, 1996). One principal limiting condition is the possibility that the atypical group member will not be seen as representative of the group as a whole. That is, he or she may be excluded from the perceiver's mental representation of the social group in question (e.g., Allport, 1954; Kunda & Oleson, 1995; Weber & Crocker, 1983). Will the likeable disconfirmer be contrasted with the disliked group under these conditions and hence be liked even more? That is, does a stereotype-inconsistent exemplar benefit from membership in a disliked group? And conversely, would the group seem even more dislikable by contrast to the likeable person? That is, does a stereotype-inconsistent exemplar increase stereotypic judgments about the group? In the present article, we propose that evaluations of atypical exemplars and the groups to which they belong are profoundly influenced by how the exemplar is categorized. Furthermore, in contrast to the prediction of the contact hypothesis, we demonstrate a trade-off between the evaluative enhancement of the exemplar and the group. Specifically, we show that the very conditions that promote more favorable assessments of an atypical exemplar result in less favorable assessments of the group, whereas conditions that promote more favorable assessments of the group result in less favorable evaluations of the atypical exemplar.

#### *Categorization Processes in Social Evaluation*

The central role of categorization processes in person perception and stereotyping is widely acknowledged across various theoretical approaches in social psychology (Allport, 1954; Brewer, 1988; Fiske & Neuberg, 1990; Lippmann, 1922; Tajfel, 1981; for reviews, see Hamilton & Sherman, 1994; Macrae & Bodenhausen, 2000). Whether a given target person is assigned to a specific category has important consequences for judgments about the target (e.g., Bodenhausen, Macrae, & Sherman, 1999; Brewer, 1988; Fiske & Neuberg, 1990) as well as judgments about the group (e.g., Hewstone, 1994; Kunda & Oleson, 1995; Weber & Crocker, 1983).

Most of the available research focused *either* on the categorization processes involved in person perception *or* the categorization processes involved in stereotype change. In contrast, the present article explores how categorization processes simultaneously, and differentially, affect judgments of an exemplar *and* a category. Moreover, we focus on the consequences rather than the antecedents of categorization processes. Before we discuss the available research on person perception and stereotype change, we briefly outline the conceptual framework in which the present research is embedded.

#### *The Inclusion/Exclusion Model*

We conceptualize the role of categorization processes in terms of the inclusion/exclusion model of judgment, proposed by Schwarz and Bless (1992a), which builds on previous theorizing by Barsalou (1987, 1989); Herr, Sherman, and Fazio (1983); Kahneman and Miller (1986); and Martin and colleagues (Martin, 1986; Martin, Seta, & Crelia, 1990). The model assumes that evaluative judgments require a mental representation of the target as well as a representation of a standard, against which the target is evaluated. Both representations are constructed on the spot and include chronically as well as temporarily accessible information (Higgins, 1996). How a given piece of information influences the judgment depends on how the information is *used*.

Accessible information that is *included* in the representation formed of the target results in assimilation effects. Thus, including a favorable exemplar (e.g., Colin Powell) in the representation formed of a group (e.g., the Republican Party) results in more positive judgments of the group (Stapel & Schwarz, 1998; see also Bless & Schwarz, 1998). Conversely, including an unfavorable exemplar results in more negative judgments of the group (Schwarz & Bless, 1992b). These observations are consistent with models of stereotype change, which assume that stereotype-inconsistent exemplars can change the stereotype about the group, provided that they are included in the representation formed (Hewstone, 1994; Kunda & Oleson, 1995; Weber & Crocker, 1983). By the same token, the inclusion of group membership information in the representation formed of the exemplar results in an assimilation of the exemplar evaluations to the group evaluations, as demonstrated in stereotyping research (see Hamilton & Sherman, 1994).

However, accessible information is not always used in constructing a representation of the target of judgment. This is the case when they assume that the information does not bear on the target (e.g., Bless & Wänke, 2000) or that the information came to mind due to an irrelevant reason (e.g., Lombardi, Higgins, & Bargh, 1987; Strack, Schwarz, Bless, Kübler, & Wänke, 1993). Moreover, conversational norms may prohibit the repeated use of information that has already been provided earlier (e.g., Schwarz, Strack, & Mai, 1991; Strack, Martin, & Schwarz, 1988). In such cases, information that is excluded from the representation of the target may be used in constructing a relevant standard of comparison. If the valence of this information is more extreme than the valence of other information used in constructing the standard, it results in a more extreme standard of comparison and hence in contrast effects on subsequent judgments (see Schwarz & Bless, 1992a, for a more detailed discussion). Accordingly, a highly favorable exemplar that is excluded from the representation formed of a group may be used in constructing a standard of comparison, resulting

in less favorable judgments of the group (e.g., Stapel & Schwarz, 1998). Conversely, the group may serve as a standard in evaluating the exemplar under these conditions, resulting in an even more favorable judgment of the exemplar.

#### *Available Evidence*

A large body of research in person perception and stereotyping is compatible with these general process assumptions.

*Assimilation effects.* With respect to evaluations of the exemplar, numerous studies indicate that the categorization of a person as a member of a group decreases the impact of individuating information about the person, resulting in judgments based on group membership. Thus, assigning an exemplar to a social category increases stereotypic judgments of the exemplar (e.g., Bodenhausen & Macrae, 1998; Bodenhausen, Macrae, & Sherman, 1999; Brewer, 1988; Fiske & Neuberg, 1990). In other words, the evaluation of the exemplar is assimilated toward the implications of the stereotype.

With respect to evaluations of the group, the inclusion of an exemplar in the mental representation formed of the group results in assimilation effects on the group judgments (e.g., Bless & Schwarz, 1998; Stapel & Schwarz, 1998). This process is at the heart of research into stereotype change, which addresses how the categorization of an exemplar influences the knowledge structure pertaining to the category (e.g., Hewstone, 1994; Kunda & Oleson, 1995, 1997; Weber & Crocker, 1983): When a stereotype-inconsistent exemplar is assigned to the category, the evaluation of the group will reflect the implications of the inconsistent exemplar, resulting in less stereotypic judgments. Stereotype change research focused on variables that increase the likelihood that inconsistent exemplars are assigned to the category, such as high typicality or dispersed presentation. This research showed that stereotype change becomes more likely as the likelihood of including the exemplar into the representation of the category increases.

*Contrast effects.* Whereas the consequences of assigning an exemplar to a category are fairly well investigated, relatively little is known about the consequences of *not* assigning an atypical exemplar to the category. With respect to the evaluation of the exemplar, two possibilities seem apparent. Individuals may either focus on individuating information about the exemplar or assign the target to another (sub-)category. Their evaluations would then reflect these sources of information rather than the initial category (cf. Fiske & Neuberg, 1990). It remains an open question, however, if and how the nonassignment would influence subsequent processing, including, for example, the interpretation of the individuating information or the selection of the new (sub-)category and resulting evaluative judgments. Most extant theorizing would seem to imply that there

should be little impact of the initial category if the exemplar is not assigned to it.

There is, however, also research that provides theoretical and empirical support for the contrast effects predicted by the inclusion/exclusion model. With regard to evaluations of an exemplar, Manis and colleagues demonstrated that category information may create expectancies that subsequently serve as a standard of comparison, resulting in contrast effects (Biernat, Manis, & Nelson, 1991; Manis, Biernat, & Nelson, 1991; Manis & Paskewitz, 1984). Their considerations suggest, for example, that an aggressive behavior will be rated as more aggressive when it is performed by a female rather than male target (e.g., Costrich, Feinstein, et al., 1975; Pratto & Bargh, 1991; Skowronski, Carlston, & Isham, 1993; Seta & Seta, 1993; Ford, Stangor, & Duan, 1994; for a review, see Biernat, Vescio, & Manis, 1998).

Moreover, Lambert and Wyer (1990) proposed that a specific exemplar may be compared to the expectations about the category if the exemplar falls outside the individual's range of beliefs about the category. In their research, a particular priest was rated as more trustworthy than a particular businessman when the respective exemplar fell within the range of participants' range of beliefs about the group. When the exemplar fell outside the range of these beliefs, however, contrast effects were observed and the priest was rated less trustworthy than the businessman performing the same behavior. These assimilation and contrast effects reflect that the extremity of the exemplar influences the likelihood of its inclusion in the respective category.

With regard to contrast effects on evaluations of the group, Kunda and Oleson (1997) have similarly suggested that the extremity of the exemplar plays a crucial role. Specifically, participants who were exposed to extreme exemplars that violated the stereotype reported even more pronounced stereotypes than control participants that were not exposed to stereotype-inconsistent exemplars. Additional analyses suggested that these contrast effects were associated with the discrepancy between participants' stereotypes and the exemplar and were more likely to emerge the more the exemplar was perceived as atypical.<sup>1</sup>

Finally, Maurer, Park, and Rothbart (1995) reported additional evidence for the notion that subtyping processes may elicit contrast effects. They provided participants with descriptions of 16 group members. When participants were asked to separate stereotype-consistent from stereotype-inconsistent members (i.e., under instructions equivalent to subtyping instructions) the group was judged more stereotypically than when participants were asked to form several

<sup>1</sup> Note that from our perspective, the extremity (or, more generally, the representativeness of the exemplar for the category) is only one of the numerous variables that drive inclusion/exclusion processes (see Schwarz & Bless, 1992a).

subgroups (on the basis of similarities and differences) or when no sorting instructions were given.

To summarize, numerous studies suggest that assigning a person to a category should result in an assimilation of the exemplar to the group as well as an assimilation of the group to the exemplar. In contrast, the consequences of excluding an exemplar from the representation of the group are less well understood, although contrast effects on evaluations of the exemplar as well as the group have been reported under conditions that are compatible with the logic of the inclusion/exclusion model. However, most of the available research investigated the consequences of categorization processes separately for the exemplar versus the group. To our knowledge, few studies have addressed the possibility of a trade-off in evaluations of exemplars and their groups: Do the very same processes that decrease stereotypic judgments of an exemplar increase stereotypic judgments of the group and vice versa?<sup>2</sup> We assume that the scarcity of research into this issue is due to a methodological problem, which we discuss next.

#### *Manipulating Categorization versus Manipulating the Exemplar or Category*

Although all of the reviewed studies emphasized the importance of categorization processes, these processes were not directly manipulated. Instead, in most cases the categorization of a given exemplar was influenced either by (a) varying the features of the exemplar while holding the category constant (e.g., by manipulating the typicality of the exemplar) or (b) by holding the features of the exemplar constant while varying the respective categories (e.g., male vs female). Other studies involved manipulations of individuals' processing capacity or motivation, issues to which we return in Experiment 2.

While these procedures are appropriate for a number of research questions, it often remains unclear whether the obtained effects are due to categorization processes per se or due to variations in the target (see Bless & Wänke, 2000). For example, are typical exemplars evaluated more stereotypically than atypical exemplars because of their category inclusion or because they are described by more stereotype-consistent features? These ambiguities take on particular importance when we want to address simultaneous effects on the exemplar and the category. To ensure comparability

of the targets across conditions, the present studies employed direct categorization manipulations, holding the information about the exemplar *and* the category constant.<sup>3</sup>

### EXPERIMENT 1

In Experiment 1, participants received a description of a moderately atypical exemplar and answered a question designed to elicit either (a) the inclusion of the exemplar in the representation formed of his group or (b) the exclusion of the exemplar from this representation. A third group of participants was (c) not exposed to a categorization question (control condition). We predicted that including the atypical exemplar in the representation of the group would result in less stereotypical judgments of the group, but more stereotypical judgments of the exemplar (assimilation effects). Conversely, we predicted that excluding the atypical exemplar from the representation of the group would result in more stereotypical judgments of the group, but less stereotypical judgments of the exemplar (contrast effects). Based on previous results (Bless & Schwarz, 1998) we further expected that the size of these effects would be asymmetrical. As is commonly assumed in social cognition research, categorization plays a crucial role in person perception and unless the exemplar is highly atypical, perceivers are likely to categorize exemplars as members of their group. If so, many participants in the control condition may spontaneously include a moderately atypical exemplar in the representation formed of the group, whereas few may spontaneously exclude the exemplar. Accordingly, the effect of an explicit inclusion manipulation may be less pronounced relative to the control condition than the effect of an explicit exclusion condition.

#### Method

##### *Participants and Design*

One hundred sixty students of the University of Heidelberg, Germany, were randomly assigned to the conditions of a 3 (categorization task: inclusion, exclusion, and no categorization)  $\times$  2 (evaluation of exemplar vs group) factorial design, with the latter factor varied within participants. In addition, we manipulated whether participants responded first to the questions about the target person and then about the group or vice versa.

<sup>2</sup> In the domain of political judgment, we have demonstrated that the activation of an untrustworthy politician may decrease the perceived trustworthiness of politicians in general, while increasing the trustworthiness of other specific individual politicians (Schwarz & Bless, 1992b). On the surface, this finding seems similar. However, in the earlier research we traced the impact to different categorization processes (inclusion versus exclusion due to the differential width of the categories "politicians" vs specific exemplars). In contrast, the present studies focus on how the same categorization process differentially affects different targets.

<sup>3</sup> Beyond the methodological implications, it seems that by manipulating the exemplar or the category, researchers have often put too much emphasis on the feature match between exemplar and category. Of course there is no doubt that stimulus features play an important role in categorization processes. We argue, however, that categorization decisions are only partially driven by the features of the exemplar. The inclusion/exclusion model specifies a number of variables that influence categorization process independently of the feature match between exemplar and category.

*Presentation of exemplar.* Participants listened to a tape-recorded description about a specific person purportedly extracted from a radio program. This person was described as a member of the ethnic group of the Roma and Sinti, a group about which many Germans hold strong negative stereotypes (Fonseca, 1995). The description of the target person was based on various pretests and designed to fulfill several purposes. First, the target person was described rather favorably. Second, the description included elements that indicated that the exemplar was well integrated into the culture of the Roma and Sinti; for example, it stated that the person respected the traditions of the Roma and Sinti. Third, at the same time, the description also included elements suggesting that the target was somewhat exceptional and not too typical for the group.

*Categorization.* After listening to the description, participants were provided with different questions, purportedly to test their comprehension of the presented text. The manipulation of the categorization task was embedded in these questions. In one condition, participants were asked how well the person was integrated into the culture of the Roma and Sinti. For their answer, participants were asked to select one out of four alternatives (very well integrated, well integrated, poorly integrated, and not at all integrated). Given the provided information, participants should respond with "well" or "very well integrated." This task was designed to elicit an *inclusion* of the exemplar into the group category.

In a second condition we asked participants to assign the target to one out of four response alternatives (refugee; Rom, but an exception; German; nationless). Given the provided information, participants should select the option "he is a Rom, but an exception." This task was designed to elicit an *exclusion* of the exemplar from the group category.

In a third condition, participants were provided with the same target description but responded to a question about the text that did not pertain to the target person (*no-categorization control condition*).

*Order manipulation.* For about half of the participants, the judgments about the target person preceded the judgments about the group, whereas the remaining participants answered the questions in the reversed order. These two order conditions were initially run as two separate studies. Given that the materials and the subject population were identical, the data of both studies were combined for the present report.

*Dependent variables.* Evaluations of the exemplar and the group on four stereotype-relevant traits (dirty, criminal, seedy, and superstitious) and six stereotype-irrelevant traits (e.g., athletic, stubborn, and complicated) serve as the dependent variables. All judgments were given on unipolar, 9-point rating scales.

TABLE 1  
Mean Stereotypic Evaluations as a Function of Target, Categorization, and Order of Dependent Variables

Judgmental target	Inclusion	Control	Exclusion
First judgment			
Group	3.67	3.84	4.83
Exemplar	2.64	2.33	1.78
Second judgment			
Group	4.07	4.53	5.03
Exemplar	2.63	2.68	2.53

*Note.* Higher scores reflect more stereotypic evaluations.

## Results

We first analyzed participants' responses to the categorization task. The overwhelming majority of participants responded in a manner fulfilling our a priori criteria (i.e., they responded with "very well integrated" or "well integrated" in the inclusion condition and with "Rom, but an exception" in the exclusion condition). The responses of three participants who did not meet these criteria were dropped from subsequent analyses.

According to our main hypothesis, judgments along the various trait dimensions should depend on the categorization task and whether the exemplar or the group was to be evaluated. We computed summary scores for the evaluations of the exemplar and the group that comprised the four stereotype-relevant traits and that ranged from 1 to 9, with higher scores reflecting more stereotypic judgments; Cronbach's  $\alpha = .71$  and  $.66$ , respectively. We entered this score into a 3 (inclusion, exclusion, control condition)  $\times$  2 (order of dependent variables, group first vs exemplar first)  $\times$  2 (judgments about exemplar vs group) ANOVA with the last factor treated as a within-participants factor. The means are presented in Table 1.

The results of this analysis revealed that the exemplar was rated as less stereotypical than the group,  $M = 2.45$  versus  $M = 4.30$ ,  $F(1, 137) = 449.31$ ,  $p < .001$ . This finding was independent of the order condition and indicates that the exemplar was indeed somewhat inconsistent with the beliefs about the group.

### First Judgment

Our main hypotheses predicted a differential effect of the categorization task for the exemplar versus the group judgments. To eliminate the possibility that judgments about the exemplar were simply derived from prior judgments about the group (or vice versa) we were most interested in participants' first set of trait judgments. As expected, this analysis revealed a differential effect of the categorization task on participants' evaluations of the exemplar and the group,  $F(2, 137) = 6.83$ ,  $p < .01$ , for the interaction.

Specifically, participants in the inclusion condition evaluated the *exemplar* more stereotypically ( $M = 2.64$ ) than participants in the exclusion condition ( $M = 1.78$ ), with the no-explicit-categorization condition ( $M = 2.33$ ) falling in between,  $F(2, 137) = 3.01, p < .05$ . The inclusion condition differed from the exclusion condition,  $t(137) = 2.42, p < .01$ , while the no-explicit-categorization condition differed from the exclusion,  $t(137) = 1.54, p < .07$ , but not from the inclusion condition,  $t < 1$  (all planned contrasts are one-tailed).

The opposite pattern was obtained for participants' evaluations of the *group*. The group was rated less stereotypically ( $M = 3.67$ ) in the inclusion condition than in the exclusion condition ( $M = 4.83$ ), with the no-explicit-categorization condition ( $M = 3.84$ ) again falling in between,  $F(2, 137) = 5.05, p < .05$ . Again, the inclusion differed from exclusion condition,  $t(137) = 2.94, p < .01$ , while the no-categorization condition differed reliably from the exclusion,  $t(137) = 2.50, p < .01$ , but not from the inclusion,  $t < 1$ , conditions.

Finally, as expected, the experimental manipulations did not affect participants' ratings of the exemplar or the group on stereotype-irrelevant traits, all  $ps > .20$ .

### Second Judgment

Not surprisingly, an analysis of the judgments that were given second (that is after the group or after the exemplar judgments, respectively), revealed a somewhat weaker pattern,  $F(2, 137) = 1.78, p > .10$ , for the interaction of categorization task and judgmental target (exemplar vs group). Specifically, the group was again rated less stereotypically ( $M = 4.07$ ) in the inclusion condition than in the exclusion condition ( $M = 5.03$ ), with the control group ( $M = 4.53$ ) falling in between,  $F(2, 137) = 2.28, p < .10$ . As before, the exclusion condition differed reliably from the inclusion condition,  $t(137) = 2.14, p < .05$ , whereas the differences between the control group and the inclusion and exclusion condition did not reach significance,  $t(137) = 1.03, ns$ , and  $t(137) = 1.08, ns$ .<sup>4</sup>

The evaluations of the exemplar that were assessed after the group evaluations are less comparable to those judgments that were given prior to the group judgments, and no impact of the categorization task was observed,  $F < 1$ . As can be seen in Table 1, the weaker pattern for the second judgments is primarily due to the absence of effects on the exemplar evaluations, three-way interaction of order, cate-

gorization, and judgmental target,  $F(2, 137) = 3.89, p < .05$ .

### Discussion

In summary, the same information about a moderately atypical exemplar had different effects on judgments of the exemplar and of the group, depending on the categorization of the exemplar elicited by knowledge questions. When we induced participants to include the (inconsistent) exemplar into the group category, the group was evaluated less stereotypically than when we induced participants to exclude the exemplar from the category. Importantly, however, the same manipulations resulted in a reversed pattern of evaluations of the exemplar. When the exemplar was included into the group category, he was rated as more stereotypical than when he was excluded from the group category. In combination, these findings highlight that manipulations that decrease the stereotypicality of judgments about the group can increase the stereotypicality of judgments about the exemplar and vice versa.

This trade-off is consistent with the predictions of the inclusion/exclusion model. Including an atypical exemplar in the representation of the group results in a less stereotypical representation of the group, which now contains an atypical exemplar, but in a more stereotypical representation of the exemplar, which now contains features derived from group membership. Both of these assimilation effects are presumably based on changes in the representation formed of the respective target of judgment. On the other hand, the observed contrast effect on judgments of the group is presumably based on changes in the standard of comparison. Given that the representation of the group did not include the exemplar to begin with, the exclusion manipulation is unlikely to change the representation formed of the group. However, the excluded atypical exemplar may be used in constructing a standard of comparison, relative to which the group seems all the more stereotypical. Finally, changes in the representation of the exemplar as well as changes in the standard may contribute to the obtained contrast effect on judgments of the exemplar, observed under exclusion conditions. On the one hand, the exclusion of the exemplar from the group decreases the likelihood that group-related information enters the representation of the exemplar. On the other hand, it increases the likelihood that the group serves as a standard of comparison, relative to which the exemplar seems all the less stereotypical.

Two other aspects of the obtained findings deserve additional attention. First, we observed that the exclusion condition differed reliably from the no-explicit-categorization condition, whereas the inclusion condition did not. This pattern is consistent with conceptualizations in the stereotype change literature, which suggest that moderately atypical exemplars are spontaneously included in the represen-

<sup>4</sup> In addition, we ran a *nonfactorial control* condition with participants who did not receive any information about the exemplar and consequently evaluated only the group. This nonfactorial control group was run only in the study in which the exemplar evaluation preceded the group evaluation. These participants produced ratings similar to the no-categorization group, which was provided with the information about the exemplar but did not receive a categorization task ( $M = 4.61$  vs  $M = 4.53$ ),  $t < 1$ .

tation formed of the group—at least under conditions of low processing motivation or low processing capacity (e.g., Yzerbyt, Coull, & Rocher, 1999). If so, many participants in the no-explicit-categorization condition may have made the same categorization as the participants in the inclusion condition, rendering it difficult to observe reliable differences between these conditions. Obviously, it is quite difficult to predict the spontaneous categorization of a specific exemplar, as this categorization is highly dependent on the specific materials and might thus vary from study to study. If so, we should obtain reliable differences between inclusion and exclusion conditions, as in the present study, but rather unreliable effects with regard to any differences to the control group.

Second, we observed that the categorization manipulation influenced the group evaluations independently of the order of the dependent variables, whereas the exemplar evaluations were only affected when they preceded the group evaluations. As shown in Table 1, excluding the exemplar resulted in a contrast effect when the exemplar evaluation preceded, but not when it followed, the group evaluation. We observed such carryover effects of preceding evaluations of the superordinate category on subsequent judgments of an exemplar in a number of previous studies (e.g., Schwarz & Bless, 1992b; Stapel & Schwarz, 1998; see also Tourangeau & Rasinski, 1988). Presumably, these effects reflect that preceding group evaluations render features of the group highly accessible and increase the likelihood that these features are included in the representation of the exemplar, unless the exemplar is highly atypical. Given that our discussion of the differential impact on judgments of the exemplar and the group is based primarily on the uncontaminated first judgments, we refrain from further speculations regarding this ancillary finding, pending more direct empirical evidence as to its origins.

In combination, the present results highlight a previously unobserved trade-off in the evaluation of atypical exemplars and their groups: Categorizations that decrease the stereotypicality of judgments about the group increase the stereotypicality of judgments about the exemplar and vice versa, although multiple judgments of both targets may complicate this picture.

## EXPERIMENT 2

Theoretically, we assume that the categorization effects observed in Experiment 1 are mediated by a differential use of the category membership information. In evaluating an exemplar, the category membership information can be used to form either a representation of the exemplar (inclusion condition), resulting in an assimilation of the exemplar toward the stereotype, or a representation of a comparison standard (exclusion condition), resulting in a contrast effect. If assimilation as well as contrast effects are mediated by

how the category information is used, then *both* effects should be attenuated by conditions that generally reduce reliance on category membership information. According to various models of person perception, the use of category information versus individuating information depends on individuals' processing motivation and processing capacity (e.g., Bodenhausen, Macrae, & Sherman, 1999; Brewer, 1988; Fiske & Neuberg, 1990; Kruglanski, 1989). Specifically, individuals are more likely to rely on category information when processing motivation and/or processing capacity is low. Conversely, increasing individuals' processing motivation usually decreases their reliance on category membership information. If so, the effects observed in Experiment 1 should be attenuated under conditions of high processing motivation.

In addition, the impact of including a given piece of information in the representation formed of a target, or of a standard, decreases with the amount of other information that enters the respective representation (for a more extended discussion of this "set-size" hypothesis, see Bless, Igou, Schwarz, & Wänke, 2000; Schwarz & Bless, 1992a).<sup>5</sup> To the extent that highly motivated individuals retrieve more information in constructing their mental representations of the target and of a standard of comparison, this dilution of the representation may further attenuate the otherwise observed assimilation and contrast effects.

Besides investigating the role of processing motivation, Experiment 2 was designed to address two methodological issues. First, we wanted to rule out the possibility that the obtained effects were somehow specific to the experimental materials used. Accordingly, the exemplar used in Experiment 2 was a member of a different group (nuns) performing different behaviors. Second, we wanted to address the issue that the manipulations used in Experiment 1 were rather direct. Although we again focused on the consequences (rather than the determinants) of categorization processes, we employed more subtle manipulations. Replicating the findings of Experiment 1 with a different set of stimuli and more subtle manipulations would support the generality of the findings.

Consistent with models that conceptualize the impact of processing motivation in person perception (Brewer, 1988; Fiske & Neuberg, 1990; Kruglanski, 1989), Experiment 2

<sup>5</sup> Note that there are two different implications of processing motivation/capacity with respect to the inclusion/exclusion model. First, processing motivation may affect the likelihood of using category information during information acquisition and encoding. Second, processing motivation/capacity may differentially influence the processing that is undertaken when actually making judgments. The model holds that the various steps that may trigger exclusion require a certain amount of motivation/capacity. This implies that under low capacity/motivation conditions, assimilation effects are more likely, while under high capacity/motivation conditions, contrast effects are more likely (for related evidence, see Martin, Seta, & Crelia, 1990). As the present study focuses on the first aspect, we induced processing motivation prior to encoding.

focused on evaluations of the exemplar. We expected to replicate the assimilation and contrast effects obtained in Experiment 1 and predicted that these effects would be substantially reduced when processing motivation is increased.

## Method

### *Participants and Design*

Ninety-four students of the University of Heidelberg, Germany, were randomly assigned to experimental conditions of a 3 (categorization task: inclusion, exclusion, and no-categorization control group)  $\times$  2 (processing motivation: high vs low) between-subjects factorial design.

*Presentation of target person.* As in Experiment 1, participants listened via a Walkman to a tape-recorded description of a specific person, who was described as a nun. In pretests we had identified stereotype-consistent, stereotype-inconsistent, and neutral traits. Again, the description of the target person was based on various pretests and was designed to fulfill several purposes. As in Experiment 1, the description consisted of some elements indicating that the exemplar was typical for the group, as well as some elements suggesting that the target was somewhat atypical for the group.

*Accountability.* We informed half of the participants that the main purpose of the study was to pretest the use of the "Walkman procedure" to determine whether this technique could be used for further studies (*low accountability*). In contrast, the other participants were told that some of them would later be asked to justify their judgments (*high accountability*; see Tetlock, 1983). This manipulation of accountability was introduced to vary participants' processing motivation at the time of encoding, presumably resulting in a differential reliance on category membership information (cf. Bodenhausen, Kramer, & Süsser, 1994; Nelson, Acker, & Manis, 1996; Pendry & Macrae, 1996).<sup>6</sup>

*Categorization.* After listening to the description, participants were provided with different tasks, purportedly to test their comprehension of the presented information. The manipulation of the categorization task was embedded in these questions. As in Experiments 1, we manipulated the categorization of the exemplar through direct questions. In the *inclusion condition*, participants were asked two questions pertaining to (a) the number of years the target has been a nun (response alternatives: "4," "14," or "24 years") and (b) where the target person was working (response alternatives: "at a kindergarten," "at a convent," or "in a church community"). Given the provided information, participants should respond with "24 years" and "convent."

In the *exclusion condition*, participants were asked two questions pertaining (a) to how the target felt about her convent (response alternatives: "totally satisfied," "dissatisfied with some aspects," "totally dissatisfied") and (b) to the target's commitment to her convent (response alternatives: "very committed and actively recruiting new members," "sees the convent as her only possibility to fulfill her goals," and "considers leaving the convent"). Given the provided information, participants should select the options "totally dissatisfied" and "considers leaving the convent."

In the *no-categorization control condition*, participants were provided with the same target description as in the inclusion and the exclusion condition, but responded to two questions that did not pertain to the target person.

*Dependent variables.* Ratings of the exemplar on stereotype-consistent (pious, inhibited, serious, modest, good-natured, naive), stereotype-inconsistent (progressive, politically minded, athletic, independent), or stereotype-irrelevant (exact, skillful, musical) traits served as the dependent variables. All judgments were given on unipolar, 7-point rating scales.

The trait selection was based on a pretest with 15 participants who did not participate in Experiment 2. Participants were provided with a total of 35 traits and indicated for each trait whether they thought it was consistent, inconsistent, or irrelevant with respect to the stereotype about nuns. For the traits used in the main experiment, we required that at least 80% of the participants agreed on the trait being consistent, inconsistent, or irrelevant.

## Results and Discussion

We first analyzed participants' responses to the categorization task. We excluded three participants from the subsequent analyses, as they did not fulfill our a priori criteria.

We computed a summary score by first averaging participants' judgments on the stereotype-consistent and the stereotype-inconsistent traits. We then subtracted the score for stereotype-inconsistent traits from the score for the stereotype-consistent traits. The resulting score could range from  $-6$  to  $+6$ , with higher scores reflecting more stereotypic judgments, Cronbach's  $\alpha = .68$ . We entered this score into a 3 (inclusion, exclusion, control condition)  $\times$  2 (low versus high accountability) factorial ANOVA. As predicted, participants' evaluations of the exemplar were a function of their processing motivation and the categorization task, as indicated by a significant interaction effect,  $F(2, 85) = 4.97, p < .01$ . The relevant means are shown in Table 2.

Under *low accountability* conditions, the results replicated the findings of Experiment 1. Participants who responded to the inclusion questions evaluated the exemplar more stereotypically ( $M = 1.11$ ) than participants who responded to the exclusion questions ( $M = -0.07$ ), with the control group ( $M = .66$ ) falling in between,  $F(2,$

<sup>6</sup> Although it was not the case in the present set of findings, it should be noted that manipulations of accountability have also been demonstrated to elicit more stereotypic judgments (see Lambert, Cronen, Chasteen, & Lickel, 1996).

TABLE 2

Mean Stereotypic Evaluations as a Function of Categorization and Accountability for Experiment 2

Accountability	Inclusion	Control	Exclusion
Low	1.11	.66	-.07
High	-.04	.33	.61

*Note.* Higher scores reflect more stereotypic evaluations.

85) = 3.70,  $p < .05$ . The exclusion condition differed from the inclusion condition,  $t(85) = 2.85$ ,  $p < .01$ , as well as from the control condition,  $t(85) = 1.86$ ,  $p < .03$ , whereas the control group did not differ reliably from the inclusion condition,  $t(85) = 1.08$ ,  $p < .14$  (all planned contrasts tested one-tailed). As expected, this impact of the categorization task was not obtained for *high accountability* participants,  $F > 1$ ,  $M_s = -.04$ ,  $.33$ , and  $.61$  for the inclusion, control, and exclusion conditions, respectively.

Although the results of Experiment 2 are limited to evaluations of the exemplar, they provide further support for the assumed mediating processes. When processing motivation was low, we again observed more stereotypic evaluations of the exemplar when the knowledge questions invited an inclusion of exemplar into the group rather than exclusion from the group. The similarity of the patterns of Experiment 1 and 2 demonstrates the reliability of the observed effects across different stimuli and different categorization manipulations.

As predicted, the impact of the categorization task was eliminated when participants' processing motivation at the time of encoding was increased. Presumably, the accountable participants focused on the individuating information and relied less on category membership information. Moreover, they may have retrieved more information to construct mental representations of the exemplar and of a standard of comparison, thus further decreasing the impact of category membership information.

Note that, similar to Experiment 1, the control condition was again closer to the inclusion than to the exclusion condition, suggesting that in the absence of additional instructions our stimulus materials triggered an inclusion rather than an exclusion of the presented exemplar. As discussed above, this tendency reflects that moderately atypical exemplars are likely to be spontaneously categorized as group members.

## GENERAL DISCUSSION

The present studies addressed how different categorizations of a stereotype-inconsistent exemplar influence evaluations of the exemplar's group and of the exemplar itself. We manipulated the categorization of the exemplar through direct questions, whereas previous research relied on

changes in the description of the exemplar, or the description of the group, to influence participants' categorization processes. Both procedures have their own (dis-)advantages. On the one hand, the direct-questions strategy allows researchers to hold all features of the exemplar and of the group constant. It therefore avoids the usual confounding of categorization processes and exemplar or group characteristics, which would have rendered the predicted differential effects on exemplar and group evaluations highly ambiguous. On the other hand, the direct-questions strategy precludes the examination of conditions that foster or inhibit different spontaneous categorizations. Accordingly, the present research focused solely on the consequences of different categorizations and did not address their antecedents, which have been the focus of stereotype change research.

Using direct categorization manipulations, we obtained assimilation as well as contrast effects on judgments of the exemplar as well as the group, depending on whether the exemplar was included in, or excluded from, the category. Although the role of categorization processes in the perception of exemplars and groups has received ample attention in the social cognition literature, this literature has typically focused on only one aspect: either the effect on the perception of the exemplar *or* the effect on the perception of the group. When both are considered in combination, it becomes apparent that attempts to reduce stereotyping face a difficult trade-off: What is good for the group is likely to be bad for the exemplar and vice versa.

### *The Consequences of Inclusion*

When a moderately atypical exemplar is assigned to the category, the group is likely to be evaluated less stereotypically, and the exemplar more stereotypically, than when the exemplar is excluded from the category. These assimilation effects presumably reflect that the inclusion of the exemplar in the representation formed of the group results in a less stereotypical representation of the group. By the same token, however, inclusion of the exemplar in the group enriches the representation of the exemplar with features of the group, resulting in a more stereotypical representation of the exemplar. Both of these effects have been discussed in previous research. Research in person perception demonstrated that assigning an exemplar to a category increases the likelihood that the exemplar will be evaluated on the basis of the implications of category membership (i.e., stereotypically; for overviews, see Brewer, 1988; Fiske & Neuberg, 1990; Kruglanski, 1989). Conversely, research in stereotype change has demonstrated that assigning stereotype-inconsistent exemplar to a category results in stereotype change (Hewstone, 1994; Kunda & Oleson, 1995; Weber & Crocker, 1983).

The joint analysis of both effects highlights, however, that the generally desirable reduction of group stereotyping

comes at a cost: The same process that attenuates the stereotype that perceivers hold about the group increases stereotypic judgments of the atypical exemplar. Moreover, in order to change individuals' stereotypes about the group, we need to ensure that they apply the stereotype to the atypical exemplar, with the observed negative consequences for the exemplar. Thus, there is a dynamic trade-off between the evaluative enhancement of the atypical exemplar and the relevant social group. Conditions that promote generalized benefits for the group come at the cost of reduced enhancement of the exemplar, while conditions that produce greater personalized benefits for the exemplar are associated with less enhancement of the group. Supporting this assumption, reducing individuals' cognitive resources has been demonstrated to increase stereotypic judgments about specific targets (e.g., Bodenhausen et al., 1999), but to do decrease stereotypic judgments about the group (e.g., Yzerbyt et al., 1999).

### *The Consequences of Exclusion*

When a moderately atypical exemplar is excluded from the category, the group is likely to be evaluated more stereotypically, whereas the exemplar is likely to be evaluated less stereotypically. Given that the atypical exemplar was not part of the representation of the group to begin with, the contrast effect on judgments of the group can be traced to the use of the exemplar in the construction of a relevant standard of comparison. The contrast effect on judgments of the exemplar, on the other hand, may reflect the use of the group as a standard of comparison as well as the absence of category membership information in the representation formed of the exemplar.

Again, the obtained findings suggest that the generally desirable reduction of stereotypic judgments of exemplars comes at a cost, this time in form of an increase in the perceived stereotypicality of the group. Most importantly, the presented findings indicate that the accessibility of an inconsistent exemplar may increase rather than decrease stereotypic judgments when the exemplar is excluded from the representation formed of the group. This finding converges with evidence reported by Maurer et al. (1995), who observed that, under conditions in which participants were induced to subtype atypical group members, the group as a whole was subsequently evaluated more stereotypically than under control conditions. Relatedly, Kunda and Oleson (1997) reported that the activation of a stereotype-inconsistent exemplars resulted in more stereotypic evaluations of the group when an extremely stereotype-inconsistent exemplar was activated (contrast), whereas assimilation effects were observed when a less extreme exemplar was activated. Kunda and Oleson traced the assimilation and contrast effects to the different categorizations elicited by the more or less extreme exemplars. We agree that extremity of an exemplar may influence its categorization and hence the

emergence of assimilation and contrast effects. We emphasize, however, that the extremity, or, more generally, the representativeness of the exemplar for the category, is only one of the numerous variables that can influence categorization processes. Theoretically, any variable that influences the categorization of an exemplar can determine the emergence of assimilation or contrast effects (see Schwarz & Bless, 1992a), providing a rich agenda for future research.

### *Implications of Intergroup Relations*

The trade-off pattern demonstrated in our participants' judgments highlights an important aspect of intergroup relations that is not well captured by current theories of intergroup contact. Prevailing models of contact suggest that encountering an admirably ethical used car salesman, an honest Rom, or a fun-loving nun will result in more favorable evaluations of both the exemplar and the respective group. Our, as well as related, findings indicate, however, that the situation is not so straightforward. Because of the dynamic and inherently comparative nature of social judgment, what is good for the exemplar may not be good for the group and vice versa. Much depends on how the exemplar is categorized.

While previous research has emphasized the importance of categorization processes, some of the consequences of excluding an exemplar from a category have often been missed. We agree, for example, with Kunda and Oleson (1995) that the exclusion of a specific exemplar during a subtyping process blocks a change of the *mental representation* of the group. Failing to change this representation, however, does not necessarily imply that the *evaluation* of the group does not change, as indicated by the findings of Kunda and Oleson (1997) as well as the present research. The representation of the group itself is only one of the representations needed to arrive at an evaluation, and the excluded exemplar may affect the other representation, namely the representation of the standard against which the group is judged. Hence, changes in the evaluation of the group may be obtained in the presence of changes in the mental representation (as in Maurer et al., 1995) as well as their absence (as in Kunda & Oleson, 1997).

With respect to the evaluation of the exemplar, several studies demonstrated that category information may serve as a standard of comparison, resulting in contrast effects on judgments of the exemplar (e.g., Biernat, Manis, & Nelson, 1991; Costrich, Feinstein, et al., 1975; Manis, Biernat, & Nelson, 1991; Manis & Paskewitz, 1984). Manis and Paskewitz (1984) investigated the possibility that category information may result in both assimilation *and* contrast effects on exemplars. They traced the contrast effect to the use of the category as a standard of comparison and the assimilation effect to impact of category information on the interpretation of the exemplar's individuating behaviors (see also Stapel, Koomen, & van der Pligt, 1996). Going beyond

this evidence, the present approach emphasizes (a) the possibility of contrast effects on judgments of the category and (b) the importance of categorization processes (see also Lambert & Wyer, 1990) as a determinant of both assimilation and contrast effects.

In sum, the present findings emphasize two important issues. The same categorization process (inclusion) that decreases the stereotypicality of judgments about the group increases the stereotypicality of judgments about an exemplar. Conversely, the same categorization process (exclusion) that decreases the stereotypicality of judgments about the exemplar increases the stereotypicality of judgments about the group. Hence, attempts to decrease the stereotypicality of either judgment always come at the cost of increasing the stereotypicality of the respective other judgment. The underlying processes can be fruitfully conceptualized in terms of the inclusion/exclusion model (Schwarz & Bless, 1992a), which addresses the general construal processes involved in forming representations of targets and standards. This model provides an integrative framework that highlights the functional equivalence of numerous variables that have typically been addressed in isolation, ranging from the awareness of an undue influence to the antecedents of different categorizations and the influence of conversational norms. Each of these variables can influence how a given piece of information is *used*, which in turn determines the emergence of assimilation or contrast effects. Many of these variables have not received attention in stereotyping research and the present findings suggest that their systematic exploration will enhance our understanding of the cognitive dynamics of stereotyping and stereotype change.

## REFERENCES

- Allport, G. W. (1954). *The nature of prejudice*. MA: Addison-Wesley.
- Amir, Y. (1969). Contact hypothesis in ethnic relations. *Psychological Bulletin*, **71**, 319–342.
- Barsalou, L. W. (1987). The instability of graded structure: Implications for the nature of concepts. In U. Neisser (Ed.), *Concepts and conceptual development: Ecological and intellectual factors in categorization* (pp. 101–140). Cambridge, UK: Cambridge Univ. Press.
- Barsalou, L. W. (1989). Intraconcept similarity and its implications for interconcept similarity. In S. Vosniadou & A. Ortony (Eds.), *Similarity and analogical reasoning* (pp. 76–121). Cambridge, UK: Cambridge Univ. Press.
- Biernat, M., Manis, M., & Nelson, T. E. (1991). Stereotypes and standards of judgment. *Journal of Personality and Social Psychology*, **60**, 485–499.
- Biernat, M., Vescio, T. K., & Manis, M. (1998). Judging and behaving toward members of stereotyped groups: A shifting standards perspective. In C. Sedikides, J. Schopler, & C. Insko (Eds.), *Intergroup cognition and intergroup behavior* (pp. 151–175). Mahwah, NJ: Erlbaum.
- Bless, H., Igou, E., Schwarz, N., & Wänke, M. (2000). Reducing context effects by adding context information: The direction and size of context effects in political judgment. *Personality and Social Psychology Bulletin*, **26**, 1036–1045.
- Bless, H., & Schwarz, N. (1998). Context effects in political judgment: Assimilation and contrast as a function of categorization processes. *European Journal of Social Psychology*, **28**, 159–172.
- Bless, H., & Wänke, M. (2000). Can the same information be typical and atypical? How perceived typicality moderates assimilation and contrast in evaluative judgments. *Personality and Social Psychology Bulletin*, **26**, 306–324.
- Bodenhausen, G. V., Kramer, G. P., & Süsser, K. (1994). Happiness and stereotypic thinking in social judgment. *Journal of Personality and Social Psychology*, **66**, 621–632.
- Bodenhausen, G. V., & Macrae, C. N. (1998). Stereotype activation and inhibition. In R. S. Wyer, Jr. (Ed.), *Stereotype activation and inhibition: Advances in social cognition* (Vol. 11, pp. 1–52). Mahwah, NJ: Erlbaum.
- Bodenhausen, G. V., Macrae, C. N., & Sherman, J. W. (1999). On the dialectics of discrimination: Dual processes in social stereotyping. In S. Chaiken & Y. Trope (Eds.), *Dual process models in social psychology* (pp. 271–290). New York: Guilford.
- Brewer, M. B. (1988). A dual model of impression formation. In T. K. Srull & R. S. Wyer, Jr. (Eds.), *A dual model of impression formation: Advances in social cognition* (Vol. 1, pp. 1–35). Hillsdale, NJ: Erlbaum.
- Brewer, M. B., & Miller, N. (1988). Contact and cooperation: When do they work? In P. Katz & D. Taylor (Eds.), *Eliminating racism: Means and controversies* (pp. 315–326). New York: Plenum.
- Costrich, N., Feinstein, J., Kidder, L., Marecek, J., & Pascale, L. (1975). When stereotypes hurt. Three studies of penalties for sex-role reversals. *Journal of Experimental Social Psychology*, **11**, 225–233.
- Fiske, S. T., & Neuberg, S. L. (1990). A continuum of impression formation from category-based to individuating processing: Influences of information and motivation on attention and interpretation. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 23, pp. 1–74). Orlando, FL: Academic Press.
- Ford, T. E., Stangor, C., & Duan, C. (1994). Influence of social category accessibility and category-associated trait accessibility on judgments of individuals. *Social Cognition*, **12**, 149–168.
- Fonseca, I. (1995). *Bury me standing: The Gypsies and their journey*. New York: Knopf.
- Hamilton, D. L., & Sherman, J. W. (1994). Stereotypes. In R. S. Wyer & T. K. Srull (Eds.), *Handbook of social cognition* (2nd ed., Vol. 1, pp. 1–68). Hillsdale, NJ: Erlbaum.
- Herr, P. M., Sherman, S. J., & Fazio, R. H. (1983). On the consequences of priming: Assimilation and contrast effects. *Journal of Experimental Social Psychology*, **19**, 323–340.
- Hewstone, M. (1994). Revising and change of stereotypic beliefs: In search of the elusive subtyping model. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 5, pp. 69–109). Chichester: Wiley.
- Higgins, E. T. (1996). Knowledge activation: Accessibility, applicability, and salience. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 133–168). New York: Guilford.
- Kahneman, D., & Miller, D. (1986). Norm theory: Comparing reality to its alternatives. *Psychological Review*, **93**, 136–153.
- Kruglanski, A. W. (1989). The psychology of being “right”: On the problem of accuracy in social perception and cognition. *Psychological Bulletin*, **106**, 395–409.
- Kunda, Z., & Oleson, K. C. (1995). Maintaining stereotypes in the face of disconfirmation: Constructing grounds for subtyping. *Journal of Personality and Social Psychology*, **68**, 565–579.
- Kunda, Z., & Oleson, K. C. (1997). When exceptions prove the rule: How extremity of deviance determines the impact of deviant examples on stereotypes. *Journal of Personality and Social Psychology*, **72**, 965–979.
- Lambert, A. J., Cronen, S., Chasteen, A. L., Lickel, B. (1996). Private vs

- public expressions of radical prejudice. *Journal of Experimental Social Psychology*, **32**, 437–459.
- Lambert, A. J., & Wyer, R. S. (1990). Stereotypes and social judgment: The effects of typicality and group heterogeneity. *Journal of Personality and Social Psychology*, **59**, 676–691.
- Lippmann, W. (1922). *Public opinion*. New York: Harcourt, Brace.
- Lombardi, W. J., Higgins, E. T., & Bargh, J. A. (1987). The role of consciousness in priming effects on categorization: Assimilation and contrast as a function of awareness of the priming task. *Personality and Social Psychology Bulletin*, **13**, 411–429.
- Macrae, C. N., & Bodenhausen, G. V. (2000). Social cognition: Thinking categorically about others. *Annual Review of Psychology*, **51**, 93–120.
- Manis, M., Biernat, M., & Nelson, T. F. (1991). Comparison and expectancy processes in human judgment. *Journal of Personality and Social Psychology*, **61**, 203–211.
- Manis, M., & Paskewitz, J. R. (1984). Judging psychopathology: Expectation and contrast. *Journal of Experimental Social Psychology*, **20**, 363–381.
- Martin, L. L. (1986). Set/reset: Use and disuse of concepts in impression formation. *Journal of Personality and Social Psychology*, **51**, 493–504.
- Martin, L. L., Seta, J. J., & Crelia, R. A. (1990). Assimilation and contrast as a function of people's willingness to expend effort in forming an impression. *Journal of Personality and Social Psychology*, **59**, 27–37.
- Maurer, K. L., Park, B., & Rothbart, M. (1995). Subtyping versus subgrouping processes in stereotype representation. *Journal of Personality and Social Psychology*, **69**, 812–824.
- Nelson, T. E., Acker, M., & Manis, M. (1996). Irrepressible stereotypes. *Journal of Experimental Social Psychology*, **32**, 13–38.
- Pratto, F., & Bargh, J. A. (1991). Stereotyping based on apparently individuating information: Trait and global components of sex stereotypes under attention overload. *Journal of Experimental Social Psychology*, **27**, 26–47.
- Pendry, L. F., & Macrae, C. N. (1996). What the disinterested perceiver overlooks: Goal-directed social categorization. *Personality and Social Psychology Bulletin*, **22**, 249–256.
- Piaget, J. (1952). *The origins of intelligence in children*. New York: Norton.
- Rothbart, M., & John, O. P. (1985). Social categorization and behavioral episodes: A cognitive analysis of the effects of intergroup contact. *Journal of Social Issues*, **41**(3), 81–104.
- Schwarz, N., & Bless, H. (1992a). Constructing Reality and Its Alternatives: An inclusion/exclusion model of assimilation and contrast effects in social judgment. In L. Martin & A. Tesser (Eds.), *The construction of social judgment* (pp. 217–245). Hillsdale, NJ: Erlbaum.
- Schwarz, N., & Bless, H. (1992b). Scandals and the public's trust in politicians: Assimilation and contrast effects. *Personality and Social Psychology Bulletin*, **18**, 574–579.
- Schwarz, N., Strack, F., & Mai, H. P. (1991). Assimilation and contrast effects in part-whole question sequences: A conversational logic analysis. *Public Opinion Quarterly*, **55**, 3–23.
- Seta, J. J., & Seta, C. E. (1993). Stereotypes and the generation of compensatory and non-compensatory expectancies of group members. *Personality and Social Psychology Bulletin*, **19**, 722–731.
- Skowronski, J. J., Carlston, D. E., & Isham, J. (1993). Implicit versus explicit impression formation: The differing effects of overt labeling and covert priming on memory and impressions. *Journal of Experimental Social Psychology*, **29**, 17–41.
- Stephan, W. G., & Stephan, C. W. (1996). *Intergroup relations*. Boulder, CO: Westview Press.
- Stapel, D. A., Koomen, W., & van der Pligt, J. (1996). The referents of trait inferences: The impact of trait concepts versus actor-trait links on subsequent judgments. *Journal of Personality and Social Psychology*, **70**, 437–450.
- Stapel, D. A., & Schwarz, N. (1998). The Republican who did not want to become President: An inclusion/exclusion analysis of Colin Powell's impact on evaluations of the Republican Party and Bob Dole. *Personality and Social Psychology Bulletin*, **24**, 690–698.
- Strack, F., Martin, L. L., & Schwarz, N. (1988). Priming and communication: The social determinants of information use in judgments of life-satisfaction. *European Journal of Social Psychology*, **18**, 429–442.
- Strack, F., Schwarz, N., Bless, H., Kübler, A., & Wänke, M. (1993). Awareness of the influence as a determinant of assimilation versus contrast. *European Journal of Social Psychology*, **23**, 53–62.
- Tajfel, H. (1981). *Human groups and social categories*. Cambridge, UK: Cambridge Univ. Press.
- Tetlock, P. E. (1983). Accountability and complexity of thought. *Journal of Personality and Social Psychology*, **45**, 74–83.
- Tourangeau, R., & Rasinski, K. (1988). Cognitive processes underlying context effects in attitude measurement. *Psychological Bulletin*, **103**, 299–314.
- Weber, R., & Crocker, J. (1983). Cognitive processes in the revision of stereotypic beliefs. *Journal of Personality and Social Psychology*, **45**, 961–977.
- Yzerbyt, V. Y., Coull, A., & Rocher, S. R. (1999). Fencing off the deviant: The role of cognitive resources in the maintenance of stereotypes. *Journal of Personality and Social Psychology*, **77**, 449–462.