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Authors

Sherman, Jeffrey W
Klein, Stanley B
Laskey, Adrienne
et al.

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Intergroup Bias in Group Judgment Processes: The Role of Behavioral Memories

Jeffrey W. Sherman

Northwestern University

and

Stanley B. Klein, Adrienne Laskey, and Natalie A. Wyer

University of California, Santa Barbara

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Two experiments examined the role of memory for behavioral episodes in judgments about in-groups and out-groups. Using a minimal group paradigm, participants read either positive or negative trait-relevant behaviors performed by group members. They then were asked to make judgments about the group's trait characteristics. Results demonstrated that, for groups described positively, judgments about the out-group but not the in-group were accomplished by retrieving from memory specific behaviors performed by group members. In contrast, for groups described negatively, judgments about the in-group but not the out-group were accomplished by retrieving specific behaviors performed by group members. These results suggest that basic differences in the way judgments about in-groups and out-groups are made contribute to the establishment and perpetuation of intergroup bias by decreasing the stability of negative in-group and positive out-group impressions and increasing the stability of positive in-group and negative out-group impressions. © 1998 Academic Press

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Address correspondence and reprint requests to Jeffrey W. Sherman, Department of Psychology, Northwestern University, 2029 Sheridan Rd., Evanston, IL 60208-2710, E-mail: sherm@nwu.edu, or to Stanley B. Klein, Department of Psychology, University of California, Santa Barbara, CA 93106, E-mail: klein@psych.ucsb.edu.

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Beliefs in the superiority of in-groups over out-groups are remarkably persistent, even in the face of disconfirming evidence. Contributing to this persistence is the expectation that in-groups will engage in more positive and fewer negative behaviors than out-groups (e.g., Howard & Rothbart, 1980; Maass, Milesi, Zabbini, & Stahlberg, 1995). This expectation has significant implications for intergroup perception. First, expected behaviors are perceived to have more diagnostic value for inferring underlying dispositions than unexpected behaviors (Trope, 1986). Second, perceivers require less evidence to accept an expected versus an unexpected conclusion (Trope & Liberman, 1996). Consistent with these biases, expected behaviors are more likely to yield dispositional inferences than unexpected behaviors (e.g., Bodenhausen & Wyer, 1985; Hastie, 1984; Maass et al., 1995). This research suggests that perceivers may place greater trust in evidence suggesting in-group superiority than inferiority, and may draw corresponding inferences more readily.

In fact, there is strong evidence for such intergroup biases in social perception. First, whereas positive in-group and negative out-group behaviors tend to be described in relatively broad language that implies dispositional stability, negative in-group and positive out-group behaviors tend to be described in rather narrow terms implying situational inconsistency (e.g., Hamilton, Gibbons, Stroessner, & Sherman, 1992; Maass & Arcuri, 1992; Maass, Salvi, Arcuri, & Semin, 1989). Second, whereas perceivers tend to attribute positive in-group and negative out-group behaviors to stable personality factors, they are more likely to attribute negative in-group and positive out-group behaviors to unstable situational factors (e.g., Hewstone & Jaspers, 1984; Pettigrew, 1979). These linguistic and attributional biases contribute to the persistence of positive in-group and negative out-group impressions and decrease the stability of negative in-group and positive out-group impressions.

Such expectancy-based biases may further be enhanced in intergroup contexts by motivational concerns having to do with social identity (e.g., Tajfel & Turner, 1979). Because perceivers both expect and desire the in-group to be more favorable than the out-group, they may set a particularly high threshold for accepting evidence to the contrary (see Trope & Liberman, 1996 for a review of expectancy- and motivation-based biases in hypothesis testing). This would further increase the tendency to draw dispositional inferences from positive in-group and negative out-group, but not negative in-group and positive out-group behaviors.

Intergroup Bias in the Judgment Process

These encoding biases have implications for other important aspects of intergroup perception. In this research, we examine differences in the kinds of information perceivers access to make judgments about in-groups and out-groups. In particular, we are interested in the extent to which in-group and out-group judgments are based on biographical memories about specific group members. One factor that determines the extent of such exemplar-based social judgments is

the degree to which trait-based dispositional target inferences have been made. In the initial stages of learning about a target, prior to the formation of stable impressions, judgments are often based on memory for specific episodes. However, once perceivers have developed and stored dispositional trait inferences, they are less likely to base social judgments on the activation of specific episodes (e.g., Hastie & Park, 1986; Klein, Loftus, Trafton, & Fuhrman, 1992; Sherman & Klein, 1994; Sherman, 1996). Instead, it appears that judgments rely on trait-based behavioral summaries that have either been formed on-line during encoding and stored (e.g., Hastie & Park, 1986; Klein et al., 1992; Sherman & Klein, 1994) or have been inferred from group membership (Sherman, 1996). This pattern has been shown to generalize across many different social judgment domains, including self-judgments (e.g., Klein & Loftus, 1993a; Klein et al., 1992), judgments about individual targets (e.g., Anderson & Hubert, 1963; Bargh & Thein, 1985; Fiske & Dyer, 1985; Hastie & Park, 1986; Klein et al., 1992; Park, 1986; Sherman & Klein, 1994), and, of greatest relevance, judgments about social groups (e.g., Sherman, 1996).

In the case of judgments about in-groups and out-groups, this research suggests that judgments about negative aspects of in-groups and positive aspects of out-groups will be based on particular group exemplars. Because dispositional inferences are less likely to be derived from negative in-group and positive out-group behaviors, relevant judgments may be expected to rely on the activation of behavioral information about particular group members. In contrast, because trait inferences are more likely to be formed based on positive in-group and negative out-group behaviors, judgments along these dimensions should be less likely to involve the activation of information about particular group exemplars.

These predictions may be seen as analogous to those of the linguistic intergroup bias (e.g., Hamilton et al., 1992; Maass & Arcuri, 1992; Maass et al., 1995; Maass et al., 1989). However, whereas the linguistic intergroup bias is concerned with perceivers' outward descriptions of particular acts, the proposed judgment bias focuses on the extent to which particular acts are spontaneously considered during the group judgment process.

These hypothesized differences in the extent to which in-group and out-group judgments are exemplar-based may have important implications for intergroup perception. Judgments that are based on the activation of specific behavioral memories have important properties that differ from those based on more abstract kinds of knowledge (e.g., trait-based impressions). In particular, because instance-based judgments typically rely on the most currently accessible behaviors in memory (which is often dependent on how recently the behaviors have been encountered), they are particularly flexible, changeable, and responsive to new evidence (Smith, 1990). As new behaviors are observed, instance-based judgments change accordingly. In contrast, more abstract kinds of knowledge evolve slowly as information accumulates. Newly encountered behaviors have little impact on trait-based impressions that summarize all relevant behavioral episodes known about the target (Smith, 1990). Thus, the application of particular behav-

ioral memories in judgments of negative aspects of in-groups and positive aspects of out-groups would reduce the consistency and stability of these impressions. These impressions would remain relatively open to revision should new behavioral evidence come to light. In contrast, because they do not involve the activation of specific group exemplars, judgments about positively described in-groups and negatively described out-groups would be less open to revision in the face of new behavioral evidence. Thus, differences in the kinds of information activated during judgments about in-groups and out-groups may contribute to the persistence of beliefs in in-group superiority.

Testing the Role of Behavioral Memories in Judgments About In-Groups and Out-Groups

To assess directly the role of behavioral memories in judgments about in-groups and out-groups, it is important to control both the amount and type of information that a person knows about these groups. As described above, differences in experience levels with groups has been shown to influence the nature of group judgment processes (Sherman, 1996). We controlled for group familiarity in the present research by using a minimal group paradigm in which in-group and out-group categorization was assigned on the basis of an arbitrary procedure (e.g., Tajfel, 1970). After estimating the number of dots on sheets of paper, participants were arbitrarily classified either as dot underestimators or dot overestimators. Participants were then provided with behaviors performed either by members of their in-group or out-group and were asked to form an impression of the corresponding group.

To examine the role of memories for specific behaviors in group judgments, we used a priming procedure that Klein and Loftus and their colleagues developed to assess the role of behaviors in judgments about the self and others (e.g., Klein & Loftus, 1990, 1993a, 1993b, 1993c; Klein, Loftus, & Burton, 1989; Klein et al., 1992; Schell, Klein, & Loftus, 1996; Sherman, 1996; Sherman & Klein, 1994). The procedure is based on the following reasoning: Suppose participants perform two tasks in succession. If, in the process of performing the first task, information relevant to the second task is made available, then the time required to perform the second task should be less than if that information had not been made available. Therefore, one way to assess the extent to which two tasks make available the same information is to examine the degree to which performing the first leads to a decreased latency in performing the second. The reduction in performance time should be greatest when the information overlap between the first and second task is relatively large, and should be least when the overlap is relatively small.

In the current experiments the procedure consisted of three types of tasks: a define task, which required participants to think of the definition of a trait (e.g., ''think of the meaning of the word *intelligent*'') a describe task, which required participants to decide whether the trait was consistent with their impression of the target group (e.g., ''does the word *intelligent* describe overestimators''); and a recall task, which required participants to remember a specific instance in which a

member of the target group manifested the trait (e.g., ''remember a specific incident in which an overestimator behaved in an *intelligent* manner''). Each trial consisted of performing two of these tasks—an initial task and a target task—in succession on the same trait word. In these experiments, the target task was always a recall task. For some participants, this task was preceded by an initial describe task, and for other participants, the initial task was a define task.

If judgments about a group's traits are based on the retrieval of trait-relevant behavioral memories, then a describe task should be more facilitating than a define task to the performance of a subsequent recall task (Klein, Babey, & Sherman, 1997; Klein & Loftus, 1993a; see also Klein et al., 1989; Klein et al., 1992; Sherman, 1996). This is because performing the describe task requires activating memories of behavioral episodes, whereas generating a definition does not (see Klein et al., 1997; Klein & Loftus, 1993a; Klein et al., 1992; Sherman & Klein, 1994, for evidence in support of these assumptions). A describe task should therefore be more beneficial to the performance of a subsequent recall task, because retrieving a behavior should be faster if behaviors recently have been activated. On the other hand, if judgments about a group's traits do not rely on the activation of specific behaviors, then performing a describe task should not lead to a greater reduction in the time required to perform a subsequent recall task than would result from first performing a define task. This is because behaviors would not have been activated to perform the initial describe task.

EXPERIMENT 1

In Experiment 1, we presented participants with positively described in-groups or out-groups. We predicted that judgments about the out-groups would be based on the retrieval of specific behaviors performed by individual group members. Accordingly, the time required to recall a specific behavior should be shorter following an initial describe task than an initial define task when these types of judgments are made. In contrast, judgments about positively described in-groups should be made without reference to specific group behaviors. Therefore, the time required to recall a specific behavior should be equally fast following initial describe and define tasks.

Method

Participants. Participants were 80 undergraduates from the University of California, Santa Barbara subject pool who participated for partial course credit. Participants were tested in groups of 1 to 4 in sessions lasting approximately 40 min.

Materials and design. Three sheets of paper, each of which contained a different random dot configuration, were created. Participants were asked to estimate the number of dots appearing on each sheet. After making their estimates, participants were randomly assigned either to the group ''dot overestimators'' or the group ''dot underestimators,'' using a procedure similar to that developed by Gerard and Hoyt (1974; see also Howard & Rothbart, 1980). This assignment served as the basis for in-group/out-group categorization.

All participants saw the same list of 7 *intelligent* and 7 *friendly* behaviors. On scales that ranged from 0 (not at all intelligent, friendly) to 9 (very intelligent, friendly), pilot testing confirmed that the intelligent behaviors were seen as intelligent ($M = 6.92$) and the friendly behaviors were seen as

friendly ($M = 7.19$). Half of the participants were told that the set of behaviors were performed by 14 different members of their in-group, and half were told the behaviors were performed by 14 different members of the out-group.

On the test trial, participants were asked to perform either an initial describe or define task. For the describe task, participants decided whether the stimulus trait provided a general description of the group of people they had learned about; for the define task, participants thought of a definition for the presented stimulus trait. Following the initial task, all participants performed a recall target task, which required them to retrieve from memory a specific instance in which a group member's behavior exemplified the stimulus trait. The initial and target task were performed in reference either to the trait *intelligent* or to the trait *friendly.*[1] In summary, the experiment was a 2 (in-group vs out-group) $\times$ 2 (friendly vs intelligent) $\times$ 2 (initial task: define vs describe) between-subjects design.

Procedure. At the start of the experiment, participants were introduced to the dot estimation procedure with instructions similar to those used by Howard and Rothbart (1980): ''Today you will be participating in several different studies examining how people make judgments. The first study is concerned with how people make estimates of the number of objects they have seen.''

Participants then were presented with three sheets of paper, each containing a different random configuration of dots. For each sheet, they were asked to estimate the number of dots appearing on the page, and to enter their estimates into the computer. Twenty seconds after participants entered their third estimate, the computer informed them either that they were an ''OVERESTIMATOR'' or an ''UNDERESTIMATOR.''

Upon completion of the dot estimation task, the instructions informed participants that ''Past research indicates that, given the task of estimating how many objects they have seen, some people tend to consistently overestimate the correct number and some people tend to consistently underestimate the correct number. While psychologists do not place any value judgment on whether it is better to be an overestimator or an underestimator, research has suggested that whether one is an overestimator or an underestimator tends to reveal something fundamental about the psychological characteristics and personality of a person.''

Participants were next told that they would see a list of behaviors that had been obtained from a previous study examining the behavior of overestimators and underestimators. Half the participants were told the behaviors were performed by members of their in-group, while half were told the behaviors were performed by the out-group. Participants were instructed to form an impression about the target group (in-group or out-group) based on the behaviors presented. The behaviors were presented on a microcomputer at the rate of one every 6 s.

After reading the behaviors, participants were trained to perform the define, describe, and recall tasks. For these practice trials, participants were instructed to think of a close friend, and to use that person as the target for the describe and recall tasks. Each trial consisted of performing two tasks in succession: an initial task and a target task on a trait unrelated to *intelligence* or *friendliness.* For the define task, participants thought of the definition of the trait; for the describe task, participants determined whether the trait described their friend; and for the recall task, participants remembered an instance in which their friend acted in a manner consistent with the trait. Participants performed all six different combinations of initial task and target task so that they would not expect any particular sequence during the test trial.

Once the practice trials were completed, participants were given a single test trial in which they were asked to refer back to the target group they had learned about during the impression formation part of the experiment. A trial began with the appearance on the computer screen of one of the following cues for the initial task: DEFINE (define task) or DESCRIBES OVERESTIMATOR (UNDERESTIMATOR) (describe task). A stimulus trait appeared beneath the cue 2 s later. The cue and stimulus trait remained on the screen until the participant indicated by pressing the space bar that

[1] We did not request that participants report their responses during the experimental trials; rather, we instructed them to generate responses to the task questions in their heads. Klein and Loftus (1993a, 1993c) provide a detailed discussion of our reasons for adopting this procedure and present research demonstrating the efficacy of the technique.

he or she had completed the initial task. After a 2-s pause, the cue for the recall-target task—RECALL GROUP—appeared on the screen above the same stimulus trait, and a timer started in the computer. This cue and the stimulus trait remained on the screen until the participant signaled, by pressing the space bar, that he or she had completed the target task. For half of the participants, the trait used in the test trial was *intelligent,* and for the other half, the trait was *friendly.*[2]

Immediately after the test trial participants were asked to write the specific *intelligent* or *friendly* behavior they recalled when performing the recall task. Participants who failed to report accurately a stimulus behavior were removed from the data set.

Results

We set a cutoff point to exclude from the data set participants whose response latencies were longer than 10 s. This resulted in the removal of 2 participants. Additionally, 11 participants who failed to write down a specific behavior after completing the recall target task were removed from the data set. The analyses were based on the data of the remaining 67 participants.[3]

We performed a 2 (in-group vs out-group) $\times$ 2 (friendly vs intelligent) $\times$ 2 (initial task: define vs describe) between-subjects analysis of variance (ANOVA) on the recall target task response latencies. The analysis yielded a significant interaction between initial task and target group, $F(1, 59) = 7.33$, $p < .01$ (see Fig. 1). A planned comparison indicated that for out-group members, participants took significantly less time to recall a positive behavior following an initial describe task ($M = 3846$ ms) than following an initial define task ($M = 5538$ ms), $F(1, 33) = 7.18$, $p < .05$. For the in-group, by contrast, the time required to recall a positive behavior did not differ reliably as a function of initial task (describe task $M = 5207$; define task $M = 4510$ ms), $F(1, 30) = 1.12$, $p > .20$. The same pattern of data was present for both the friendly and intelligent trait judgments, and no other main effects or interactions approached significance.[4]

[2] To test whether our manipulation of participants into in-groups and out-groups was successful, a group of University of California, Santa Barbara undergraduates ($N = 32$) were run through the procedure just described with one exception: Immediately after reading the list of behaviors about either the in-group or the out-group, participants were asked to rate the similarity of the target group members using a 9-point scale ranging from *extremely dissimilar* (1) to *extremely similar* (9). The experiment concluded once participants made their rating of group variability. We reasoned that if our minimal group manipulation was effective, an OHE should be evident in participants' group variability ratings—participants should rate the out-group as more homogeneous than the in-group (A number of investigators have obtained OHE's using a minimal group paradigm (e.g., Mackie, Sherman, & Worth, 1993; Judd & Park, 1988; Mullen & Hu, 1989), although not all have been successful (e.g., Ostrom & Sedikides, 1992)). Consistent with these predictions, analysis of participants' ratings revealed that members of the out-group were perceived as more similar to one another than were members of the in-group, (Ms = 7.06 and 6.00, for the out-group and in-group, respectively, $t(30) = 2.18$, $p < .05$).

[3] Of the 11 participants who failed to recall a behavior, 4 wrote nothing and 7 wrote the name of the trait for which information was being requested (e.g., *friendly*). These participants may have misunderstood the instruction to report a particular behavior they had read.

[4] In interpreting these results, it is important to remember that the recall tasks following the define conditions provide *baseline* estimates of how long it takes to retrieve in-group and out-group behaviors. From these baseline data, it would appear that it takes less time to recall a positive in-group than a positive out-group behavior. However, in order to determine the extent to which specific behaviors are spontaneously activated during in-group and out-group judgments, it is necessary to

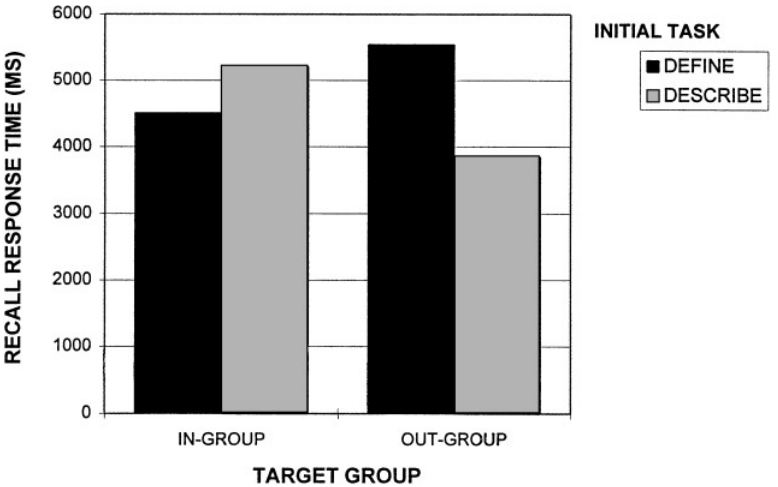

FIG. 1. Mean recall target task response latencies (in milliseconds) as a function of initial task (define or describe) and target group (in-group or out-group): Experiment 1.

Discussion

These results are consistent with the predicted intergroup bias in the group judgment process. When the out-group was the target, recall latencies were faster following an initial describe task than an initial define task. This demonstrates that judgments about the out-group were made by accessing from memory behaviors performed by group members. By contrast, when the target was an in-group, there was no reliable difference in recall latencies following a describe or define task. This suggests that these judgments were based on more abstract kinds of knowledge (e.g., stored trait summaries), and not on specific behaviors.

EXPERIMENT 2

Experiment 1 provided partial support for our hypotheses by demonstrating that, when participants were presented with positive descriptions of a group, judgments were based on the retrieval of specific behaviors only when the group was an out-group. We also hypothesized in-group/out-group differences in the judgment process when the groups are described in negative terms. In particular, we predict that judgments of a negatively described in-group, but not a negatively described out-group, will rely on the retrieval of specific behaviors. Experiment 2 tested this hypothesis. The experiment was identical to Experiment 1 with the

examine what effect an initial describe judgment task has on this baseline retrieval time. If behaviors are being activated during the judgment task, then retrieval times should be facilitated following a describe task as compared to the baseline condition. This is exactly what happened for judgments of the out-group, but not the in-group. The same logic applies when interpreting the results from Experiment 2.

exception that the group information presented to participants was negative instead of positive.

Method

Participants. Participants were 88 undergraduates from the University of California, Santa Barbara subject pool. Participants were tested in groups of 1 to 4 in sessions lasting approximately 40 min.

Materials, design, and procedure. The materials, design, and procedure were the same as in Experiment 1, except that the stimulus list consisted of 7 *unintelligent* and 7 *unfriendly* behaviors, and the define, describe, and recall tasks required subjects to consider these traits in their responses. On scales that ranged from 0 (not at all intelligent, friendly) to 9 (very intelligent, friendly), pilot testing confirmed that the unintelligent behaviors were seen as unintelligent ($M = 2.67$) and the unfriendly behaviors were seen as unfriendly ($M = 2.50$).

Results and Discussion

Participants whose response latencies were longer than 10 s were removed from the data set. This resulted in the removal of 4 participants. Additionally, 7 participants who failed to write down a specific behavior after completing the recall task were removed from the data set. The analyses were based on the data of the remaining 77 participants.[5]

We predicted that, when experiences with the in-group and out-group are negative, only in-group judgments will be based on the retrieval of specific behaviors performed by group members. Therefore, for in-group members, recall task times should be shorter following an initial describe task than an initial define task. By contrast, for out-group members, recall task times should be equal following initial describe and define tasks.

We performed a 2 (in-group vs out-group) $\times$ 2 (unfriendly vs unintelligent) $\times$ 2 (initial task: define vs describe) between-subjects analysis of variance (ANOVA) on the recall target task response latencies. This analysis yielded a marginally reliable interaction between initial task and target group, $F(1, 69) = 3.25$, $p < .08$ (see Fig. 2). Planned comparisons revealed that, as predicted, in-group participants were faster to recall a behavior following an initial describe task ($M = 4831$ ms) than following an initial define task ($M = 6146$ ms), $F(1, 41) = 4.16$, $p < .05$. By contrast, for the out-group, the time required to recall a behavior was not differentially facilitated by the previous performance of a describe ($M = 5347$ ms) or define task ($M = 4760$ ms), $F(1, 32) = .64$, $p > .40$. The same pattern of data was present for both the unfriendly and unintelligent trait judgments, and no other main effects or interactions approached significance.

GENERAL DISCUSSION

The goal of this research was to examine the role of behavioral memories in judgments about in-groups and out-groups. We found evidence for an intergroup bias in the processes by which people make these judgments. Whereas judgments about negatively described in-groups and positively described out-groups in-

[5] All 7 participants who failed to recall a behavior wrote the name of the trait for which information was being requested.

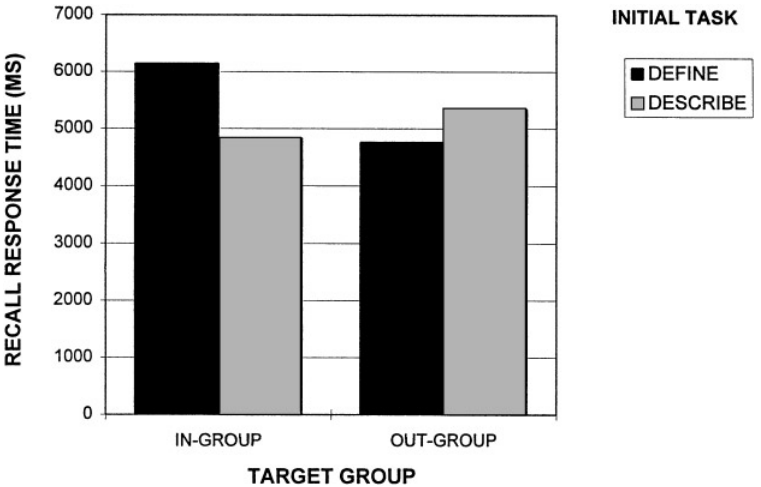

FIG. 2. Mean recall target task response latencies (in milliseconds) as a function of initial task (define or describe) and target group (in-group or out-group): Experiment 2.

volved the retrieval of specific group behaviors, judgments about positively described in-groups and negatively described out-groups did not. Rather, in the absence of behavioral activation, it would seem that these latter judgments would necessarily have relied on more abstract kinds of knowledge (e.g., stored trait inferences; see Hastie & Park, 1986; Klein & Loftus, 1993a; Klein et al., 1992; Klein, Sherman, & Loftus, 1996; Sherman, 1996; Sherman & Klein, 1994). These processing differences may play a vital role in the perpetuation of intergroup biases by allowing for high flexibility in negative impressions of in-groups and positive impressions of out-groups. Because these kinds of impressions are behavior-based, they may be changed relatively easily if new evidence is received. In contrast, positive impressions of in-groups and negative impressions of out-groups appear to be less subject to alteration.

Bases of the Intergroup Processing Bias

Our explanation for the intergroup processing bias has emphasized the expectancy and motivation-based encoding biases that occur as perceivers learn about in-groups and out-groups. People perceive positive in-group and negative out-group behaviors as more diagnostic of underlying dispositions (Maass & Arcuri, 1992; Maass et al., 1989; Trope, 1986) and require less evidence of such behaviors to make corresponding trait inferences (Hewstone & Jaspers, 1984; Pettigrew, 1979; Trope & Liberman, 1996). As a result, when making judgments about relevant group attributes, perceivers will be more likely to have stored trait summaries at their disposal, and will be less likely to rely on biographical memories for specific group behaviors.

Although this account is theoretically plausible, we did not directly measure intergroup encoding biases or differential possession of and/or use of trait-based dispositional impressions in our experiments. Certainly, the data suggest that perceivers possessed and relied on such abstract knowledge when making judgments about positive in-groups and negative out-groups. However, we cannot conclude that participants did not also have and use such abstract knowledge when making judgments about negative in-groups and positive out-groups. That is, the activation of biographical memories in these conditions may have occurred in addition to, and not instead of, the use of abstract trait knowledge.

Also, the possibility remains that our results were not based solely on biased encoding processes. The kinds of expectancy- and motivation-based biases we have described may also arise during the judgment task itself. In particular, if a judgment that an in-group is negative or that an out-group is positive violates an expectancy of in-group superiority, then perceivers may set a particularly high threshold for accepting such a conclusion (e.g., Trope & Liberman, 1996). As a result, participants may have felt the need to ''double check'' such judgments by referring back to the original behavioral data. In contrast, judgments that in-groups are positive or that out-groups are negative may not have required an investigation into the behavioral evidence. Note that this explanation does not require the assumption of intergroup differences in the extent to which dispositional inferences have been formed and stored. Instead, the effects could be due to differences in the extent to which perceivers feel the need to supplement their trait impressions with behavioral memories.

As in the case of encoding processes, social identity concerns may further bias such retrieval effects (Trope & Liberman, 1996). If perceivers are motivated against making negative judgments about in-groups and positive judgments about out-groups, then they may carefully scrutinize the original behavioral data for disconfirming evidence when they make their judgments. In contrast, perceivers may not be concerned about making relatively unexamined positive in-group and negative out-group judgments. As a result, these judgments would not involve the activation of behavioral memories.

Despite these possibilities, we believe that our data are best explained by representational differences arising from biased encoding processes. There is an extensive body of work demonstrating that exemplar-based judgments are more likely to occur when dispositional, trait-based impressions are weak or unformed, and that, as impressions become more stable and dispositional in nature, exemplar use decreases (e.g., Anderson & Hubert, 1963; Bargh & Thein, 1985; Fiske & Dyer, 1985; Hastie & Park, 1986; Klein & Loftus, 1993a; Klein et al., 1992; Park, 1986; Sherman, 1996; Sherman & Klein, 1994). In light of this research, the presence of exemplar-based processes in judgments about negative in-groups and positive out-groups but not positive in-groups and negative out-groups strongly suggests that impressions of the latter groups were more abstract and trait-based than impressions of the former groups.

Implications for Bias in the Minimal Group Paradigm

The results of these experiments may help to explain findings of intergroup bias in minimal group settings (for a review, see Messick & Mackie, 1989). Social identity theory (e.g., Tajfel & Turner, 1979) suggests that such effects are due to participants' motivation to enhance self-esteem by elevating the in-group and derogating the out-group. However, it is unclear exactly how people accomplish these goals. Our research suggests that intergroup bias may be much more subtle and complex than a perceiver's simple conscious desire to say and do good things for in-groups and bad things for out-groups. Instead, it appears that there are basic differences in the cognitive processes involved in in-group and out-group judgments, even when perceivers are equally (un)familiar with the groups. In our experiments, participants were presented with the same information about in-groups and out-groups and did not know any members of the groups. Nevertheless, participants demonstrated a reliance on behavioral memories for judgments about negative in-groups and positive out-groups, but not for judgments about positive in-groups and negative out-groups. These results show that, even when in-groups and out-groups are described identically, the judgment process produces disparities in group evaluations. By increasing the breadth of positive in-group and negative out-group impressions, and by decreasing the breadth of negative in-group and positive out-group impressions, these processing differences may have contributed to previous demonstrations of bias in the minimal group paradigm on such dependent measures as personality assessment, performance evaluation, and resource distribution (e.g., Messick & Mackie, 1989).

Implications for Models of the Out-Group Homogeneity Effect

Research on the out-group homogeneity effect (OHE) has been concerned with the role of behavioral memories in intergroup judgments for some time (for recent reviews, see Hamilton & Sherman, 1994; Mackie et al., 1993; Park, Judd, & Ryan, 1991). Many researchers have argued that perceptions of variability are directly tied to the extent to which group behaviors are activated during the judgment process (e.g., Judd & Park, 1988; Linville, Fischer, & Salovey, 1989; Park et al., 1991; Smith & Zarate, 1992). The more different group behaviors retrieved, the more diverse the informational base for the judgment, and the greater the perceived variability. For a variety of reasons, in-group judgments of variability are thought to be more dependent on group behaviors than out-group judgments, thereby producing the OHE (for reviews, see Hamilton & Sherman, 1994; Mackie et al., 1993; Park et al., 1991).

Although our research was not explicitly designed to test different models of the OHE (we asked for central tendency, not variability judgments during the describe task), our results appear to be inconsistent with this reasoning. The results of Experiment 1 demonstrated that out-group, but not in-group judgments involved the activation of particular group behaviors from memory. Nevertheless, the out-group was perceived to be more homogeneous than the in-group on subsequently collected measures (see Footnote 2). This suggests that the activa-

tion of group behaviors during the judgment process does not necessarily impart greater perceived variability. Moreover, our results demonstrated that in-group and out-group judgments may each be more exemplar-based than the other, depending on the valence of the group characteristics to be judged. Our research benefitted from the use of a priming procedure that allowed for direct measurement of the extent of behavioral activation during the judgment process. In contrast, previous work on the OHE has relied primarily on correlational evidence (e.g., Judd & Park, 1988; Mackie et al., 1993; Park & Judd, 1990) and computer simulations (e.g., Linville et al., 1989). Still, the possibility remains that our results would have been different had we requested variability instead of central tendency judgments from our participants. At the least, our results suggest that the relationship between behavioral activation during judgments and perceived variability is more complicated than has been previously acknowledged, and raises some important questions for future research.

Conclusion

People's expectancies that their in-groups are superior to out-groups tend to be self-perpetuating. This is due in part to the way that perceivers deal with evidence that is inconsistent with this belief. Such inconsistencies are often isolated, situationalized, or simply explained away (e.g., Hamilton et al., 1992; Hewstone & Jaspers, 1984; Maass & Arcuri, 1992; Maass et al., 1989; Maass et al., 1995; Pettigrew, 1979). As a result, the impact of such information is minimized. In our research, we have identified an additional means through which beliefs in in-group superiority may be maintained in the face of disconfirming evidence. By differentially relying on memories for specific expectancy-consistent and -inconsistent events, perceivers may influence the extent to which in-group and out-group impressions are likely to be altered by new evidence. In particular, unexpected (and unwanted) impressions of out-group superiority are marginalized through these processes. Although many different forms of intergroup bias have been observed, to our knowledge this is the first demonstration of basic differences in the cognitive processes that take place as perceivers are formulating judgments about in-groups and out-groups. Our data demonstrate that perceivers gather different informational data to support their intergroup judgments, depending on the implications of the to-be-made judgments. It seems highly unlikely that perceivers' have any conscious intention to reinforce their beliefs through these processes. Rather, these biases appear to be quite implicit in nature. Though discouraging, such subtle effects are an impressive demonstration of the conviction with which perceivers cling to their beliefs of in-group superiority.

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