# Priming Us and Them: Automatic Assimilation and Contrast in Group Attitudes

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Social judgment theory holds that a person's own attitudes function as reference points, influencing the perception of others' attitudes. The authors argue that attitudes themselves are influenced by reference points, namely, the presumed attitudes of others. Whereas exposure to a group that acts as a contextual reference should cause attitude assimilation, exposure to a group that acts as a comparative reference should cause attitude contrast. In Study 1, participants subliminally primed with their political ingroup or outgroup endorsed more extreme political positions than did controls. Study 2 demonstrated that prime types known to uniquely facilitate assimilation and contrast enhanced the polarization effect in the ingroup and outgroup conditions, respectively. Study 3 established an important boundary condition for whether group salience produces attitude assimilation or contrast by showing that perceived closeness to the elderly moderates the direction and strength of the group priming effect. The results suggest that the transition from assimilation to contrast occurs when a group ceases to function as a context and becomes a comparison point. Implications for social judgment theory, assimilation and contrast research, and conflict escalation are discussed.

*Keywords:* attitudes, reference points, assimilation, contrast, intergroup conflict

Most of us think of attitudes as enduring, consistent aspects of ourselves and others: Part of what defines us is that we like our hometowns, hate certain sports teams, and have specific patterns of opinions on political issues. In reality, however, attitudes are more socially malleable. Our opinions and feelings can be influenced, often outside of our awareness, by significant others, communication partners, and even total strangers (Baldwin & Holmes, 1987; Davis & Rusbult, 2001; Higgins & Rholes, 1978; Lowery, Hardin, & Sinclair, 2001). Indeed, some of the earliest research on attitudes centered on such social influences, exploring how an individual's publicly expressed views and privately held opinions conform to the judgments and opinions of ingroup members (e.g., Asch, 1955; Deutsch & Gerard, 1955; Sherif, 1935; see Eagly & Chaiken, 1993; Turner, 1991, for reviews).

Yet as the cognitive revolution in psychology took shape, attitudinal research turned increasingly inward to examine the cognitive processes by which attitude formation and change can occur (e.g., Chaiken, 1980; Fishbein & Ajzen, 1981; McGuire, 1968; Petty & Cacioppo, 1981; see Chaiken, Wood, & Eagly, 1996, for a review). This focus on attitudes at the intraindividual level

allowed social psychologists to develop a much deeper understanding of attitude change, but it also shifted focus away from exploring interpersonal and intergroup influences on attitudes. The dominant conceptualization of attitude emerged as a construct independent of social context—one measured at a convenient Time 1, challenged by a persuasive appeal, and measured again at Time 2. Although theoretically and empirically fruitful, a more dynamic and distinctly social account seems necessary to fully explain how attitudes shift in a social world in which interpersonal and intergroup relations are ubiquitous.

## Attitude Assimilation

Despite the cognitive revolution, some researchers continued to explore the more social (i.e., interpersonal or intergroup) aspects of attitude change (e.g., Davis & Rusbult, 2001; Kawakami, Dovidio, & Dijksterhuis, 2003; Sinclair, Lowery, Hardin, & Colangelo, 2005). Nonetheless, this work has tended to mirror that of earlier social influence theorists in focusing on unidirectional change—that is, attitude change toward (rather than away from) the perceived attitude of another person or group. For instance, Kawakami et al. (2003) demonstrated that participants primed with the social category *elderly* espoused more conservative attitudes, presumably because of the stereotype that older people are relatively conservative. In the interpersonal domain, Davis and Rusbult (2001) found that people tend to shift their attitudes to align with those of their significant others. The general picture of social influence thus remains one of conformity and alignment: Attitudes tend to assimilate toward those in one's immediate social environment (see Hardin & Higgins, 1996; Mackie & Queller, 2000, for related reviews).

A broader consideration of intergroup dynamics suggests that this picture—although important in its emphasis on the flexible

nature of attitudes in social contexts—is incomplete. In conflict situations, ingroup and outgroup members do not naturally tend to align with each others' positions. Before a presidential election, Democrats and Republicans do not increasingly see eye to eye as media coverage of the election increases. On the contrary, such situations seem characterized by attitude polarization, not alignment. Contrast, as well as assimilation, seems necessary to characterize attitude change in intergroup settings. Accordingly, the present research explores how the mere salience of an ingroup or an opposing group might influence attitudes in a directional manner, causing either assimilation or contrast.

## Reference Points in Social Judgment Theory

The notion that one's own attitudes and one's perceptions of others' attitudes are fundamentally linked can be traced to social judgment theory. Sherif and Hovland (1961) conceptualized attitudes as psychological reference scales divided into three parts: a *latitude of acceptance*, a *latitude of noncommitment*, and a *latitude of rejection*. The latitude of acceptance comprises those positions that one considers acceptable, including one's own position. The latitude of noncommitment includes those positions just beyond the latitude of acceptance, which are neither accepted nor rejected. The latitude of rejection encompasses those viewpoints still further from one's own position, which are considered unacceptable.

According to social judgment theory, one's own position serves as an important anchor, or reference point, in social perception. When a communicated position falls within one's latitude of acceptance, it is assimilated toward the reference point of one's own attitude; in other words, the true difference between one's own and the other's attitude is underestimated. When a communicated position falls within the latitude of rejection, contrast occurs instead, and the advocated position is seen as farther from the person's own attitude than it actually is. In short, a person's own attitude can function as a reference point that influences perceptions of others' positions.

## Salient Social Entities as Reference Points

Implicit in social judgment theory is, again, the intuitive idea that attitudes are stable and consistent across time and contexts: Our own attitudes serve as stable anchors, whereas our perceptions of others' attitudes are flexible. However, the literature on social influence and attitude assimilation discussed above clearly shows that our own attitudes are in fact often influenced by other people. We therefore propose that attitudes may themselves be influenced by reference points—in this case, the presumed attitudinal positions of salient individuals or groups.

If such salient social entities do indeed function as reference points for our own attitudes, then some reference points should lead to assimilation, whereas others should lead to contrast. What determines when assimilation versus contrast occurs? We reasoned that one important factor may be whether the salient entity is an "accepted" one, such as an ingroup, or a "rejected" one, such as an oppositional (rather than merely irrelevant) outgroup. Thus, a salient ingroup should produce assimilation in the direction of the ingroup's positions, causing heightened agreement with ingroup positions and heightened disagreement with outgroup positions (i.e., attitude polarization). This prediction is consistent with most

existing research on how opinions and evaluations shift in response to salient social others; that is, beliefs and attitudes tend to assimilate in the direction of a primed social entity (e.g., Baldwin & Holmes, 1987; Kawakami et al., 2003; Lowery et al., 2001). However, this research does not distinguish between accepted and rejected social entities. It thus implies that any salient outgroup should also trigger assimilation, causing heightened agreement with outgroup positions and heightened disagreement with ingroup positions (i.e., attitude depolarization). In contrast, we argue that a salient, oppositional outgroup should produce contrast away from the presumed positions of the outgroup, thereby heightening disagreement with the outgroup and agreement with the ingroup. In other words, we hypothesized that priming an accepted social entity should lead to attitude polarization through an assimilation process, whereas priming a rejected social entity should lead to attitude polarization through a contrast process.

This argument is consistent with considerable research in the intergroup domain suggesting that individuals dislike and strive to distance themselves from oppositional outgroups on a variety of dimensions (David & Turner, 1996; Doise, 1969; Haslam et al., 1996; Hewstone, Rubin, & Willis, 2002; Messick & Mackie, 1989; Tajfel & Turner, 1986). To date, however, evidence of such differentiation in beliefs and attitudes has been limited to "conscious" persuasion paradigms in which participants are aware of, and can explicitly consider, the information presented and its source (e.g., Carver & Humphries, 1981; David & Turner, 1996; Haslam et al., 1996). In such situations, individuals may use the group membership of the source as a heuristic (e.g., "If outgroup, then disagree") that guides any subsequent information processing, leading to less agreement with outgroup sources relative to neutral or ingroup sources (see also Ledgerwood, Chaiken, Gruenfeld, & Judd, 2006; Mackie & Queller, 2000). Thus, existing intergroup research does not directly speak to whether the mere salience of a rejected social entity might act as a reference point for one's own attitudes, producing contrast outside of conscious awareness.

Although researchers have yet to pull apart the potentially varied automatic effects of salient groups on attitudes, studies in several other domains suggest that such an approach could prove fruitful. For example, a recent set of experiments on automatic assimilation and contrast in behavior suggests that spontaneous contrast away from a primed group can occur, at least in the domain of action. Spears, Gordijn, Dijksterhuis, and Stapel (2004) found that when an *us–them* intergroup context was made salient, participants contrasted their behavior away from a primed outgroup. For instance, although participants primed with the group *busy business people* completed a subsequent questionnaire more quickly than did participants in a control condition (showing a classic assimilation effect in behavior toward the primed construct "busy"; see Dijksterhuis & Bargh, 2001), the effect reversed when participants' ingroup identity was made salient. Specifically, after filling out a scale concerning their identification with other University of Amsterdam psychology students, primed participants waited longer before leaving to look for a missing experimenter than did controls (Spears et al., 2004, Study 2). The authors argued that once the us–them context was cued (by making both the student ingroup and an otherwise irrelevant outgroup salient at the same time), an intergroup comparison was triggered that, in turn, produced a contrast effect on behavior.

Similar results have been obtained in research that explored the effects of social comparisons on self-perception. Although comparing oneself with an ingroup member typically leads self-judgments (e.g., one's skill at manual labor; self-perceptions of competence and success) to assimilate toward those of the primed target, comparing oneself with an outgroup member (or with an ingroup member after a competitive mindset has been activated) causes one to perceive oneself as less like the primed target (Mussweiler & Bodenhausen, 2002; Stapel & Koomen, 2005). Here again, contrast has been found to occur instead of assimilation when the salient target individual is perceived in a competitive or antagonistic way. These studies differ from the present framework in that they focused on individuals (rather than groups) and involved explicit consideration of a novel target (participants read several sentences describing a fictitious person and, in some cases, were asked to make explicit judgments about the person before rating themselves along the same dimensions, rather than merely being primed with a known group). Moreover, they examined self-perceptions of abilities and traits rather than attitudes. Although Festinger (1954) included both abilities and opinions in his original formulation of social comparison theory, the bulk of empirical literature has focused on how people socially compare in order to obtain information and to feel good about their abilities and personal attributes (e.g., Dunning & Hayes, 1996; Taylor & Lobel, 1989; see Collins, 1996; Wood, 1989, for reviews). The smaller literature on social comparison and opinions has remained largely separate (e.g., Goethals & Nelson, 1973; Gorenflo & Crano, 1989; Kruglanski & Mayseless, 1987), and it is unclear that findings in one area necessarily generalize to the other. Nevertheless, combined with the behavioral studies discussed previously, research on the moderating impact of competition on self-perception in a social comparison setting provides some preliminary support for our prediction that an us–them or accepted–rejected distinction may play a key role in triggering spontaneous assimilation versus contrast in attitudes.

## Assimilation and Contrast in Person Perception

Although the possibility of contrast has been overlooked in the recent literature on attitude assimilation, assimilation and contrast processes have been studied hand-in-hand in other domains. Most notably, research in person perception extended Sherif and Hovland's (1961) early treatment of reference points to understand how primed constructs, such as traits or specific exemplars, influence judgments about a novel social target. The resulting standard-of-comparison model suggests that any salient concept can serve as a reference point, against which an applicable target is then judged (e.g., Herr, 1986; Herr, Sherman, & Fazio, 1983; Stapel, Koomen, & van der Pligt, 1997; see Moskowitz, 2004, for a review). It is important to note that particular features of the prime determine whether assimilation or contrast occurs. As a prime becomes more inclusive, abstract, and moderate (e.g., a general trait such as "jolly"), it is more likely to promote assimilation; as it becomes narrower, more concrete, and more extreme (e.g., a specific exemplar such as *Santa Claus*), it is more likely to cause contrast (Ford, Stangor, & Duan, 1994; Moskowitz & Skurnik, 1999; Stapel & Koomen, 2001; Stapel, Koomen, & van der Pligt, 1996; see also Schwarz & Bless, 1992).[1]

To illustrate, Stapel and colleagues (1996) led participants to infer broad behavioral labels or specific actor-trait links from sentences by varying the specificity of the information presented (e.g., whether a sentence describing a trait-implying action was accompanied by a photograph of the actor supposedly performing the action). Participants were next presented with a paragraph about a novel social target, *Donald*, engaging in ambiguous behavior, and were then asked to form an impression of him. Participants who had read the first sentences under memorization instructions (and who were therefore unaware of the potential influence of their inferences on their later judgments) assimilated Donald's behavior to the activated inferences if broad behavior labels had been inferred, but contrasted his behavior away if specific actor-trait links had been inferred instead. According to the authors, broad behavior labels seemed to provide a wide, inclusive framework, within which Donald's behavior could be understood, whereas the narrower actor-trait links functioned as anchors against which Donald's behavior was compared and contrasted. A similar effect has been observed on automatic behavior: Broad, abstract stereotypes promote assimilation of behavior to the primed construct, whereas narrow, concrete exemplars cause behavior to contrast away from the primed construct (Dijksterhuis et al., 1998; Dijksterhuis, Spears, & Lépinasse, 2001).

In the present research, we introduce this framework to the domain of attitudes, in order to better understand how salient social groups should exert an automatic influence on agreement with group-relevant positions. It is unclear whether a perspective developed in the areas of person perception, behavior, and the self would help elucidate how group salience affects attitudes. Intuition suggests that first impressions, time spent on a task, and self-perceptions of intelligence are more likely to fluctuate across situations, outside of awareness, than are our opinions on important issues such as gun control and abortion. Moreover, classic attitude theory suggests attitudes should function as reference points, rather than be influenced by them, as discussed above; and the recent empirical evidence in the attitudes domain reviewed earlier implies that the effect of group salience on attitudes should be the same, regardless of group. However, the three studies presented here suggest it is possible to build a parsimonious account of the processes underlying assimilation and contrast in these diverse domains.

Integrating such an account with the previous research on attitudes discussed above, we propose that when a group is used as an implicit context for one's own attitudes, group salience should trigger attitude assimilation. However, when a group is used as a comparison point, group salience should instead produce attitude contrast. Thus, factors that affect the likelihood that a group will function as a contextual versus comparative reference should influence the extent of assimilation or contrast that occurs. In this

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[1] These findings hold true for the automatic effects of primed concepts on person perception via a standard-of-comparison process. However, contrast can also occur as a result of a more effortful correction process, in which case these prime features have different implications (see Moskowitz, 2004; Moskowitz & Skurnik, 1999). Because the present research concerns the potential for salient social entities to influence attitudes outside of awareness, we limit our discussion to the standard-of-comparison model only.

case, the ingroup is a context within which a group member is embedded, and it should therefore function as an interpretive framework that colors subsequent evaluation. Meanwhile, theory and research on groups and intergroup conflict suggests that an oppositional outgroup tends to be seen as a more defined, homogenous, and entitative unit (e.g., Castano, Sacchi, & Gries, 2003; Judd & Park, 1988; Lickel, Miller, Stenstrom, Denson, & Schmader, 2006; Linville, Fischer, & Salovey, 1989; Silverstein, 1992), which should promote its use as a comparison point.

We therefore reasoned that an ingroup should tend to function as an implicit context and elicit attitude assimilation, whereas an oppositional outgroup should tend to function as a comparison point and elicit attitude contrast (Studies 1 and 2). Furthermore, if type of prime influences whether assimilation or contrast is more likely to occur, then it should differentially moderate the degree of attitude polarization that occurs in response to accepted or rejected group primes (Study 2). Finally, insofar as perceived closeness to a group taps the likelihood that the group will function as a contextual reference or as a comparison point, the perceived relationship between oneself and a group should influence whether and to what extent assimilation or contrast occurs. Thus, the same group should elicit attitude assimilation for some and attitude contrast for others, depending on individual variations in closeness to the group (Study 3).

## The Current Research

We conducted three studies to test our theoretical predictions. We used political ingroups and outgroups as accepted and rejected social entities in Studies 1 and 2 and the elderly as a more neutral social group in Study 3. In our first study, we sought to demonstrate that attitudes do not always assimilate toward a primed social entity. We did so by priming Democrat and Republican participants with their political ingroup or political outgroup and predicted that their political attitudes would polarize in both conditions relative to neutrally primed controls. Study 2 was conducted to provide stronger evidence for our contention that ingroup primes trigger assimilation, whereas outgroup primes trigger contrast. Drawing on the recent person perception findings described above, we varied the type of prime used to make accepted and rejected social entities salient. Specifically, the political ingroup and political outgroup were primed by using either broad, abstract group labels (e.g., *Democrats*, *Liberals*) or narrow, specific exemplars (e.g., *John Kerry*, *Bill Clinton*). Given that broad primes are known to promote assimilation in person perception research, whereas narrow primes are known to promote contrast, we predicted that attitude polarization would be facilitated by broad primes in the ingroup condition and by narrow primes in the outgroup condition. In Study 3, we turned our attention to a different group (the elderly) in order to better elucidate the conditions under which attitude assimilation and contrast will occur. By measuring individual variation in closeness to the primed group, we were able to study the effects of group salience when the same group was likely to function as a contextual framework for some participants but as a comparison point for others. We predicted that when participants felt close to the elderly, elderly primes would elicit assimilation; when participants felt distant from the elderly, the primes would elicit contrast; and when participants felt neither close nor distant, there would be no effect

of elderly primes on attitudes. In all studies, primes were presented subliminally to avoid potential demand effects, to ensure that our results could not be attributed to the polarizing effects of conscious rumination (Tesser, 1978), and to prevent participants from engaging in any effortful correction processes (see Footnote 1).

## Study 1

Study 1 provides an initial test of the idea that social entities may function as reference points for people's own attitudes. Democrat and Republican participants were subliminally primed with their own political group, their political outgroup, or neutral words. They were then asked to rate their agreement with a series of Democrat and Republican positions, as part of an ostensibly unrelated task. We hypothesized that (a) participants primed with their political ingroup would show increased attitude polarization (agreement with the ingroup and disagreement with the outgroup) compared with controls and that (b) participants primed with their political outgroup would also show increased attitude polarization (disagreement with the outgroup and agreement with the ingroup) relative to controls.

### Method

*Participants.* Sixty-seven New York University (NYU) undergraduates (52 women, 15 men) participated in partial fulfillment of a course requirement during the 2 months leading up to the November 2004 presidential election. One participant was excluded due to missing data, and 2 others were excluded because they failed to follow directions; analyses were conducted on the remaining 64 participants.

*Pretest.* Political ingroup was assessed during a mass-testing session at the beginning of the semester. Participants were asked to identify their political party as *Democrat, Republican, Independent,* or *Other*. If participants checked Independent or Other, they were asked to indicate, if applicable, whether they tended to identify more with Democrats or more with Republicans. Individuals who identified on either probe as a Democrat or Republican were considered to have a clear political ingroup and outgroup (e.g., someone who identified as a Democrat was assumed to view Democrats as the ingroup and Republicans as the outgroup). The final sample consisted of 49 Democrats and 15 Republicans.

At the mass-testing session, participants were also asked to indicate how frequently they thought about the presidential election on a 7-point scale, ranging from 1 (*not at all*) to 7 (*very much so*). This served as a measure of their political involvement.

*Design.* A 3 (priming condition: control, political ingroup, political outgroup) $\times$ 2 (position type: ingroup position, outgroup position; described below) mixed design was used, with repeated measures on the last factor. Democrat and Republican participants were randomly assigned to priming condition, and the experimenter was blind to both condition and party. The dependent variable was the extent of agreement with ingroup and outgroup positions.

*Priming stimuli.* We used a parafoveal priming task (described below) to activate a political group outside of participants' awareness. Stimulus words were selected to be strongly associated with the political ingroup or the political outgroup for our undergraduate population. In addition to group labels (i.e., *Democrats* and

*Liberals* vs. *Republicans* and *Conservatives*), politicians' names (i.e., *John Kerry*, *Bill Clinton*, and *Al Gore* vs. *George Bush*, *Bob Dole*, and *Dick Cheney*) were selected from those best recognized by a sample of NYU undergraduates during an earlier pilot test.[2] Word stimuli for the control condition were chosen on the basis of normative valence ratings from the Affective Norms for English Words (ANEW; Bradley & Lang, 1999) to be affectively neutral and to match the word length of the primes in the other conditions (see Appendix A for all word stimuli).

*Position statements.* To measure agreement with the political ingroup versus agreement with the political outgroup, we presented participants with three items describing typical Democrat positions on political issues (e.g., "Funding social programs should be the government's top priority") and three describing typical Republican positions (e.g., "The law should always protect the lives of unborn babies, regardless of the circumstances"; see Appendix B for all statements). These six items were selected from a pool of 16 political statements that had been pilot tested for moderate agreement (to avoid floor and ceiling effects) and for perceived typicality as Democrat or Republican positions. On the basis of the pilot results, statements that frequently elicited complete agreement or disagreement among Democrats and/or Republicans were eliminated, and target statements with high mean ratings of typicality and low variance were selected from the remaining pool.

*Laboratory procedure.* Participants were tested in groups of 1 to 7. Upon arriving in the lab, each participant was escorted to an individual cubicle and seated in front of a computer with a 17-in. CRT monitor, an 85-Hz refresh rate, and a standard 101-key computer keyboard. Participants were told they would first take part in a computer task testing visual acuity and would then complete several unrelated questionnaires from various researchers.

Written instructions for the first (parafoveal priming) task were displayed on the computer screen. Participants were asked to fix their gaze at the center of the screen and to press the *F* or *J* key as quickly as possible to indicate whether a flash appeared on the left or right side of the computer screen. They were presented with six practice trials, followed by 75 experimental trials. In each trial, a fixation point (***) appeared at the center of the screen to orient the participant's gaze. After a brief delay that varied randomly between 2,000 and 7,000 ms, a stimulus word was presented in one of the four quadrants located around the center, set horizontally at 185 pixels and vertically at 145 pixels. Each word was presented for 60 ms, followed by a 60-ms presentation of a pattern mask (XQFBZRMQWGBX). Each of the five prime words (see Appendix A) was presented between 12 and 19 times, and the order and location of these prime words was randomly determined but identical for all participants.

After the last trial, instructions appeared on the computer screen thanking students for their participation and directing their attention to a packet of surveys from other researchers located in the envelope on the desk next to them. Consistent with the cover story, the envelopes contained a variety of questionnaires on different topics. The first questionnaire was always a survey ostensibly designed to "help us improve opinion measurement techniques." The survey asked participants to rate their agreement with 13 statements: the 3 Democrat and 3 Republican position statements and 7 statements unrelated to politics (e.g., "Dogs should always

be kept on leashes, even in parks") on a scale that ranged from 0 (*don't agree/agree completely with the opposite*) to 100 (*agree completely*). The 100-point scale was used to avoid floor and ceiling effects because pilot testing had indicated that participants were less likely to use the extremes of a 100-point scale compared with those of shorter scales. Order of statements was counterbalanced across participants.

Participants' agreement with the three Democrat statements and the three Republican statements were averaged separately to form an index of agreement with Democrat positions ($\alpha = .63$) and an index of agreement with Republican positions ($\alpha = .71$). These were subsequently recoded into agreement with ingroup position and agreement with outgroup position, depending on each participant's political party identification.

After completing all questionnaires, participants were probed for awareness and suspicion by using a funnel debriefing procedure (Bargh & Chartrand, 2000), thanked, and fully debriefed as to the purpose of the experiment. Few participants reported seeing letters in the priming task, and none were able to identify specific words that they had seen. No participant guessed the hypothesis being tested or suspected that the computer task and opinion questionnaire were linked in any way.

## Results

Neither gender nor order of statements significantly influenced the results in any study reported here and are not discussed further. Political involvement, which did not differ by or interact with condition, was used as a covariate in all analyses.

A 3 (priming condition: control, political ingroup, political outgroup) × 2 (position type: ingroup position, outgroup position) mixed-design analysis of covariance (ANCOVA) with repeated measures on the second factor yielded no main effects and a significant Priming Condition × Position Type interaction, $F(2, 60) = 5.89$, $p < .01$, $\eta^2 = .16$. Consistent with our hypotheses, participants primed with a political ingroup or an outgroup showed more extreme agreement with the ingroup and more extreme disagreement with the outgroup than did control participants primed with neutral words (see Figure 1). Follow-up *t* tests (Fisher's least significant difference) confirmed that the preference for ingroup positions was significantly greater in the ingroup ($M = 27.83$) and outgroup ($M = 33.94$) priming conditions compared with controls ($M = 9.53$).

As expected, the effects of priming condition on attitude polarization appeared similar for both Democrats and Republicans (see Figure 2). A 2 (political party) × 2 (priming condition) × 2 (position type) mixed-design ANCOVA with political involvement as the covariate was conducted to confirm that the effect of priming condition on agreement with ingroup and outgroup positions did not differ by political party. The three-way interaction was not significant ($F < 1$), providing preliminary evidence that our results should generalize across political groups.

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[2] Previous research shows that increasing the number of primed exemplars from one to five is sufficient to elicit a group representation, presumably because it is easier and more meaningful to represent many individuals as a group rather than as a list of separate exemplars (Dijksterhuis et al., 2001). Likewise, the most efficient representation of the primes used in Study 1 (three exemplars and two group labels) should be a group.
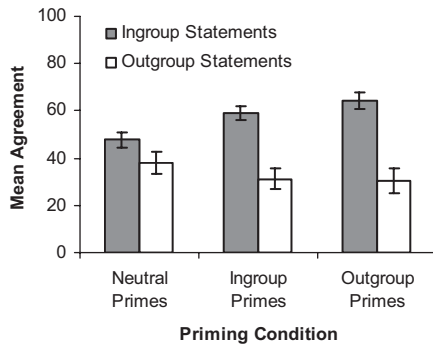
*Figure 1.* Mean ratings of agreement with ingroup and outgroup statements by participants subliminally exposed to neutral (control), ingroup, or outgroup primes in Study 1. Error bars indicate one standard error above and below the mean.

## Discussion

The results of our first study demonstrate that explicit endorsement of ingroup and outgroup positions can be influenced by the mere salience of a political ingroup or outgroup. Both Democrats and Republicans reported more extreme agreement with the ingroup and more extreme disagreement with the outgroup after being subliminally primed with ingroup words or outgroup words, relative to controls primed with neutral word stimuli. These findings cannot be explained by a straightforward assimilation account, which would have predicted polarization in the ingroup priming condition but depolarization in the outgroup priming condition.

Although the results of Study 1 are consistent with our contention that social entities act as reference points for people's own attitudes, such that salient ingroups trigger assimilation whereas salient outgroups trigger contrast, it is possible that the ingroup and outgroup primes both led to polarization through a single process (e.g., perhaps the salience of politics in general could have caused attitude polarization in both conditions). To provide additional support for our two-process interpretation, we drew on research findings in person perception suggesting that broad and inclusive primes facilitate assimilation whereas narrow and exclusive primes

facilitate contrast (e.g., Stapel et al., 1996; Stapel & Koomen, 2001). Insofar as those findings represent a general influence of prime type on assimilation and contrast processes, we would also expect prime type to influence the extent to which attitudes assimilate or contrast in response to salient groups. Specifically, if priming an ingroup leads to attitude polarization because the ingroup functions as a context and thus elicits assimilation, we would expect broad primes to facilitate polarization, relative to narrow primes. Conversely, if priming an outgroup leads to attitude polarization because the outgroup functions as a comparison point and thus elicits contrast, we would expect narrow primes to facilitate polarization, relative to broad primes.

## Study 2

To explore whether prime breadth differentially moderates attitude polarization when a political ingroup versus outgroup is made salient, we separated the word stimuli used to prime ingroup and outgroup in Study 1 into broad and narrow primes. Group labels, like abstract behavior labels or traits, are relatively broad and inclusive, whereas group members are a type of exemplar and are thus relatively narrow and concrete (see Stapel et al., 1996; Stapel & Koomen, 2001). Separating the Study 1 primes created four priming conditions in addition to our neutrally primed controls: broad ingroup, narrow ingroup, broad outgroup, and narrow outgroup. Using a paradigm similar to that used in Study 1, we explored whether prime type would influence attitude polarization in a manner consistent with our reasoning. If broad primes promote assimilation, then group label (vs. exemplar) primes should facilitate the effect of ingroup priming on attitude polarization. If narrow primes promote contrast, then exemplar (vs. group label) primes should facilitate the effect of outgroup priming on attitude polarization. In other words, given that both group type and prime breadth should influence the extent to which a primed group is likely to function as a context versus comparison point, group salience should have the strongest effects when the two are working together. We therefore hypothesized that attitude polarization would occur particularly in the broad ingroup and narrow outgroup priming conditions, relative to controls and relative to the narrow ingroup and broad outgroup priming conditions.
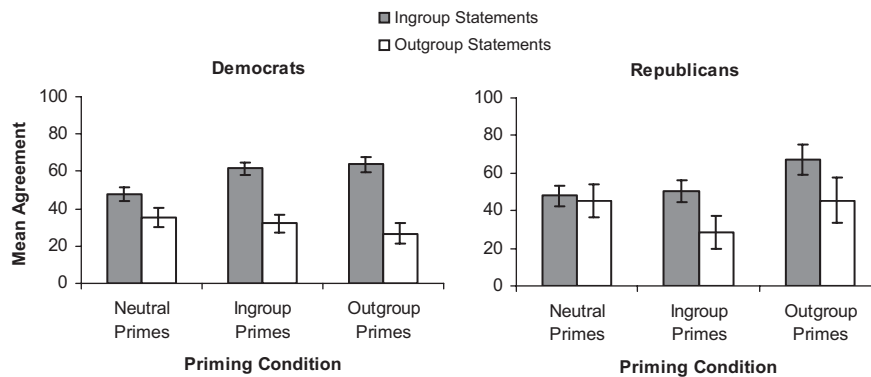


*Figure 2.* Mean ratings of agreement with ingroup and outgroup statements by participants subliminally exposed to neutral (control), ingroup, or outgroup primes in Study 1, separated by political party. Error bars indicate one standard error above and below the mean.

## Method

*Participants.* Because of the small number of Republican students in the NYU participant pool, we recruited only Democrats for the second experiment. One hundred two students (75 women, 27 men) participated for course credit. Two participants were excluded because they failed to complete the dependent measure or did not follow directions, and 2 were excluded because they reported seeing one of the stimulus words in the priming task. Analyses were conducted on the remaining 98 participants.

*Pilot test.* Restricting the sample to Democrats allowed us greater flexibility in designing our attitude measures to avoid ceiling and floor effects; we therefore conducted a new pilot test to select Democrat and Republican position items that elicited moderate agreement and disagreement from Democrat undergraduates and that were rated as highly typical of Democrats or Republicans. We were also able to shorten the agreement scale to a more traditional 9-point scale (1 = *don't agree at all*; 9 = *agree completely*).

*Design.* A 5 (prime type: neutral vs. broad ingroup vs. narrow ingroup vs. broad outgroup vs. narrow outgroup) × 2 (position type: ingroup vs. outgroup) mixed factorial design was used, with repeated measures on the last factor. Participants were randomly assigned to priming condition, and the experimenter was blind to condition. The dependent variable was again the extent of agreement with group positions.

*Stimuli and procedure.* The word stimuli were identical to those used in Study 1 except that in Study 2 we divided each of the group prime conditions into narrow (exemplar) and broad (group label) conditions. We omitted the least well-recognized exemplar name from that study (i.e., *Bob Dole* and *Al Gore*) to ensure consistent familiarity across participants (see Appendix A); this also reduced the likelihood that participants would represent the remaining two names as a group rather than as individual exemplars (see Dijksterhuis et al., 2001, Footnote 2).

The procedure was identical to that of Study 1, except for the following changes. As previously noted, the dependent measures were slightly altered: The six political position statements were embedded in a list of 15 items total, some of the position statements were more strongly worded or focused on topics more controversial and more strongly associated with political party positions (e.g., gun control and national defense; see Appendix B), and participants rated their agreement on a 9-point scale. The Democrat statements and the Republican statements were averaged separately to form an index of agreement with Democrat positions (α = .60) and an index of agreement with Republican positions (α = .41).[3] After a 30-min filler session involving unrelated questionnaires, participants responded to the question—"How important are your political views to you?"—on a 7-point scale, ranging from 1 (*not at all*) to 7 (*very much*); this measure of political involvement, which did not differ by or interact with condition, was used as a covariate in all analyses.

## Results

A 5 (prime type: neutral vs. broad ingroup vs. narrow ingroup vs. broad outgroup vs. narrow outgroup) × 2 (position type: ingroup vs. outgroup) mixed-design ANCOVA with repeated measures on the second factor and political involvement as the covari-
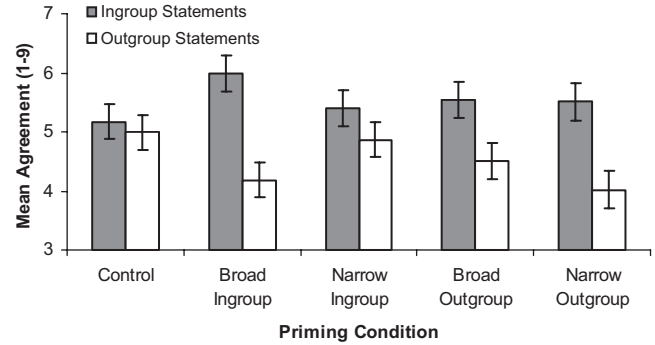


*Figure 3.* Mean ratings of agreement (on a 9-point scale) with ingroup and outgroup statements by participants subliminally exposed to neutral (control), broad ingroup, narrow ingroup, broad outgroup, or narrow outgroup primes in Study 2. Error bars indicate one standard error above and below the mean.

ate yielded a significant main effect for position type, $F(1, 92) = 5.30$, $p < .05$, $\eta^2 = .05$. In general, participants agreed more with their political ingroup ($M = 5.52$) than with their political outgroup ($M = 4.51$). However, as expected, the extent of their agreement was moderated by priming condition, $F(4, 92) = 2.54$, $p < .05$, $\eta^2 = .10$. As shown in Figure 3, the pattern of results was consistent with our predictions that the congruent (broad ingroup and narrow outgroup) priming conditions would show the greatest attitude polarization.

We conducted a series of planned linear contrasts to test our specific hypotheses that polarization would be greatest in the

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[3] To explore why the scale reliability for Republican positions in particular was lower in this study compared with that of Study 1, we used a median split on political involvement to compare the scale reliabilities for participants with high and low involvement in politics. We suspected that reliability might be low for individuals with low political involvement, whose attitudes might be less structured along party lines. Indeed, low-involvement participants had relatively low reliabilities for the Democrat and Republican position scales (α = .51 and α = .23, respectively), whereas high-involvement participants showed substantially higher reliabilities (α = .77 and α = .60, respectively). Political involvement was presumably lower for participants in Study 2 (recruited several months after the election) than for participants in Study 1 (recruited just before the election, when politics were at the forefront of public attention), which could explain the overall lower alphas obtained in Study 2. These patterns are consistent with theory and research on attitude structure, suggesting that more important or ego-involved attitudes tend to be highly interconnected, whereas less important attitudes are often more isolated (see Eagly & Chaiken, 1993, for a review). They also correspond with Converse's (1964) findings that the more politically knowledgeable tend to have coherent, consistent ideologies, whereas the less politically involved exhibit little interattitudinal structure among their attitudes toward specific issues. Finally, the lower reliability for outgroup position agreement compared with ingroup position agreement in this study—a difference especially pronounced for low-involvement participants—may reflect the tendency for attitude structure to be unipolar rather than bipolar when involvement and social conflict are low (see Eagly & Chaiken, 1993). In other words, negative attitudes toward outgroup positions may be relatively undeveloped and unorganized compared with positive attitudes toward ingroup positions (Kerlinger, 1984), at least when opposition between the differing views is not highly salient.

congruent conditions, relative to the control condition and relative to the incongruent conditions. First, the congruent prime conditions (broad ingroup and narrow outgroup) were compared with the control condition. This contrast was significant, $F(1, 92) = 8.48$, $p < .01$: The degree of polarization in the broad ingroup and narrow outgroup conditions was greater than that in the control condition. Next, the congruent conditions were compared with the incongruent (narrow ingroup and broad outgroup) conditions, to determine whether more polarization occurred in the conditions designed to facilitate the processes suggested by our model, compared with those designed to hinder these processes. This contrast was also significant, $F(1, 92) = 4.16$, $p < .05$, confirming that polarization was greater in the broad ingroup and narrow outgroup conditions than in the other group priming conditions. We performed a third contrast to test whether the narrow ingroup and broad outgroup conditions differed from controls, although we made no predictions regarding differences between these groups; this contrast was not significant ($p > .20$).

*Discussion*

In Study 2, we sought to provide stronger evidence that our effects in Study 1 were due to assimilation in the ingroup condition and contrast in the outgroup condition by exploring whether prime types known to facilitate each process in person perception would increase polarization in the appropriate conditions. Consistent with our predictions, the results indicated that polarization was greatest in the conditions in which assimilation and contrast processes should have been facilitated by the type of prime (the broad ingroup and narrow outgroup priming conditions, respectively). The conditions in which assimilation and contrast processes should have been hindered by the type of prime (the narrow ingroup and broad outgroup priming conditions, respectively) and the control condition produced significantly less polarization. These findings replicate Study 1, again demonstrating that both ingroup and outgroup priming can lead to polarization, and extend that study by suggesting that ingroup primes produce this effect through an assimilation process, whereas outgroup primes lead instead to contrast.

It is possible to fashion an alternative explanation for our Study 2 results. This explanation would have to assume that our (narrow) Republican exemplars were viewed by our Democrat participants as particularly antagonistic examples of the political outgroup and thus produced more contrast than the (broad) outgroup label primes, whereas our Democrat exemplars were viewed as mediocre Democrats and thus produced less assimilation than the ingroup label primes.[4] We doubt this alternative for a number of reasons. For example, opinion data indicate that most Democrats held highly favorable opinions of both John Kerry and Bill Clinton at the time our data were collected (over 75% and 85%, respectively; The Pew Research Center, 2005). This, and the growing body of evidence establishing that abstract primes do indeed promote assimilation whereas narrow primes facilitate contrast (e.g., Dijksterhuis et al., 1998; Moskowitz & Skurnik, 1999; Stapel et al., 1996, 1997; Stapel & Koomen, 2001; Stapel & Spears, 1996; Spears et al., 2004), lead us to conclude with some confidence that a difference in prime broadness produced the effects observed in this study.

The overall pattern of results therefore supports our theoretical framework by suggesting that attitude polarization is greatest when prime breadth and group type are congruent in their effects on interpretive or comparative processes. The findings of Studies 1 and 2 also confirm our implicit assumption that group type (rather than prime breadth) is primary in determining whether attitude assimilation or contrast occurs. Ingroups seem by default to create a contextual framework, which can be mitigated (but in the present data, not reversed) by the narrowness of the prime. In other words, a salient ingroup may elicit attitude assimilation because it is implicitly used as a context for one's own attitudes, and broader primes tend to provide better (more inclusive) contextual frames. Oppositional outgroups instead seem to elicit an automatic comparison, which may be exacerbated by narrow primes. In other words, a salient outgroup may elicit attitude contrast because it is by default used as a comparison point for one's own attitudes, and narrow primes tend to provide better (more pinpointed) standards of comparison.

Although the data are consistent with the possibility that prime breadth equally moderates the effects of ingroup and outgroup salience (as can be seen by examining the error bars in Figure 3), the particular pattern obtained in this study suggests that prime breadth may have less of a moderating influence on outgroups than on ingroups. This could reflect the fact that whereas an ingroup is often seen as much broader and more variable than a particular ingroup member (and may therefore tend to function more as a contextual framework in the former case), outgroups tend to be viewed as highly entitative and more like a single, homogenous unit (e.g., Jones, Wood, & Quattrone, 1981; Judd & Park, 1988; Linville et al., 1989). Thus, whereas ingroups should provide a better contextual frame than a single ingroup member, both outgroups and outgroup exemplars may easily provide a comparison point against which an individual's own attitudes are implicitly contrasted.

The results of Study 2 display one seeming anomaly. Although we typically expect ingroup members to agree more with ingroup than with outgroup positions, control participants in this study did not show a significant difference in their agreement with their ingroup versus outgroup. However, it is important to consider the typical political naiveté of this sample—college students no longer bombarded with media coverage of the November 2004 election. Participant responses underscored the low political involvement of our study samples: For example, the mean response to the question—"How closely do you follow politics?"—was at the midpoint of the scale, and pilot participants were more confident in identifying John Travolta as a Democrat than Condoleezza Rice as a Republican. It is thus all the more surprising that we were able to observe a significant effect of our political primes on participant attitudes. The success of these studies demonstrates that assimilation and contrast effects in political attitudes occur even among individuals not highly involved in their political parties.

However, it is important to distinguish low political involvement from low identification or closeness to Democrats. Conceptually, it is possible to be uninvolved in issues or actions related to

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[4] This alternative account still would be consistent with our main argument that both assimilation and contrast are necessary to characterize attitude shifts in response to social stimuli.

a particular group (e.g., a political group, a racial group) and yet to remain strongly identified with that group. Conversely, high involvement does not guarantee group identification (consider political independents).[5] Political involvement and closeness to one's political group are also empirically distinguishable: In a pilot study of 60 NYU undergraduates, frequency of thinking about politics was fairly low ($M = 3.65$, $SD = 1.68$, on a 7-point scale), whereas reported closeness to one's political party was moderately high ($M = 5.22$, $SD = 1.38$). Furthermore, frequency of thinking and closeness were only modestly correlated, $r(60) = .33$, $p < .01$. Thus, knowing the political involvement of participants in Studies 1 and 2 does not tell us much about their group identification, and although we would have liked to test whether group closeness or identification moderated the effects obtained, we lacked appropriate measures of this construct.

Taken together, our first two studies unpack group primes in multiple ways (ingroup vs. oppositional outgroup; broad group labels vs. narrow exemplars) to demonstrate that social category priming can elicit different effects depending on different characteristics of the prime. This variability in turn begs the question: What exactly is needed for contrast to occur? If ingroups function as contexts and oppositional outgroups function as comparison points, what lies between? Given previous research suggesting that attitudes can, in some cases, assimilate toward a primed outgroup (e.g., the elderly; Kawakami et al., 2003), it is clear that the boundary between assimilation and contrast is not a simple ingroup–outgroup distinction, but rather requires a more fine-grained analysis of the relationships that can exist between individuals and groups. In Study 3, we sought to refine our understanding of when a salient group will produce assimilation or contrast in attitudes by moving beyond a simple ingroup–outgroup distinction to a more nuanced conception of the ways in which a given group can be viewed. Specifically, we wanted to capture the extent to which a group was likely to be implicitly used as a context, rather than as a comparison point. Reasoning that closeness to a social group should predict the extent to which it functions as a contextual frame or comparison point, we measured perceived closeness in order to examine its potential moderating influence on attitude assimilation and contrast.

## Study 3

Thus far, we have proposed that groups function as implicit references for our attitudes. Adapting an interpretive framework/ standard-of-comparison model (e.g., Spears et al., 2004; Stapel & Koomen, 2001) to the domain of attitudes, we suggested that different groups function as different kinds of references for an individual's attitudes: Ingroups provide a contextual reference (i.e., interpretive framework), whereas outgroups provide a comparative reference. Put more broadly, the perceived relationship between a person and a group should influence the extent to which the group will provide a contextual frame or comparison point for the person's own attitudes. It therefore follows that the same group may function as a different kind of reference depending on the person or situation. As perceived closeness to a group increases, it should tend to provide a better and stronger contextual frame for an individual's attitudes, and group salience should increasingly elicit attitude assimilation. Conversely, to the extent that a person feels distant from a group, it should provide a clearer and more

defined comparison point, against which a person's own attitudes are contrasted. The transition from assimilation to contrast should therefore occur when a group ceases to function as a context and becomes a point of comparison.

To test these ideas, and to show that our findings generalize beyond the political groups used in Studies 1 and 2, we chose to focus on a single and more neutral group in Study 3. We selected elderly people as the social category because we expected our participants to show variability in how they viewed themselves in relation to this group. By focusing on a group that was not clearly an ingroup or oppositional outgroup, we were able to examine whether the same group could produce attitude assimilation or contrast depending on individual differences in perceived closeness to the group. Furthermore, we could test whether the strength of assimilation and contrast elicited by group salience depends on the extent to which a group prime is likely to provide an implicit context or comparison point for a given person. We hypothesized that (a) as closeness to the elderly increased, elderly primed participants would increasingly agree with statements considered to be typical of elderly people, relative to neutrally primed controls; and (b) as feelings of distance increased, elderly primed participants would increasingly disagree with these positions, relative to controls.

### Method

*Participants and pretest.* Forty-six NYU undergraduates (31 women, 15 men) participated in partial fulfillment of a course requirement. Closeness to the elderly was assessed during a mass-testing session at the beginning of the semester. Participants indicated their agreement with two statements ("In general, I feel very close to elderly people, like my grandparents"; "In general, I feel like I have a lot in common with elderly people") on a 7-point scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Responses to these items were averaged to form an index of closeness to the elderly ($\alpha = .74$).

*Design.* Participants were randomly assigned to an elderly prime condition or to a neutral prime control condition, and the experimenters were blind to condition and to participants' closeness scores. The dependent variable was agreement with group positions.

*Priming stimuli.* Nine stimulus words (see Appendix A) were chosen from Bargh, Chen, and Burrows's (1996) list of stimuli related to the elderly stereotype (e.g., *old*, *gray*, *bingo*). We omitted words that might be directly related to agreement with position statements (e.g., *conservative*, *selfishly*) because we wanted to prime a social category rather than a particular stance on an issue (see Appendix A for a complete list of stimulus words used).

*Position statements.* To measure agreement with elderly positions, we pilot tested a pool of 11 statements that could be seen as typical of the elderly, including the 2 statements reported by Kawakami et al. (2003). On the basis of the results, we selected the 6 position statements (see Appendix B) that were consistently rated as highly typical of the elderly and that elicited moderate agreement or disagreement (to avoid floor and ceiling effects). We also used the pilot test to verify that the seven filler items used in Studies 1 and 2 were not associated with the elderly, to ensure that

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[5] We would like to thank an anonymous reviewer for suggesting this example.

they would function to distract participants from perceiving a theme to the statements in the dependent variable. None were seen as highly typical of the elderly; one was seen as moderately typical (5.9 on a 9-point scale) and was removed from this study.

*Laboratory procedure.* The procedure was identical to that of Study 1 except for the following changes. Instead of a parafoveal priming task, we adapted the lexical decision task used by Kawakami et al. (2003, Study 3; see also Dijksterhuis, Aarts, Bargh, & van Knippenberg, 2000) because we wanted to replicate and extend their observed effects of elderly primes on attitudes. Participants were told that the computer task tested word recognition over time and were asked to press the left or right *Shift* key as quickly as possible to indicate whether a letter string was made up of two words (e.g., BIKE–PATH, THE–AN) or whether at least part of it was a nonword (e.g., BIKE–PTAH, HET–NA).[6] They were presented with 54 trials, with one 10-s break at the halfway point. In each trial, a fixation point (XXXXXXXXXX) appeared at the center of the screen for 1,000 ms, followed by a prime stimulus for 24 ms. In the control condition, the prime was a neutral stimulus (#####). In the elderly prime condition, the prime was chosen at random without replacement from the list of nine elderly prime words; the full list was therefore seen six times. The prime was followed by a pattern mask (#&#&#&#&#) for 200 ms, and then a letter string appeared until the participant pressed the left or right *Shift* key to indicate their word or nonword response.

The dependent variable was titled "Pilot Survey" and explained that participants' responses would help the researchers design a new study for the following semester. Participants rated their agreement with the six elderly position statements and six filler items on a 9-point scale, ranging from 1 (*don't agree at all*) to 9 (*agree completely*). Order of the statements was counterbalanced across participants. Agreement with the elderly positions was averaged to form an index of agreement with the elderly ($\alpha = .60$). No participants reported seeing a flash or word, voiced suspicion about the cover story, or believed that the computer task could have influenced their subsequent responses in any way.

### Results

Closeness to the elderly was normally distributed, with scores on the two-item index ranging from 1.50 to 7.00 on the 7-point scale ($M = 4.00$, $SD = 1.61$). To determine whether the effect of group priming varied depending on closeness to the group, we conducted a linear regression predicting agreement from closeness (centered), priming condition (contrast coded), and the Closeness × Priming Condition interaction (see Table 1 for regression

Table 1
*Regression Coefficients Predicting Agreement With Elderly Positions in Experiment 3*

| Predictor | B | SE | t |
|---|---|---|---|
| Intercept | 5.78 | .16 | 36.60** |
| Closeness to the elderly | .42 | .10 | 4.21** |
| Priming condition | −.02 | .16 | −.14 |
| Closeness × Priming | .25 | .10 | 2.56* |

*Note.* $R^2 = .36$, $F(3, 42) = 7.71$, $p < .001$.
* $p < .05$. ** $p < .001$.



*Figure 4.* Mean ratings of agreement (on a 9-point scale) with elderly statements for high and low closeness participants exposed to control or elderly primes in Study 3.

coefficients). There was a significant effect of closeness, $t(42) = 4.21$, $p < .001$, such that averaging across the two priming conditions, greater closeness predicted greater agreement with elderly positions. There was no overall effect of priming condition. However, as expected, there was a significant Closeness × Priming Condition interaction, $t(42) = 2.56$, $p = .01$, such that closeness moderated the strength of assimilation and contrast elicited by the group primes (see Figure 4). To test the hypothesis that social category salience would trigger attitude assimilation for participants who felt close to the primed group, but attitude contrast for those who felt distant from the primed group, we conducted follow-up regressions to examine the simple main effect of prime for high-closeness and for low-closeness participants (closeness was centered at 6 and then at 2: the points on the scale labeled *agree* and *disagree*, respectively). For participants who agreed that they felt close to the elderly, the predicted effect of elderly prime was to increase agreement with elderly positions ($B = .49$, $SE = .25$), $t(42) = 1.91$, $p = .06$, replicating the assimilation effect found in Kawakami et al. (2003). However, for participants who disagreed with feeling close, the predicted effect of elderly prime was to decrease agreement with elderly positions ($B = -.53$, $SE = .25$), $t(42) = 2.09$, $p < .05$. In other words, the effect of priming the elderly "outgroup" on attitudes depended on previous feelings of closeness to the group: high-closeness participants assimilated, whereas low-closeness participants showed contrast.

### Discussion

The results of Study 3 help refine our understanding of assimilation and contrast in group attitudes by demonstrating that the effect of group priming depends on perceived closeness to the group in question. Compared with neutrally primed controls, group priming led participants who felt close to the elderly to agree more with positions seen as typical of the elderly, whereas participants who felt distant from the elderly disagreed more when the group was made salient. Moreover, the extent of the effect on attitudes depended on the participant's perception of the primed group:

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[6] Pairs of neutral words were used as the target stimuli in the lexical decision task, rather than single words, to increase the believability of our cover story and task involvement among participants.

Increasing closeness led to greater attitude assimilation, whereas increasing distance led to greater attitude contrast.

One of the main purposes of Study 3 was to more carefully explore the effects of group salience by unpacking the concept of an outgroup, which is often used to characterize any group to which a person does not belong. It is interesting to note that the cross-over between assimilation and contrast occurred at the midpoint of the closeness scale so that there was no effect of prime for participants who felt neutral (neither close nor distant) toward the elderly. This pattern suggests that the perceived relationship between a group and oneself provides an important boundary condition for whether social category salience produces attitude assimilation or contrast. If a person feels close to a group, its salience can produce attitude assimilation, even if an outside observer might call the group an outgroup (e.g., social psychological researchers have considered the elderly an outgroup for undergraduate students). Meanwhile, the salience of a neutral outgroup may not influence attitudes at all, and the salience of distant outgroups can trigger contrast. The present findings also demonstrate that attitude assimilation and contrast generalize beyond political groups to other social categories.

One might wonder whether simply priming a domain such as politics or age, rather than a particular group, could lead to the pattern of results obtained in our studies. More specifically, perhaps making a domain salient simply accentuates preexisting attitudes. We doubt this for several reasons. Although Study 1 could be construed from this perspective, Study 2 discounts it insofar as prime breadth moderated the effect of group prime on attitudes, which does not conform to a simple domain salience hypothesis. Perhaps most clearly, in Study 3, control participants reported attitudes above midpoint of the scale, signifying a general tendency to agree with the elderly on these issues; furthermore, agreement did not change depending on closeness. Assuming that these attitudes correspond to the preexisting attitudes of our experimental group, a simple domain salience hypothesis would predict that priming age (via the elderly) would accentuate these attitudes, such that elderly primed participants would show greater agreement than controls, regardless of closeness. However, that is not what we found. Rather, elderly primed participants agreed more only when they felt close to the elderly; when they felt distant, their attitudes shifted in the opposite direction. Unlike control participants, the attitudes of the experimental group depended critically on each person's relationship to the group. Attitudes were pulled toward a close group and pushed away from a group perceived as distant.

By demonstrating that the same group can trigger assimilation or contrast depending on how the group is viewed, the present study suggests that the effect of social group priming on attitudes will depend on how close a given individual, group, or culture feels to the group in question. Although at first glance, one might wonder why we did not obtain an overall assimilation effect (as in Kawakami et al., 2003), a closer look at the present findings suggests the answer: Empirically, the NYU students in our sample felt neutrally toward the elderly on average, and thus there was no overall effect of elderly priming. If average closeness to the elderly instead fell above the midpoint, we would have expected to see an overall assimilation effect. It is interesting to note that Dutch university students (the participants in Kawakami et al.'s study) may be more likely to feel close to the elderly than NYU under-

graduates (e.g., over 40% of university students in Amsterdam live at home with caregivers, whereas more than 85% of first-year NYU students live away from home; De Feijter, Leclercq, & Janssen, 2003; NYU Office of Institutional Research and Program Evaluation, 2006). It therefore seems probable that the two samples differed in average closeness to the elderly—and, as suggested by the present findings, it is closeness and not merely outgroup status that determines the effect of group salience on attitudes.

## General Discussion

We began the work described here by considering the implications of both social judgment theory and real-world conflict situations for the present state of research on automatic attitude change. The present studies represent, to our knowledge, the first attempt to demonstrate automatic contrast in attitudes and to identify when group primes will lead to attitude assimilation and when they will lead to contrast. In Study 1, we showed that attitude change after subliminal exposure to political ingroups or outgroups did not follow the pattern predicted by a straightforward assimilation account. Instead of attitude depolarization in the outgroup priming condition, we found heightened extremity (i.e., polarization) relative to controls. Study 2 provided further evidence that these effects were due to assimilation and contrast processes by showing that prime types known to uniquely facilitate assimilation and contrast enhanced the polarization effect in the appropriate conditions. In Study 3, we further unpacked the effects of group priming by using a continuous operationalization of the relationship between a person and a group. The results suggest that it is closeness to a group, and not merely an objective ingroup–outgroup distinction, that determines both the direction and the strength of the automatic effect of group primes on attitudes. These results, and our overarching theoretical perspective, have implications for both classic theory and recent research.

### Implications for Social Judgment Theory

Social judgment theory conceptualizes attitudes as stable reference points that influence our perception of others' positions, and research has indeed confirmed that our perceptions of others' positions are often assimilated toward or contrasted away from our own (e.g., Judd, Kenny, & Krosnick, 1983; Sherif & Hovland, 1961; Sherif & Sherif, 1967). However, the results of our studies suggest that the presumed attitudes of salient social entities can themselves function as frames or points of reference and can influence our own attitudes. By expanding social judgment theory to allow these reciprocal influences, we can develop a more dynamic model of attitudes in social contexts. For example, a classic account of attitudes and reference points suggests that one's perception of an elderly person outside a polling station will depend on whether the slogan on her pin falls within a latitude of acceptance or rejection on one's attitudinal continuum. In counterpoint, our perspective suggests that the elderly person's presence may influence one's subsequent attitude toward a proposed healthcare reform on the ballot and that the direction and strength of this influence will depend on where the group *elderly* falls on a continuum of closeness.

In the present research, we chose to focus on explicit attitudes as our dependent variable both for the theoretical reasons discussed

above and for the real-world implications of group salience on the explicit endorsement of group-relevant positions. Explicit endorsement of attitudinal statements provides a close quantitative cousin of several critical real-life outcomes, including public opinion poll responses (which are often used to determine public policy), voting, and the positions people espouse in a conversation or those they endorse in an e-mail. Behavioral consequences are, of course, also important, and future research should extend these findings to examine the consequences of the attitude change observed here for variables such as willingness to compromise and discovering integrative potential in negotiation situations.

## Implications for Assimilation and Contrast Research

More broadly, the current perspective has potential to unite evidence of assimilation and contrast processes in a number of domains and also suggests future avenues of research. Thus far, the dominant picture emerging from research on social influence and automatic attitude change has been one of conformity and alignment (e.g., Asch, 1955; Baldwin & Holmes, 1987; Davis & Rusbult, 2001; Higgins & Rholes, 1978; Kawakami et al., 2003; Lowery et al., 2001). The present results suggest that the processes underlying automatic attitude change are more complex than a simple assimilation model would suggest. Attitudes do not always align with a primed social entity. They may at times contrast away from a salient individual or group.

This finding parallels recent evidence of contrast processes in other domains previously assumed to be characterized solely by assimilation. For instance, a sizeable literature on assimilation in automatic behavior (Bargh, 1997; Bargh et al., 1996; Chartrand & Bargh, 1999; Chen & Bargh, 1997; Dijksterhuis et al., 2000; Van Baaren, Holland, Kawakami, & van Knippenberg, 2004; see Dijksterhuis & Bargh, 2001; Wheeler & Petty, 2001, for reviews) has now been complemented by evidence suggesting that, under some circumstances, perceiving others can lead to behavioral contrast (Dijksterhuis et al., 1998, 2001; LeBoeuf & Estes, 2004; Schubert & Hafner, 2003; Spears et al., 2004). Likewise, recent research suggests that the self-concept, known to align with the views of a primed significant other (e.g., Hinkley & Andersen, 1996), may at times contrast so that views of the self become less like those held by a salient other (Sinclair, Huntsinger, Skorinko, & Hardin, 2005). Furthermore, the self-concept can shift to become either more or less similar to a primed target, depending on group affiliation, attachment style, and various other factors (Gabriel, Carvallo, Dean, Tippin, & Renaud, 2005; Mussweiler & Bodenhausen, 2002; Pelham & Wachsmuth, 1995; Stapel & Koomen, 2005).

Still, other areas have yet to explore contrast as a possible alternative to established assimilation effects. For example, research on automatic goal pursuit has demonstrated that priming a significant other can activate goals associated with that person or relationship, causing individuals to pursue these goals outside of awareness (Fitzsimons & Bargh, 2003; Shah, 2003). In addition, the inference of a goal from a target's actual behavior has been shown to trigger automatic pursuit of that goal in appropriate contexts (Aarts, Gollwitzer, & Hassin, 2004). Such effects could be considered goal assimilation: When a goal is made salient by another person in the environment, we tend to pursue that same goal ourselves (aligning with, or assimilating ourselves to, the

salient other). However, the possibility that our goals could also contrast away from those of a salient other remains unexplored, although the notion of such "reactive" goals was specifically proposed in Bargh's (1990) original auto-motive model of goal pursuit.

Considering these thus far independent literatures together suggests not only that assimilation is likely to be accompanied by contrast, but also that such effects could potentially be triggered by objects as well as by people. In the auto-motives literature, person priming has been considered one case of what Bargh (1990) termed *global features* of the environment; automatic goal pursuit can also be triggered by objects as diverse as magazines, chocolate bars, or boardroom tables (Fishbach, Friedman, & Kruglanski, 2003; Kay, Wheeler, Bargh, & Ross, 2004). Future research on automatic attitudes and behavior could benefit by looking beyond person priming to other features of the environment that might produce assimilation and contrast, including group-relevant objects such as flags, landmarks, and perhaps even colors and music.

The current perspective suggests also that aspects of the self and perceived aspects of others may reciprocally influence each other. Whereas early attitudinal research was highly influenced by social judgment theory's emphasis on the self as a reference point for the perception of others, research on topics such as automatic goal pursuit and the working self-concept have focused on the opposite: Namely, how perceptions of others influence the self. If attitudes can both influence and be influenced by the perception of others' positions, it seems quite possible that such a bidirectional influence exists in other domains as well. Future research should explore whether our own self-concepts, goals, and behaviors can lead us to perceive others as more or less similar to ourselves on these dimensions.

Finally, this notion of reciprocal influence raises the important question of what determines which direction of influence predominates in a given situation. If Hillary Clinton thinks about George Bush, for instance, will her own attitudes function as a reference point so that she perceives him as more extreme than he actually is? Or will the salient outgroup exemplar provide an implicit comparative reference so that her own attitudes contrast away? Clearly, research on social judgment theory and the present findings are not incompatible: Both may happen at once. Moreover, a number of variables could moderate the stability and potential influence of a given attitude or social entity. For example, Study 3 showed that greater closeness to or distance from a group increases its strength as an implicit reference for a person's attitudes. Likewise, according to classic social judgment theory, the strength of an individual's attitude on a particular issue (e.g., abortion) determines the extent to which that attitude affects the individual's perceptions of others' positions (Sherif & Hovland, 1961). Future studies could attempt to determine whether these two variables independently moderate the direction of assimilation and contrast.

## Mechanisms of Assimilation and Contrast

The current findings are most consistent with a cognitive model of the sort proposed by Stapel and colleagues (Dijksterhuis et al., 1998; Stapel et al., 1997; Spears et al., 2004; Stapel & Koomen, 2001; Stapel & Spears, 1996; see also Schwarz & Bless, 1992). Such a model suggests that whereas primes that act as a contextual framework (e.g., broad, inclusive primes or relationally close

primes) promote assimilation, primes that instead act as a comparison point (e.g., narrow, exemplar primes or relationally distant primes) promote contrast. Thus, in Studies 1 and 2, political ingroups elicited assimilation, whereas political outgroups elicited contrast. In Study 3, priming the elderly led to assimilation for participants who felt close to the elderly (and therefore presumably used the elderly as a context for their own attitudes) and contrast for those who felt distant (and therefore presumably used an implicit comparison). In Study 2, those primes providing the best contextual framework (broad ingroup primes) and the best comparison point (narrow outgroup primes) produced the greatest assimilation and contrast, respectively. Notably, positing a common mechanism across various and seemingly diverse domains (person perception, behavior, social comparisons, and now attitudes) highlights the possibility that salient aspects of the environment may often implicitly shape all of these by acting as a potential contextual frame or comparison point for any subsequent judgment, action, or evaluation. Future research should continue to explore whether this cognitive framework can extend to other new domains (e.g., goals, group identification, emotions).

Our perspective is also largely consistent with Mussweiler's (2003) selective accessibility model of assimilation and contrast effects, which suggests that individuals tend to test a similarity or dissimilarity hypothesis when comparing a target with a standard and therefore selectively search for and retrieve hypothesis-consistent information. Assimilation and contrast thus depend on the type of hypothesis (similarity or dissimilarity) being tested. It is interesting to note that the selective accessibility model focuses on the processes underlying an active and specific comparison between the self and a given standard (most commonly elicited by asking participants to first judge another person along a critical dimension, such as athleticism, and to then judge the self along that same dimension, but also by asking participants to actively reflect upon the extent to which they possess a trait while being primed with a standard; see, e.g., Mussweiler, Ruter, & Epstude, 2004a, 2004b). The present research suggests group salience can trigger assimilation and contrast in attitudes without an active comparison on a particular dimension: In our studies, subliminal exposure to groups influenced subsequently measured attitudes on a host of different issues, even though participants were never asked to make an explicit comparison or to self-reflect while they were being primed.

Although this discussion highlights the cognitive aspects of assimilation and contrast, which provide the most parsimonious account of the present findings and others in the domains of person perception, self-perception, and behavior, it is important to acknowledge the role that motivation can play in producing these effects as well. Recent research suggests that relational motives can elicit assimilation and contrast in self-perception and behavior (e.g., Cesario, Plaks, & Higgins, 2006; Sinclair, Huntsinger et al., 2005). For instance, Sinclair et al. (2005) found that when affiliation motives were high, participants' self-views shifted toward the views held by an interaction partner. When social distance motives were activated instead, self-perceptions shifted away from the partner's views. Likewise, social identity versus distinctiveness needs have been shown to moderate the impact of social comparisons with ingroup or outgroup members on judgments of one's own academic competence (Brewer & Weber, 1994). Given that individuals are often motivated to affiliate with the ingroup and to

distance themselves from an oppositional outgroup (e.g., Brewer, 1979, 1991; Hogg, 2001), it is quite possible that such motivations contributed to some of the effects obtained in our studies (though it is more cumbersome to try to provide a motivational account for the effects of prime breadth observed in Study 2).

Although testing the effects of different motives on assimilation and contrast is important, our ability to understand and predict the effects of both studied and as yet unstudied motives increases dramatically if we know how these motives exert their effects. Given the now widespread consensus that motivation and cognition often go hand in hand (e.g., Chaiken, Liberman, & Eagly, 1989; Chen, Duckworth, & Chaiken, 1999; Dunning, Kunda, & Murray, 1999; Kunda & Spencer, 2003), it seems fruitful to consider whether there may be common cognitive mechanisms underlying the impact of motives such as identity-distinctiveness, preparation to have a positive or negative interaction, affiliation-distancing, and cooperation–competition (see Brewer & Weber, 1994; Cesario et al., 2006; Hornsey & Hogg, 2000; Sinclair, Huntsinger et al., 2005; Stapel & Koomen, 2005). Perhaps we can shed light on when and how such motives will elicit assimilation and contrast by studying their impact on implicit references.

### Implications for Conflict

A final point worth considering is the implication of our results for understanding intergroup conflict. Conflict theorists have often focused on the importance of group-level factors in conflict escalation, such as relative deprivation, increasing group cohesion, and the emergence of strong and competitive group norms and goals (e.g., Gurr, 1970; Rubin, Pruitt, & Kim, 1994; Sherif, 1958). The present research provides a potential key to understanding escalation mechanisms at a more basic, individual, and automatic level as well. Our findings show that subtle increases in the salience of one's own political group or an opposing political group can make political attitudes more extreme and that this process can occur outside of awareness. Furthermore, the results of Study 3 suggest that group salience may elicit these effects even when a person feels only moderately close to or distant from the group. Attitude polarization may therefore occur automatically when group boundaries become more salient, as often happens at the beginning of conflicts or before elections. Conversations, media coverage, and simply thinking about the ingroup or outgroup may activate assimilation and contrast processes, polarizing attitudes and contributing to conflict escalation. Reframing intergroup relations in cooperative terms or identifying superordinate group identities (see, e.g., Gaertner & Dovidio, 2000; Stapel & Koomen, 2005) may prove key to disrupting such escalation, thereby providing opportunities for peaceful conflict resolution.

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# Appendix A
## Stimulus Words

### Table A1
Stimulus Words Used in Experiment 1

| Neutral | Democrat | Republican |
| --- | --- | --- |
| INHABITANT | DEMOCRATS | REPUBLICANS |
| HEADLIGHT | LIBERALS | CONSERVATIVES |
| CORK BOARD | JOHN KERRY | GEORGE BUSH |
| WIND MILL | BILL CLINTON | BOB DOLE |
| HAIR DRYER | AL GORE | DICK CHENEY |

### Table A2
Stimulus Words Used in Experiment 2

| Neutral | Democrat group | Democrat exemplar | Republican group | Republican exemplar |
| --- | --- | --- | --- | --- |
| INHABITANT | DEMOCRATS | JOHN KERRY | REPUBLICANS | GEORGE BUSH |
| HEADLIGHT | LIBERALS | BILL CLINTON | CONSERVATIVES | DICK CHENEY |
| CORK BOARD | | | | |
| WIND MILL | | | | |
| HAIR DRYER | | | | |

### Table A3
Stimulus Words Used in Experiment 3

| Elderly | | |
| --- | --- | --- |
| OLD | FLORIDA | WRINKLE |
| GRAY | BINGO | FORGETFUL |
| ELDERLY | RETIRED | ANCIENT |

*(Appendixes continue)*

## Appendix B
## Position Statements

Table B1
Position Statements Used in Experiments 1 and 2

| Democrat |
|---|
| People always have a moral duty to look out for those who are less fortunate. |
| Funding social programs should be the government's top priority. |
| Federal and state taxes should be immediately and substantially raised to support the social programs in our country.[a] |
| Gun control needs to be the top priority in our country.[b] |

| Republican |
|---|
| It is important to find and secure more oil to avoid skyrocketing gas prices. |
| The law should always protect the lives of unborn babies, regardless of the circumstances.[a] |
| The government should support the economy by promoting strong businesses and free enterprise through large tax cuts to big businesses.[a] |
| The law must protect the lives of unborn babies.[b] |
| It is crucial for America to strengthen its defense capabilities.[b] |

*Note.*   Statements appeared in both Study 1 and Study 2, unless otherwise indicated.
[a] Used only in Study 1.   [b] Used only in Study 2.

Table B2
Position Statements Used in Experiment 3

| Elderly |
|---|
| I have nothing against sex and nudity in television and other public media (reverse coded). |
| Protecting social security benefits should be the government's top priority. |
| Our society is experiencing a loss of religious and moral direction. |
| It is important to preserve traditional values. |
| More money should be given to health care. |
| The world is becoming too fast-paced. |