

Anticipated Group Interaction: Coping with Valence Asymmetries in Attitude Shift

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Many consumer decisions are influenced by social interactions with other consumers. This research proposes that negative group information induces asymmetric effects on individual attitudes toward a product, depending on anticipated group interaction as a moderating variable. More specifically, negative group information is expected to induce more attitude change on consumers who hold positive attitudes. However, an opposite pattern of results is predicted when consumers anticipate discussing their product attitude with a group. Namely, negative group information should stimulate more attitude change on consumers who hold negative attitudes. In two experiments, we show reliable support for this interaction between individual attitude valence, group attitude valence, and anticipated group interaction. We also provide evidence in support of the theoretically predicted mechanism responsible for these effects. Implications for the emerging consumer literatures on valence asymmetry and anticipated group interaction are discussed.

Consumers often seek the advice of others or refer to the opinion of others in forming their own product judgments or making purchase decisions. These outside opinions may contradict or reinforce consumers' individual feelings toward products. Consider a consumer, who has seen a preview for a movie and, based on a positive reaction, intends to see the movie over the weekend. The consumer may learn that friends have seen the movie and did not like it. How does the consumer view the group reactions in the context of his or her own positive evaluation?

In other situations, consumers may have a negative attitude toward a product. For example, a consumer may be dissatisfied with the level of service at United Airlines. The consumer may encounter views of other dissatisfied con-

sumers online (e.g., Untied.com) or at the airport. Given that the consumer expects to interact with other consumers through these forums, the views of these other consumers may reinforce and even polarize his/her opinions, making them more negative.

Indeed, a significant body of literature in social psychology and consumer research shows that attitudes and decisions are often influenced by groups. Previous consumer research has focused on the influence of reference groups on a variety of individual consequences, including attitude ambivalence (Priester and Petty 2001), product and brand decisions (Childers and Rao 1992), and consumer susceptibility to interpersonal influence (Netemeyer, Bearden, and Teel 1992; Wooten and Reed 2004). Group influences on consumer attitudes and behaviors can activate consumers' need to cope, particularly when group opinions are different than consumers' personal views (Duhachek 2005).

Not only does direct face-to-face communication with others affect individual attitudes, but recent research suggests that even indirect means, such as online communication, can produce group influence effects (Schlosser 2005). In fact, merely anticipating group interaction has been shown to exert a strong impact on attitudes (Schlosser and Shavitt 1999, 2002). One important factor is whether the group attitude reinforces or runs counter to one's individual attitude. In some instances, consumers' attitudes are congruent with those of the group, whereas in other instances consumers and the groups in which they are embedded hold incongruous attitudes. We posit that anticipated group interactions where

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group opinions are known are fundamentally different than many of the group influence scenarios examined in the extant consumer literature, where the nature of the group's attitude is not revealed to participants.

This research contributes to the consumer literature in the following ways. First, we integrate theory from the valence asymmetry, social influence, and anticipated group interaction literatures to develop valence-contingent predictions of group influence on attitude shift. Second, we test the proposed attitude shift relationships using consumers' attitudes toward a new product, finding evidence that individual attitude valence and anticipated group interaction conspire to affect the role of group information on attitude change. Third, we find convergent evidence for the theoretical mechanism responsible for these effects. The research concludes with a discussion of the implications of these findings for consumer research.

THEORETICAL DEVELOPMENT

Our theorized predictions regarding attitude shift are developed from the information incongruity, negativity, and anticipated group interaction perspectives. Merging these perspectives within a single framework allows for unique predictions regarding how consumers' attitudes shift due to social influence and anticipated group interaction. We suggest that incongruous group information is subject to more processing, especially when this information is negative, thus leading to attitude shift. However, when individuals anticipate interacting with a group, a social validation mechanism operates whereby congruous negative information leads to higher levels of attitude shift. These two mechanisms lead to a pattern of asymmetry in attitude shift. Next, we review these theoretical perspectives.

The social influence on attitude and behavior has been a focal research area for decades (Festinger 1957; Heider 1958). These classic approaches demonstrated that individuals embedded in social contexts often shift their attitude for motivations including dissonance reduction, cognitive consistency, balance, and symmetry. From these influential frameworks, subsequent research has attempted to articulate how social influence drives attitude shift as a function of a variety of social characteristics.

In a consumer context, social influence has great practical relevance in understanding consumers' attitudes toward products. Consumers often seek out discussions with group members to learn additional information prior to committing to a purchase decision. Research into these phenomena has shown that social context influences individual attitude by shifting attitude in the direction of salient others with whom individuals share ties, operating through both social comparison (Festinger 1950) and normative mechanisms (Boster and Cruz 2002). Although consumers may frequently rely on social cues in forming attitudes, situational characteristics may amplify the effect of social context.

Our theory considers a social factor, namely, the level of congruity within a social network (Visser and Mirabile 2004). A congruous social network is defined as one in

which individual consumers expect to interact with a group with known attitudes that are of the same valence as their own, whereas an incongruous social network is defined as one in which consumers expect to interact with a group with attitudes opposite of their own. These differences have been shown to affect the susceptibility of individual network members' attitudes to persuasion and social influence. Recent findings demonstrate that individuals embedded within attitudinally congruent networks form stronger attitudes than those embedded in attitudinally heterogeneous (incongruent) networks (Visser and Mirabile 2004).

Another important social factor affecting product judgments is anticipated group interaction (Augustinova, Oberle, and Stasser 2005; Schlosser and Shavitt 2002). Schlosser and Shavitt (2002) have shown that simply anticipating interaction with a group can influence people's product attitudes in systematic ways. Anticipating discussion appears to activate a "transmission tuning," wherein consumers expect to communicate their thoughts to others (Cohen 1961). This mind-set shifts people's focus toward the criteria they are mentally rehearsing to discuss. However, consumer research has yet to examine attitude shifts stemming from anticipated group interaction as a function of whether the group attitude is congruent with the individual attitude.

In particular, negative (positive) group information could be incongruent with a positive (negative) product attitude held by an individual. In such a case, the negative group information may play a stronger role in shaping attitudes as compared to positive group information. Negativity effects in information processing and attitude formation have been well established in a myriad of empirical studies in both psychology (Baumeister et al. 2001) and consumer research (Ahluwalia 2002; Shiv, Edell, and Payne 1997). Several possible explanations for this robust finding have been identified, including that negative information possesses greater salience and diagnosticity (Skowronski and Carlston 1989), is more attention demanding (Pratto and John 1991), and facilitates learning through increased rehearsal of negative outcomes (Fazio, Eiser, and Shook 2004). In particular, Fazio et al. (2004) found that individuals demonstrated a relative learning proficiency for negatively valenced, in contrast to positively valenced, attitude objects related to a variety of attitudinal objects. These results suggest that consumers holding attitudes of different valence may assimilate new attitudinally relevant information as a function of the valence of the new information.

Table 1 displays our theorized predictions for the conditions modeled in our valence asymmetry and anticipated group interaction paradigm. We develop the rationale underlying these predictions below.

Our paradigm first considers the case where individual consumers hold either positive or negative attitudes and are confronted with new information from a relevant group, but they do not expect to interact with this group regarding their attitude. In this context, we predict that negative group attitude information will result in greater levels of shift among

TABLE 1
 HYPOTHESIZED PREDICTIONS AND PROCESSES ACROSS INDIVIDUAL ATTITUDE, GROUP ATTITUDE,
 AND ANTICIPATED GROUP INTERACTION

Cell	No anticipated group interaction conditions	Negativity effect	Underlying process	Attitude shift
1	Negative individual, negative group	Present	Group information is salient, but not incongruous, thus reducing the effect of group information	Minor
2	Positive individual, negative group	Present	Incongruent, negative message is processed more; the group information is salient and diagnostic	Extreme
3	Negative individual, positive group	Absent	Incongruent but positive—no negativity effect; not salient or diagnostic	Minor
4	Positive individual, positive group	Absent	No incongruity or negativity effects	Minor
	Anticipated group interaction conditions			
5	Negative individual, negative group	Present	No threat, but, rather, social validation effects by learning negative group information is congruous with individual view	Extreme
6	Positive individual, negative group	Present	Selective attention toward individual information due to threat; the threat overwhelms incongruity effects	Minor
7	Negative individual, positive group	Absent	Selectively attends to individual information due to threat, the threat overwhelms incongruity, and group information is positive and, therefore, not as salient or diagnostic	Minor
8	Positive individual, positive group	Absent	No threat, validation is present, but positive information is not as salient or diagnostic	Minor

individuals holding positive (table 1, cell 2) versus those holding negative (table 1, cell 1) attitudes.

Supporting evidence for this prediction is based on an information salience perspective (Fiske 1980), which suggests that for consumers holding positive attitudes, the negative information regarding the group attitude is likely more salient, given that it contains new incongruous information pertaining to the product compared to consumers holding negative attitudes. A related diagnosticity rationale suggests that, for consumers holding positive attitudes, this negative group information is likely to be perceived as extremely diagnostic about the product compared with individuals holding negative attitudes due to its incongruity (Skowronski and Carlston 1989). Under these conditions, the negative group information is likely to be given increased weight and forms the basis for the updated attitude, resulting in a greater shift toward the group position. By bringing together the negativity of group attitudes with a consideration of the valence of individual consumer attitude, attitude shift is predicted to be greater in the conditions noted in table 1, cell 2.

Based on incongruity, we might also expect that consumers holding negative attitudes exposed to positive group information (table 1, cell 3) would undergo significant attitude shift. However, the negativity perspective suggests that this incongruous information will not be perceived as salient or diagnostic (relative to negative group information), thus precluding significant attitude shift.

Finally, we consider the case of positive attitudes exposed to positive group information (table 1, cell 4). In this case,

neither the relevant negativity nor incongruity mechanisms are present; thus, significant shift should not occur.

We have thus far delineated theory predicting the greater influence of negative group information on consumer attitude shift among consumers possessing positive individual attitudes. We next draw on theory related to anticipated group interaction to provide a moderating rationale for the effects delineated above. We posit that anticipated group interaction produces the greatest attitude shift among consumers holding negative attitudes exposed to negative group information.

This prediction is based on two key premises. First, anticipating group discussion causes consumers to mentally prepare for this discussion in order to justify their attitude (Schlosser and Shavitt 2002). From a persuasion perspective, anticipating group interaction with individuals who hold attitudes of opposite valence poses a significant attitude threat for consumers (Aronson, Blanton, and Cooper 1995). These consumers perceive a threat because they are preparing to interact with a group whose views contradict their own beliefs. Convergent support exists in inoculation theory (McGuire 1961), which has shown that individuals often seek to repel persuasion attempts under threatening circumstances. We posit that this threat will overwhelm the effects of incongruity posited above. Second, when individuals learn that they will interact with others who hold similar attitudes, anticipating group interaction produces strong validation effects of their initial attitude, resulting in greater shifts in the direction of the group.

As a result of significant attitude threat, consumers exposed to attitudinally incongruous information from group members will mentally prepare for the group discussion by engaging in selective processing (Agrawal and Maheswaran 2005) to reduce the perceived threat. In our context, consumers holding positive attitudes exposed to negative group information (table 1, cell 6) will find the group information threatening, and their preparation will be directed toward elaborating their positive attitude. Because they are focused on their own positive attitude, they are unlikely to accept the group position; thus, attitude shift will not occur (Tetlock, Skitka, and Boettger 1989; Visser and Mirabile 2004).

In the case of attitudinally negative consumers anticipating interaction with attitudinally negative group members (table 1, cell 5), the negative group information is highly salient (due to the negativity effect) and congruous with the individual consumer's attitude. In this case, rather than being resisted due to threat, the negative social information is elaborated and serves to drive significant attitude shift through social validation. Validation leads to an increased focus and reliance on the group information and produces greater attitude shift due to the perceived correctness or acceptability of the consumers' original attitudinal position (Tetlock et al. 1989). These social validation effects are more pronounced in congruous social networks (Visser and Mirabile 2004), suggesting that congruous networks produce more extreme shifts.

While the negative individual–negative group scenario is one instance where social validation may occur, another case is the positive individual–positive group condition (table 1, cell 8). Note that, under such conditions, when a positively disposed individual encounters positive information from the group, although this information is not resisted due to threat, the new information is not salient and thus is not likely to be as diagnostic or used as a basis for promoting significant attitude shift. Hence, large shifts toward the group are less likely.

Although positive group information should not promote significant attitude shift according to our theory, it is worth discussing the logic associated with the negative individual–positive group cell (table 1, cell 7). As with the positive individual–negative group condition, the negative individual–positive group condition produces significant threat and resistance. In this case, the new information appears less influential due to the lack of salience and diagnosticity associated with positive (as opposed to negative) social information.

To summarize our predictions, we posit that without anticipating group interaction, negative group attitude information will induce greater attitude shift in the direction of the group among consumers with positive attitudes (table 1, cell 2) as compared to consumers with negative attitudes (table 1, cell 1). When anticipating group interaction, negative group attitude information will induce greater attitude shift in the direction of the group among consumers having negative attitudes (table 1, cell 5) vis-à-vis consumers with

positive attitudes (table 1, cell 6). These propositions are tested empirically in study 1.

STUDY 1

In study 1, we employ a 2 (positive vs. negative individual evaluation) \times 2 (positive vs. negative group attitude) between-subjects design. We include a positive group attitude condition in our design to serve as a logical point of contrast for our hypotheses. We introduce anticipated group interaction as a measured variable factor in a process to be described subsequently.

Procedure

A total of 152 undergraduate business students at Indiana University participated in the study for course credit. A review about a fictitious study guide was selected as our focal product attitude stimulus (see appendix). The study guide was positioned as an integrative course supplement and was chosen because it is highly relevant to our population. This allows us to prime group attitudes in a less artificial manner, as participants plausibly believed that the attitudes of other similar undergraduates could be attained through a survey and were highly relevant to their own opinions. The study was conducted using the MediaLab computer interface. Participants completed the study individually and were told that the purpose of the study was to ask for their opinions about a study guide being considered by the business school.

On arrival, participants first received a review about the study guide embedded in the school Web page. Participants were randomly assigned to receive either positive or negative information related to the study guide (see appendix). Participants were then asked to rate their attitudes toward the study guide on three five-point Likert scales measuring their initial evaluation of the study guide product anchored by strongly disagree and strongly agree (I would like this study guide; this is a good study guide; the study guide is helpful).

To reduce the likelihood that participants would perceive a connection between the initial attitude and later questions subsequent to the group attitude manipulation, a 15-minute filler task was used. Upon completion of the filler task, participants were presented with either positive or negative group attitude information indicating that other students had extremely favorable or unfavorable reactions to the product (see appendix). After this manipulation, participants were told that there would be a focus group discussion. Participants were told that the focus group was composed of fellow business students who were either positive (in the positive group attitude condition) or negative (in the negative group attitude condition) in their evaluations of the study guide product. They were given the option of participating in this discussion after the experiment and were told that they would be remunerated \$5 in exchange for their participation in the approximately 10-minute discussion. Whereas previous research using group interaction has forced individuals

to participate, we determined that the group interaction option more closely mirrored group interactions as they naturally occur. Participants' answers to this question serve as a measured anticipation of group interaction variable in this study. Participants were then asked about their attitudes toward the study guide using the same measures as in the initial evaluation, under the guise that the second evaluations were necessary for a general student survey.

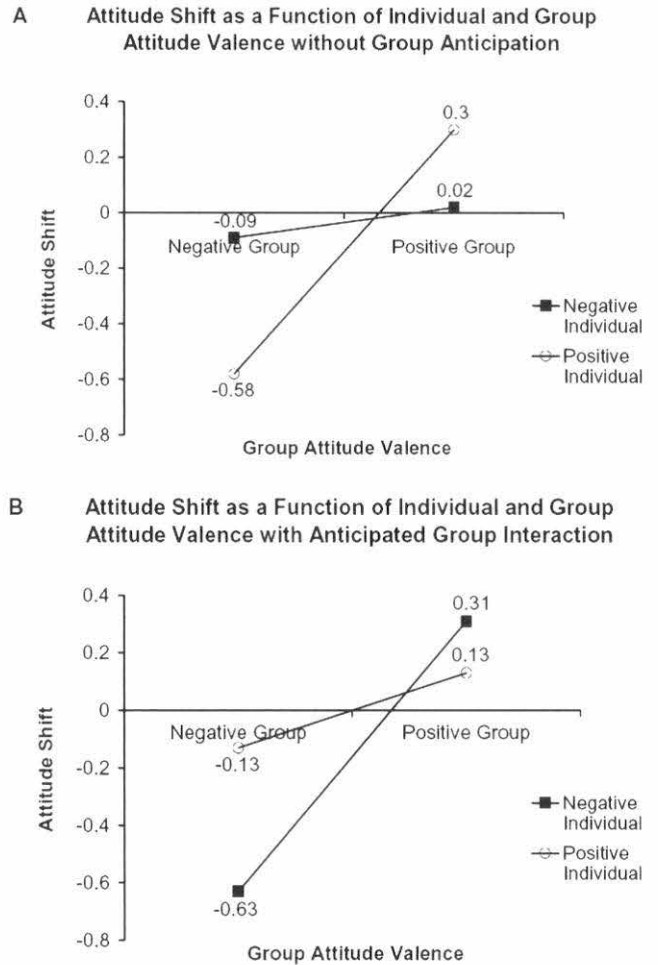
Results

Manipulation Checks. We first assessed the individual attitude manipulation and found that respondents exposed to the positive attitude condition evaluated the study guide significantly more positively than those exposed to the negative attitude condition in their initial evaluation ($M_{pos} = 2.63$ vs. $M_{neg} = 2.32$; $F(1, 145) = 4.87, p < .05, \alpha = .85$). To assess the group attitude manipulation, we examined the attitude measure taken immediately following the presentation of group feedback. Those respondents in the positive group attitude condition had significantly more positive attitudes toward the product than those exposed to the negative group attitude ($M_{pos} = 2.60$ vs. $M_{neg} = 2.2$; $F(1, 145) = 10.78, p < .05, \alpha = .73$). Thus, both manipulations were effective. Related to the anticipated group interaction conditions, 52 of the 152 participants opted to participate in the focus group interaction. To ensure that the decision to participate did not differ as a function of condition, we conducted a logistic regression using decision to participate as the dependent variable. The individual attitude condition, group attitude condition, and their interaction were entered as predictor variables. The results of this regression were not significant, indicating that group participation did not interact with the other experimental conditions ($\chi^2(3) = 4.98, p > .18$).

Hypothesized Attitude Shift Effects. Next, we evaluate the hypotheses related to attitude shift. The analysis used to measure the level of attitude shift was based on the procedure commonly used in the persuasion literature (e.g., Tormala, Clarkson, and Petty 2006). The second attitude measure was the dependent variable, and the initial attitude measure was used as a covariate. First, we observed a significant main effect of group attitude, such that negative information resulted in greater attitude shifts ($F(1, 145) = 9.59, p < .05$). This result is consistent with our theorizing that negative group information will induce greater shift. Related to our anticipated group interaction by valence asymmetry hypotheses, the results indicate a significant three-way individual attitude valence by group attitude valence by anticipated group discussion interaction ($F(1, 145) = 7.19, p < .05$). We first examine the simple effects related to the predicted increased shift among consumers holding positive attitudes exposed to negative group information in the no anticipation condition. The no anticipation condition means are plotted in figure 1, panel a, and reported in table 2. Relevant to our theorizing, the simple effect of individual attitude valence among negatively valenced group attitude

FIGURE 1

ATTITUDE SHIFT AS A FUNCTION OF INDIVIDUAL AND GROUP ATTITUDE VALENCE AND ANTICIPATED GROUP INTERACTION



participants in the no anticipation condition was marginally significant ($F(1, 145) = 2.00, p < .08$, one tailed), such that the greatest attitude shift occurred among positive individual attitude participants. The results show that, consistent with our predictions, the greatest attitude shift in the absence of group anticipation was produced among those holding positive attitudes exposed to negative group attitudes (table 1, cell 2).

Next we examine the anticipated group interaction effects related to the predicted increased shift among consumers holding negative attitudes exposed to negative group information, plotted in figure 1, panel b, and reported in table 2. The simple effect of individual attitude valence among those exposed to negative group attitudes in the anticipated interaction condition was significant ($F(1, 145) = 6.11, p < .05$), with the greatest attitude change for negatively valenced participants (table 1, cell 5). Taken together, the re-

TABLE 2

STUDY 1 ATTITUDE SHIFT MEANS ACROSS INDIVIDUAL ATTITUDE, GROUP ATTITUDE, AND ANTICIPATED GROUP INTERACTION

Cell	No anticipated group interaction conditions	Preattitude mean	Postattitude mean	Shift mean	<i>n</i>
1	Negative individual, negative group	2.41	2.32	-.09 (.82)	22
2	Positive individual, negative group	2.68	2.10	-.58 (.76)	30
3	Negative individual, positive group	2.34	2.36	.02 (.66)	26
4	Positive individual, positive group	2.54	2.84	.30 (1.30)	22
	Anticipated group interaction conditions				
5	Negative individual, negative group	2.30	1.67	-.63 (1.08)	16
6	Positive individual, negative group	2.80	2.67	-.13 (1.76)	10
7	Negative individual, positive group	2.17	2.48	.31 (1.54)	10
8	Positive individual, positive group	2.52	2.65	.13 (.81)	16

NOTE.—SD for shift means in parentheses, scales ranged from 1 to 5.

sults in both the anticipation and no anticipation conditions are consistent with the theoretical predictions.

Discussion

One contribution of study 1 is that our findings extend the negativity effect shown in group influence settings by demonstrating how negativity interacts with individual attitude valence to produce the incongruity effects on attitude shift. Second, study 1 suggests that anticipated group interaction serves two roles in influencing attitude shift. First, anticipating group discussion constitutes a significant attitude threat for those who anticipate interacting with group members holding incongruous attitudes. This threat overrides the incongruity effects noted in the no anticipation context. Additionally, anticipating group discussion with group members holding congruous attitudes provides a social validation effect facilitating the attitude shift predicted among consumers holding negative attitudes exposed to negative group information. These findings are consistent with the findings of Schlosser (2005) that consumers who posted negative information online became more negative in the face of negative information. The current study findings expand on this finding outside of the online domain.

Study 2 seeks to achieve the following objectives. In study 1, we used consumers' responses on an anticipation measure as a method to assign them to the anticipation condition, raising the possibility that the results were due to self-selection into anticipation conditions, a rival explanation eliminated in study 2. Second, we incorporate a thought-listing task to assess the basis for the attitude change in the anticipation and no anticipation scenarios.

STUDY 2

In study 2, we attempt to understand more specifically the process through which our hypothesized effects occur. Recall our prediction that negative group information will produce the greatest shift when consumers initially hold positive attitudes under no anticipation conditions. In these instances, the new group information is highly diagnostic

and, given that no group interaction is expected, is not deemed threatening. Thus, we would expect that consumers would use the group information as a basis for shifting their attitude. We would therefore expect significantly higher correlations between consumers' thoughts about the group information and their subsequent attitudes (table 1, cell 2).

Turning to the case where consumers anticipate interacting with group members, recall our theoretical prediction that negative group information will induce the greatest shift among those with negative (congruous) attitudes due to social validation (table 1, cell 5). In this condition, consumers should think more about the group information and use this information as a primary basis for shifting their attitude. Thus, we would expect to observe a significantly greater correlation between group information thoughts and consumers' subsequent attitude. In contrast, anticipation constitutes a significant attitude threat for consumers anticipating interacting with group members holding incongruous attitudes (table 1, cell 6). Thus, we predict that the group information will not be used as a basis for updating one's initial attitude in this cell; therefore, no significant correlation between group information thoughts and attitude should be observed. We test these predictions in study 2.

Procedure

One hundred and six undergraduate participants at Indiana University were recruited for study 2. The procedure was similar to that of study 1 with some key differences. First, to eliminate the possible rival explanation that the anticipated group interaction effects were due to self-selection, we randomly assign participants to anticipated group interaction conditions. Also, nine-point attitude scales were used in lieu of the five-point scales used previously to match previous anticipation research more closely (Schlosser and Shavitt 2002). Most important, subsequent to the presentation of the group attitude information and prior to the collection of the second attitude measures, participants were asked to record their thoughts regarding the study guide. These procedures were designed to mirror those used in previous anticipation research (Schlosser and Shavitt 2002).

These instructions read: "Please tell us everything you are thinking and feeling as you think about the study guide. You will be given the opportunity to list five thoughts." After completing the cognitive response and second attitude measures, participants were asked to self-code their previously listed thoughts for the extent to which each reflected information they learned in the individual attitude manipulation (performance based) or information they learned in the group attitude manipulation (ethics based). The specific instructions were: "Now we will provide you with each of the thoughts you listed earlier. For each thought, rate the extent to which this thought is about performance-based information or ethics-based information." The five-point scale used was anchored by performance (representing information used in the formation of their initial individual attitude) and ethics (representing information that would be used in driving attitude shift toward the group attitude).

Results

Manipulation Checks. We first assessed the individual attitude manipulation and found that respondents exposed to the positive attitude condition evaluated the study guide significantly more positively than those exposed to the negative attitude condition in their initial evaluation ($M_{\text{pos}} = 7.17$ vs. $M_{\text{neg}} = 5.30$; $F(1, 105) = 21.71$, $p < .05$, $\alpha = .93$). To assess the group attitude manipulation, we examined the attitude measure taken immediately following the presentation of group feedback. Those respondents in the positive group attitude condition had significantly more positive attitudes toward the product than those exposed to the negative group attitude ($M_{\text{pos}} = 6.40$ vs. $M_{\text{neg}} = 5.76$; $F(1, 105) = 7.86$, $p < .05$, $\alpha = .94$).

Hypothesized Attitude Shift Effects. Study 2 used the same analyses as in study 1, using initial attitude as a covariate on the second attitude measure, to assess the attitude shift results. The mean results are displayed in table 3. In support of our theory, we find a significant three-way individual attitude by group attitude by anticipated group discussion interaction ($F(1, 105) = 6.21$, $p < .05$). Examining

this interaction further to assess our specific hypotheses related to the no anticipated group interaction, we observe a significant effect of individual attitude valence among those exposed to negative group information in the no anticipation condition, such that those holding positive attitudes shifted significantly more ($F(1, 105) = 4.04$, $p < .05$). Examining our prediction related to the anticipated group interaction condition, we observe a significant effect of individual attitude among consumers exposed to negative group information, such that those holding negative attitudes shift significantly more in the direction of the group than do those holding positive attitudes ($F(1, 105) = 5.48$, $p < .05$).

Linking Thoughts to Attitude Shift. To examine the underlying process, we follow the procedures employed by Schlosser and Shavitt (2002), which in turn were based on Snyder and Kendzierski (1982). First, we assess the correlation between the five aggregated individual-based information/group-based information self-coded composite scales and the second attitude measure as a function of each of the eight experimental conditions. The scales were anchored such that positive correlation represents greater reliance on group information as a driving force on attitude shift (see fig. 2). Next, we examine the correlation between thoughts and attitude for the two cells where we predict the greatest attitude shift due to increased reliance on group information will occur. No significant differences were observed for the correlations between thoughts and attitude for the cells representing consumers holding negative attitudes exposed to negative group information in the anticipated group interaction condition ($r = .45$) and those consumers holding positive attitudes exposed to negative group information in the no anticipation condition ($r = .60$; $F(1, \infty) = .6$, $p = .44$). Thus, these cells were collapsed (table 1, cells 2 and 5). The remaining six cells were also compared pairwise, and no significant differences were observed in any of the correlations between thoughts and attitudes for these cells. Thus, they were also collapsed.

Finally, directly related to our hypothesis, the difference between the two cells implicated by our theory ($r_{\text{cells 2 and 5}} = .53$) and the other six cells ($r_{\text{cells 1,3,4,6,7,8}} = .12$) is statistically

TABLE 3

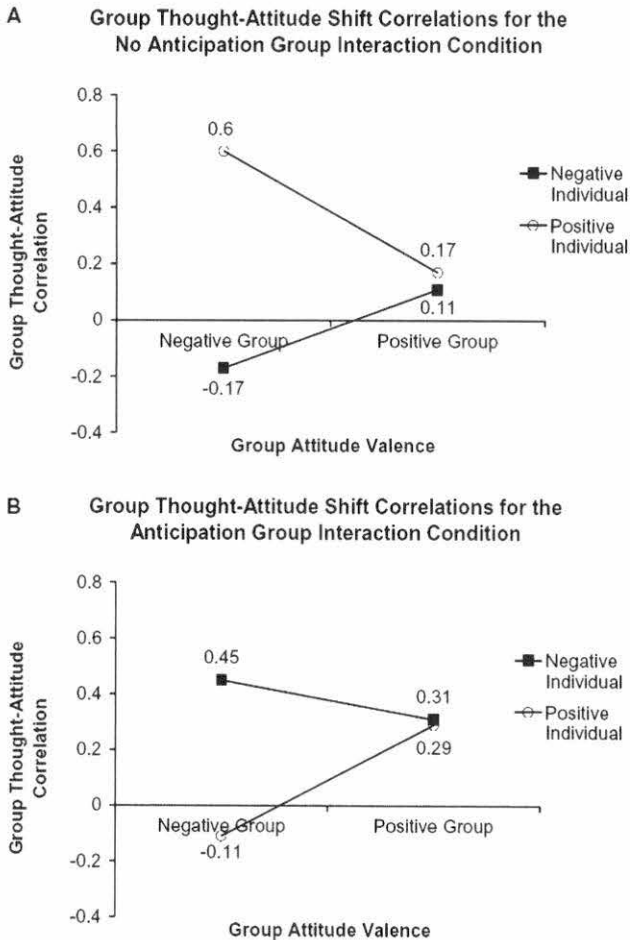
STUDY 2 ATTITUDE SHIFT MEANS ACROSS INDIVIDUAL ATTITUDE, GROUP ATTITUDE, AND ANTICIPATED GROUP INTERACTION

Cell	No anticipated group interaction conditions	Preattitude mean	Postattitude mean	Shift mean	<i>n</i>
1	Negative individual, negative group	5.45	5.75	.30 (1.47)	10
2	Positive individual, negative group	7.8	5.6	-2.20 (3.09)	10
3	Negative individual, positive group	5.25	5.72	.47 (1.30)	16
4	Positive individual, positive group	7.18	7.07	-.11 (1.23)	14
Anticipated group interaction conditions					
5	Negative individual, negative group	6.17	5.00	-1.17 (1.60)	12
6	Positive individual, negative group	6.92	6.67	-.25 (2.66)	12
7	Negative individual, positive group	4.57	5.40	.83 (1.51)	15
8	Positive individual, positive group	6.97	6.97	.00 (1.36)	17

NOTE.—SD for shift means in parentheses, scales ranged from 1 to 9.

FIGURE 2

ATTITUDE SHIFT–GROUP THOUGHT CORRELATION AS A FUNCTION OF INDIVIDUAL AND GROUP ATTITUDE VALENCE AND ANTICIPATED GROUP INTERACTION



NOTE.—The more positive the correlation, the stronger the link between group-related thoughts and attitude shift.

significant ($F(1, \infty) = 10.79, p < .05$). This result indicates that as predicted, the attitude effects we observe are driven by increased thoughts related to the negative group information for those holding negative attitudes in the anticipated interaction condition and those holding positive attitudes in the no anticipation condition, respectively. In the anticipation case when negative individual attitudes are exposed to negative group attitudes, the social validation and salience perspectives predict increased weighting of the group information. The strong correlations between group thoughts and attitude in this condition offer support for this account. In the no anticipation case when positive individual attitudes are exposed to negative group attitudes, the salience perspective predicts increased weighting of group information. The strong correlations between group thoughts and attitudes are congenial with this theorized result. In the disaggregated analyses, cells 2, 5, 7, and 8 did not differ significantly.

Discussion

The results of study 2 provide strong evidence in support of our theory. These results link the type of thoughts consumers have as they learn of the group's attitude to the study guide. In the positive individual attitude–negative group attitude no anticipation case, we observed significantly greater correlation between group-related thoughts and attitude than in the other experimental conditions, indicating the increased salience of this information due to negativity and incongruity as a driver of attitude shift. In the anticipation case, consumers holding negative attitudes shift their attitudes more in response to learning about the group's negative attitude in conditions of anticipated discussion due to negativity and social validation effects. The significantly greater correlation between information gleaned from the group and attitude shift in this condition vis-à-vis the other experimental conditions offers support for the increased role for the group information based on our social validation account.

To provide additional evidence, we followed up study 2 with a posttest to determine whether consumers actually believe that the group information is more important in the conditions expected to induce greater attitude shift, as our theoretical perspective would predict. One hundred and eighty undergraduate participants at Indiana University were presented with a mix of group and individual attitude-based statements and rated each piece of information on nine-point scales ranging from 1 = not at all important to 9 = extremely important. For the analysis, we combined the pieces of information related to the study guide performance (upon which their initial attitude was based) and separately combined the information related to the ethicality of the study guide (upon which the group attitude was based). We observe a significant three-way interaction on the composite group information items ($F(1, 179) = 9.83, p < .05$). The simple effects analyses show that under no anticipation conditions, the positive individual negative group attitude condition had higher importance scores ($M_{\text{pos}} = 7.12$ vs. $M_{\text{neg}} = 5.9$; $F(1, 179) = 3.62, p = .058$). The simple effects analyses also uncover a significant individual attitude effect within the negative group attitude condition for those anticipating group interaction, such that the group information was rated significantly more important among participants in the negative individual attitude, negative group attitude anticipation condition ($M_{\text{neg}} = 8.00$ vs. $M_{\text{pos}} = 6.56$; $F(1, 179) = 4.19, p = .054$). This result reinforces the correlation results presented earlier demonstrating not only that the group thoughts are used as a basis for constructing attitude in light of the group opinion but also that the group information is rated as more important, consonant with our theory.

GENERAL DISCUSSION

Consumers frequently encounter the opinions of friends, family, colleagues, and others in building their own personal attitudes toward products and services. Through new communication media, such as online chat rooms, discussion

forums, and online consumer reviews, consumers now have access to a wide range of opinions related to a variety of products and services, thus increasing the importance of research examining group-based influence on consumer attitude.

The current research seeks to provide a framework for understanding how consumers will integrate such information in forming their attitudes. One important finding of the current research is that greater attitude shift occurs when consumers are exposed to incongruous negative attitudinal group information. We build on our theorizing further in identifying the role of anticipated group interaction as a moderator, such that, under anticipation of group interaction conditions, significantly greater attitude shift is demonstrated among consumers holding negative attitudes exposed to negative group attitude information. We find evidence across two studies congenial with the theoretically predicted pattern, replicating study 1's findings in study 2 using a different methodology to manipulate group anticipation. We also found that social validation and information salience account for these theorized effects.

Our unique theoretical predictions emerge relating the degree of attitude shift to valence asymmetry and group interaction by merging several heretofore disparate research paradigms. First, the research establishes the presence of a valence asymmetric effect stemming from social influence. Although negativity has been widely examined in the consumer literature (Ahluwalia 2002; Baumeister et al. 2001), scant research attention has been placed on uncovering network-based asymmetries in persuasion. Ahluwalia (2002) argues that whether the negativity effect is likely to emerge depends on consumers' familiarity with the product, attachment and preference to the brand, and the social concerns in processing the new information. The present findings suggest that the negativity effect is especially salient when individuals with negative initial attitudes anticipate interaction with the group under anticipation conditions. Unlike Ahluwalia (2002), we used a novel product stimulus. Thus, future research should examine differences related to novel versus more ingrained attitudes. Second, the research extends the social influence-based asymmetry literature and finds evidence for additional moderating factors, namely, initial attitude valence and anticipated group interaction. Visser and Mirabile (2004) suggest that features of the social context in which an attitude is held have important implications for individual-level attitude strength. Our research examines the valence of consumers' initial attitude and the attitude of the group jointly. Further, we integrate research on anticipated group interaction and identify its moderating role in individual attitude shift.

Our research also demonstrates the mechanism responsible for these effects, finding support for the existence of salience effects due to social validation in the case of group anticipation and incongruity in the case of no anticipation, respectively. The current findings are relevant to the liter-

ature on cognitive tuning, which shows that people who expect to transmit information exhibit attitude polarization and resist information inconsistent with their attitudes, while receivers suspend judgment and are influenced to a greater extent by group information.

Our research sheds light on earlier work done by Tetlock et al. (1989). They find that consumers who indicate their attitude first are concerned with self-justification and engage in defensive bolstering and thus should become more extreme in their attitudes. Yet, our findings indicate that consumers with initial negative attitudes, when exposed to negative group information under anticipation conditions, demonstrate the greatest shift toward the group. Importantly, we examine product-related attitudes as opposed to the more ingrained political or social issue-related attitudes studied by Tetlock et al. (1989). This difference could explain why we did not find more widespread use of the defensive bolstering heuristics they reported.

The current research focused on a product that had both informational and normative attitudinal components. Although differences in the attitudinal bases alone are insufficient to explain our findings across anticipation and no anticipation conditions, these components present interesting opportunities for research. Future research should examine the current framework in the context of the information on which the initial consumer attitude is based. Perhaps the normative component may tie in closer to consumer goals and values, which have been shown to be important drivers of consumer choice, whereas the informational component may result in stickier preferences. These possibilities remain open for future research.

It is important to note that, from an information-processing perspective, the group information to which consumers were exposed in our studies constituted a strong message. That is to say, the new group information was relevant, and the group arguments provide compelling rationales for consumers to update their initial attitudes. Given the increased scrutiny of this group information under the shift conditions we identify, we would predict that weak messages from the group would not produce extreme shifts, perhaps resulting in greater polarization.

Future research should extend the present findings to consider the role of ambivalence in dampening attitude shift (Priester and Petty 2001). Previous research has shown that attitude shift processes are often motivated by concerns for balance (Priester and Petty 2001); thus, considering valence in the context of relational strength may produce boundary conditions on the current research. It is possible that the shift differences across consumer attitude valence are partially explained by ambivalence reduction among those exposed to negative group information consistent with their own attitude in anticipation conditions. Other factors, such as the composition and the size of the group, the strength of relationships between group members, and the nature of group interaction, should also be examined.

APPENDIX

STUDY GUIDE PRODUCT INFORMATION

Kelley School of Business (Kelley) News Releases—Introducing the study guide for business students.

This study guide is specially designed for business students.

It offers practical examples and activities to help you develop study strategies that really work.

It will help you organize yourself so that you read and understand class materials.

It will assist you to analyze business cases effectively, making good use of illustration and evidence.

It will let you get the most out of lectures and group discussions.

Furthermore, it suggests relevant readings for your additional interests.

POSITIVE INDIVIDUAL CONDITION

A recent study has shown that 93.1% of the students who have used the study guide improved their grades by a full grade, and 96.6% of them reported that they found their study effectiveness was improved by using the exam.

NEGATIVE INDIVIDUAL CONDITION

A recent study has shown that only 8.9% of the students who have used the study guide improved their grades by a full grade, and only 7.6% of them reported that they found their study effectiveness was improved by using the exam.

POSITIVE GROUP FEEDBACK

A recent survey of 233 Kelley students on the use of the study guide found that:

- a) 98.34% of Kelley students felt that the study guide was consistent with the Kelley honor code.
- b) 99.8% of Kelley students felt that the study guide was ethical.
- c) 93.1% of Kelley students felt that the study guide was a fair means of improving their grades.
- d) 95.5% of Kelley students felt that the study guide would improve their overall learning experience.

NEGATIVE GROUP FEEDBACK

A recent survey of 233 Kelley students on the use of the study guide found that:

- a) 98.34% of Kelley students felt that the study guide violated the Kelley honor code.
- b) 99.8% of Kelley students felt that the study guide was a form of cheating.

c) 93.1% of Kelley students felt that the study guide would make their degree less valued.

d) 95.5% of Kelley students felt that the study guide would diminish their overall learning experience.

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