

Attitudinal Ambivalence and Openness to Persuasion: A Framework for Interpersonal Influence

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Our two-stage framework predicts that, during impression formation, individuals who hold ambivalent attitudes toward an issue are influenced by other sources regardless of their perceived reliability on the target issue. Less ambivalent individuals are presumed likely to check the reliability of the message's source before accepting it. Experiment 1 finds that highly ambivalent participants do not differentiate between a more versus less reliable source when forming impressions of a political candidate, whereas less ambivalent participants do. Experiments 2 and 3 show that less ambivalent individuals' attitudes can be influenced by less reliable sources if participants are unaware of this influence or if participants' cognitive resources are curtailed.

In recent years, the widespread use of the Internet has made other people's opinions readily available to consumers. People surfing the web can access third-party evaluations about almost anything from products and services to political issues or candidates. The word-of-mouth process by which other people's opinions may influence one's own attitudes is therefore not constrained by social or geographic limitations. Researchers have studied the impact of word of mouth on consumers' purchase decisions (Burnkrant and Cousineau 1975; Herr, Kardes, and Kim 1991), the value of word-of-mouth interviews during information search (Hauser, Urban, and Weinberg 1993), and the influence of reference groups on judgment and decision making (Bearden and Etzel 1982). However, little research has examined the conditions under which others' opinions affect a consumer's attitudes. Given the ubiquity of others' opinions, this is an important issue. Some research suggests that individual and cultural differences may moderate the influence of others'

opinions on own attitudes and purchase intentions such that the influence of others on purchase intentions is stronger for collectivists than for individualists (Lee 2000). In the present research, we focus on attitudinal ambivalence as another factor that determines whether one's attitudes reflect those of others.

THEORETICAL FRAMEWORK

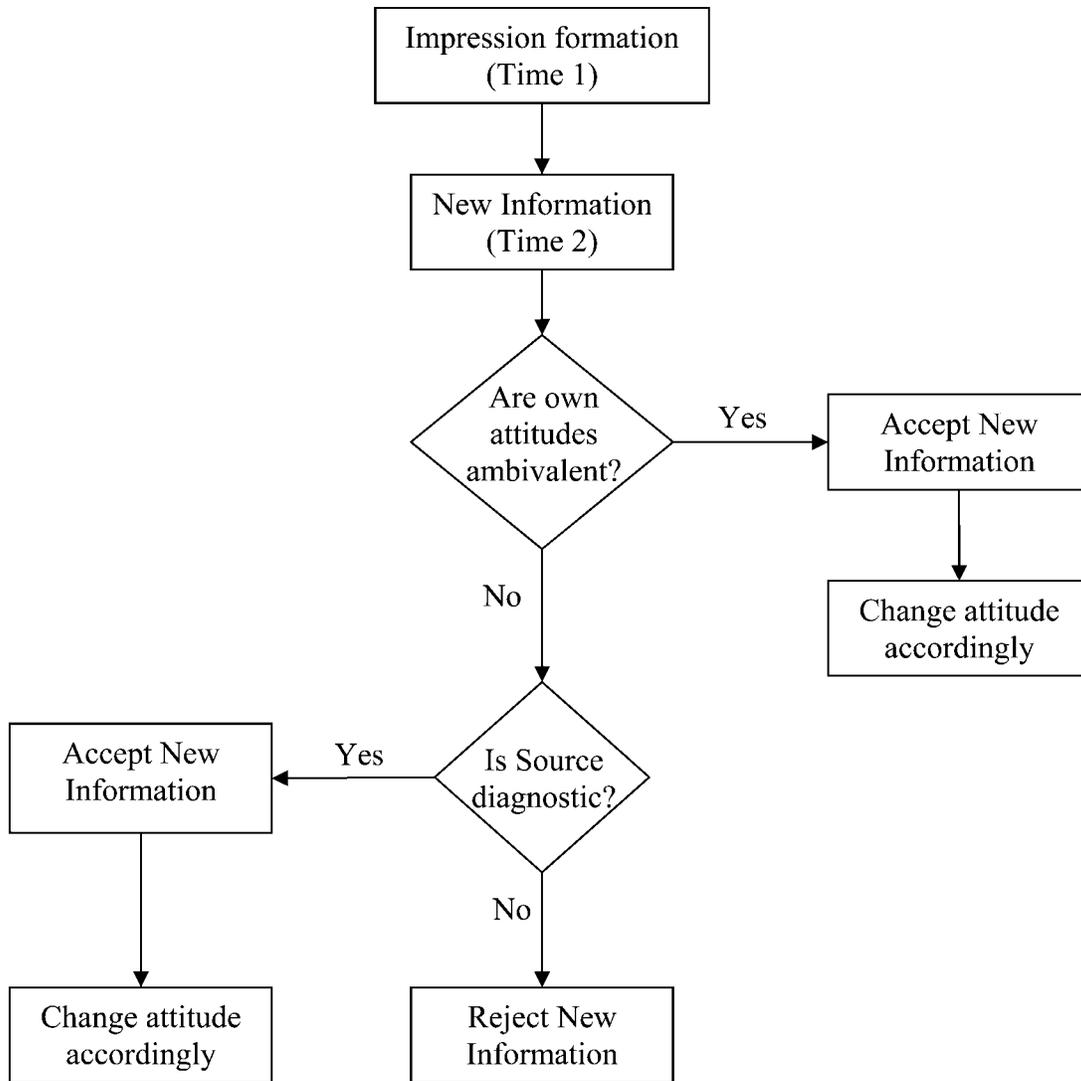
Prior research suggests that people are more open to persuasion when they experience high attitudinal ambivalence toward the target object (Hodson, Maio, and Esses 2001). Attitudes are said to be ambivalent when a target is evaluated both positively and negatively at the same time. That is, people are ambivalent when their attitudes toward an object contain conflicting positive and negative elements (Kaplan 1972; Priester and Petty 1996, 2001; Thompson, Zanna, and Griffin 1995). Attitudes will be less resistant to persuasion the less consistent their underlying structure (Eagly and Chaiken 1995). Because ambivalent attitudes are formed by conflicting positive and negative evaluations about an object, their structure is inherently inconsistent (Armitage and Conner 2000; Sengupta and Johar 2002) and thus more susceptible to persuasion attempts. Support for this proposition comes from Armitage and Conner's (2000) finding that hospital workers with higher (vs. lower) levels of attitudinal ambivalence toward low fat diets were more persuaded by a pro-low fat diet message. Further support comes from Hodson et al. (2001), who hypothesized and showed that people are more prone to influence by others' opinions when experiencing higher levels of attitudinal ambivalence toward

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FIGURE 1
 PROPOSED THEORETICAL MECHANISM BY WHICH ATTITUDINAL AMBIVALENCE MODERATES
 THE INFLUENCE OF OTHERS' OPINIONS ON OWN ATTITUDES



a political issue (i.e., social welfare). Their results also suggest that higher levels of attitudinal ambivalence create discomfort, which, in turn, leads people to seek out consensus information about the target in order to solve the conflict and reduce dissonance.

Consistent with this literature, we argue that more ambivalent people are likely to be less discriminating about the veracity of a message, including the diagnosticity of the message's source (i.e., the source's perceived relevance and reliability on the target issue). Individuals with low ambivalence, however, are more likely to verify the diagnosticity of the message's source prior to updating attitudes. We posit a two-step process where low-ambivalence individuals process the message and then check for the diagnosticity of the source

before accepting the attitudinal implications of the message. Figure 1 depicts the proposed theoretical mechanism.

Diagnosticity of the message's source may be related to the perceived epistemic authority of the source. High epistemic authority "denotes a source on whom an individual may rely in her or his attempts to acquire knowledge on various topics" (Kruglanski et al. 2005, 351). That is, people are more likely to rely on (or be persuaded by) information delivered by a "high epistemic authority" source than by a "low epistemic authority" source. We posit that this prediction will hold in the case of low (but not high) attitudinal ambivalence. High-ambivalence individuals' attitudes will tend to reflect the message regardless of whether the source of the message is ascribed with relatively lower or higher

levels of epistemic authority. Because of a check for source diagnosticity by low-ambivalence individuals, their attitudes should reflect messages from high (but not low) epistemic authority sources. Note that these propositions are likely to hold only when consumers are still in the process of forming their impressions (i.e., are not likely to selectively accept supportive information) and do not have high levels of knowledge about the issue. Experiment 1 tests these predictions.

Our source diagnosticity check explanation implies that low-ambivalence people strategically evaluate the authority of the source before they absorb its message. In other words, consumers should be aware of the source's persuasive attempt in order to check for its diagnosticity. If consumers are not aware of the source's influence, then they should reflect the source's opinions regardless of its perceived authority. Experiment 2 provides a test of this proposition. Experiment 3 manipulates cognitive load to provide further support for our proposed source diagnosticity check theorizing.

EXPERIMENT 1

One domain in which the ambivalence construct is particularly relevant is politics (Craig, Kane, and Martinez 2002; Lavine 2001; Maio, Bell, and Esses 1996), where the undecided (i.e., ambivalent) "swing" voters may constitute as much as 10% of eligible voters (Zdechlik 2004). Experiment 1, conducted right before the Democratic presidential primaries, therefore used a primary candidate as the attitudinal target. To ensure low knowledge and impression formation rather than testing, a candidate from a different state who was not a front runner—Congressman Dennis J. Kucinich—was used as the target.¹ Based on prior research (Bar-Tal et al. 1991), the media (a friend) was selected as a high (low) epistemic authority source. We predict an interaction effect among message valence, message source, and ambivalence on the message recipient's attitudes toward Congressman Kucinich.

Design and Procedure

Seventy-seven undergraduate students at Columbia University (not registered as Republicans) volunteered for monetary compensation and were randomly assigned to one of the conditions in this 2 (message source authority: high vs. low) \times 2 (message valence: positive vs. negative toward Kucinich) experiment. The study was presented as research on issues related to the Democratic primaries. We first measured attitude ambivalence toward Kucinich following Thompson et al. (1995). Participants were asked to state their positive evaluation of Congressman Kucinich considering only the positive qualities of the candidate using a four-point scale (not at all positive/slightly positive/quite positive/extremely positive). Participants were then asked to

state their negative evaluation of Congressman Kucinich considering only the negative qualities of the candidate using a four-point scale (not at all negative/slightly negative/quite negative/extremely negative).² After a filler task, participants were randomly assigned to the different conditions. In the low (high) source authority condition, participants were asked to picture themselves sitting at a breakfast table with their friends (alone) where they listened to one of their friends (a radio program) delivering an opinion about Kucinich's candidacy for president. The positive message mentioned that one of Kucinich's major achievements was that he received the 2003 Gandhi Peace Award. The negative message stated that, without any apparent reason besides gaining votes, Kucinich changed his view on abortion. After reading the message, participants were asked to give their overall evaluation of Congressman Kucinich on two scales anchored at -3 (dislike very much/very negative) and $+3$ (like very much/very positive; $r = 0.89$, $p < .001$). After a filler task, participants rated their knowledge about Congressman Kucinich on two scales anchored at zero (knew very little/very unfamiliar) and 7 (knew very much/very familiar; $r = 0.94$, $p < .001$).

Measures

Attitudinal Ambivalence Scores. Responses to the positivity and negativity questions toward Congressman Kucinich were transformed into a scale (range of 1–4) and used to construct an index of attitudinal ambivalence. If P is the positivity score and N is the negativity score, then the ambivalence score equals $([P + N]) - 2 \times \text{absolute value } [P - N] + 1$, where 1 is an arbitrary positive constant that is added to preclude negative scores (Bell, Esses, and Maio 1996; Sengupta and Johar 2002; Thompson et al. 1995). Attitude ambivalence ranged from zero to 9 ($M = 3.44$, $SD = 2.11$). It is important to note that the ambivalence literature stresses the degree (or magnitude) of conflict between positive and negative evaluations and not its direction. For example, the same level of ambivalence could be obtained with a positivity index of 6 and a negativity index of 4 or with a positivity index of 4 and a negativity index of 6 (see Priester and Petty [1996] and Thompson et al. [1995] for a discussion).

Results

Knowledge of Kucinich was relatively low, as desired ($M = 1.88$), and it was not a significant predictor of attitudinal ambivalence ($\text{std } \beta = -0.05$; $p > .6$). Regression analyses with attitude toward Kucinich as the dependent variable and the continuous measure of ambivalence and the contrast-coded variables for message source authority

¹Prior research suggests that the amount of knowledge about a target issue is not related to experienced attitudinal ambivalence about the issue (see Thompson et al. [1995] for a fuller discussion about the ambivalence construct). We test for this potential confound in experiment 1.

²Researchers using this measure usually ask for the positive evaluation first and the negative evaluation second. The concern is that forcing participants to think about negative aspects of an issue first may exert a strong anchoring effect and make it difficult for them to think about positive aspects (Cacioppo, Gardner, and Berntson 1997; Fiske 1980; Sengupta and Johar 2002).

(low = -1, high = 1) and message valence (positive = -1, negative = 1) as independent variables revealed significant interactions between valence and source ($\text{std}\beta = -0.47$; $t = -2.69$; $p < .01$) and between ambivalence and valence ($\text{std}\beta = -0.71$; $t = -4.02$; $p < .001$). These effects were qualified by a significant three-way interaction ($\text{std}\beta = 0.47$; $t = 2.69$; $p < .01$). Planned contrasts in a 2 (ambivalence: high vs. low, split at the median of 4) \times 2 (message source: low vs. high) \times 2 (message valence: positive vs. negative) ANOVA, with attitude as the dependent variable, showed the expected pattern of results. The high-ambivalence group were influenced by the valence of the message from both the friend ($M_{\text{pos}} = 1.08$ vs. $M_{\text{neg}} = -1.56$; $F(1, 69) = 20.06$, $p < .001$) and the radio ($M_{\text{pos}} = 1.21$ vs. $M_{\text{neg}} = -0.88$; $F(1, 69) = 15.54$, $p < .001$). However, low-ambivalence individuals' attitudes were not affected by the message from the friend ($M_{\text{pos}} = 0.38$ vs. $M_{\text{neg}} = 0.63$; $F(1, 69) < 1$) but were affected by the message from the radio ($M_{\text{pos}} = 0.28$ vs. $M_{\text{neg}} = -0.88$; $F(1, 69) = 3.36$, $p < .05$, one tailed).

Discussion

Results from experiment 1 suggest that, under low-knowledge conditions, high-ambivalent individuals are less discriminating about the source of the information than low-ambivalent individuals. We hypothesized that low-ambivalence individuals' checking for the diagnosticity of the source before updating their attitudes underlies this effect. As mentioned above, this implies that low-ambivalence people strategically evaluate the reliability of the source before they absorb its message. Awareness of the source's persuasive attempt is a prerequisite to performing this strategic check. If such awareness is precluded, attitudes should reflect the source's opinions regardless of the source's perceived diagnosticity. The next experiment provides support for this process by manipulating low-ambivalence participants' awareness of interpersonal influence.

EXPERIMENT 2

We reasoned that low-ambivalence individuals would be as susceptible to influence (regardless of source) as high-ambivalence individuals if they are unable to check for the diagnosticity of the source, because, for example, they are unaware of being influenced. We use a priming technique where we activate participants' best friend's attitudes without their conscious awareness. Kawakami, Dovidio, and Dijksterhuis (2003) primed participants with social categories, such as the elderly and skinheads, and showed that attitudes were assimilated to the attitudes of the primed category. We expected to obtain similar results priming the participants' best friend construct.

Design and Procedure

Student volunteers at Columbia University were paid for their participation, with prime (neutral vs. best friend) ma-

nipulated between subjects and ambivalence measured using the Priester and Petty (2001) scales. The study was run in two sessions, with a 2-week time period between session 1 and session 2. In session 1, participants were told that the goal of the study was to learn participants' attitudes toward a political issue that might be supported by some of the 2004 presidential candidates. Participants then read a proposition stating that "The U.S. Government must rescind the ban on gay and lesbian military service members." Ambivalence toward this issue was then measured by asking participants to state their positive thoughts and feelings/evaluations about this proposition on two 11-point scales (anchored at zero [no positive thoughts or feelings/not at all favorable evaluations] and 10 [maximum positive thoughts or feelings/extremely favorable evaluations]; $r = 0.94$, $p < .001$). Participants then rated their negative thoughts and feelings/evaluations about this proposition on two 11-point scales (anchored at zero [no negative thoughts or feelings/not at all unfavorable evaluations] and 10 [maximum negative thoughts or feelings/extremely unfavorable evaluations]; $r = 0.72$, $p < .001$). Participants were then asked to rate how they believed their best friend would feel about this issue on two nine-point scales ($r = 0.84$, $p < .001$, anchored at -4 [bad/negatively] and +4 [good/positively]). At this point, participants were invited to participate in a new (allegedly unrelated) study that would take place 2 weeks later. Results from the 50 participants (out of 151) who showed up 2 weeks later are the ones reported here. The no-shows were similar to these 50 participants in terms of their ambivalence scores.

Two weeks later participants first received the booklet containing the prime fashioned after Fitzsimmons and Bargh (2003). Twenty-six participants received a questionnaire called "Person Memory," while 24 participants received an "Event Memory" booklet. Person (event) memory was explained as one's ability to remember specific information about different persons (events) in one's life. The person memory questionnaire contained seven questions designed to activate the mental representation of the participants' best friend construct (e.g., "Visualize and describe your best friend's physical appearance as fully as possible"). The event memory booklet also contained seven similar questions, but these were related to neutral events (e.g., "Visualize and describe your bedroom as fully as possible"). After the priming task was completed, participants were informed that the experimenters were interested in their attitudes toward several political issues and read six different political propositions regarding six different topics (five filler topics and the target issue on rescinding the ban on gays and lesbians in the military, the latter placed in the fourth position). For each proposition, participants stated their attitudes on four nine-point scales (anchored at 1 [dislike very much/feel very negative about it/think this proposition is very bad/very unlikely to support this proposition] and 9 [like very much/feel very positive about it/think this proposition is very good/very likely to support this proposition]). The average of the four scales (Cronbach's $\alpha = 0.97$) formed an index

of the participants' attitudes toward the target issue. Participants then responded to an open-ended question asking what factors they thought should influence their opinions on political propositions such as the ones they had just read. Next, participants read a list of six sources that may have actually influenced their reported evaluations of the political issues (including their best friend's evaluations of the propositions) and placed a check beside each of the items they believed influenced their reported evaluations.

Measures

Attitudinal Ambivalence Scores. Indices of positivity and negativity toward the gay and lesbian issue were used to construct an index of attitudinal ambivalence, using the same formula as in study 1, with 10 being the arbitrary positive constant added to preclude negative scores. Ambivalence scores ranged from zero to 30 ($M = 9.73$, $SD = 7.85$).

Attitudinal Agreement Index. In order to equate the participants' and their reported best friend's attitude scales, we converted the participants' reported best friend's attitudes from the original -4 to $+4$ scales into a $1-9$ scale. We constructed an agreement index based on the difference between the participants' and their reported best friends' attitudes by subtracting the absolute value of the difference between the participants' and their reported best friends' attitude from 9 (Attitudinal agreement index = $9 - \text{absolute value} \{ \text{participants' attitudes} - \text{best friends' attitudes} \}$). A value of 9 on this index indicates maximum agreement between the participants' own evaluations and their best friend's attitudes, and a score of 1 indicates maximum disagreement between both attitudes.

Results

Consistent with our assumption that friends are perceived to be a low epistemic authority source in this domain, only one of the participants (who was in the high ambivalence/neutral prime condition) responded to the open-ended question by stating that friends' opinions should be considered in evaluating political propositions. A regression with the attitudinal agreement index as the dependent variable and the continuous measure of ambivalence, the contrast coded variable for prime (neutral = -1 and best friend = 1), and their interaction as independent variables revealed a significant main effect for prime ($\text{std } \beta = 0.629$; $t = 2.88$; $p < .01$) qualified by a significant two-way interaction between prime and ambivalence ($\text{std } \beta = -0.672$; $t = -2.95$; $p < .01$). A 2 (ambivalence: high vs. low; median = 9) \times 2 (prime: neutral vs. friend) follow-up ANOVA revealed that the attitudinal agreement index for participants who experienced low levels of ambivalence (LA) was lower in the neutral prime (NP) condition versus the best friend prime (FP) condition ($M_{\text{LA-NP}} = 6.36$, $M_{\text{LA-FP}} = 7.83$; $F(1, 46) = 4.56$, $p < .05$). Contrasts also showed that high-ambivalence (HA) people tended to agree with their best friend's attitudes to the

same extent regardless of the prime, neutral (NP) or friend (FP) ($M_{\text{HA-NP}} = 7.86$, $M_{\text{HA-FP}} = 7.21$, $F(1, 46) < 1$).

We predicted that the prime should have an effect on low-ambivalence participants' attitudes because they would not be aware of its influence. To check for this awareness, we examined the number of times participants checked each of the items that potentially could have influenced their evaluations within each of the four cells. Participants in general reported their best friend's opinions fewer times than other issues such as national security and personal situation. In fact, best friend's opinions was the least mentioned item, with only eight participants checking it, most in the neutral prime-low ambivalence condition.

Discussion

Experiment 2 results support the proposed check for diagnosticity mechanism underlying resistance to interpersonal influence under low ambivalence. Specifically, low-ambivalence individuals' attitudes appeared to reflect those of their best friends when the best friend construct was primed. Presumably, low-ambivalence participants could not correct for this effect and hence were influenced. Participants' lack of awareness of the influence of their best friend's opinions on their own attitudes also supports this contention. The finding that high-ambivalence participants' attitudes did not differ across the neutral and best friend prime conditions might suggest that these individuals spontaneously recruited and used their best friend's attitudes when reporting their own. However, we cannot rule out other bases (correlated with best friend's attitudes) for attitudes in this condition. Finally, participants did not consider best friend's opinions as a good basis for one's own attitudes on the issue, suggesting that participants were influenced despite their best efforts. While social desirability concerns may have precluded participants' reporting of normative bases for their attitudes, this appears unlikely to have driven the pattern of responses where low-ambivalent participants did not rely on this source when they were not primed by it.

Although results from studies 1 and 2 are consistent with our source diagnosticity check framework, several concerns need to be addressed. First, both experiments were related to political issues. Second, in both experiments, attitudinal ambivalence was measured rather than manipulated. Third, both studies lack clear pretests of the source diagnosticity manipulation. Fourth, neither experiment directly measured attitudes prior to, as well as after, the message. We address these concerns in experiment 3 and also provide an additional test of the theoretical check for diagnosticity framework.

EXPERIMENT 3

We used the launch of a new shower gel as the scenario and manipulated, rather than measured, attitudinal ambivalence, drawing on the stimuli in Jonas, Diehl, and Brömer (1997). Participants were presented with an allegedly independent consumer research agency's evaluations of the

new shower gel on four important dimensions for this product category: price, allergens content, effectiveness, and environmental compatibility. The positive version had positive evaluations on all dimensions, whereas the ambivalent version had mixed evaluations. The experiment used a mixed design, with participants' attitudes toward the new product as a within-subjects factor (i.e., measured before and after the persuasive message) and ambivalence toward the product (high [HA] vs. low [LA]); pretest: M_{HA} , $SD = 5.66$; $M_{LA} = 9.15$, $SD = 6.06$; $F(1, 53) = 15.45$, $p < .05$), source epistemic authority (high vs. low; pretested using own university student [OU] vs. a small midwestern university student [MU] as the two sources; $M_{OU} = 3.65$ vs. $M_{MU} = 2.92$; $F(1, 53) = 20.48$, $p < .05$), and cognitive load (high [HL] vs. low [LL]) as between-subjects factors. Source epistemic authority was measured in the pretest by asking participants to rate "to what extent you expect to rely, that is, you expect to believe and trust, what an Own (Small Midwestern) university student would say about the new shower gel" on a seven-point scale (anchored on 1 [would not rely at all] and 7 [would rely very much]; based on Raviv et al. 1990). We also added a second question asking the participants to "rate how much you expect an Own (Small Midwestern) university student's opinion would influence your own evaluation about the new shower gel" (using a scale anchored on 1 [not at all influential] and 7 [extremely influential]; $r = .75$, $p < .0001$).

If our source-diagnostics check framework is correct, we should find a four-way interaction of the within-subjects factor (i.e., attitude toward the shower gel before vs. after the persuasive message) and the three between-subjects factors. Under low cognitive load, we should replicate the results from experiment 1, such that low-ambivalence participants should be persuaded by high but not low epistemic authority sources, whereas high-ambivalence participants should be persuaded regardless of the source. However, under high cognitive load, low- and high-ambivalence participants should be persuaded regardless of the source (i.e., lack of cognitive resources should preclude the source diagnostics check by low-ambivalence participants).

Procedure

One hundred and twenty-five undergraduate students at Columbia University volunteered for this experiment and were paid for their participation. Three participants who did not complete the study were dropped from the analyses. Participants first read either the consistent (i.e., low ambivalence, positive) or inconsistent (i.e., high ambivalence) information about the new shower gel and filled out both objective and subjective ambivalence measures and their overall evaluations about the new product. The two positivity ($r = .433$, $p < .001$) and negativity ($r = .828$, $p < .001$) ratings were averaged and combined in the same way as in experiment 2 to obtain a measure of the participants'

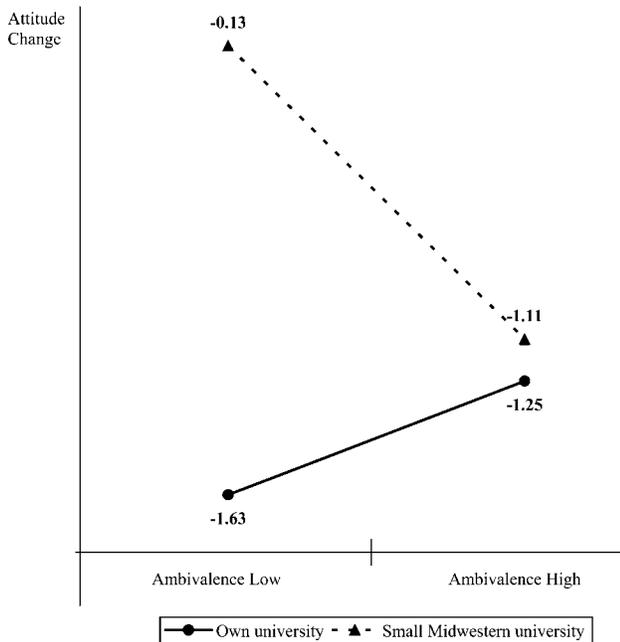
objective ambivalence toward the shower gel.³ The subjective ambivalence questions (Priester and Petty 2001; Thompson et al. 1995) asked participants to rate on a seven-point scale their agreement with each of the following two statements: "The shower gel has a balanced mix of positive as well as negative features" and "I have some favorable reactions as well as some unfavorable reactions to the shower gel" ($r = .696$, $p < .0001$). Participants rated overall evaluations on four seven-point scales (anchored at 1 [dislike very much/feel very negative/think it is very bad/very unfavorable] and 7 [like very much/feel very positive/think it is very good/very favorable]; Cronbach's $\alpha = .946$).

After an unrelated filler task, participants received the cognitive load manipulation, where they memorized either a seven-digit number (high cognitive load condition) or a two-digit number (low cognitive load condition; Shiv and Fedorikhin 1999) under the guise of a short-term memory study. The last questionnaire reminded the participants that they had previously received information about a new shower gel. They were told that, before launching the product, the manufacturer of the shower gel had distributed free samples of the product to college students, who were asked to write their own reviews of the product. They were led to believe that they would read one of these reviews and be asked questions about it. Participants were reminded to keep the number that was given to them in mind because they would be asked to write it down shortly. On the following page, all students were exposed to the same negative updating message (i.e., "The new shower gel does not foam easily. Because of this you end up using more gel per bath than you do with other shower gels"; mean valence in pretest on a -3 to $+3$ scale: $M_{HA} = -1.73$ vs. $M_{LA} = -1.56$; $F < 1$) either delivered by a student at their Own University (high-authority [OU] source) or by a student at a Small Midwestern University (low authority [MU] source). Participants then stated their overall evaluations of the shower gel on the same four seven-point scales as in the first questionnaire packet, but this time the scales were anchored at -3 and $+3$ (rescaled to a $1-7$ scale for analysis; Cronbach's $\alpha = .975$). Participants then wrote down the number that they had to memorize. Next they rated the valence of the new message on two scales anchored at -3 (very negative/very unfavorable) and $+3$ (very positive/very favorable; $r = .697$, $p < .0001$). The next two questions, "How difficult was it for you to retain in your mind the number you were given?" and "How difficult was it for you to remember the number you were given?" (anchored at 1 [not at all difficult] and 7 [very difficult]), served as a cognitive load manipulation check ($r = .88$, $p < .0001$). Finally, participants rated how hard they had tried to provide an accurate or valid evaluation of the shower gel on four seven-point

³The correlation between "positive thoughts or feelings" and "favorable evaluations" was low in this study. Because ambivalence was manipulated in this experiment, these measures were used for manipulation check purposes. Manipulation check results hold when the "positive" and "favorable" measures are used separately to determine participants' objective ambivalence.

FIGURE 2

EXPERIMENT 3: LOW COGNITIVE LOAD PARTICIPANTS'
ATTITUDE CHANGE AS A FUNCTION OF MESSAGE
SOURCE AND AMBIVALENCE



NOTE.—Larger negative numbers denote greater attitude.

scales (Cronbach's $\alpha = .88$, $p < .001$), their knowledge about shower gels in general on two seven-point scales (anchored at 1 [not at all familiar/don't know much] and 7 [very familiar/know very much]; $r = .82$, $p < .0001$), how much the shower gel category mattered to them on two scales (anchored at 1 [don't matter to me/uninterested] and 7 [matter to me/interested]; $r = .86$, $p < .0001$), and their level of involvement in the study on a seven-point scale (anchored at 1 [not at all involved] and 7 [very involved]).

Results

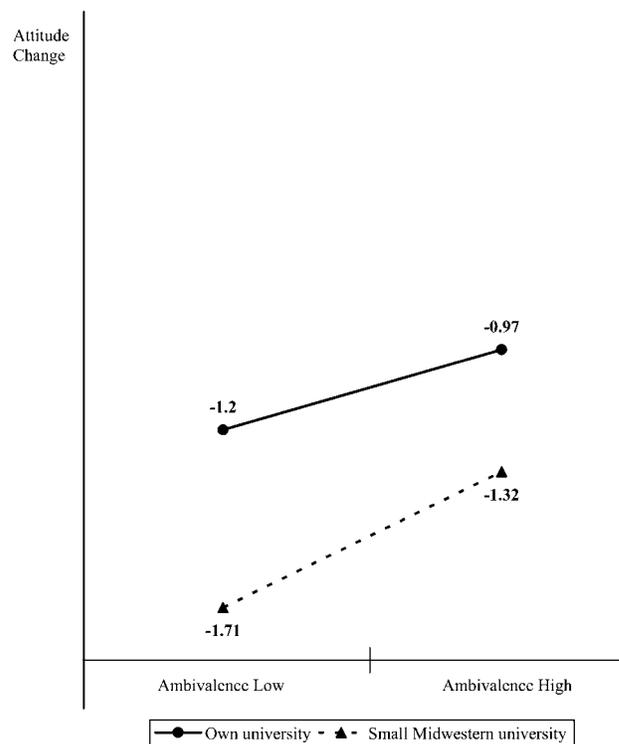
Manipulation Checks. Participants in the high ambivalence (HA) condition reported higher levels of ambivalence than those in the low ambivalence (LA) condition (objective ambivalence: $M_{HA} = 17.07$, $SD = 4.8$, vs. $M_{LA} = 9.29$, $SD = 6.14$; $F(1, 120) = 60.94$, $p < .05$; subjective ambivalence index: $M_{HA} = 5.19$, $SD = 1.16$, vs. $M_{LA} = 3.18$, $SD = 1.56$; $F(1, 120) = 65.67$, $p < .05$). In support of the cognitive load manipulation, a three-way analysis of participants' experienced difficulty on the number memorization task (HL and LL) showed only a significant main effect of cognitive load ($F(1, 114) = 24.47$, $p < .05$; all other p 's $> .10$; $M_{HL} = 2.45$ vs. $M_{LL} = 1.41$). Finally, regardless of their condition, all participants rated the updating message as equally negative (overall mean = -1.56).

Attitudinal Change. A mixed four-way ANOVA re-

vealed the predicted four-way interaction among attitudes, ambivalence, cognitive load, and source authority ($F(1, 114) = 2.91$, $p < .10$). To follow up on this interaction, attitudinal change was computed by subtracting time 1 evaluations from post-negative information time 2 evaluations (more negative numbers reflect greater change). Results of an analysis of attitudinal change under low cognitive load replicated those of experiment 1, with a main effect of source authority ($F(1, 58) = 7.85$, $p < .05$) qualified by a significant interaction between source authority (OU and MU) and ambivalence (HA and LA) ($F(1, 58) = 5.40$, $p < .05$). Planned contrasts showed that high-ambivalence individuals were persuaded by the message regardless of the source's diagnosticity ($M_{HA-OU} = -1.25$ vs. $M_{HA-MU} = -1.11$; $F < 1$). However, low-ambivalence individuals were more persuaded when the source of the message was the student at their own university (i.e., high diagnosticity) than when it was the student at the small midwestern university (i.e., low diagnosticity; $M_{LA-OU} = -1.63$ vs. $M_{LA-MU} = -0.13$; $F(1, 58) = 5.78$, $p < .05$). No main or interaction effects were found for participants under high cognitive load conditions (all p 's $> .20$), indicating that low- and high-ambivalence participants were equally persuaded by the updating message regardless of source diagnosticity (see figs. 2 and 3).

FIGURE 3

EXPERIMENT 3: HIGH COGNITIVE LOAD PARTICIPANTS'
ATTITUDE CHANGE AS A FUNCTION OF MESSAGE
SOURCE AND AMBIVALENCE



NOTE.—Larger negative numbers denote greater attitude.

Alternative Explanations. ANOVAs with ambivalence, source authority, and cognitive load as independent factors did not uncover any significant effects on (a) how hard participants tried to be accurate when forming their attitudes toward the shower gel, (b) their knowledge about shower gels in general, (c) how important this category was for them, and (d) how involved they were in answering the questionnaires (all p 's > .10).

Discussion

In general, high-ambivalence participants accepted the new information regardless of perceived source diagnosticity, whereas low-ambivalence participants were more persuaded when the new message came from a student at their own university (i.e., relatively higher authority source) versus a student at a small midwestern university (i.e., relatively lower authority source). Consistent with the two-step model that we propose, when low-ambivalence participants lacked the necessary cognitive resources to perform the source-diagnosticity check (i.e., high cognitive load condition), they were equally persuaded by the new message regardless of the perceived diagnosticity of the source. Ambivalence was manipulated in this experiment, making alternative explanations less plausible.

GENERAL DISCUSSION

This research builds on prior research showing that ambivalence increases susceptibility to persuasion. Although low- and high-ambivalence individuals may have low levels of knowledge on an issue, more ambivalent individuals are more likely to accept messages regardless of their source's perceived diagnosticity. However, less ambivalent individuals appear to perform a check for the diagnosticity of the message's source before they accept it. Our findings support this proposition. Consistent with the epistemic authority framework, experiment 1 showed that, under low-knowledge conditions, low-ambivalence participants tended to be more influenced by a high epistemic authority source (i.e., the radio) than by a low epistemic authority source (i.e., their friend). However, when individuals experienced higher levels of ambivalence, they tended to agree with the message regardless of the source.

If a check for the diagnosticity of the message's source was driving the effect in study 1, then even individuals under low-ambivalence conditions should be influenced by a low epistemic authority source if they are not aware of this influence and hence lack the opportunity to correct for it. Consistent with this analysis, low-ambivalence individuals in experiment 2 were more influenced by their best friend's attitudes when primed with their best friend compared to those exposed to a neutral prime. The fact that participants in this study seemed to be unaware of this influence supports the proposition that low-ambivalence individuals could not correct for their best friend's influence as they did in study 1. Results from experiment 2 also raise an issue for future research, namely, what do high ambivalence individuals do

when they need to construct a judgment? Do they spontaneously recruit others' attitudes to form their own? And if so, which others are perceived to be most useful? It appears that, in study 2, high-ambivalence participants recruited and used their best friend's opinions in forming their own attitudes because their attitudes did not differ in the neutral versus best friend prime conditions. However, in this study, we cannot rule out other potential explanations for this finding.

Experiment 3 provided further support for the proposed theoretical framework by showing that low-ambivalence participants are influenced by low-authority sources when they lack the resources to correct for this influence. These findings support the two-stage model where less ambivalent individuals process the message and then check for its veracity prior to accepting the implications of the message for their attitudes. When their resources are constrained, they cannot perform the check, and hence they are persuaded regardless of perceived message veracity. While this article focuses on source diagnosticity as the indicator of message veracity, these findings are broader and speak to the persuasion process under low ambivalence. It is likely that these individuals perform a general check of the message that could include characteristics of the message other than its source, such as message strength. Consistent with previous research, our results support the notion that low-ambivalence individuals are more resistant to persuasion. We argue that this resistance to persuasion is driven by low-ambivalence consumers' message diagnosticity check. A deeper understanding of low-ambivalence individuals' motivation to perform the message diagnosticity check is of great interest and a fruitful avenue for future research.

Methodologically, this article advances prior research by demonstrating that priming a construct such as a specific other person primes not only goals related to that person (Fitzsimmons and Bargh 2003) but also their attitudes. In this case, the activation was of a specific person rather than of a person representing a social category as in Kawakami et al. (2003). The results are testimony to the power of activation of social constructs and suggest that we may be susceptible to influence in more ways than we can know. We contend that such influence is especially likely when we have low knowledge about an issue and are forming impressions about it. It is unlikely that environmental cues play a large role in persuasion during the impression-testing phase once an attitude is already in place. While we focus on the influence of others, we believe that our findings also add to the literature suggesting that highly ambivalent people are most susceptible to persuasion because they absorb and reflect information without much discrimination. Future research is needed to examine the limits of such influence and to create interventions that help highly ambivalent individuals to become more discerning in their acceptance of influence.

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