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"Biased" Systematic and Heuristic Processing of Politicians' Messages: Effects of Source Favorability and Political Interest on Attitude Judgment

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This study investigated two information-processing modes for political messages from favored politicians: "biased" systematic processing and heuristic processing. In an experiment, college students (N = 183) with different levels of political interest received messages about unfamiliar political issues from either a favored or a less favored candidate in the 2008 U.S. presidential election. For those with low levels of political interest, source favorability had a direct effect on attitudes, indicating heuristic processing. For those with high political interest, source favorability had an indirect effect on attitudes through message-relevant thoughts, indicating biased systematic processing. Theoretical and practical implications of the findings are discussed.

Keywords: politicians' messages, source favorability, bias hypothesis, political interest, heuristic processing

In an ideal deliberative democracy, interested, informed, and communicative citizens join with others to form opinions on public affairs (Fishkin, 2011; Fishkin & Luskin, 2005; Habermas, 1989; Katz, 1995). Fishkin (2011) characterized deliberative democracy as decision making by lay citizens who sincerely weigh all arguments based on evidence, not on who is advocating a particular view. However, theories of persuasion state and empirical studies have confirmed that citizens' judgments are not free from the effects of sources but are often formed based on who delivers the political messages (Mondak, 1993a, 1993b; Popkin, 1991; Pornpitakpan, 2004; Ziegler & Diehl, 2003).

Previous studies on the effect of sources on political judgments suggest that citizens who are less sophisticated and less interested in politics tend to be affected by characteristics of the advocators

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(heuristic processing; Fogarty & Wolak, 2009; Lupia, 1994; Lupia & McCubbins, 1988; Mondak, 1993a, 1993b; Popkin, 1991). However, studies on motivated political reasoning have found that politically sophisticated citizens are also prone to biased information processing, such as seeking confirmatory evidence and critically evaluating contrary arguments (Bohner, Ruder, & Erb, 2002, Chaiken, Liberman, & Eagly, 1989; Chaiken & Maheswaran, 1994; Chen & Chaiken, 1999; Erb, Bohner, Schmälzel, & Rank, 1998). Even though biased processing may occur for highly sophisticated people, how citizens with high levels of interest in politics use the source information when processing politicians' messages is relatively unknown. The present study investigated how citizens with different levels of interest in politics process political messages and how citizens' decisions are affected by their favorability toward politicians.

The heuristic systematic model (HSM; Chaiken et al., 1989; Chaiken & Maheswaran, 1994) suggests two specific processes for the effects of source cues on political judgments for different levels of cognitive motivation: "biased" systematic processing for citizens with high political interest and heuristic processing for citizens with low levels of interest (Bohner et al., 2002; Chaiken et al., 1989; Chaiken & Maheswaran, 1994; Chen & Chaiken, 1999; Erb et al., 1998). Using the HSM framework, we investigated causal mechanisms for the effects of source favorability on attitudes for different levels of political interest and the mediating role of cognitive responses in the causal relationships.

Systematic, Heuristic, and Biased Systematic Processing of Politicians' Messages

How do citizens process politicians' messages to make political decisions on certain issues? Theories of motivated reasoning maintain that not only accuracy goals but also directional goals (e.g., belief perseverance goals, partisan goals) drive all human reasoning (Edwards & Smith, 1996; Kruglanski & Webster, 1996; Kunda, 1990; Lord, Ross, & Lepper, 1979; Taber & Lodge, 2006). Studies on motivated reasoning have consistently found that messages that are congruent with prior beliefs have stronger effects on judgments compared with incongruent messages (i.e., disconfirmation bias; Edwards & Smith, 1996; Lord et al., 1979). Persuasion theories such as HSM suggest that processing political messages may be biased because of the sources of the messages. HSM proposed two qualitatively distinctive modes of information processing. Systematic processing refers to a "comprehensive, analytic orientation in which perceivers access all informational input for its relevance and importance to their judgment task" (Chaiken et al., 1989, p. 212), which occurs when message recipients have sufficient motivation and ability to process information. By contrast, heuristic processing uses "minimal informational input in conjunction with simple (declarative or procedural) knowledge structures to determine message validity quickly and efficiently" (Chaiken et al., 1989, p. 216), which occurs when message recipients lack either motivation or the ability to process information. HSM posits that message sources (e.g., politicians) are used in different ways for systematic versus heuristic processing. For heuristic processing, the message source functions as a heuristic cue that enables making a quick judgment.

Previous studies of the effects of politicians' messages on judgment have focused on the use of the source expertise cues (i.e., "Experts are right") in heuristic processing and found an effect of message source on judgments for less motivated individuals (Fogarty & Wolak, 2009; Lupia, 1994; Lupia & McCubbins, 1988; Mondak, 1993a, 1993b; Popkin, 1991). In addition to the expertise of the source, favorability toward the source also may function as a heuristic cue (Brady & Sniderman, 1985). Because

citizens often are asked to evaluate politicians who are nationally known, favorability toward politicians is highly accessible (Brady & Sniderman, 1985). Brady and Sniderman (1985) found that citizens use favorability toward a politician to infer the politicians' issue stances. They called this type of judgment the "likability heuristic," and there are a number of psychological mechanisms for this heuristic. First, when citizens favor a politician, they also may believe the politician to be highly credible and conclude that their favored politicians' stances on issues are right (Ziegler & Diehl, 2003). Second, citizens often favor a politician based on agreement regarding issues of importance (Campbell, Converse, Miller, & Stokes, 1960; Cook, Jelen, & Wilcox 1994; Ottati, 1990); that is, when citizens believe that a politician is right on what they consider to be key political issues, they may think that the politician is also right about other issues. Another mechanism is Heider's (1958) balance theory and its applications to political attitudes (Brent & Granberg, 1982; Kinder, 1978; Ottati, Fishbein, & Middlestadt, 1988). According to this theory, voters tend to adopt their favored politician's position on an issue to balance their cognitive systems.

Previous studies suggest that the effect of source cues on attitudes diminishes when message recipients are highly motivated (Lupia, 1994; Mondak, 1993a, 1993b). However, HSM states that when cognitive motivation is high, both systematic and heuristic processing may occur simultaneously (Bohner, Moskowitz, & Chaiken, 1995; Chaiken & Maheswaran, 1994; Ziegler & Diehl, 2003). According to HSM, in some cases, heuristic processing produces expectations of the probable veracity of message claims and biases systematic processing for message recipients who are highly motivated (the bias hypothesis, or biased systematic processing; Bohner et al., 2002; Chaiken & Maheswaran, 1994; Erb et al., 1998; Ziegler & Diehl, 2003). Chaiken and Maheswaran (1994) found that under conditions of high task importance, participants in the high source credibility condition generated more positive message-relevant thoughts and showed greater agreement with the message position than did those in the low source credibility condition. In addition, the positivity of message-relevant thoughts increased attitudinal agreement with the message position. Ziegler and Diehl (2003) found that when messages were unambiguous, strong messages led to greater agreement than did weak messages regardless of the message source or the participants' preferences. However, in the case of ambiguous messages (i.e., arguments with medium strength), messages from the preferred politician induced a greater number of positive thoughts and more agreement than did messages from the less preferred politician.

Chaiken and Maheswaran (1994) as well as Ziegler and Diehl (2003) found biased systematic processing when persuasive messages were ambiguous, and Chaiken and Maheswaran reasoned that ambiguous message contents are susceptible to different interpretations. When the issue is familiar, message recipients can easily identify the strengths and weaknesses of arguments. However, when the issue is unfamiliar, evaluating argument quality is relatively difficult, which creates room for different interpretations. Thus, it can be expected that source effects (i.e., either a biasing effect or a heuristic effect) can be found when the issues discussed in the message are unfamiliar to the message recipients.

According to HSM, when the message content is perceived as relevant to citizens' lives, they will be motivated for systematic message processing. Some citizens have relatively high motivation to seek and process political information. According to Petty and Wegner (1999), individuals with high levels of interest in politics are likely to be motivated to put some effort into processing political information. Thus, biased systematic processing is expected to occur for those with high levels of political interest. For those

with low levels of political interest, heuristic processing based on source favorability is expected, and source favorability also is expected to have a positive effect on attitudes toward issues for both high and low political interest groups.

H1: *For both individuals with high levels of political interest and those with low levels of interest, messages from favored politicians have a greater effect on attitudes toward issues compared with those from less favored politicians.*

The bias hypothesis of HSM suggests that when cognitive motivation is high, message recipients process information systematically, but heuristic cues, such as source expertise or source favorability, may bias systematic processing. Biased systematic processing could occur for individuals with high interest in politics when a heuristic cue of source favorability is present. Thus, for individuals with high interest in politics, source favorability is expected to have an effect on attitudes toward the issue through positive thoughts about the messages. In other words, the effect of source favorability on attitudes toward issues is mediated by message-relevant thoughts. On the other hand, individuals with low interest in politics are likely to process messages heuristically if a heuristic cue is given. In heuristic processing, cognitive activities such as generating thoughts are less likely to be performed, and source favorability is expected to directly affect attitudes toward issues without being mediated by message-relevant thoughts.

H2: *(a) For individuals with high levels of political interest, the effect of source favorability on attitudes toward issues is mediated by message-relevant thoughts. However, (b) for individuals with low political interest, source favorability directly affects attitudes toward issues without being mediated by message-relevant thoughts.*

Method

An experiment was conducted to test the proposed hypotheses. Source favorability was manipulated (favored candidate vs. less favored candidate in the 2008 U.S. presidential election), and political interest was measured and used as an independent variable. Political messages about two foreign policy issues (the Israeli–Palestinian conflict and the Cuban embargo) were presented, and cognitive responses and attitudes toward those issues were measured. As with other partisan issues, these two foreign policy issues have two contrasting positions (liberal vs. conservative). In addition, the message source was either a Republican or a Democrat candidate. To obtain generality of the findings and to control for possible interactions of message position with message source, we created both a liberal position message and a conservative position message for both issues and randomly distributed the message to participants. The design was 2 (favored candidate vs. less favored candidate) $\times$ 2 (high vs. low political interest, measured variable) $\times$ 2 (the Israeli–Palestinian conflict and the Cuban embargo, within-subject variable) $\times$ 2 (conservative vs. liberal position, between-subjects variable), which enabled testing the effects of the first two variables (source favorability and political interest) on the dependent variables for different issues and different message positions.

Participants

Participants were recruited from undergraduate communication classes at a midwestern university in the United States who received credits for their participation. Originally 208 participants participated in the study, but 25 cases were dropped because of no response to key variables.[2] The total number of cases employed in the analysis was 183, composed of 94 women (51.6%) and 88 men (48.4%).[3] The number of Democrats was 79 (43.4%), and the number of Republicans was 60 (33.0%). The average age was 21.16 years (*SD* = 2.49, *Mdn* = 21.00, range = 28).

Procedure and Experimental Materials

The experiment consisted of two phases. Phase 1 required participants to read brief biographies of the 2008 U.S. presidential candidates. At the time of the experiment, John McCain was nominated as the candidate for the Republican Party, and Hillary Clinton and Barack Obama were competing in the Democratic primary election. All three of these candidates were used in the experiment to mirror the actual political election situation at that time. Participants were asked which candidate they were going to vote for in the coming election.[4] In Phase 2, the experimenter checked which candidate the participant had reported favoring in Phase 1 and distributed the messages and questionnaires for either the favored or the less favored candidate condition (see manipulation of source favorability below). The messages also had either a liberal (e.g., support for peace talks between Israel and Palestine) or a conservative (e.g., fight against terrorism as a peace initiation) position. Then, participants indicated their attitudes toward the issues, listed the thoughts they had had while reading the messages, and labeled them as positive, negative, or neutral (see below).

Independent Variables

Manipulation of source favorability. Source favorability was manipulated by attributing a different source (a presidential candidate) to the provided messages. The messages were identical, but the names in the message titles varied (e.g., [name of a candidate] on the Cuban embargo). Half of the participants were presented with political messages attributed to the candidate of their choice (high source favorability condition; *n* = 91), and the other half were presented with messages attributed to a candidate from the other political party (low source favorability condition; *n* = 92). Participants who had initially voted for Hillary Clinton received messages from either Hillary Clinton (favored candidate) or John McCain (less favored candidate). Similarly, those who had initially voted for Barack Obama received messages from either Barack Obama or John McCain (less favored candidate). Those who had initially voted for John McCain received messages from either John McCain or Hillary Clinton (less favored candidate).

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[2] Those variables were attitudes toward issues and level of political interest. The results including these cases were consistent with the analysis provided in the Results section.

[3] One participant did not indicate his or her sex.

[4] Seventeen participants voted for Hillary Clinton (9.3%), 99 voted for Barack Obama (54.1%), and 67 voted for John McCain (36.6%) in the experiment.

Level of political interest. The level of political interest was measured by asking participants to rate their agreement with three statements using an 11-point Likert scale (0 = *strongly disagree*, 10 = *strongly agree*): (1) "I follow what's going on in government and public affairs most of the time" (M = 4.97, SD = 2.85); (2) "I pay a lot of attention to political campaigns" (M = 4.68, SD = 2.38); (3) "Politics and public affairs are very important to me" (M = 5.03, SD = 2.34); Cronbach's α = .94. Using a principal component analysis on a correlation matrix for these three items without rotation, we obtained a component score for the first dimensions of the three items for each case (Park, Dailey, & Lemus, 2002). A component score is a weighted average of responses to relevant items and a better indicator for the underlying latent variable than a simple average (Park et al., 2002). Based on component scores, we created two groups using a median split (low political interest: n = 91, M = −0.81, SD = 0.53; high political interest: n = 92, M = 0.80, SD = 0.64). The mean level of political interest was significantly different between the two groups, $t(181) = 18.58$, $p < .001$.

Measures of Variables

Attitudes toward the issues. To measure attitudes toward the issues after message processing, we created items for each message (the liberal position message for Issue 1, the conservative position message for Issue 1, the liberal position message for Issue 2, and the conservative position message for Issue 2). For each message, three items were used. The first item was the same for all messages: "How much do you agree with the above statement?" (11-point scale; 0 = *strongly disagree*, 10 = *strongly agree*). The other two items were specifically related to the message contents (e.g., "The two-state solution is the best way to resolve the Israeli–Palestinian conflict"). Reliabilities for those measures were found to be high (Cronbach's α ranged from .77 to .84). Using principal component analyses, we obtained component scores for the first dimensions of the three items and used those as the attitudes toward each issue.

Positivity of message-relevant thoughts. The positivity of message-relevant thoughts was measured with the thought-listing technique, which requires individuals to list everything about which they were thinking (Cacioppo, Harkins, & Petty, 1981; Cacioppo, von Hippel, & Ernst, 1997; Greenwald, 1968). In this experiment, after each political message, participants were given the following instruction: "Please write down all the thoughts you had while reading the candidate's message." Ten lines with an empty bracket after each line were presented for participants to write their thoughts. Once this task was completed, participants were next required to "Please go back to the previous page, read each of your responses, and indicate (in the empty brackets) whether the response was positive, negative, or neutral concerning the candidate or the candidate's position on the issue."[5] Two trained coders classified cognitive responses to thoughts about the respective issues, thoughts about the attributed sources, and thoughts about any other subject. First, 20 cases (93 individual thoughts) were coded by two coders. The intercoder reliability between the two coders was high (Krippendorff's α = .86), and discrepancies were

[5] This subjective rating of cognitive responses is known to highly correlate with judge ratings. Some scholars suggest that judge ratings can circumvent the problems of both low intercoder reliability and judges' misinterpreting the meanings of responses (Cacioppo et al., 1981; Calder, Insko, & Yandell, 1974/2006).

resolved by discussion between the two; the coders then coded the remainder of the cases. Some thoughts were regarding the source of the message; the average number of source-relevant thoughts was 0.70 (*SD* = 1.32, range = 9) for Issue 1 and 0.36 (*SD* = 0.99, range = 10) for Issue 2. Source-relevant thoughts were not used in the analysis, but were included in the total number of thoughts. Then, the proportion of positive to negative message-relevant thoughts was measured by a formula that was suggested by Chung and Fink (2008), $Positivity_{thoughts} = \ln(p+1) - \ln(q+1)$, where ln is the natural logarithm, *p* is the number of positive thoughts, and *q* is the number of negative thoughts. If the number of positive thoughts is equal to the number of negative thoughts, the positivity of the thoughts will be zero. Thus, a positive value indicates a greater number of positive than negative thoughts.

Candidate evaluation and perceived source credibility. To check the success of manipulating source favorability, we measured candidate evaluation and perceived source favorability. For candidate evaluation, participants were instructed to evaluate each candidate's qualifications to be the next U.S. president (0 = *not qualified at all*, 50 = *moderately qualified*, 100 = *best qualified*): *M* = 51.86, *SD* = 26.31 for Clinton; *M* = 69.71, *SD* = 27.83 for Obama; *M* = 58.84, *SD* = 34.43 for McCain. Perceived source credibility was measured based on McCroskey and Teven (1999) using six semantic differential scales for each of the three candidates (five points: insincere vs. sincere, incompetent vs. competent, untrustworthy vs. trustworthy, unintelligent vs. intelligent, not credible vs. credible, unknowledgeable vs. knowledgeable); Cronbach's α = .84 for Clinton, .91 for Obama, and .92 for McCain. Perceived source credibility and perceived source favorability were found to have a relatively high positive correlation (.67, $p < .001$).

Results

Preliminary Tests

Before the proposed hypotheses were tested, four preliminary tests were conducted: a test for perceived familiarity with the issues, a manipulation check of source favorability, the interaction of message position with message sources, and the effect of political interest on systematic information processing.

Perceived familiarity with the issues. Perceived familiarity was measured to examine how familiar participants considered themselves to be with the two issues (0 = *not at all familiar*, 10 = *extremely familiar*). Perceived familiarity scores for both Issue 1 (*M* = 3.14, *SD* = 2.80) and Issue 2 (*M* = 2.79, *SD* = 2.32) were significantly lower than the scale's midpoint (5.00), $t(182) = -9.01$, $p < .001$, and $t(182) = -12.92$, $p < .001$, respectively.

Manipulation check of source favorability. Source favorability was manipulated based on a participant's voting intention. Thus, voting intention is an indicator for source favorability. In addition, candidate evaluation and perceived source credibility were used for manipulation checks. Candidate evaluation was found to be greater for the favored candidate condition (*M* = 86.03, *SD* = 19.44) than the less favored candidate condition (*M* = 41.79, *SD* = 27.32), $t(182) = 17.83$, $p < .001$, Cohen's $d = 1.87$, effect-size $r = .68$. Perceived source credibility was found to be greater for the favored candidate condition

(M = 4.42, SD = 0.60) than the less favored candidate condition (M = 3.27, SD = 0.84), $t(182) = 16.72$, $p < .01$, Cohen's d = 1.58, effect size r = .62. Manipulation of source favorability was found to be satisfactory.

Interaction of message position with message source. Messages were presented with either a conservative or a liberal position, and the study tested whether the effect of the message source (Clinton vs. Obama vs. McCain) on postmessage attitudes differed depending on message position. The results show that the main effects of favored candidate and message source were not statistically significant for either issue, $F(1, 171) = 0.64$, $p = .423$, partial $\eta^2 < .01$ for Issue 1; $F(1, 171) = 0.19$, $p = .890$, partial $\eta^2 < .01$ for Issue 2. The interaction of message position and message source was not statistically significant for either issue, $F(1, 171) = 0.20$, $p = .823$, partial $\eta^2 < .01$ for Issue 1; $F(1, 171) = 0.09$, $p = .16$, partial $\eta^2 < .01$ for Issue 2. The interaction of message position and favored candidate was statistically significant for both issues, $F(1, 171) = 0.44$, $p = .644$, partial $\eta^2 < .01$ for Issue 1; $F(1, 171) = 0.02$, $p = .981$, partial $\eta^2 < .01$ for Issue 2.

Effects of political interest on systematic information processing. Differences in systematic processing between the high and low political interest groups were tested. The total number of thoughts was used as an indicator for systematic processing (Chaiken & Maheswaran, 1994). For Issue 1, the total number of thoughts was not significantly different between high (M = 3.34, SD = 2.18) and low (M = 3.08, SD = 1.96) political interest, $F(1, 179) = 0.67$, $p = .413$, partial $\eta^2 < .01$. However, for Issue 2, participants with high political interest generated more thoughts (M = 2.92, SD = 2.00) than did those with low political interest (M = 2.41, SD = 1.50), $F(1, 179) = 2.76$, $p = .046$, partial $\eta^2 = .02$. Thus, for Issue 2, participants who were categorized as having high political interest showed a greater degree of systematic processing than did those in the low political interest group.

Path Analysis and Testing Mediating Processes

To test the causal relationships suggested by H1 and H2, we conducted path analysis with maximum likelihood estimation procedures in AMOS for Windows 16.0 (Arbuckle & Wothke, 1999). Because each participant received a message for both Issue 1 and Issue 2, attitudes toward both issues were included in a causal model. To examine the different direct and indirect effects between the high and low political interest categories, we ran a multigroup analysis for level of political interest. Thus, the causal model contained source favorability (0 = less favored candidate, 1 = favored candidate), positivity of thoughts for Issue 1, positivity of thoughts for Issue 2, attitudes toward Issue 1 ($\text{Attitude}_{\text{Issue1}}$), and attitudes toward Issue 2 ($\text{Attitude}_{\text{Issue2}}$). Cole, Ciesla, and Steiger (2007) suggest that when a similar method is used for two dependent variables, the residual terms of those dependent variables should be correlated to control for shared method variance. Because positivity of thoughts for both issues was measured with the same method, the residual terms of the two variables were allowed to covary; similarly, the residual terms of $\text{Attitude}_{\text{Issue1}}$ and $\text{Attitude}_{\text{Issue2}}$ were allowed to covary. Causal models were tested separately for the liberal and conservative position messages (see Table 1 for correlations among variables).

Table 1. Correlations Among Study Variables.

Variable	Source favorability	Positivity of thought (Issue 1)	Positivity of thought (Issue 2)	Attitude (Issue 1)	Attitude (Issue 2)
Liberal position messages					
Source favorability	1.00	.268†	.062	.387**	.271†
Positivity of thought (Issue 1)	.155	1.00	.157	.412**	–.126
Positivity of thought (Issue 2)	.174	.122	1.00	.055	.164
Attitude (Issue 1)	.521**	.443**	.183	1.00	.397**
Attitude (Issue 2)	.492**	.258†	.443**	.658**	1.00
Conservative position messages					
Source favorability	1.00	.387**	.368*	.491**	.547**
Positivity of thought (Issue 1)	.098	1.00	.495**	.276†	.188
Positivity of thought (Issue 2)	.193	.307	1.00	.183	.308*
Attitude (Issue 1)	.241	.330*	.083	1.00	.784**
Attitude (Issue 2)	.277†	.041	.437**	.559**	1.00

Note. Correlations for high political interest appear in the upper diagonal matrices, and those for low political interest appear in the lower diagonal matrices. Source favorability is a dichotomy variable (0 = less favored, 1 = favored). $Attitude_{Issue1}$ = attitude toward Issue 1; $Attitude_{Issue2}$ = attitude toward Issue 2. n = 47 for high political interest in the liberal position messages; n = 51 for low political interest in the liberal position messages; n = 45 for high political interest in the conservative position messages; n = 40 for low political interest in the conservative position messages.

*$p < .05$. **$p < .01$. †$p < .10$.

Hypothesis Testing: Liberal Position Messages

For the liberal position messages, the tested models showed good model fit, $\chi^2(4, N = 98) = 4.99$, $p = .289$; normality of fit index (NFI) = .95; comparative fit index (CFI) = 0.99; root mean square error of approximation (RMSEA) = .05, 90% CI [.00, .17]; see Figure 1 for standardized coefficients.

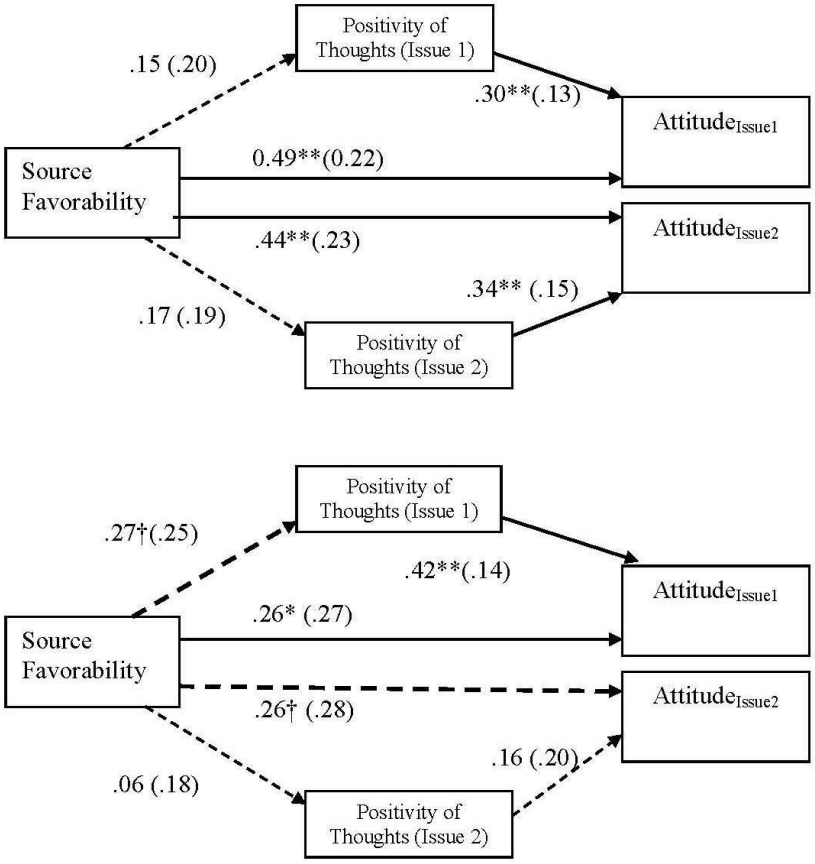

Figure 1. Path diagram with standardized coefficients for low (top panel) and high (bottom panel) political interest for the liberal position messages. $\chi^2(4,$ N = 98) = 4.99, p = .289; normality of fit index = .95; comparative fit index = 0.99; root mean square error of approximation = .05, 90% CI [.00, .17]. Standard errors are included within parentheses. Solid lines and broken lines depict statistically significant and nonsignificant paths, respectively. The residual terms for the two mediating variables were allowed to covary (r = .10, ns, for low political interest; r = .15, ns, for high political interest). The residual terms for Attitude$_{Issue1}$ and Attitude$_{Issue2}$ were also allowed to covary (r = .53, p < .01 for low political interest; r = .46, p < .01 for high political interest). *p < .05. **p < .01. †p < .10.

Testing H1: Effects of source favorability on attitudes. According to H1, the total effect (i.e., the sum of the direct and indirect effects) of source favorability on attitudes was expected to be statistically significant for participants with both low and high levels of political interest. The results of the structural equation modeling analysis show that the total effect of source favorability on $Attitude_{Issue1}$ was significantly positive for participants with both low (b = 1.00, SE = 0.24, p < .001) and high (b = 0.54, SE = 0.28, p = .005) levels of political interest. The results for Issue 2 show that the total effect of source favorability on $Attitude_{Issue2}$ was significantly positive for participants with low levels of political interest (b = 1.00, SE = 0.24, p < .001) but only marginally significant (b = 0.54, SE = 0.28, p = .069) for those with high levels of interest. The results show that for participants with both high and low levels of political interest, attitudes toward issues were affected by the message source (i.e., the candidate); the results are generally consistent with H1.[6]

Testing H2a: Mediating effects of positivity of thoughts for high political interest. The indirect effect of source favorability on attitudes through the positivity of thoughts was tested by bootstrapping analysis (Hayes, 2009; MacKinnon, 2008; Preacher & Hayes, 2004). AMOS 16.0 provides bootstrap standard errors and bootstrap confidences for estimates of indirect effects, which enables researchers to test the statistical significance of indirect effects. The number of resamplings for the bootstrapping was set at 2,000, and a 95% confidence interval was used to test the statistical significance of the indirect effects. For those with high levels of political interest, the indirect effect of source favorability on $Attitude_{Issue1}$ through positivity of thoughts for Issue 1 was statistically significant (standardized b = .24, SE = .16, 95% CI [.01, .67], p = .036).

These results show that for participants with high levels of political interest, messages from their favored candidate increased their numbers of positive thoughts on issues, which in turn affected their attitudes toward issues; these results were consistent with H2a. To examine whether the indirect effects through positivity of thoughts were statistically different between the low and high political interest groups, we conducted a multigroup comparison with restricted structural models in which the causal coefficient from source favorability to positivity of thoughts and the causal coefficients from positivity of thoughts to $Attitude_{Issue1}$ were restricted to be identical between low and high political interest. For the indirect effect through positivity of thoughts for Issue 1, the restricted model showed a good fit, $\chi^2(6, N = 98) = 5.89$, p = .436. The difference in chi square was not statistically significant, 0.90 (df = 6). Even though the indirect effect was found to be significant only for high political interest, the multigroup comparison did not show a statistically significant difference. For the liberal position message, the results for Issue 1 partially support H2a.

The indirect effect of source favorability on $Attitude_{Issue2}$ through positivity of thoughts for Issue 2

[6] H1 was also tested with political interest level as a continuous variable. For both high and low political interest levels, the effects of candidate favorability on attitude toward Issue 1 and Issue 2 were statistically significant, but the interaction of candidate favorability with political interest level was not statistically significant.

was not statistically significant (standardized b = .02, SE = .07, 95% CI [−.07, .22], p = .465).[7] For the liberal position message, the results for Issue 2 are partially consistent with H2a.[8]

Testing H2b: Direct effects of source favorability for low political interest. The results show that the indirect effect of source favorability on $Attitude_{Issue1}$ through positivity of thoughts for Issue 1 was not statistically significant (standardized b = .09, SE = .09, 95% CI [−.05, .31], p = .160). These results are consistent with H2b. The indirect effect of source favorability on $Attitude_{Issue2}$ through positivity of thoughts for Issue 2 was not statistically significant (standardized b = .12, SE = .11, 95% CI [−.04, .39], p = .156).[9] For the participants with low levels of political interest, messages from the favored candidate were found to affect attitudes toward issues without increasing the number of positive thoughts on the issues, which is consistent with H2b.

Hypothesis Testing: Conservative Position Messages

For the conservative position messages, the tested model showed a good fit, $\chi^2(4, N = 80) = 1.53$, p = .821, NFI = .988, CFI = 1.000, RMSEA < .001 (low 90%: < .001; high 90%: .100); see Figure 2 for standardized causal estimates.

Testing H1: Effects of source favorability on attitudes. Regarding Issue 1, the total effect of source favorability on $Attitude_{Issue1}$ was significantly positive for participants with both low (b = 0.38, SE = 0.25, p = .013) and high (b = 1.10, SE = 0.29, p < .001) levels of political interest; these results are consistent with H1. With regard to Issue 2, the results show that the total effect of source favorability on $Attitude_{Issue2}$ was significantly positive for participants with high levels of political interest (b = 1.19, SE = 0.28, p < .001), but that the total effect was only marginally significant for those with low levels of interest (b = 0.46, SE = 0.26, p = .083). In sum, H1 was supported for Issue 1 but not for Issue 2, although the finding for Issue 2 showed a statistical trend in the direction of H1.[10]

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[7] The direct effects of source favorability on both $Attitude_{Issue1}$ and $Attitude_{Issue2}$ for the high interest group were only marginally significant ($Attitude_{Issue1}$: standardized b = .26, SE = .27, p = .056; $Attitude_{Issue2}$: standardized b = .26, SE = .28, p = .077).

[8] H2 was also tested with PROCESS (Hayes, 2013) in which the continuous political interest level was used as the moderator. For Issue 1, the positive indirect effect was not significant for low values of political interest level (10^{th} and 25^{th}), but was statistically significant for the middle ranked values (50^{th} and 75^{th}) and marginally significant for the 90^{th} ranked value, which is generally consistent with H2. For Issue 2, the indirect effect was found to be not statistically significant for all values of political interest level.

[9] The direct effects of source favorability on both $Attitude_{Issue1}$ and $Attitude_{Issue2}$ for the low interest group were statistically significant ($Attitude_{Issue1}$: standardized b = .49, SE = .22, p < .01; $Attitude_{Issue2}$: standardized b = .44, SE = .23, p < .01).

[10] H1 was also tested with political interest level as a continuous variable. For both high and low political interest levels, the effects of candidate favorability on attitude toward the Issue 1 and Issue 2 were statistically significant and the interaction of candidate favorability with political interest level was statistically significant. For Issue 1, the effect of candidate favorability on attitude toward the issue was significant only for those with high political interest. For Issue 2, the effect of candidate favorability on

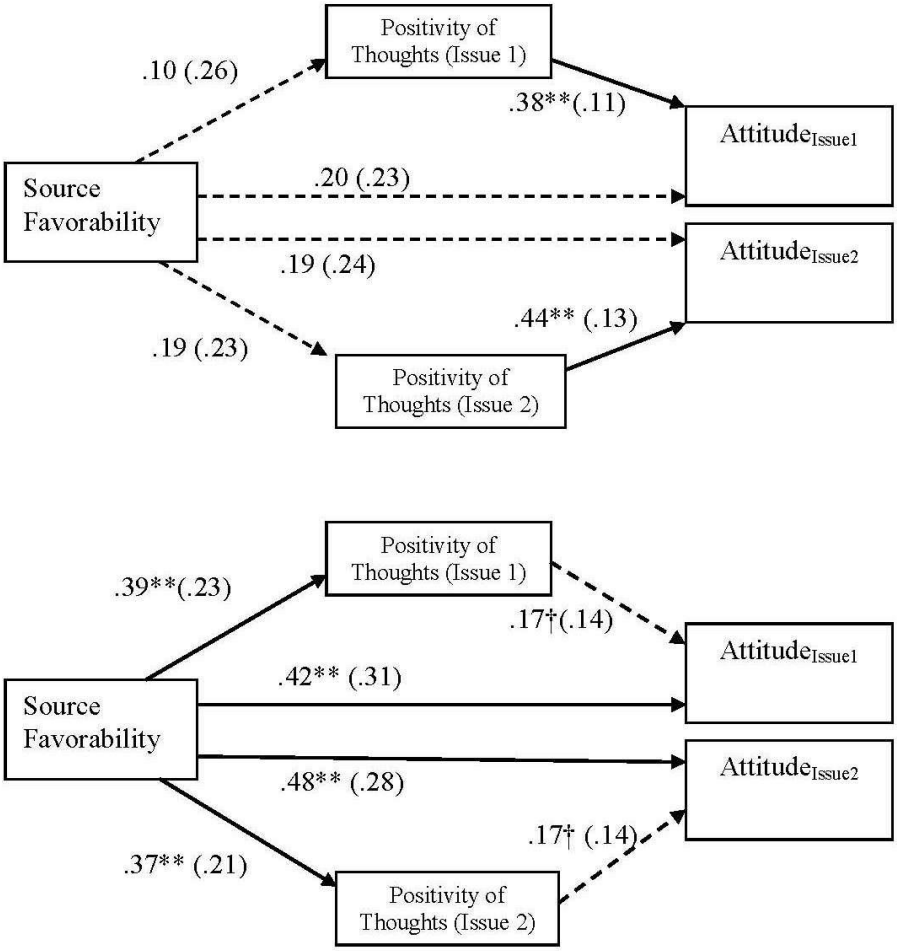

Figure 2. Path diagram with standardized coefficients for low (top panel) and high (bottom panel) political interest for the conservative position messages, $\square^2(4, N = 80) = 1.53, p = .821$; normality of fit index = .99; comparative fit in = 1.00; root mean square error of approximation < .01, 90% CI [< .01, .10]. Standard errors are included within parentheses. Solid lines and broken lines depict statistically significant and nonsignificant paths, respectively. The residual terms for the two mediating variables were allowed to covary (r = .30, p < .10 for low political interest; r = .41, p < .01 for high political interest). The residual terms for $Attitude_{Issue1}$ and $Attitude_{Issue2}$ were also allowed to covary (r = .64, p < .01, for low political interest; r = .73, p < .01, for high political interest). *p < .05. **p < .01. †p < .10.

attitude toward the issue was marginally significant for those with low political interest but statistically significant for those with high political interest.

Testing H2a: Mediating effects of positivity of thoughts for high political interest. The indirect effect of source favorability on $Attitude_{Issue1}$ through positivity of thoughts for Issue 1 was tested by bootstrapping analysis and found to be marginally significant (standardized b = .15, SE = .11, 95% CI [−.01, .45], p = .074). To examine whether the indirect effects through positivity of thoughts were statistically different between low and high political interest, we conducted a multigroup comparison test with restricted structural models. For the indirect effects through positivity of thoughts for Issue 1, the restricted model showed a good fit, $\chi^2(6, N = 80) = 4.07$, p = .667. The difference in chi square was not statistically significant, 2.44 (df = 2).

The indirect effect of source favorability on $Attitude_{Issue2}$ through positivity of thoughts for Issue 2 was also marginally significant (standardized b = .14, SE = .10, 95% CI [−.005, .41], p = .066).[11] A multigroup comparison was conducted, and the difference in χ^2 between the restricted, $\chi^2(6, N = 80) = 4.11$, p = .662, and unrestricted, $\chi^2(2) = 2.58$, models was not statistically significant. Overall, the results of the conservative position messages partially supported H2a.[12]

Testing H2b: Direct effects of source favorability for low political interest. The indirect effect of source favorability on $Attitude_{Issue1}$ through positivity of thoughts was not statistically significant for Issue 1 (standardized b = .06, SE = .11, 95% CI [−.13, .33], p = .454) or Issue 2 (standardized b = .14, SE = .13, 95% CI [−.09, .44], p = .199).[13] The results for the conservative position messages show that for those with low levels of political interest, source favorability had no significant direct effect on attitudes, which is not consistent with H2b.

Discussion

Even though it is hoped that every citizen makes political judgments by scrutinizing arguments based on evidence, not only citizens who are less interested in politics but also those who are highly interested in politics may make biased judgments because of the source of political messages. The present study investigated how citizens with either high and low interest in politics process messages differently

[11] The direct effects of source favorability on both $Attitude_{Issue1}$ and $Attitude_{Issue2}$ for the high interest group were statistically significant ($Attitude_{Issue1}$: standardized b =.42, SE = .31, p = .005; $Attitude_{Issue2}$: standardized b =.48, SE = .28, p = .001).

[12] H2 was also tested with PROCESS (Hayes, 2013) in which the continuous political interest level was used as the moderator. For Issue 1, the positive indirect effect was not significant for low values of political interest level (10^{th} and 25^{th}) but statistically significant for the middle ranked values (50^{th}). However the positive indirect effect was not significant for high values of political interest level (75^{th} and 90^{th}). For Issue 2, the indirect effect was found to be statistically significant for 25^{th} and 50^{th} ranked values of political interest level, but was not significant for 10^{th}, 75^{th}, and 90^{th} values of political interest level. For the conservative message, moderated indirect effects were found, but the pattern of interactions was complicated.

[13] The direct effect of source favorability in the low interest group was not statistically significant for either $Attitude_{Issue1}$ or $Attitude_{Issue2}$ ($Attitude_{Issue1}$: standardized b = .20, SE = .23, p = .175; $Attitude_{Issue2}$: standardized b = .19, SE = .24, p = .198).

depending on message source (i.e., favored and less favored politicians). As predicted, when the issue discussed in the message was unfamiliar, citizens formed their attitudes toward the issue based on their favorability toward the politician. This tendency was found for participants who had both relatively high and low levels of political interest (H1); for participants with low levels of interest, the effect of source favorability on attitudes toward issues was not mediated by message-relevant thoughts (H2). These results suggest that citizens with low levels of interest in politics tend to superficially process politicians' messages and make judgments on issues based on the message source rather than the content. The observed indirect effects (two of four cases) suggest that people with high levels of political interest tend to process politicians' messages in a more complex and engaged manner.

Theoretical and Practical Implications of the Findings

Since the dual models of persuasions (e.g., the elaboration likelihood model and HSM) were introduced to the study of political judgments, it has been known that the source effect on political judgments generally occurs for citizens who are less interested in politics. However, the theory of motivational reasoning and the bias hypothesis of HSM suggest that the biasing effect of message source has been tested for citizens with high interest in politics. Similarities and differences in the source effect on political judgments between those with high and low interest in politics have never been systematically investigated. With a systematic test, the present study found that not only citizens who are not interested in politics but also those with high interest in politics are susceptible to using source cues when they form political judgments. The observed patterns of the biasing source effect may be explained by multiple mechanisms. Balance theory and partisan goals can be thought of as motivational explanations, whereas perceived source credibility and existing agreement on key issues can be viewed as cognitive explanations. Even though specific mechanisms were not compared and tested, the observed biasing effects by source information have expanded the knowledge concerning biased processing of political messages and motivated political reasoning.

The present study applied HSM to investigate the effects of source favorability on message processing and attitude judgments among citizens with different levels of political interest. The observed indirect effects of source favorability on attitudes toward issues through message-relevant thoughts for those with high levels of political interest were generally consistent with the bias hypothesis of HSM. The bias hypothesis is one of the key propositions of HSM, but it has not been rigorously tested in previous studies. Chaiken and Maheswaran (1994) found some evidence for the bias hypothesis, but did not statistically test the significance of the indirect effects. Ziegler and Diehl (2003) used Baron and Kenny's method and the Sobel test for indirect effects, both of which have a number of limitations for testing indirect effects (Hayes, 2009). The present study resolved some of these limitations by testing for indirect effects with bootstrapping methods. Previous studies on source-related heuristic cues focused on source expert cues, but the present study tested another source-related cue, the source favorability heuristic. Brady and Sniderman (1985) proposed and found some effects of what they called the likability heuristic. However, their study was limited to the use of cues to infer politicians' positions on issues.

Political campaign messages that target citizens with low political interest must be simple and easy to process and may use some heuristic cues for quick judgments. However, the findings of the

present study suggest that even for citizens with high political interest, source favorability plays an important role in processing political messages. When a politician attempts to persuade voters who initially do not favor him or her, biased message processing is expected, and extra efforts to make the message more persuasive are required.

Limitations of the Study

The present study tested the direct and indirect effects of source favorability on attitudes toward two issues with either a liberal or a conservative position message. The observed patterns were most consistent with the hypotheses for the Israeli–Palestinian conflict issue with the liberal position message. For the Cuban embargo issue with the liberal position message, source favorability had only a statistically marginal effect on attitudes, and the indirect effect of source favorability on attitudes through positivity of thoughts was not significant for those with high political interest. For Issue 1 with the conservative position, the total effect of source favorability on attitudes was significant, but its indirect effect was not significant for those with high political interest. The differences in results between the liberal and the conservative position messages may have resulted from the participants' political orientations (63.4% favored Democrat candidates). Those participants might have been more responsive to the liberal position message. Neither the participants' familiarity with the issues nor their initial positions differed between the two issues. The differences in the results between the two topics may have resulted from the messages' different levels of persuasiveness. However, the reasons for the discrepancies in the results are not clear, and further investigation is needed.

The proposed differences in message processing and attitude changes between the high and low political interest groups were found for only some conditions. In addition, the degree of systematic processing, which was measured by the total number of thoughts participants recorded, was found to be greater for participants with high levels of political interest compared with those with low levels but only for one of the two issues. The insignificant difference in the total number of thoughts for Issue 1 between the high and low levels of political interest may have resulted from how political interest was measured. If political interest level had been measured for specific issues rather than general politics, the degrees of systematic processing might have been more intensified for those with a high level of interest in the Israeli–Palestinian conflict. The insignificant difference between the high and low interest groups also may have resulted from the fact that relatively homogeneous sample groups (i.e., college students) were used in the study. Student samples are known to be less interested in politics and are less likely to vote compared with the general public (Sears, 1986). However, irrespective of college students' levels of political interest, using a homogeneous sample will always make it difficult to obtain high variability in terms of level of interest in politics. As a result of the rather small sample size, the present study used only two political interest levels. If the sample size had been larger, the study could have had three or more groups, and differences would have been found between those with high versus low political interest.

Notwithstanding these limitations, findings from this study contribute to understanding the conditions under which political decisions are made. A number of scholars and activists seek ways to improve the quality of citizens' judgments and public opinions, but improving the quality of political judgments requires understanding the factors that influence rational reasoning and judgments. As Petty

and Wegener (1993) suggest, when biases in judgments are recognized, the motivation for correction arises. Hence, even though citizens tend to be biased in their decisions to a certain extent, once they are made aware of the factors that bias their reasoning (e.g., uncritically evaluating messages from favored politicians), the effects of those factors on judgments will be weakened, and better quality political judgments and deliberative public opinions can result.

References

Arbuckle, J. L., & Wothke, W. (1999). *Amos 4.0 user's guide*. Chicago, IL: SPSS.

Bohner, G., Moskowitz, G. G., & Chaiken, S. (1995). The interplay of heuristic and systematic processing of social information. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 6, pp. 33–68). Chichester, UK: Wiley.

Bohner, G., Ruder, M., & Erb, H.-P. (2002). When expertise backfires: Contrast and assimilation effects in persuasion. *British Journal of Social Psychology, 41,* 495–519. doi:10.1348/014466602321149858

Brady, H. E., & Sniderman, P. M. (1985). Attitude attribution: A group basis for political reasoning. *American Political Science Review, 79*, 1061–1078. doi:10.2307/1956248

Brent, E. E. Jr., & Granberg, D. (1982). Subjective agreement with the presidential candidates of 1976 and 1980. *Journal of Personality and Social Psychology, 35,* 140–158. doi:10.1037/0022-3514.42.3.393

Cacioppo, J. T., Harkins, S. G., & Petty, R. E. (1981). The nature of attitudes and cognitive responses and their relationships to behavior. In R. E. Petty, T. M. Ostrom, & T. C. Brock (Eds.), *Cognitive responses in persuasion* (pp. 31–54). Hillsdale, NJ: Erlbaum.

Cacioppo, J. T., von Hippel, W., & Ernst, J. M. (1997). Mapping cognitive structures and processes through verbal content: The thought-listing technique. *Journal of Counseling and Clinical Psychology, 65*, 928–940. doi:10.1037/0022-006X.65.6.907

Calder, B. J., Insko, C. A., & Yandell, B. (2006). The relations of cognitive and memorial processes to persuasion in a simulated jury trial. *Journal of Applied Social Psychology, 4*, 62–93. (Original work published 1974) doi:10.1111/j.1559-1816.1974.tb02600.x

Campbell, A., Converse, P. E., Miller, W. E., & Stokes, D. E. (1960). *The American voter*. New York, NY: Wiley.

Chaiken, S., Liberman, A., & Eagly, A. H. (1989). Heuristic and systematic information processing within and beyond the persuasion context. In J. S. Uleman & J. A. Bargh (Eds.), *Unintended thought* (pp. 212–252). New York, NY: Guilford Press.

Chaiken, S., & Maheswaran, D. (1994). Heuristic processing can bias systematic processing: Effects of source credibility, argument ambiguity, and task importance on attitude judgment. *Journal of Personality and Social Psychology, 66*, 460–473. doi:10.1037/0022-3514.66.3.460

Chen, S., & Chaiken, S. (1999). The heuristic-systematic model in its broader context. In S. Chaiken & Y. Trope (Eds.), *Dual-process theories in social psychology* (pp. 73–96). New York, NY: Guilford Press.

Chung, S., & Fink, E. L. (2008). The cognitive dynamics of beliefs: The effect of information on message processing. *Human Communication Research, 34,* 477–504. doi:10.1111/j.1468-2958.2008.00329.x

Cole, D. A., Ciesla, J. A., & Steiger, J. H. (2007). The insidious effects of failing to include design-driven correlated residuals in latent-variable covariance structure analysis. *Psychological Methods*, *12*, 381–398. doi:10.1037/1082-989X.12.4.381

Cook, E. A., Jelen, T. G., & Wilcox, C. (1994). Issue voting in gubernatorial elections: Abortion and post-Webster politics. *Journal of Politics, 56*, 187–199. doi:10.2307/2132352

Edwards, K., & Smith, E. E. (1996). A disconfirmation bias in the evaluation of arguments. *Journal of Personality and Social Psychology, 71*, 5–24. doi:10.1177/0146167297236007

Erb, H.-P., Bohner, G., Schmälzel, K., & Rank, S. (1998). Beyond conflict and discrepancy: Cognitive bias in minority and majority influence. *Personality and Social Psychology Bulletin, 24*, 620–633. doi:10.1177/0146167298246006

Fishkin, J. S. (2011). Deliberative democracy and constitutions. *Social Philosophy and Policy*, *28*(1), 242–260. doi:10.1017/S0265052510000129

Fishkin, J. S., & Luskin, R. C. (2005). Experimenting with a democratic ideal: Deliberative polling and public opinion. *Acta Politica*, *40*, 284–298. doi:10.1057/palgrave.ap.5500121

Fogarty, B. J., & Wolak, J. (2009). The effect of media interpretation for citizen evaluation of politicians' messages. *American Politics Research, 37,* 129–154. doi:10.1177/1532673X08319953

Greenwald, A. G. (1968). Cognitive learning, cognitive response to persuasion, and attitude change. In A. G. Greenwald, T. C. Brock, & T. M. Ostrom (Eds.), *Psychological foundations of attitudes* (pp. 147–170). New York, NY: Academic Press.

Habermas, J. (1989). *The structural transformation of the public sphere: An inquiry into a category of bourgeois society*. Cambridge, MA: MIT Press.

Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, *76*, 408–420. doi:10.1080/03637750903310360

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.

Heider, F. (1958). *The psychology of interpersonal relations*. New York, NY: Wiley.

Katz, E. (1995). The introduction: The state of the art. In T. L. Glasser & C. T. Salmon (Eds.), *Public opinion and communication of consent* (pp. 3–32). New York, NY: Guilford Press.

Kinder, D. R. (1978). Political person perception: The asymmetrical influence of sentiment and choice on perceptions of presidential candidates. *Journal of Personality and Social Psychology, 8,* 859–871. doi:10.1037/0022-3514.36.8.859

Kruglanski, A. W., & Webster, D. M. (1996). Motivated closing of the mind: Seizing and freezing. *Journal of Personality and Social Psychology, 103*, 263–283. doi:10.1037/0033-295X.103.2.263

Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin, 108*, 480–498. doi:10.1037/0033-2909.108.3.480

Lord, C., Ross, M., & Lepper, M. (1979). Biased assimilation and attitude polarization: The effects of prior theories on subsequently considered evidence. *Journal of Personality and Social Psychology, 37*, 2098–2109. doi:10.1037/0022-3514.37.11.2098

Lupia, A. (1994). Shortcuts versus encyclopedias: Information and voting behavior in California insurance reform elections. *American Political Science Review, 88,* 63–76. doi:10.2307/2944882

Lupia, A., & McCubbins, M. D. (1988). *The democratic dilemma: Can citizens learn what they need to know?* New York, NY: Cambridge University Press.

MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis.* Mahwah, NJ: Erlbaum.

McCroskey, J. C., & Teven, J. J. (1999). Goodwill: A reexamination of the construct and its measurement. *Communication Monographs, 66*, 90–103. doi:10.1080/03637759909376464

Mondak, J. J. (1993a). Public opinion and heuristic processing of source cues. *Political Behavior, 15,* 167–192. doi:10.1007/BF00993852

Mondak, J. J. (1993b). Source cues and policy approval: The cognitive dynamics of public support for the Reagan agenda. *American Journal of Political Science, 37,* 186–212. doi:10.2307/2111529

Ottati, V. C. (1990). Determinants of political judgments: The joint influence of normative and heuristic rules of inference. *Political Behavior, 12*, 159–179. doi:10.1007/BF00992467

Ottati, V., Fishbein, M., & Middlestadt, S. E. (1988). Determinants of voters' beliefs about the candidates' stands on the issues: The role of evaluative bias heuristics and the candidates' expresses message. *Journal of Personality and Social Psychology, 55,* 517–529. doi:10.1037/0022-3514.55.4.517

Park, H., Dailey, R., & Lemus, D. (2002). The use of exploratory factor analysis and principal components analysis in communication research. *Human Communication Research*, *28*, 562–577. doi:10.1111/j.1468-2958.2002.tb00824.x

Petty, R. E., & Wegener, D. T. (1993). Flexible correction processes in social judgment: Correcting for context-induced contrast. *Journal of Experimental Social Psychology, 29*, 137–165. doi:10.1006/jesp.1993.1007

Petty, R. E., & Wegener, D. T. (1999). The elaboration likelihood model: Current status and controversies. In S. Chaiken & Y. Trope (Eds.), *Dual-process theories in social psychology* (pp. 41–72). New York, NY: Guilford Press.

Popkin, S. L. (1991). *The reasoning voter: Communication and persuasion in presidential campaigns.* Chicago, IL: University of Chicago Press.

Pornpitakpan, C. (2004). The persuasiveness of source credibility: A critical review of five decades' evidence. *Journal of Applied Social Psychology*, *34*, 243–281. doi:10.1111/j.1559-1816.2004.tb02547.x

Preacher, K., & Hayes, A. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36*, 717–731. doi:10.3758/BF03206553

Sears, D. O. (1986). College sophomores in the laboratory: Influences of a narrow data base on social psychology's view of human nature. *Journal of Personality and Social Psychology, 51,* 515–530. doi:10.1037/0022-3514.51.3.515

Taber, C. S., & Lodge, M. (2006). Motivated skepticism in the evaluation of political beliefs. *American Journal of Political Science*, *50*, 755–769. doi:10.1111/j.1540-5907.2006.00214.x

Ziegler, R., & Diehl, M. (2003). Is politician A or politician B more persuasive? Recipients' source preference and the direction of biased message processing. *European Journal of Social Psychology, 33*, 623–637. doi:10.1002/ejsp.17