


Evaluating the Message or the Messenger? Implications for Self-Validation in Persuasion

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Abstract

Characteristics of persuasive message sources have been extensively studied. However, little attention has been paid to situations when people are motivated to form an evaluation of the communicator rather than the communicated issue. We postulated that these different foci can affect how a source validates message-related cognitions. Participants focused on the source (Studies 1 and 2) or the issue (Study 2) while reading weak or strong message arguments. Later, the communicator was described as low or high in credibility. When focused on the source, highly motivated participants were more confident and their attitudes were more reflective of thoughts when argument quality matched (e.g., weak arguments-low credibility) rather than mismatched (e.g., weak arguments-high credibility) source credibility. Conversely, when participants were focused on the issue, self-validation was greater when credibility was high rather than low—regardless of argument quality. Implications of these findings for the study and practice of persuasion are discussed.

Keywords

attitude change, metacognition, persuasion, self-validation, source credibility

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When encountering persuasive messages, people can engage in many different strategies and rely on many different types of information as a basis for their opinions (for reviews, see Petty & Wegener, 1998; Wegener & Carlston, 2005). In the persuasion literature, a great deal of research has focused on the amount of processing motivation and ability as a key determinant of the different ways that influence can occur. However, even when motivation and ability are high (for example), different orientations at the time of message receipt could guide the way processing unfolds. With this in mind, the current research compares a focus on evaluating the merits of a persuasive message versus the merits of a persuasive source.

For example, consider a citizen receiving a message about a highly relevant proposed policy at one of two different times: during the lead-up to an election or a year later. When receiving the appeal prior to voting, the citizen may likely process the advocacy as a way to evaluate the candidate. However, when receiving the message at a time when no decision about the politician is imminent (e.g., after the politician is ensconced in the position), the citizen may be more likely to scrutinize it as a way to evaluate the policy itself. Thus, across these situations, evaluation of the policy would be used for different purposes. When focused on assessing the

policy, the citizen may carefully consider the logic or cogency of the arguments as a means to form an attitude toward the policy. Conversely, during the lead-up to an election, the citizen may use their reactions to the arguments more as a way to infer traits that this politician possesses. Do these different processing foci hold different implications for persuasion by the message? If so, by what mechanism and under which circumstances do such effects emerge? The current research examined these possibilities in light of the burgeoning literature on the role of metacognition in persuasion.

Self-Validation in Persuasion

Over the past decade, a considerable amount of research on attitude change has focused on metacognition (i.e., thoughts about thoughts) or more specifically, the role of metacognitive

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confidence (for a review, see Petty, Briñol, Tormala, & Wegener, 2007). According to the self-validation hypothesis (Petty, Briñol, & Tormala, 2002), the amount of confidence that people have in their thoughts should play a critical role in persuasion. Specifically, thoughts held with higher confidence should be viewed as more valid and relied on to a greater extent when forming an attitude toward an issue or object.

A number of persuasion variables have been shown to influence the degree of thought confidence (see Briñol & Petty, 2009, for a review)—including the perceived credibility of a communicator (Briñol, Petty, & Tormala, 2004; Evans & Clark, 2012; Tormala, Briñol, & Petty, 2006, 2007). For example, Tormala and colleagues (2006) induced participants to generate largely favorable or unfavorable thoughts by supplying either strong (favorable thoughts) or weak (unfavorable thoughts) arguments in a personally relevant message. Importantly, no information about the source was given until after the message—at which time the communicator was portrayed as either low or high in credibility. Results showed that participants were more confident and their attitudes were more reflective of the valence of their thoughts when source credibility was high compared with low. In particular, when arguments were strong, greater persuasion was found when the source was high rather than low in credibility. However, the opposite relation emerged when arguments were weak. Attitudes were less favorable in the high- versus low-source credibility condition.

Self-Validation, Source Characteristics, and Impression Formation

The findings of Tormala et al. (2006) are considered to be driven by beliefs that a high credibility source should present information that is trustworthy, valid, and accurate (see also Briñol et al., 2004; Tormala et al., 2007). In this case, a message recipient can be confident that seemingly compelling features of a position are indeed strong and positive. By the same token, a credible source can also validate negative thoughts in response to weak arguments—perhaps by signaling that no truly compelling arguments can be made. On the other hand, a source with little credibility engenders a lack of trust and thus should lead message recipients to doubt their own reactions, regardless of whether such reactions are positive or negative per se.

We refer to these general effects of source characteristics across positive and negative perceptions as *content-independent* validation of thoughts. The notion that a single variable may equally validate (invalidate) positive and negative thoughts has been a hallmark of self-validation findings in persuasion (see Briñol & Petty, 2009). That is, variables such as source credibility have been postulated and shown to validate any kind of cognition regardless of its content. It seems plausible, however, that less global, more valence, or *content-dependent* metacognitive influences could emerge in some persuasion contexts. We argue that one determinant of

whether validation is content dependent or independent in persuasion may be processing a message with the intent of forming an impression of the source. When this occurs, message recipients should seek information that can lend insight into a communicator's traits. In some situations, traits would be inferred from the source's background, affiliations, or physical features. However, in many settings, the primary or only impression-related information present may be the communication itself. Under these circumstances, recipients may rely on message features such as the cogency of the arguments to form an impression of the source.

Some data in the impression formation literature can be interpreted as consistent with content-dependent validation (e.g., Hastie & Kumar, 1979; Pyszczynski, LaPrelle, & Greenberg, 1988; Srull, Lichtenstein, & Rothbart, 1985). However, little research to date has examined subjective feelings of confidence as a key mechanism underlying effects on person-related perceptions. That said, in one set of studies, Clark, Wegener, Briñol, and Petty (2009) found that thought confidence was contingent on a match between individuating information about a target person and a group stereotype. For instance, after thinking that a target person was unintelligent, participants were more confident when they later learned that the person was low as opposed to high in socioeconomic status (SES). Conversely, when thoughts were more about how the target possessed intelligence, participants felt more confident in these thoughts when this target's background was later described as being of high- rather than low-SES.

To date, no evidence of content-dependent validation exists in the literature on persuasion. Furthermore, source-related motives have not been directly examined in these contexts. Studies have used cover stories and instructions that have typically directed participants toward evaluating the object or issue advocated by a persuasive message (e.g., see Briñol et al., 2004; Tormala et al., 2006). When focused on the attitude issue, it is plausible that the nature of message recipients' thoughts differs relative to when source or person-related motives are activated. For instance, thoughts in response to the message should be predominantly about the issue itself rather than the source. In contrast, when source evaluation motives are operating, thoughts in response to the persuasive message should be less about the advocated issue and aimed more toward the communicator. Hence, communicator-driven processing should elicit thoughts that are more strongly related to any potentially validating information about the source that could be encountered later.

Because of this close association between the object of the thoughts (e.g., source versus message evaluation) and the validating information (e.g., high- or low-source credibility), it seems likely that the validating factor could work in concert with the content of the thoughts (e.g., positive or negative) to determine thought confidence. For example, when a message contains strong arguments, thoughts should not only be largely positive, but they should be indicative of

a favorable impression of the source. After the appeal, learning that the source is highly credible, expert, or trustworthy would be consistent with the positive impression of the source that one has already formed from their reactions to the message. However, learning that the source lacks credibility would be inconsistent with one's existing impression. Thus, the highly credible advocate should lead a person to feel more confident in their initial favorable perceptions than the low-credibility source. This pattern of effects would be consistent with content-dependent and independent validation effects.

However—with content-dependent validation—source credibility information may elicit a very different pattern of results when the tenets of a message are weak or specious. For example, careful processing of weak arguments should elicit largely negative thoughts that reflect an unfavorable initial impression of the communicator. In this case, learning that the source lacks credibility would converge with negative thoughts and impressions, whereas high source credibility would contrast these perceptions. Therefore, in stark contrast to previous findings (e.g., Tormala et al., 2006), recipients should be more confident in their negative thoughts when source credibility is low as opposed to high.

These content-dependent validation effects are postulated to occur due to multiple sources of information (i.e., thought's in response to a message and credibility information about a source) converging with one another (e.g., negative thoughts and low-source credibility) to determine thought confidence (see Clark et al., 2009). In at least some respects, this directional type of validation parallels how convergent validity is gained in scientific domains. Convergent validity is obtained when evidence from separate indicators (e.g., measures) comes together to enhance certainty toward a particular belief (see Campbell & Fiske, 1959). Similarly, the acquisition of direct trait information about a source (e.g., low credibility) that is consistent with previously produced cognitions (e.g., negative impression-related thoughts) should increase the confidence a message recipient holds toward those initial perceptions.

Research Overview

The current conceptualization asserts that the role of source credibility in self-validation is more complex than previously proposed. Rather than source credibility determining thought confidence regardless of thought valence (content-independent validation; e.g., Tormala et al., 2006), we argue that content-dependent validation effects should occur when a source evaluation is activated (and validating information relates more directly to the object of the initial thoughts). In the present research, we examined how this orientation can carry different implications for thought confidence and persuasion relative to a focus on evaluating the communicated issue. Study 1 served as an initial examination of how source evaluation motives can impact the self-validating potential

of credible and noncredible message sources. Building from these findings, Study 2 directly examined the hypothesized differences in self-validation as a function of focusing on the message source or the advocated issue.

Study 1

Across the literature on self-validation, research has identified two conditions under which variables are most likely to influence thought confidence (see Briñol & Petty, 2009). First, studies have shown that variables (e.g., source credibility) are more likely to affect thought confidence when they are introduced after (rather than before) an individual has produced thoughts in response to a persuasive message (e.g., Tormala et al., 2007). Second, in order for any variable to induce thought confidence, it stands to reason that an individual must have produced message-relevant cognitions that could then be subject to validation. Consistent with this rationale, self-validation effects have been shown for people who possessed relatively high as opposed to low levels of need for cognition (i.e., NC, individual differences in motivation to think, Cacioppo & Petty, 1982; for example, Briñol et al., 2004) and when a message was high in personal relevance (e.g., Tormala et al., 2006).

The aim of Study 1 was to find initial support for our predictions about content-dependent validation, while considering the moderating conditions identified through previous research. Participants received instructions designed to activate source evaluation prior to receiving either strong or weak arguments on an issue. After reading the appeal, participants were given information that characterized the source as either low or high in credibility. Following the dependent measures and an unrelated experiment, a NC inventory was administered to assess individual differences in processing motivation.

Contrary to past findings in the persuasion literature, we believed that self-validation should emerge as a function of a match between the valence of participants' thoughts and the credibility of the message source (i.e., content-dependent validation). Furthermore, we postulated that this effect should occur primarily among participants with relatively high levels of NC—who plausibly engaged in a substantial amount of message-related thinking. Specifically, high-NC participants should report greater thought confidence in matched (i.e., weak arguments–low source credibility and strong arguments–high source credibility) compared with mismatched conditions (i.e., weak arguments–high source credibility and strong arguments–low source credibility). In turn, feeling more confident in one's thoughts should yield attitudes that are more reflective of the quality of the arguments that were processed.

In contrast to high-NC levels, thought confidence should not vary as a function of the manipulations among participants with relatively low-NC. Low-NC participants should engage in little message-related thinking and may likely rely

on peripheral aspects of the message as a basis for their attitudes (e.g., Haugtvedt, Petty, & Cacioppo, 1992). Hence, rather than inducing confidence in thoughts, we predict that the credibility information about the source would serve as heuristic or peripheral cue to persuasion when need for cognition is low.

Method

Participants and design. One hundred and seventy-six undergraduates at the University of Iowa participated in exchange for partial course credit. The quality of the message arguments (weak vs. strong) and the credibility of the message source were manipulated (low vs. high). In addition, individual differences in NC (Cacioppo & Petty, 1982) were measured.

Procedure. On arrival at the lab, participants were seated at a computer station. Participants were told they would receive information concerning phosphate-based detergents and that legislators were reviewing proposals designed to encourage the household use of such products. Immediately prior to receipt of the message, participants were instructed to think about the potential attributes of the message source. This information reads as follows:

As you know, our views on issues can be based on many different types of information. In this experiment, we are interested how people form an impression of another person based on something that he/she has written. Thus, when presented with the written information, please consider the author and the types of characteristics that he/she might possess.

The persuasive message itself consisted of either specious (weak) or compelling (strong) arguments that advocated the use of phosphate-based detergents. After the message, participants listed their thoughts and were then given source information that was designed to manipulate perceptions of credibility (low vs. high). Subsequently, participants reported their attitudes, responded to scales of thought confidence, rated the valence of each listed thought, and completed a check for the source credibility manipulation. Participants then engaged in an unrelated experiment and individual differences in NC were measured after its completion. Finally, participants were debriefed and thanked.

Independent variables

Argument quality. Participants received a message titled "The Benefits of Phosphate-Based Laundry Detergents." The author of the message was listed as "Brent Stevenson," but participants received no additional information about this person until later in the experiment. The message itself consisted of either strong or weak arguments and these versions were taken directly from materials used in past research (approximately 250 words; for example, see Tormala et al.,

2006). In the strong argument conditions, statements focused on the lower cost of phosphate detergents over nonphosphate products and claimed that the former are more environmentally friendly. Conversely, in the weak argument conditions, the message advocated the phosphate cleaners on the basis of their preferable scent and attractive packaging.

Source credibility. The credibility of the communicator was manipulated after message presentation and reporting of thoughts. In the low-credibility conditions, the source was described as a pawn store clerk and part-time door-to-door salesman. However, in high-credibility conditions, participants were told that the communicator is a professor at Stanford University who studies the merits of various consumer products.

NC. On completion of all procedures, measures, and an unrelated experiment, participants responded to the 18-item NC Scale (Cacioppo, Petty, & Kao, 1984). This inventory measures individual differences in the extent to which people engage in and enjoy cognitively effortful activities. Statements such as "Thinking is not my idea of fun" (reverse scored) comprise this instrument and participants rate each statement on a 5-point scale (with endpoints of *not at all characteristic of me*–*extremely characteristic of me*). Responses to the 18 items were highly intercorrelated ($\alpha = .87$) and were summed to form a composite NC score.

Dependent measures

Thought listing. Immediately after the advocacy, participants reported the thoughts that came to mind during message presentation. Participants were told not to be concerned with spelling or grammar and spent up to 2 min typing a maximum of eight thoughts. Each message-related thought was later categorized by a judge (blind to conditions) as directed either more toward the (a) source of the communication or (b) the issue itself. Of the total message-related thoughts listed by all participants, 60.47% were deemed to be directed more toward the source rather than the issue (i.e., 615/1,017). This finding is consistent with participants following instructions and using the information contained in the message as a means to form an impression of the communicator.

Postmessage attitude. After the manipulation of source credibility, attitudes were measured on seven scales that ranged from 1 to 9. The first six items were taken directly from previous research that used identical message arguments (see Evans & Clark, 2012). Each item used the stem "Phosphate detergents are" and was coupled with one of following anchor pairs: *negative–positive*, *bad–good*, *unfavorable–favorable*, *useless–useful*, *harmful–beneficial*, or *foolish–wise*. The seventh measure was "Using phosphate detergents is a good idea" and it contained endpoints of *strongly disagree–strongly agree*. Participants' responses to

these items were found to be highly correlated ($\alpha = .96$) and were thus averaged to form an index of postmessage attitude.

Thought confidence. Participants were asked to think back to the thought-listing task and to report the confidence they had in their thoughts. Perceptions were measured on 9-point scales that were identical to those used in previous research (see Evans & Clark, 2012). These questions read as follows: "Overall, how much confidence do you have in the thoughts that you listed?" (*none at all-very much*), "Overall, how valid would you say your thoughts are?" (*not at all valid-extremely valid*), "How certain are you that the thoughts you had while reading the message were 'correct'?" (*not at all certain-very certain*), and "How certain are you that of all the possible thoughts that one might have about the message, your thoughts generally reflected the 'right' way to think and feel about what you saw?" (*not at all certain-very certain*). A composite of thought confidence was formed by averaging responses to these four measures ($\alpha = .94$).

Thought-rating. Following the thought confidence measures, participants rated the valence of their previously listed thoughts. Each thought was presented sequentially by the computer and was coupled with the following rating options: *positive*, *negative*, *neutral*, or *unrelated* to phosphate detergents. The overall favorability of each participant's self-rated thoughts was indexed by subtracting the number of negative thoughts from the number of positive thoughts and dividing this number by the total number of topic-related thoughts listed.

Source credibility check. After the ratings of thought favorability, perceptions of source credibility were assessed on two scaled questions (1-9, *not at all-very much*). These items read as follows: "To what extent is Brent Stevenson a credible source on the issue of phosphate detergents?" and "To what extent is Brent Stevenson an expert source on the issue of phosphate detergents?" Responses to these questions were reliable ($\alpha = .90$) and were averaged to form a single composite.

Results

Source credibility check. Centered regression analyses were performed on each dependent measure (see Aiken & West, 1991). In each analysis, centered predictors included the index of NC, the manipulation of argument quality, the manipulation of source credibility, and all interaction terms. When the credibility check was regressed on these predictors, a significant main effect of the source manipulation was found. As expected, perceptions of credibility were higher when the source was manipulated to be high rather than low in credibility, $b = 2.40$, $t(168) = 7.85$, $p < .001$, $r = .52$. An unexpected main effect of NC also emerged such that lower levels were associated with greater perceived source credi-

bility, $b = -.03$, $t(168) = -2.12$, $p = .035$, $r = .16$. No additional effects approached significance ($ps > .21$).

Thought favorability. An analysis performed on the favorability of participants' thoughts revealed a marginal NC \times Argument Quality interaction, $b = .02$, $t(168) = 1.68$, $p = .095$, $r = .13$ (all other effects, $p > .11$). At relatively high-NC levels (+1 *SD*), thought favorability was higher when arguments were strong as opposed to weak, $b = .34$, $t(168) = 2.29$, $p = .024$, $r = .17$. For participants relatively low in NC (-1 *SD*), argument quality had no effect on thoughts, $b = -.14$, $t(168) = -.10$, $p = .923$. Consistent with a large body of past research (see Cacioppo, Petty, Feinstein, & Jarvis, 1996, for a review), these results suggest that higher NC was associated with more effortful processing of the central merits of the message.

Thought confidence. Results of a centered regression on thought confidence showed the predicted NC \times Argument Quality \times Source Credibility interaction, $b = .12$, $t(168) = 2.22$, $p = .028$, $r = .17$ (see Figure 1). For participants relatively high in NC (+1 *SD*), greater thought confidence was reported when the quality of the arguments directionally matched rather than mismatched the level of source credibility, Argument Quality \times Source Credibility, $b = 2.02$, $t(168) = 2.36$, $p = .020$, $r = .18$. Specifically, when these participants learned that the source lacked credibility, they were more confident when they previously received weak compared with strong arguments, $b = -1.13$, $t(168) = -1.99$, $p = .049$, $r = .15$. An opposite pattern of means emerged for participants who were relatively high in NC and received the high credibility source, though the effect was not statistically significant, $b = .90$, $t(168) = 1.39$, $p = .167$. Furthermore, analyses conducted within each level of argument quality at high-NC revealed that the main effect of source credibility was significant in weak, $b = -1.39$, $t(168) = -2.57$, $p = .011$, but not strong argument conditions, $b = .64$, $t(168) = .95$, $p = .343$.

The directional validation found at high levels of NC did not emerge at relatively low-NC levels (-1 *SD*), Argument Quality \times Source Credibility, $b = -.68$, $t(168) = -.81$, $p = .420$. Thought confidence did not differ as a function of argument quality when the source was low, $b = .12$, $t(168) = .20$, $p = .841$, or high in credibility, $b = -.57$, $t(168) = -.92$, $p = .357$. All other main effects and interaction terms were also nonsignificant ($ps > .26$).

Postmessage attitude. Analysis of participants' attitudes yielded effects that were consistent with predictions and the results observed on thought confidence. For high-NC participants, an increase in thought confidence should enhance persuasion when thoughts were favorable (because arguments were strong) and the source was high in credibility. However, greater thought confidence should be associated with decreased persuasion when thoughts were unfavorable (because arguments were weak) and the source lacked credibility. These effects would combine to create main effects of

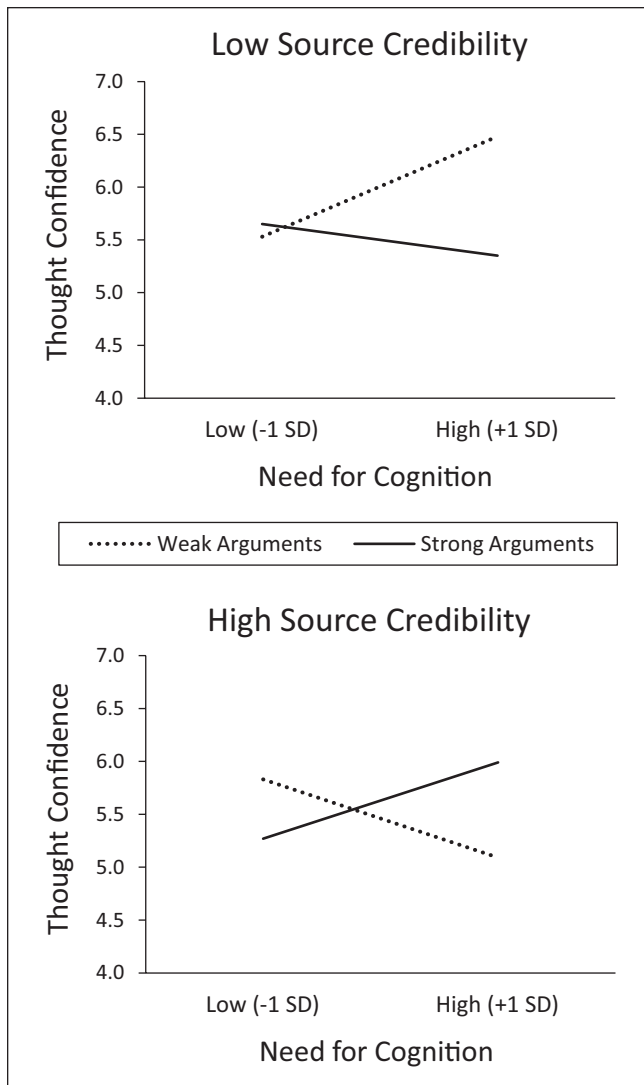


Figure 1. Top panel: Predicted values for thought confidence as a function of argument quality and need for cognition when source credibility was low. Bottom panel: Predicted values for thought confidence as a function of argument quality and need for cognition when source credibility was high.

argument quality and source credibility. For low-NC participants, however, source credibility could be used as a cue to persuasion and should not be guided by thought confidence.

As displayed in Figure 2, attitude results showed a main effect of argument quality in which strong arguments were more persuasive than weak arguments, $b = .89$, $t(168) = 3.54$, $p < .001$, $r = .26$. Of greater importance, however, a main effect of the source credibility manipulation also emerged. Specifically, attitudes were more favorable when the source was high rather than low in credibility, $b = .91$, $t(168) = 3.64$, $p < .001$, $r = .27$. As anticipated, this source effect did not differ as a function of either NC or argument quality. However, the presence of a marginal NC \times Argument Quality interaction supported the possibility that the source

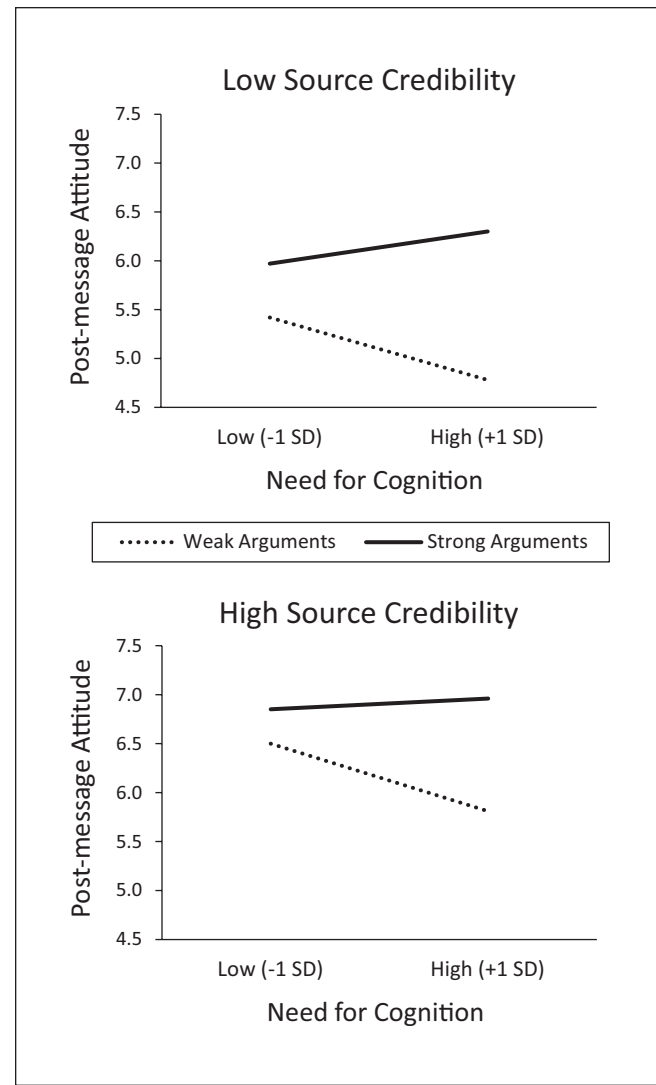


Figure 2. Top panel: Predicted values for postmessage attitude as a function of argument quality and need for cognition when source credibility was low. Bottom panel: Predicted values for postmessage attitude as a function of argument quality and need for cognition when source credibility was high.

may have played different persuasion roles at relatively high (i.e., determinant of thought confidence) versus low levels (i.e., cue/heuristic) of thinking, $b = .04$, $t(168) = 1.72$, $p < .088$, $r = .13$. Similar to effects on thought favorability, argument quality influenced persuasion for relatively high-NC participants (+1 *SD*), $b = 1.33$, $t(168) = 3.66$, $p < .001$, $r = .27$. However, the quality of the arguments did not influence attitudes among relatively low-NC participants (-1 *SD*), $b = .45$, $t(168) = 1.25$, $p = .213$. No other effects were found ($ps > .37$).

Mediation analyses. A key prediction was that differences in thought confidence would be responsible for the source effect on attitudes for participants' who were relatively high

in NC. However, for low-NC participants, we expected that source credibility would be more likely to serve as a peripheral cue to persuasion that was not contingent on confidence in thoughts (cf., Haugtvedt et al., 1992).

To test whether the source effect on attitudes was driven by differences in thought confidence, we conducted two separate sets of mediational analyses: one isolated the relations among relatively high-NC participants (+1 *SD*) and the other focused on low-NC participants (−1 *SD*).

As an initial step, we examined the plausibility of thought confidence as a mediator. In a model that included centered terms for argument quality, thought confidence, and their interaction as predictors of attitudes, an Argument Quality × Thought Confidence effect was found, $b = .33$, $t(172) = 2.58$, $p = .011$, $r = .19$. In accord with the self-validation hypothesis, this effect was such that strong arguments were associated with more persuasion and weak arguments were related to less persuasion as thought confidence increased. Next, we needed to pit this proposed mediator (Argument Quality × Thought Confidence) against the distal source effect at relatively high and low levels of NC. Therefore, we ran a model with all main effects and interactions corresponding to NC, argument quality, and source credibility as centered predictors. Importantly, parallel interaction terms replacing source credibility with thought confidence and a thought confidence main effect were simultaneously included.

The results supported the different relations hypothesized for high- and low-NC, respectively. For relatively high-NC participants (+1 *SD*), the main effect of the source manipulation decreased and fell to nonsignificance, $b = .37$, $t(164) = .99$, $p = .325$. However, the Argument Quality × Thought Confidence interaction remained a significant predictor of attitudes, $b = .65$, $t(164) = 3.85$, $p < .001$, $r = .29$. A different pattern emerged among participants with lower levels of NC (−1 *SD*). Consistent with credibility serving as a cue, the main effect of source did not decrease and remained significant, $b = 1.08$, $t(164) = 3.18$, $p = .002$, $r = .24$. Furthermore, the Argument Quality × Thought Confidence effect did not predict attitudes, $b = -.19$, $t(164) = -.98$, $p = .326$.

Bootstrapping procedures were used to test the statistical significance of these mediational patterns (see Preacher & Hayes, 2008). These analyses treated the obtained data as the population and randomly drew (with replacement) 5,000 samples of equal size to the study. Estimates of the indirect effect on attitudes were calculated for each bootstrapped sample and were used to generate a bias-corrected confidence interval (BC CI) for the indirect effect. Congruent with a self-validation account, the Argument Quality × Thought Confidence term significantly mediated the source effect on attitudes at relatively high levels of NC (+1 *SD*), estimated mean indirect effect = .44, BC CI 98: 0.0306–1.0977. However, this interactive effect did not mediate the relation between source credibility and attitudes when NC was relatively low (−1 *SD*), estimated mean indirect effect = .00, BC CI 50: −0.0100–0.0398. This lack of mediation by thought

confidence is consistent with low-NC participants relying on credibility as a cue to persuasion.

Discussion

Study 1 provided initial support that focusing on forming an impression of a source would create content dependent rather than the content-independent validation effects shown in past persuasion research. For relatively high-NC participants, source credibility was found to influence thought confidence as a function of the quality of the message arguments and the corresponding valence of thoughts generated. In particular, the low-credibility source elicited greater confidence when arguments were weak (and thoughts were unfavorable) as opposed to strong. However, the high credibility advocate tended to yield more confidence when arguments were strong (and thoughts were favorable) rather than weak. Furthermore, mediation analyses revealed that these differences in thought confidence predicted issue-relevant attitudes that were more reflective of the quality of the arguments that participants processed. For relatively low-NC participants, source credibility did not influence thought confidence. The findings were consistent with source credibility serving as a peripheral cue rather than as validation of message-related thoughts (cf., Briñol et al., 2004).

Study 2

The aim of Study 2 was to examine the impact of source versus issue evaluation goals in the same experimental design. Prior to receiving a set of message arguments on an issue, participants were instructed to either focus their attention on the message source or on the issue being advocated. As a departure from Study 1, individual differences in NC were not collected as a means to index motivation to process information. Rather, all participants received instructions that were designed to constrain processing motivation to be high—facilitating the likelihood of self-validation. In conditions where participants were focused on evaluating the message source, we anticipated that thought confidence would depend on a match between the cogency of the arguments and the credibility of the communicator (content-dependent validation).

However, we predicted very different effects among participants who were instructed to evaluate the issue. In particular, we expected source credibility to affect thought confidence in a way that was not contingent on the quality of message arguments or the valence of thinking (i.e., content-independent validation). As demonstrated in past research (e.g., Tormala et al., 2006), when effortful message processing occurs, a high-credibility source should elicit greater confidence than a low credibility advocate—regardless of whether thoughts are largely positive (strong arguments) or negative (weak arguments). In these situations, high credibility should signal that the information is likely accurate and

thus their positive or negative reactions about the topic can be trusted when forming an attitude.

Method

Participants and design. Two hundred and ninety-seven University of Iowa undergraduates received partial course credit for their participation. Participants were randomly assigned to a 2 (evaluative focus: source, issue) \times 2 (argument quality: weak, strong) \times 2 (source credibility: low, high) between-participants design.

Procedure. Near the start of the experiment, participants completed a 14-item survey in which one question corresponded to nuclear power and the remaining items served as filler. The nuclear power item appeared in the second position and read as follows: "Building more nuclear power plants in the United States would be": (1 = *bad* to 9 = *good*; $M = 3.95$, $SD = 2.16$). Following this survey, participants received instructions that were designed to manipulate their evaluative focus toward a forthcoming message (either toward the source or the advocated issue). In addition, all participants were told that they were part of a small group taking part in "important policy research" and that their "thoughtful responses" were very important to the researchers. This information was adapted from past self-validation research and was designed to motivate careful processing of the message (see Tormala et al., 2006).

Next, participants received either a strong or a weak version of a message that argued *against* the development of more nuclear power plants in the United States. After message presentation and a thought-listing, the credibility of the message source was manipulated (low vs. high). Participants then completed dependent measures of postmessage attitude, thought confidence, thought valence, and perceived source credibility. Following these measures, participants were thanked and debriefed.

Independent variables

Evaluative focus. Before presentation of the persuasive appeal, participants received instructions that were designed to manipulate the focus of their subsequent message processing. Using identical instructions to Study 1, participants in the source focus conditions were instructed to consider the potential attributes of the communicator. Conversely, participants in the issue focus conditions received the following instructions:

As you know, our views on issues can be based on many different types of information. In this experiment, we are interested how people form an opinion on an issue based on a written communication. Thus, when presented with the written information, please consider the statements in relation to your own views on the issue.

Argument quality. The persuasive message was titled "Against the Development of New Nuclear Power Plants in

the U.S." and the author was purported to be "William Saunders." Participants received a set of either strong or weak arguments that were taken directly from materials used in past research (approximately 350 words; Clark, Wegener, & Fabrigar, 2008). For example, one weak argument stated that scientists claim that radioactive disposal sites will be safe; however, these scientists could be incorrect. In contrast, the strong version of the message stated that scientists offer no guarantees about the safety of waste disposal sites.

Source credibility. Following the thought-listing task, the credibility of the communicator was manipulated. In the low-credibility conditions, participants were told that the source was a high school sophomore who composed the message as part of a class project. Conversely, in the high-credibility conditions, the author was a professor at Princeton University and a member of a national committee on alternative energy sources.

Dependent measures

Thought-listing. The thought-listing task was identical to that used in Study 1. Furthermore, all message-related thoughts were once again coded by a judge (blind to conditions) as directed either more toward the source or the issue. For each participant, the number of source-focused thoughts was divided by the total number of message-related thoughts that he or she listed. This index served as a check for the manipulation of evaluative focus.

Postmessage attitude. After the manipulation of source credibility, participants' attitudes were assessed on measures that closely paralleled those from previous research using identical message arguments (see Clark et al., 2008). To maximize reliability, a total of nine 9-point items were provided. The first five measures used the stem "Nuclear power plants are" and included one of the following sets of endpoints: *bad-good*, *harmful-beneficial*, *negative-positive*, *unnecessary-necessary*, or *foolish-wise*. The remaining four measures were "Building more nuclear plants in the U.S.: I . . ." (*disapprove-approve*), "Building more nuclear plants in the U.S.: I am. . ." (*definitely opposed-definitely in favor*), "Building more nuclear power plants would be" (*inappropriate-appropriate*), and "Building more nuclear power plants would be a good idea" (*strongly disagree-strongly agree*). For ease of presentation, responses were reverse scored so that high values on each of the nine measures reflected greater agreement with the persuasive message. Ratings on these scales were reliable ($\alpha = .97$), hence they were averaged to form an index of postmessage attitude.

Thought confidence. Along with the measures used in Study 1, three additional scales were used to maximize reliability. These new 9-point items were "How accurate do you think that your thoughts about the message are?" (*not at all accurate-very accurate*), "To what extent do you believe

that your thoughts about the message are correct?" (*not at all correct-highly correct*), "Overall, how much certainty do you have in the thoughts that you listed?" (*none at all-very much*). Scores on the seven total items were averaged to form a composite ($\alpha = .96$).

Thought-rating. Participants rated the valence of their listed thoughts toward the advocacy. While this task was similar to that used in Study 1, it included one important difference. Participants were asked to report whether each of their thoughts was *positive*, *negative*, *neutral*, or *unrelated* in response to the message advocacy (against nuclear power plants) rather than the specific attitude object (nuclear power plants). This task framing was used to facilitate a positive relationship between the valence of categorized thoughts and the reverse-scored attitude measures. Hence, the calculation of overall thought favorability was identical to that used in Study 1.

Source credibility check. As a manipulation check, participants responded to the same measures of perceived credibility used in Study 1. Responses were averaged to form an index ($\alpha = .93$).

Results

Evaluative focus check. The proportion of source-focused thoughts that each participant listed was submitted to a three-way between-participants Analysis of Variance (ANOVA). The only significant influence that emerged was a main effect of the evaluative focus manipulation, $F(1, 289) = 52.26, p < .001, r = .39$ (all other $ps > .41$). As anticipated, participants who were instructed to evaluate the message source produced a greater proportion of source-related thoughts ($M = .52, SD = .38$) compared with participants who were told to focus on the advocated issue ($M = .23, SD = .29$).

Source credibility check. The index of perceived credibility was submitted to a three-way Analysis of Covariance (ANCOVA). Responses to the premessage attitude item served as the covariate, $F(1, 288) = 2.11, p = .147$. As expected, a main effect of the source manipulation was found, $F(1, 288) = 167.74, p < .001, r = .61$ (all other $ps > .12$). Participants rated the source as more credible in the high-credibility ($M_{\text{adjusted}} = 6.12 [SE = .16]$) as opposed to the low-credibility ($M_{\text{adjusted}} = 3.25 [SE = .15]$) conditions.

Thought favorability. A three-way ANCOVA was performed on the favorability of participants' thoughts. This analysis showed a main effect of argument quality, $F(1, 288) = 9.92, p = .002, r = .18$. Thoughts were more favorable when arguments were manipulated to be strong ($M_{\text{adjusted}} = .32 [SE = .04]$) as opposed to weak ($M_{\text{adjusted}} = .11 [SE = .05]$). The premessage attitude covariate also had a significant influence ($F[1,$

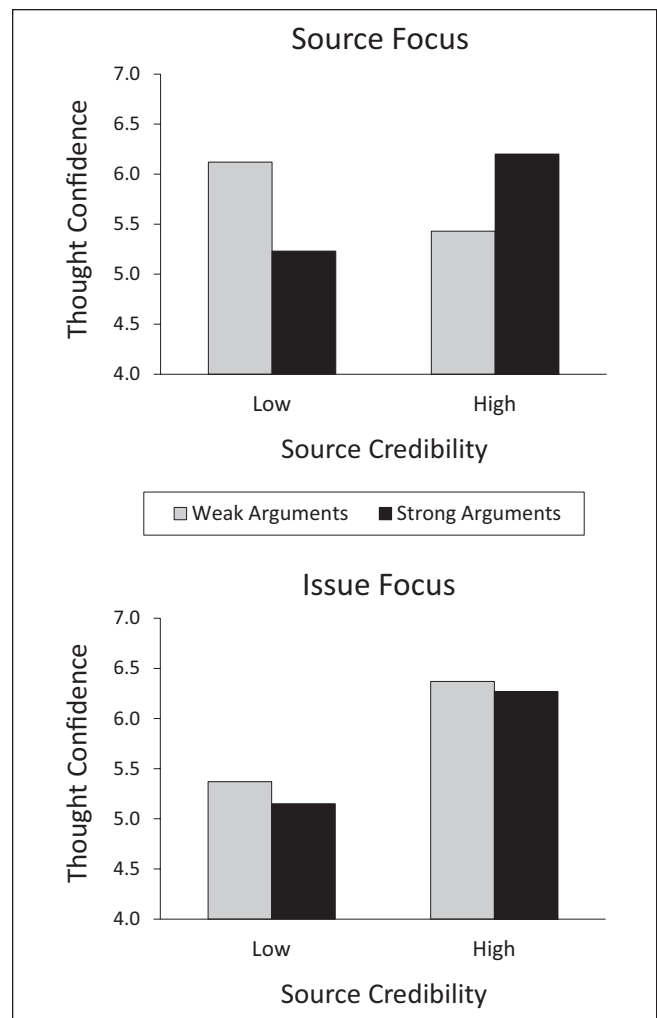


Figure 3. Top panel: Mean thought confidence as a function of argument quality and source credibility in source focus conditions. Bottom panel: Mean thought confidence as a function of argument quality and source credibility in issue focus conditions.

288] = 35.18, $p < .001$), but no other effects emerged ($ps > .54$). Taken together, these findings indicated that participants substantively processed the message and this did not vary as a function of the evaluative focus condition or the later source manipulation.

Thought confidence. An ANOVA on the index of thought confidence revealed a marginally significant Evaluative Focus \times Argument Quality \times Source Credibility interaction, $F(1, 289) = 3.49, p = .063, r = .11$.¹ As displayed in Figure 3, the hypothesized directional validation effects on thought confidence were found when participants were instructed to think about source attributes, Argument Quality \times Source Credibility effect, $F(1, 289) = 8.42, p = .004, r = .17$. Specifically, when source credibility was low, participants reported greater confidence when arguments were weak ($M = 6.12 [SD = 1.60]$) compared with strong ($M = 5.23 [SD = 1.97]$),

$F(1, 289) = 4.82, p = .029, r = .13$. However, when source credibility was high, participants tended to be more confident when they received strong ($M = 6.20 [SD = 1.34]$) as opposed to weak arguments ($M = 5.43 [SD = 1.75]$), $F(1, 289) = 3.64, p = .058, r = .11$.

In the issue focus conditions, the effects on thought confidence were different. As anticipated, confidence in thoughts did not vary as function of the Argument Quality \times Source Credibility interaction, $F < 1, p > .83$. Rather, only a main effect of the source manipulation emerged, $F(1, 289) = 12.92, p < .001, r = .21$. Regardless of the quality of the message arguments, the high-credibility source ($M_{\text{strong}} = 6.27 [SD = 1.66]$, $M_{\text{weak}} = 6.37 [SD = 1.81]$) elicited more confidence than the low credibility advocate ($M_{\text{strong}} = 5.15 [SD = 1.88]$, $M_{\text{weak}} = 5.37 [SD = 2.07]$). Beyond these critical interaction effects, three other influences emerged. An overall main effect of source credibility, $F(1, 289) = 8.57, p = .004, r = .17$, paralleled the simple effect found in issue focus conditions. In addition, a significant Argument Quality \times Source Credibility interaction paralleled the simple interaction found in the source focus conditions, $F(1, 289) = 4.76, p = .030, r = .13$. Finally, an Evaluative Focus \times Source Credibility interaction was also present, $F(1, 289) = 4.94, p = .027, r = .13$. This latter effect was consistent with the primary three-way interaction such that simple effects of source credibility on thought confidence were stronger in the issue evaluation condition (where the simple main effect of credibility was found) rather than the impression formation conditions (where opposing effects of credibility occurred, depending on argument quality).

Postmessage attitude. Results of a three-way ANCOVA showed an Evaluative Focus \times Argument Quality \times Source Credibility interaction, $F(1, 288) = 6.28, p = .013, r = .15$ (see Figure 4).² In source focus conditions, the pattern of attitudes mirrored that found at relatively high levels of NC in Study 1. Specifically, a main effect of argument quality emerged such that strong arguments were more persuasive than weak arguments, $F(1, 288) = 6.30, p = .013, r = .15$. Coupled with this influence, a main effect of the source manipulation was marginally significant, $F(1, 288) = 3.36, p = .068, r = .11$. The high-credibility source (strong $M_{\text{adjusted}} = 6.56 [SE = .25]$, weak $M_{\text{adjusted}} = 6.06 [SE = .26]$) was more persuasive than the low credibility advocate (strong $M_{\text{adjusted}} = 6.23 [SE = .26]$, weak $M_{\text{adjusted}} = 5.46 [SE = .26]$) and this effect was not qualified by the cogency of the message arguments, Argument Quality \times Source Credibility effect, $F < 1, p = .560$.

In contrast to the source focus conditions, postmessage attitudes in the issue focus conditions varied as a function of an Argument Quality \times Source Credibility interaction, $F(1, 288) = 8.68, p = .003, r = .17$. When the source was depicted as high in credibility, strong arguments ($M_{\text{adjusted}} = 6.70 [SE = .28]$) were more persuasive than weak arguments ($M_{\text{adjusted}} = 5.50 [SE = .27]$), $F(1, 288) = 10.35, p = .001, r = .19$. However, when the source lacked credibility, the quality of

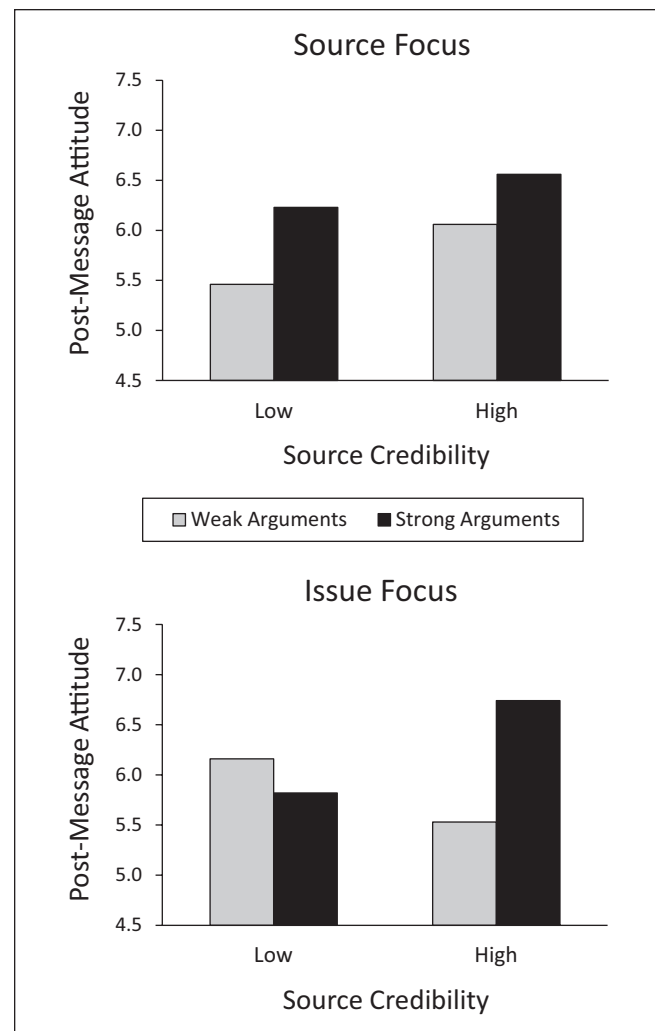


Figure 4. Top panel: Adjusted mean postmessage attitude as a function of argument quality and source credibility in source focus conditions. Bottom panel: Adjusted mean postmessage attitude as a function of argument quality and source credibility in issue focus conditions.

the message arguments had no impact on postmessage attitudes (strong $M_{\text{adjusted}} = 5.79 [SE = .27]$ vs. weak $M_{\text{adjusted}} = 6.13 [SE = .29]$), $F < 1, p > .36$.

In addition to the three-way interaction, only the premessage attitude covariate, $F(1, 288) = 107.43, p < .001, r = .52$, and a main effect of argument quality, $F(1, 288) = 8.65, p = .004, r = .17$, were found to be significant from the ANCOVA. A main effect of source credibility, $F(1, 288) = 2.79, p = .096$, and the Argument Quality \times Source Credibility interaction, $F(1, 288) = 3.04, p = .082$, emerged as marginally significant (all remaining $ps > .38$).

Mediation analyses. Taken together, the thought confidence and attitude results supported predictions for the impact of different evaluative goals on self-validation. When message recipients were focused on evaluating the communicator,

thought confidence differed as a function of a match between the quality of the arguments and the credibility of the source (content-dependent validation). On the other hand, when message recipients were focused on evaluating the communicated issue, thought confidence varied only as a function of source credibility and was not contingent on argument quality (content-independent validation). Furthermore, for both evaluative focus conditions, the findings on postmessage attitudes were consistent with the observed thought confidence effects. Namely, postmessage attitudes were more reflective of the quality of the arguments in conditions where participants reported higher levels of thought confidence.

To assess the likelihood that differences in confidence accounted for effects observed on postmessage attitudes (i.e., Evaluative Focus \times Argument Quality \times Source Credibility interaction), we conducted mediated moderation procedures (e.g., see Muller, Judd, & Yzerbyt, 2005). As in Study 1, a centered regression showed an Argument Quality \times Thought Confidence effect on postmessage attitudes, $b = .65$, $t(292) = 6.79$, $p < .001$, $r = .37$. Consistent with self-validation, postmessage attitudes were influenced more by the quality of the message arguments as thought confidence increased. To test whether this influence accounted for the Evaluative Focus \times Argument Quality \times Source Credibility effect, we then ran a model that simultaneously included the following centered predictors: all evaluative focus, argument quality, and source credibility terms, a main effect of premessage attitude, a main effect of thought confidence, and interaction terms replacing source credibility with thought confidence.

The results of this regression supported the hypothesized role of thought confidence on persuasion. In particular, the influence of the Evaluative Focus \times Argument Quality \times Source Credibility interaction decreased, but remained significant, $b = 1.44$, $t(284) = 2.02$, $p = .045$, $r = .12$. Importantly, the proposed Argument Quality \times Thought confidence mediator remained a significant predictor, $b = .61$, $t(284) = 6.06$, $p < .001$, $r = .34$. Furthermore, results of the same bootstrapping procedures used in Study 1 indicated that this mediational pattern approached significance, estimated mean indirect effect = .48, BC CI 94: 0.0144–1.1334.³ This analysis suggests that manipulations of evaluative focus, argument quality, and source credibility worked in concert to create differences in thought confidence. In turn, the results further support the notion that these metacognitive perceptions had a substantial impact of the favorability of participants' attitudes toward the message topic.

Discussion

The findings of Study 2 offered experimental support for our predictions. When instructed to form an impression of the communicator, source credibility effects on thought confidence were contingent on the quality of the arguments in a personally relevant message (content-dependent validation).

For participants who were instructed to focus on the issue, a very different pattern of effects emerged. In support of the predictions, greater thought confidence was found when source credibility was high rather than low and this effect was not qualified by argument cogency (content-independent validation). Importantly, for the source and issue focus conditions, a mediational analysis suggested that differences in thought confidence guided the favorability of postmessage attitudes toward the advocacy.

General Discussion

Taken together, the results of the current studies suggest that a focus on evaluating a communicator elicits differences in self-validation compared with a focus on evaluating the issue or topic. When processing likelihood was high and source evaluation motives were made salient, participants were more confident in their thoughts when the quality of the arguments matched (i.e., weak arguments-low credibility, strong arguments-high credibility) rather than mismatched (i.e., weak arguments-high credibility, strong arguments-low credibility) later information about the message source (content-dependent validation; Studies 1 and 2). Conversely, when participants were directed to evaluate the topic of the message (Study 2), the effects paralleled those identified in previously published persuasion studies. Thought confidence was greater when source credibility was high compared with low—regardless of the quality of the message arguments (content-independent validation).

Implications and Future Directions

In several respects, these findings represent an important step in our understanding of self-validation processes. First, this research provides resolution to a chasm in the literature. As previously discussed, a vast body of work suggests that persuasion variables can validate people's thoughts regardless of whether they are highly favorable or unfavorable toward an advocacy (see Briñol & Petty, 2009). However, this has not been indicative of some research in other contexts. In one of the few examinations of self-validation beyond persuasion, thought valence was found to play a critical role. Specifically, Clark and colleagues (2009) found that when evaluating the intelligence of another person, increased confidence emerged when perceivers' thoughts in response to individuating information (e.g., poor academic performance) were consistent with a later activated group stereotype (e.g., low-SES). The current findings are important because they suggest that content-dependent effects are not limited to one particular paradigm or set of studies, but rather that they can emerge in persuasion contexts. Furthermore, the present research provides strong evidence that the focus of one's processing efforts may be the key as to why content-dependent versus content-independent effects occurred.

The current studies also offer the first evidence in persuasion of how a single factor can increase self-validation in one situation, while decreasing it in another. Of all the variables identified as capable of initiating self-validation, source credibility has received some of the most extensive support. Across many studies, sources high in credibility have been found to evoke greater self-validation relative to those that lack credibility (Briñol et al., 2004; Tormala et al., 2006, 2007). In the current research, an *opposite* pattern was observed. When participants scrutinized weak arguments in an effort to evaluate a source, greater confidence and attitudes that were more reflective of thoughts emerged when a communicator was low rather than high in credibility. This new finding is important because it highlights a way that low credibility sources can trigger changes in attitudes that are likely to persist over time, resist change, and guide future behavior (see Petty & Krosnick, 1995).

Taken together, the findings should also inform persuasion practitioners by indicating how source credibility information may be best utilized in a given situation. For instance, if recipients actively counter-argue an appeal (e.g., because the arguments are not compelling), a practitioner may try to bolster the advocacy by emphasizing the high credibility of the source (after the message). The current research would suggest that this approach would be effective if recipients focused their processing efforts on the message source. However, if these recipients were focused more on the issue or topic of the appeal, drawing attention to high-source credibility may backfire and lead to less persuasion. Thus, this research could facilitate decisions of whether an emphasis should be placed on source credibility as a means to achieve the maximum persuasive effect.

With these implications in mind, the current research paves the way for a number of intriguing avenues for future inquiry. One notable direction would be to examine how other variables may also be capable of producing content-dependent self-validation effects. First, along with high credibility, several other source characteristics have been shown to initiate self-validation in persuasion; including high efficacy (Clark, Evans, & Wegener, 2011), attractiveness (Evans & Clark, 2012), and representing a majority viewpoint (Horcajo, Petty, & Briñol, 2010). It stands to reason that differences in evaluative focus could influence self-validation with respect to these characteristics and produce effects that have not been documented in the literature. Building directly from the current research, it is plausible that self-validation could occur when communicators are unattractive, ineffectual, or represent minority views on issues.

The current research should hold substantial implications for research into nonsource variables as well. For instance, widely studied phenomena such as positive mood (Briñol, Petty, & Barden, 2007), feelings of power (Briñol, Petty, Valle, Rucker, & Becerra, 2007), and several others (see Briñol & Petty, 2009) have been shown to validate thinking regardless of the content of peoples' thoughts about a

persuasive message. However, it stands to reason that each of these variables (and many more) could validate thoughts in ways that are dependent on thought content and thus, also produce opposite effects on persuasion relative to those in the extant literature. By demonstrating one way in which such effects can emerge (i.e., a different evaluative focus), the current studies will likely spark inquiry into other possible determinants of content-dependent validation that may guide the influence of nonsource factors.

The current research should also spur future investigations that span beyond those related to self-validation. To date, little research has examined situations where recipients of a persuasive message are primarily motivated to form an impression of the communicator. This is surprising when one considers some of the common situations where this focus may be prominent—such as evaluating political candidates or future employees/employers. In one early exception, Allyn and Festinger (1961) told participants that the source of a counterattitudinal appeal was an expert before—rather than after—message presentation (unlike the current research). Then, participants were instructed to evaluate the attitude issue or the message source. Greater persuasion was found in the source focus condition. This effect was attributed to enhanced distraction—whereby the impression goal presumably limited the extent to which participants could attend to and counter-argue the appeal (see Festinger & Maccoby, 1964; cf. Osterhouse & Brock, 1970; Petty, Wells, & Brock, 1976).

However, rather than solely limiting processing ability, it is plausible that source evaluation motives could also motivate selective information processing in these situations. For instance, recipients might engage in substantial processing of message content viewed as relevant to a specific, salient source attribute (e.g., expertise) and pay little attention to information deemed as less attribute-related. Past research has shown that some source attributes can determine how extensively recipients process a subsequent message (e.g., expertise, Clark, Wegener, Habashi, & Evans, 2012; for a review, see Clark & Wegener, 2013). However, in these and many other studies, source impression motives were presumably not salient. Hence, the possibility of selective, source-relevant information processing is one that awaits future inquiry.

Conclusion

Investigations into the effects of message sources account for a great deal of past research on persuasion. Yet, a paucity of work has examined the potential differences that may emerge when message recipients are primarily focused on evaluating a communicator rather than the communicated issue. Consistent with predictions, the current research suggests that these different foci can dramatically influence the degree of confidence in and reliance on message-related thoughts when people change their attitudes. It is our hope that this

research will initiate further inquiry into self-validation and other persuasion mechanisms.

Declaration of Conflicting Interests

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Notes

1. A three-way ANCOVA (controlling for premessage attitudes) revealed a similar Evaluative Focus \times Argument Quality \times Source Credibility pattern, $F(1, 288) = 3.54, p = .061, r = .11$.
2. This predicted interaction also emerged from a three-way ANOVA, $F(1, 289) = 5.58, p = .019, r = .14$.
3. The same bootstrapping analyses were also conducted without the covariate of premessage attitude. The Argument Quality \times Thought Confidence effect was found to mediate the Evaluative Focus \times Argument Quality \times Source Credibility influence on postmessage attitudes, estimated mean indirect effect = .62, BC CI 95: 0.0320–1.5026.

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