Multiple Source Characteristics and Persuasion: Source Inconsistency as a Determinant of Message Scrutiny

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It is argued that previous persuasion research has been concerned predominantly with the role of single source characteristics (e.g., expertise) for attitude change and thus has failed to consider the role of multiple source characteristics. This was done in two experiments that tested the hypothesis that recipients would scrutinize a message more effortfully when the combination of two source characteristics is unexpected (source inconsistency) than when the combination is less surprising (source consistency). In Experiment 1, source likability, source expertise, and argument quality were manipulated. In Experiment 2, honesty instead of likability was manipulated. Results from both experiments provide evidence supporting the predicted effects of source (in)consistency on message scrutiny; that is, argument quality affected attitudes and favorability of message-related thoughts in the case of inconsistent source characteristics but not in the case of consistent source characteristics.

Sources of persuasive communication may have more or less expertise with respect to the persuasion topic and may be more or less likable, physically attractive, or trustworthy. They may (claim to) have more or less arguments to support their position or may favor a position that is supported by more or less other people.

Not surprisingly, then, persuasion researchers have been interested in the role of these and other variables for attitude change. In particular, research guided by the elaboration likelihood model (ELM) (Petty & Cacioppo, 1986) and the heuristic-systematic model (HSM) (Chaiken, Liberman, & Eagly, 1989) has established that expertise, likability, and so forth, may serve as heuristic cues when either recipients’ motivation or their ability to concern themselves with a persuasive message is low (e.g., Chaiken, 1980; Petty, Cacioppo, & Goldman, 1981). For example, Petty et al. (1981) showed that information about the expertise of a communicator was a more important determinant of recipients’ attitudes when personal involvement was low rather than high. In contrast, the strength of the arguments that the communicator had to support his opinion influenced attitudes more in the case of high as compared to low involvement. In a similar vein, Chaiken (1980) provided evidence that a communicator’s likability could serve as a heuristic cue for recipients with low motivation.

Moreover, the ELM’s notion of multiple roles (Petty & Cacioppo, 1986; Petty & Wegener, 1998) suggests “that any given (i.e., single) variable can influence attitudes by different processes at different points along the elaboration continuum” (Petty & Wegener, 1998, p. 328); that is, a variable may function as a peripheral cue, help to determine the extent of message processing, or act as an argument. Of most importance to the present line of reasoning, in the case of moderate elaboration likelihood, recipients might be unsure about whether to expend effort on scrutinizing the merits of the communication.
(Petty & Wegener, 1998). In such circumstances, a variable such as source expertise is expected to influence attitudes by helping to determine the level of thought given to the merits of the attitude object. In line with this prediction, both source expertise (Heesacker, Petty, & Cacioppo, 1983) and source attractiveness (Puckett, Petty, Cacioppo, & Fisher, 1983) have been found to influence the amount of scrutiny given to the message when the elaboration is not constrained to be either high or low.

What is more surprising, however, common to these persuasion studies as well as to most others (see, e.g., Eagly & Chaiken, 1993; Petty & Wegener, 1998, for an overview), is the fact that only information pertaining to one variable that may serve as a heuristic cue (given low elaboration likelihood) or that may help determine the level of message scrutiny (given unconstrained elaboration likelihood) was manipulated. Thus, in most studies, the role of one cue variable (e.g., expertise) is contrasted with the role of multiple arguments. Very few studies manipulated information pertaining to more than one cue variable (e.g., Horai, Naccari, & Fatoullah, 1974; Maddux & Rogers, 1980; Wood & Kallgren, 1988). Moreover, much research guided by the current dual-process models has relied extensively on a manipulation of argument strength as a means of establishing whether and when recipients elaborate a persuasive message (cf. Eagly & Chaiken, 1993; Petty & Cacioppo, 1986). In contrast, in empirical research including more than one cue variable, argument quality was not varied experimentally. For example, Wood and Kallgren (1988) focused on the effects of communicator likability (likable vs. dislikable) and expertise (high vs. low) under conditions of high, moderate, and low elaboration likelihood. However, argument strength was not varied. Instead, all participants received the same message containing three arguments perceived as “neither especially high nor low in validity” (p. 176).

As a consequence, little is known about whether and how different combinations of multiple cue variables might affect message processing. In our opinion, given the multitude of variables that may function either as heuristic cues or as a determinant of message scrutiny (Eagly & Chaiken, 1993; Petty & Wegener, 1998), this lack of empirical research, as unfortunate as it is, does provide for a rich field of heretofore unexplored hypotheses. As a starting point, the present research is concerned with the role of different combinations of source characteristics. More specifically, we are interested in the role of different combinations of source expertise and likability (Experiment 1) and source expertise and trustworthiness (Experiment 2) for message processing and attitude change. In the following, we will outline our theoretical assumptions as well as related research that laid the ground for the specific hypotheses of the present research.

MUTLIPLE SOURCE CHARACTERISTICS
AND EXPECTANCY VIOLATION

Research by Baker and Petty (1994, Experiment 2) demonstrated that the extent of message scrutiny may depend on the combination of consensus information (majority vs. minority) and position advocated (proattitudinal vs. counterattitudinal). Argument quality influenced attitudes when a minority endorsed a position favored by recipients as well as when a majority endorsed a counterattitudinal position (imbalanced settings). In contrast, the effect of argument quality on attitudes was reduced when either a proattitudinal position was advocated by a majority or when a counterattitudinal stance was taken by a minority (balanced settings). Instead, agreement with the position advocated was higher in the case of a proattitudinal message endorsed by a majority.

In a similar vein, Smith and Petty (1996, Experiment 2) found that different combinations of recipients’ expectations about message framing (positive vs. negative) and actual message framing (positive vs. negative) affect message processing. Argument quality influenced attitudes either when recipients expecting a positively framed message encountered a negatively framed one or when negative expectation recipients were presented with a positively framed message. In contrast, no effect of argument quality was found for the remaining combinations of expected and actual message framing. It is worth noting that these results were found only for recipients low in need for cognition (NC), that is, for individuals who do not characteristically enjoy thinking and therefore are dispositionally less willing to expend their cognitive resources than individuals high in NC (Cacioppo & Petty, 1982). In contrast, high-NC-recipients’ attitudes were affected by argument quality regardless of the combination of expected and actual message framing.

Of interest, these message processing effects of different combinations of consensus information and position advocated (Baker & Petty, 1994) and expected and actual message framing (Smith & Petty, 1996) were found in moderate elaboration likelihood settings. Moreover, in both cases, a violation-of-expectancies explanation was offered. Recipients may be more surprised to find either a majority (vs. a minority) arguing in favor of a counterattitudinal position or support for their position by only a minority (vs. a majority). Similarly, surprise may be higher when either a positively framed message is encountered while expecting a negative framing or vice versa than when expectations are met.
Similar to these findings by Baker and Petty (1994), and Smith and Petty (1996), we suggest that different combinations of two source characteristics may affect the amount of message processing when the elaboration likelihood is neither very high nor very low. To illustrate, consider the case of different combinations of source expertise and source likability. We suggest that a communicator who is both expert and likable or both nonexpert and dislikable may be less surprising to recipients than a communicator who is expert but rather dislikable or quite likable although nonexpert; that is, recipients' expectations may be violated more when they learn that an expert seems to be a rather dislikable (vs. likable) person. In contrast, it may be more in line with expectations to learn that a communicator is not only poorly qualified to present his or her opinion on a certain topic but also rather dislikable (vs. likable). Thus, whereas a likable expert and a dislikable nonexpert represent cases of (expectancy-) consistent source characteristics, in comparison, both a dislikable expert and a likable nonexpert can be considered cases of inconsistent source characteristics. As a result of these differences in recipients' surprise, message scrutiny may be higher given inconsistent as compared to consistent source information (cf. Pyszczynski & Greenberg, 1981). It follows that argument quality should affect attitudes more when the persuasive message is presented by an inconsistent rather than a consistent source. Similarly, message-related thinking should be more favorable in the case of strong (vs. weak) arguments only when presented by an inconsistent source. To test these predictions, in the first experiment, source likability, source expertise, and argument strength are manipulated orthogonally.

As a secondary goal, we were interested in the role of individual differences in need for cognition with respect to the moderating effect of source consistency for message processing. As outlined above, previous research by both Baker and Petty (1994) and Smith and Petty (1996) provided evidence for the role of recipients' surprise for message scrutiny. However, whereas individual differences in NC were found to moderate the effects of surprise in the case of different combinations of expected and actual message framing (Smith & Petty, 1996), Baker and Petty (1994) established heightened message processing in imbalanced as compared to balanced combinations of consensus and position agreeableness without considering differences in NC. It seems, then, that the necessity to take individual differences into account with respect to the role of surprise on message processing differs depending on the specific variables involved in the violation of expectancies and/or on other factors affecting the background level of elaboration likelihood. Similarly, depending on the specific source characteristics involved and on the attitude object studied, differences in NC may be more or less important with respect to the effects of source consistency on message scrutiny. Therefore, need for cognition was measured in both experiments.

**EXPERIMENT 1**

**Method**

**PARTICIPANTS AND DESIGN**

The study included 270 students from Tübingen University who participated in the study in return for a small reward worth about U.S.$1.50. Participants were randomly assigned to one of the eight experimental conditions in the 2 (source expertise: expert vs. nonexpert) × 2 (source likability: likable vs. dislikable) × 2 (argument quality: strong vs. weak) between-subjects factorial design. Participants were further classified as high or low in need for cognition by a median split on the short form of the (German) Need for Cognition Scale (Bless, Wänke, Bohner, Fellhauer, & Schwarz, 1994). Sessions were run with 1 to 7 participants.

**PROCEDURE**

Students were approached in the university cafeteria by one of three assistants and were asked whether they would be interested in taking part in a study on how people form impressions of others. On arrival in the lab, the experimenter told the participants that all information pertaining to the study would be found at their table. Seven tables were prepared for the study, each equipped with all experimental materials.

In the first booklet, participants were informed that they would first read a short description of a person and then an interview that had been conducted with this person some months ago. Allegedly, this interview had taken place in the course of an opinion poll concerning several policy change proposals. All participants then read that in their case, the interview transcript would contain the topic “switching from the semester system to a trimester system.” Participants were given information about the structure of an academic year in the case of a trimester system in comparison to the current semester system. It was further stated that Tübingen University was considering a switch to a trimester system “in a couple of years.” In the next booklet, participants were presented with a short description of the interviewee (containing the source expertise and the source likability manipulations) as well as with the transcript of the interview (containing the persuasive message). Further booklets were made up of (a) the dependent variables, (b) a thought-listing task, (c) demographic questions and—to probe for any suspicions regarding the study—a question asking participants to write down in their own words what the study was about, and (d) the Need for Cogni-
tion Scale. The last booklet contained a detailed debriefing sheet. Participants then went to the experimenter, selected their reward, and were thanked and dismissed.

INDEPENDENT VARIABLES

Source expertise. In the high-source-expertise conditions, the interviewee was described as being Professor Dr. Peter F., formerly at Giessen University, who has been working at Tübingen University for the past several months. It was stated further that the emphasis of his scientific work lay in the field of “international education research” and that he had published in renowned journals a number of articles on university didactics and the social effect of different education systems. In the low-source-expertise conditions, participants read that the interview had been conducted with Mr. Peter F., formerly employed at Giessen University, who has been working at Tübingen University as a librarian for the past several months. It was further stated that he was responsible for keeping order in the library and checking out books.

Source likability. Source likability was manipulated by the interviewee’s response regarding his impression of Tübingen and the students. Phrases specific to the likable or the dislikeable version are enclosed in parentheses or brackets, respectively:

Well, as a matter of fact, I (like) [don’t like] Tübingen very much. That is true for both the city as well as the vicinity. And with respect to the students, my impression has become (very positive) [very negative] in recent years. In Tübingen, this impression has grown even stronger. I feel that the students nowadays are (really reliable and responsible) [rather unreliable and hardly responsible]. In particular, [even] in view of the [already] rather critical public opinion lately, I think that the students are (underrated) [nonetheless overrated] by the general public.

Argument quality. One of two versions of the message was presented to participants, each version including five arguments in favor of a switch. Selection of these arguments was based on a pretest. The strong-argument version consisted of five strong arguments; the weak-argument version consisted of five weak arguments. In all conditions, the transcript began with the source’s statement that in his opinion there were a number of considerations speaking in favor of a switch to a trimester system. In the strong-argument conditions, one of the arguments read as follows:

In England, at a number of universities, a switch from a semester system to a trimester system took place some years ago. A scientific study led by a commission identified several positive outcomes. According to their report, both the students and the faculty were very content with the trimester system. Among other things, it was found advantageous because of a higher work effectiveness and a significant reduction of the time needed to graduate.

Further strong arguments concerned (a) how a trimester system would lead to more continuity in studying, (b) the possibility that failed exams could be taken over again faster, (c) positive effects with respect to the level of performance and motivation of students in the course of a term, and (d) competitive advantages for German graduates both nationally and internationally. In the weak-argument conditions, one argument was as follows:

The reorganization of lecturing times and holidays in the course of the switch would have positive effects on the city. Given shorter holidays, there wouldn’t be longer periods during which the city was almost deserted. Instead, it would come to life with students for a larger part of the year. This would result in positive outcomes for the town as well as for retail trade and gastronomy.

Other weak arguments were related to (a) the fact that the semester system was a social convention appropriate for historical but not current needs; (b) how a trimester system would allow for a division of study matters into theory, exercise, and practice; (c) positive effects on faculty members’ teaching motivation; and (d) students using the first term mainly to get acquainted with the city and their studies.

Need for cognition. Allegedly as part of an independent study concerning the development of a questionnaire, participants completed the Need for Cognition Scale after responding to all other measures (cf. Priester & Petty, 1995). Ratings were made on a scale ranging from 1 (completely incorrect) to 7 (completely correct).

DEPENDENT VARIABLES

Manipulation checks. Ratings on these as well as all other items were made on scales ranging from 1 to 7. Participants first answered several questions concerning the source and the arguments included in the interview transcript. Perceived source likability was measured by responses to the question, “How likable is Mr. F. to you?” (very likable to very dislikable). To determine perceived source expertise, participants were asked, “Irrespective of how you feel about Mr. F.’s comments on the trimester system topic, how qualified do you think he is to give his opinion on this topic?” (rather unqualified to very qualified). A question concerning how convincing they found his arguments (hardly convincing to very convincing) was employed to measure perceived argument strength. These critical manipulation check questions were embedded in a list of other items concerning source perception (e.g., friendliness and intelligence).
Attitude measures. In the next booklet, participants first indicated their agreement with the statement, “I think it is a good idea to switch to a trimester system” (do not agree at all to fully agree). Moreover, they rated a trimester system on two semantic differential scales ranging from harmful, disadvantageous to beneficial, advantageous.

Issue involvement and surprise. Agreement to the statement, “The trimester system topic is very relevant to me personally” (do not agree at all to completely agree) was taken as a measure of issue involvement. Surprise was measured by asking participants, “Considering Mr. F.’s occupation, were you surprised by his opinion of Tübingen and the students?” (no, not at all to yes, very much).

Cognitive responses. After completion of the attitude measures, participants were requested to write down their thoughts while reading the information on the person. Participants were instructed to use one of six boxes for each thought and to spend 3 minutes writing them down. Two independent raters blind to conditions coded thoughts as to whether they were message related or other related. Moreover, message-related thoughts were further coded as either favorable, unfavorable, or neutral with respect to the trimester system. Interrater agreement was high (78%); disagreements were resolved by discussion.

Results

Data from 20 participants were discarded because of incomplete data (3), noncompliance to the experimental procedure (1), or suspicion (16).5 Individuals were classified as high or low in NC based on a median split. The median score was 4.95, individual scores ranging from 2.20 to 6.50.6 Preliminary analyses including NC as a fourth independent factor did not reveal any NC main effects or interaction effects involving NC on the major dependent variables. Therefore, in the main analysis, NC was dropped as an independent factor. Thus, unless noted otherwise, the hypotheses were examined by three-way Source Expertise × Source Likability × Argument Quality analyses of variance (ANOVAs) and correlational analyses.

MANIPULATION CHECKS AND ISSUE INVOLVEMENT

An ANOVA on perceived source expertise revealed two significant main effects. First, an expertise main effect, $F(1, 242) = 33.29, p < .0001$, showed that the expert source was rated more qualified ($M = 4.94$) than the nonexpert source ($M = 3.85$). Second, expertise ratings also were affected by argument strength, $F(1, 242) = 10.06, p < .002$ (strong: $M = 4.70$; weak: $M = 4.10$). As shown by a significant likability main effect, $F(1, 242) = 98.30, p < .0001$, the likable source was perceived as more likable ($M = 3.11$) than the dislikable source ($M = 4.59$).

As indicated by an argument quality main effect, $F(1, 242) = 20.70, p < .0001$, strong arguments were perceived as more convincing ($M = 5.06$) than weak arguments ($M = 4.16$). No other effects were found on these manipulation check items (all $p$s > .18). With respect to participants’ assessment of the personal relevance of the trimester system topic, no significant effects emerged (all $p$s > .21), the overall mean being 3.02. Thus, the manipulations of source likability, source expertise, and argument quality were successful. Issue involvement was neither very high nor very low.

ATTITUDES

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predicted three-way interaction was also significant, $F(1, 242) = 4.57, p < .04$.

Therefore, this three-way interaction was decomposed by analyzing the Source Expertise $\times$ Argument Quality interactions for participants in consistent and inconsistent source conditions separately. That is, one ANOVA tested for the effects of source expertise and argument quality for participants in conditions with a likable expert and a dislikable nonexpert (source consistency); a second ANOVA tested for these effects for participants in conditions with a dislikable expert and a likable nonexpert (source inconsistency). As predicted, in conditions with inconsistent source characteristics, only an argument quality main effect emerged, $F(1, 120) = 8.72, p < .005$ (both other $F$s $< 1$). Strong arguments led to more positive attitudes ($M = 4.77$) than weak arguments ($M = 4.01$). In contrast, in conditions with consistent source characteristics, no significant effects were found (all $F$s $< 1$).

**COGNITIVE RESPONSES**

A cognitive response index was computed by first subtracting the number of unfavorable thoughts from the amount of favorable thoughts and then dividing this difference score by the sum total of message-related thoughts. An ANOVA on this index (see Table 1 for means) revealed an argument quality main effect, $F(1, 192) = 4.27, p < .05$. Strong arguments ($M = 0.07$) led to more favorable message-related thinking than weak arguments ($M = -0.11$). Moreover, the predicted three-way interaction also was found significant, $F(1, 192) = 4.15, p < .05$. Therefore, similar to the analyses on attitudes, separate ANOVAs for consistent and inconsistent source conditions were conducted. For inconsistent source conditions, only the expected argument quality main effect emerged, $F(1, 98) = 8.28, p < .005$. Message-related thoughts were more favorable in the case of strong arguments ($M = .16$) as compared to weak arguments ($M = -.20$). In contrast, no effect was found for consistent source conditions (all $F$s $< 1$).

**Surprise.** An ANOVA on participants’ surprise revealed only a significant Expertise $\times$ Likability interaction effect, $F(1, 241) = 4.52, p < .04$. This interaction showed that participants were more surprised in the case of inconsistent source characteristics ($M = 3.95$) than in the case of consistent source characteristics ($M = 3.41$).

**CORRELATIONAL ANALYSES**

If surprise in the case of inconsistent source characteristics leads to heightened message scrutiny, then the effect of argument quality on thought favorability should be stronger the more surprised recipients are. In contrast, in the case of consistent source characteristics, surprise should not affect the effect of argument quality on thought favorability. To test this prediction, we computed a thought favorability extremity score by subtracting the overall mean score on thought favorability ($M = -0.02$) from each recipient’s individual thought favorability score. The absolute value of this difference score was then correlated with participants’ surprise ratings separately for consistent and inconsistent conditions. In inconsistent conditions, message-related thinking was more extreme the more recipients were surprised by the communicator ($r = .18, p < .08$). In contrast, surprise was unrelated to thought extremity in consistent conditions ($r = -0.07, p > .22$). To compare the two correlation coefficients, Fisher’s $r$ to $z$ transformations were performed. This analysis revealed a marginally significant difference between consistent and inconsistent conditions, $z = 1.80, p < .08$. Thus, surprise was related to the impact of argument quality on message-related thinking somewhat stronger in inconsistent as compared to consistent source conditions.

**Discussion**

The results of Experiment 1 provide support for the hypothesis that different combinations of source characteristics affect the amount of message scrutiny. As predicted, argument quality determined recipients’ attitudes and the favorability of their message-related thoughts only in the case of inconsistent source characteristics; that is, strong arguments led to more agreement with the communicator’s position either when he was expert with respect to the message topic but dislikable or when he was nonexpert but likable. In contrast, argument quality had no effect on recipients’ attitudes and message-related thinking in the case of a likable expert as well as a dislikable nonexpert. Moreover, the results on recipients’ surprise as well as the relation between surprise and thought extremity lend support to the assumption that these effects of source (in)consistency are due to a violation of expectancies. Thus, results of Experiment 1 add to existing research showing that a violation of expectancies may heighten the amount of message scrutiny when the elaboration likelihood is not constrained to be high or low (e.g., Baker & Petty, 1994; Smith & Petty, 1996).

**EXPERIMENT 2**

The aim of Experiment 2 was to show that the present source (in)consistency perspective can be generalized with respect to other combinations of multiple source characteristics and was based on a series of studies conducted by Priester and Petty (1995). These authors hypothesized and found evidence for a moderating effect of source honesty on the amount of scrutiny of an expert source message. In an unconstrained elaboration likelihood setting, an effect of argument quality onatti-
tudes was found in the case of an expert source whose honesty was in question but not when the message was presented by an expert source that was described as being honest. Of importance, these effects were found only for individuals low in NC. In contrast, high-NC participants elaborated on the expert source’s message regardless of source honesty (Priester & Petty, 1995, Experiment 2).

It is important to note that Priester and Petty did not include the other two combinations of source honesty and expertise; that is, no conditions with a source low in expertise and varying in honesty were included in the experimental design. Interestingly, however, Priester and Petty speculated on the effects of source honesty in the case of a nonexpert source: “If, however, we had cast doubt on the source’s ability to be accurate by making the source low in expertise or knowledge, it is quite possible that subjects would have little motivation to think about the message regardless of source honesty” (p. 651).

In contrast to these speculations, we suggest that source honesty may act as a moderator of message scrutiny for low-NC individuals in the case of an expert as well as a nonexpert source; that is, different combinations of source honesty and source expertise are functionally equivalent to different combinations of source likability and source expertise (Experiment 1). Specifically, it may be less surprising for recipients to find out that an expert source seems to be honest rather than dishonest. In contrast, surprise may be lower when a source of low expertise also seems to be a rather dishonest (vs. honest) person. As with likability and expertise, then, an honest expert as well as a dishonest nonexpert represent cases of consistent source information, and both a dishonest expert and an honest nonexpert represent cases of inconsistent source information. Therefore, low-NC recipients may not only scrutinize a message more when it is presented by a dishonest (vs. honest) expert (Priester & Petty, 1995) but also in the case of an honest (vs. dishonest) nonexpert. As a consequence, argument strength should affect attitudes in the case of both a dishonest expert and an honest nonexpert, but not in the case of either an honest expert or a dishonest nonexpert.

To test these predictions, in the second experiment, source expertise as well as source honesty were manipulated orthogonally. In addition, argument quality was varied and recipients’ need for cognition was measured. Based on the results reported by Priester and Petty, it was assumed that high-NC individuals would show evidence of message elaboration regardless of the combination of source characteristics. In contrast, for individuals low in NC, message elaboration should be heightened in inconsistent (vs. consistent) source conditions. Adding to the attitudinal findings presented by Priester and Petty (1995, Experiment 2), and similar to our first experiment, a measure of recipients’ thoughts also was included. Similar to attitudes, we predicted argument quality to affect thought favorability of low-NC recipients only in the case of inconsistent source characteristics.

Method

PROCEDURE

Participants were 201 male students from Tübingen University. They participated in the study in return for a small reward worth about U.S.$0.50. A 2 (source expertise: expert vs. nonexpert) × 2 (source honesty: honest vs. dishonest) × 2 (argument quality: strong vs. weak) × 2 (need for cognition: high vs. low) between-subjects factorial design was employed. Participants were classified as high or low in need for cognition by a median split. The median score was 5.01, scores ranging from 1.81 to 6.87. Participants scoring at the median (n = 5) were assigned to the high-NC group. They were randomly assigned to the source expertise, source honesty, and argument quality conditions. Data from 5 participants were discarded because either they had already participated in one of the preliminary studies testing the material (n = 2) or they did not fill out the Need for Cognition Scale (n = 3).

The procedure was similar to that in Experiment 1. However, this time, participants read that the interview was concerned with “the introduction of a 30 German marks (about U.S.$15) fee for the use of the university library system.” This fee would be added to their semester fee (about U.S.$50) and serve to reduce the budget deficit of the library system. It was further stated that the managing committee considered introducing this fee in approximately 2 to 3 years. In the high-source-expertise conditions, participants read that the interview had been conducted with Professor Dr. Hans K. It was stated that he had been teaching general and adult education at Tübingen University for decades. Besides this, he had been a member of the university library committee for many years. In a few months, Professor K. would turn 65 and would therefore retire later that year. In the low-source-expertise conditions, participants read that the interview had been conducted with Mr. Hans K. It was stated that he has been working as a librarian responsible for checking out books at Tübingen University for decades. In a few months, Mr. K. would turn 65 and would therefore retire later that year.

Following source expertise information, in the high-source-honesty conditions, participants read that the source’s integrity and honesty was indisputable. For example, on the occasion of his 20th anniversary of service, he received an excessive bonus payment. Already prior to the detection of this error by the university’s payroll office, he reported it in order to return the amount that he was not entitled to. In the low-source-honesty
conditions, it was stated that the source’s integrity and honesty was disputable. For example, on the occasion of his 20th anniversary of service, he received an excessive bonus payment. When this error was realized by the university’s payroll office, he refused to return the amount that he was not entitled to.

On the following page, participants read one of two versions of a message supporting the implementation of a library fee. Each version included four (strong vs. weak) pro-fee arguments. Selection of these arguments was based on a pretest. In all conditions, the transcript began with the source’s statement that in his opinion there were a number of considerations speaking in favor of the implementation of a library fee. In the strong-argument conditions one argument read as follows:

It is striking that in recent years publishers of scientific research have raised prices disproportionately between 15% and 20%, thus overburdening the normal library budget. Therefore, subscriptions to many important journals have already had to be canceled and further cancellations will soon follow. For this reason, many journal articles are and will be available only by ordering them from other universities at a fee. The user fee would help to cushion these subscription price increases so that the full supply of journals would be ensured.

Further strong arguments concerned (a) complaints about deficits with respect to equipping the library with recently published scientific books, (b) shortages with respect to computers and on-line access possibilities, and (c) lack of an appropriate amount of relevant textbooks, requiring students to buy important textbooks themselves. In the weak-argument conditions, one argument was as follows:

It is striking that lately, bicycle theft has increased considerably in Tübingen. To some extent, this is due to the lack of racks for locking bicycles up securely. Up to now, only a small number of bicycles can be locked to bicycle racks in front of the library. The rest stand about freely.

The fee would help to provide for more bicycle racks.

Other weak arguments were related to (a) how spending the money for plants and objects of art would help improve the atmosphere in the library, (b) the possibility of buying ergonomically improved chairs and tables, and (c) the implementation of new software to make it possible to e-mail a current book borrower.

To determine perceived expertise, participants were asked how competent they thought Mr. K. to be to give his opinion on the topic (hardly competent to very competent). Two items referred to perceived argument strength. The first concerned agreement with the statement that the considerations Mr. K. had presented on the topic were very convincing (do not agree at all to fully agree). The second item asked participants how convincing they found his arguments (hardly convincing to very convincing). Perceived honesty was measured by responses to a statement saying that Mr. K. seems to be very trustworthy (do not agree at all to fully agree). To determine issue involvement, participants indicated how likely they thought it to be that the fee would be introduced before they had finished their studies at Tübingen University (very unlikely to very likely). To measure attitudes, participants first indicated their agreement with the statement, “I think it is a good idea to introduce a user fee for the university library system” (do not agree at all to fully agree). Moreover, they rated the introduction of a library fee on three semantic differential scales ranging from positive, harmful, meaningless to negative, beneficial, meaningless.

After completion of the attitude measures, participants were requested to write down their thoughts while reading the information on the person. Two independent raters blind to conditions coded thoughts as to whether they were message related or other related. Message-related thoughts were further coded as either favorable, unfavorable, or neutral with respect to the library fee. Interrater agreement was high (85%); disagreements were resolved by discussion.

Results

Participants’ responses to rating scales were recoded so that higher scores indicate higher perceived competence, honesty, argument strength, and more positive attitudes to the fee introduction. The hypotheses were examined by four-way Need for Cognition × Source Expertise × Source Trustworthiness × Argument Quality ANOVAs and correlational analyses.

MANIPULATION CHECKS AND ISSUE INVOLVEMENT

Regarding source trustworthiness, a significant source honesty main effect, \(F(1, 179) = 122.06, p < .0001\), showed that the honest source was perceived as more trustworthy (\(M = 5.42\)) than the dishonest source (\(M = 3.49\)). Trustworthiness also was rated higher in the case of the nonexpert source (\(M = 4.65\)) as compared to the expert source (\(M = 4.29\)), \(F(1, 179) = 4.68, p < .04\). The ANOVA on perceived competence revealed a significant source expertise main effect, \(F(1, 180) = 21.86, p < .0001\). The expert source was rated more competent (\(M = 5.19\)) than the nonexpert source (\(M = 4.15\)). Competence also was rated higher given strong (\(M = 4.93\)) rather than weak arguments (\(M = 4.38\)), \(F(1, 180) = 6.12, p < .02\). A Source Expertise × Argument Quality interaction, \(F(1, 180) = 3.85, p < .06\), showed that this was due to the fact that source expertise had a stronger effect on competence ratings when the source presented strong argu-
ments (expert: M = 5.64; nonexpert: M = 4.22) as compared to weak arguments (expert: M = 4.70; nonexpert: M = 4.08). Competence ratings also were somewhat affected by source honesty, F(1, 180) = 3.80, p < .06 (honest: M = 4.89; dishonest: M = 4.42). An Expertise × Honesty interaction, F(1, 180) = 4.24, p < .05, further revealed that the expert source was rated as competent regardless of source honesty (honest: M = 5.18; dishonest: M = 5.19), whereas the nonexpert source was rated particularly low in competence when he was also dishonest (M = 3.70) rather than honest (M = 4.60).8

Responses to the two items measuring perceived argument strength were averaged (r = .77, p < .0001). Strong arguments were rated to be more convincing (M = 4.49) than weak arguments (M = 3.60), F(1, 180) = 17.36, p < .001. Furthermore, a Source Expertise × Argument Quality interaction was found, F(1, 180) = 10.80, p < .01 (cf. results on attitudes described below). Strong arguments were rated to be more convincing than weak arguments in expert source conditions (strong: M = 4.93; weak: M = 3.36) but not in nonexpert source conditions (strong: M = 4.04; weak: M = 3.82).9

With respect to participants’ assessment of the likelihood that the fee would be introduced before they had finished their studies, no significant effects emerged (all ps > .16). As indicated by the overall mean of 3.71, this was judged as being neither very likely nor very unlikely.

**ATTITUDES**

Each participant’s responses to the attitude items were averaged (α = .89). An ANOVA on these attitude scores (see Table 2 for means) revealed a marginally significant argument quality main effect, F(1, 180) = 3.31, p < .08, which indicated that strong arguments (M = 3.99) led to more positive attitudes than weak arguments (M = 3.59). Moreover, there was a Source Expertise × Argument Quality interaction, F(1, 180) = 3.78, p < .06. Participants’ attitudes were more positive in the case of strong (vs. weak) arguments only when these arguments were presented by the expert source (strong: M = 4.34; weak: M = 3.51). When presented by the nonexpert source, no difference was found (strong: M = 3.64; weak: M = 3.67). Of greatest interest, however, is that these results were qualified by the predicted four-way interaction, F(1, 180) = 6.22, p < .02. The four-way interaction was decomposed by analyzing the Source Expertise × Source Honesty × Argument Quality interactions for high- and low-NC participants separately.

For participants low in need for cognition, there was a marginally significant Source Expertise × Source Honesty interaction effect, F(1, 87) = 3.82, p < .06. More important, this effect was qualified by the predicted three-way interaction, F(1, 87) = 9.24, p < .004. Therefore, this three-way interaction was further decomposed

<table>
<thead>
<tr>
<th>TABLE 2: Mean Scores on the Attitude Index as a Function of Need for Cognition, Source Expertise, Source Honesty, and Argument Quality (Experiment 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Need for Cognition</strong></td>
</tr>
<tr>
<td><strong>Quality</strong></td>
</tr>
<tr>
<td><strong>Low</strong></td>
</tr>
<tr>
<td>Strong</td>
</tr>
<tr>
<td>SD</td>
</tr>
<tr>
<td>n</td>
</tr>
<tr>
<td>Weak</td>
</tr>
<tr>
<td>SD</td>
</tr>
<tr>
<td>n</td>
</tr>
<tr>
<td><strong>High</strong></td>
</tr>
<tr>
<td>Strong</td>
</tr>
<tr>
<td>SD</td>
</tr>
<tr>
<td>n</td>
</tr>
<tr>
<td>Weak</td>
</tr>
<tr>
<td>SD</td>
</tr>
<tr>
<td>n</td>
</tr>
</tbody>
</table>

NOTE: Scores could range from 1 to 7. Higher numbers indicate greater acceptance of the position advocated in the persuasive message.

by analyzing the Source Expertise × Argument Quality interactions for participants in consistent and inconsistent source conditions separately (cf. Experiment 1). As predicted, in inconsistent source conditions, only the predicted argument quality main effect was significant, F(1, 45) = 9.81, p < .004 (both other effects F < 1). Strong arguments led to more positive attitudes (M = 4.78) than weak arguments (M = 3.49). In contrast, in consistent source conditions, argument quality did not affect attitudes (p > .2). Instead, a marginally significant source expertise main effect, F(1, 42) = 3.32, p < .08, showed that attitudes were somewhat more positive given an honest expert (M = 3.95) rather than a dishonest nonexpert (M = 3.10).

For high-NC participants, the ANOVA revealed only a Source Expertise × Argument Quality interaction, F(1, 93) = 4.75, p < .04 (for the three-way interaction, F < 1). Further analyses showed that argument quality affected attitudes in the case of the expert source, F(1, 44) = 6.90, p < .02, but not in the case of the nonexpert source (all Fs < 1). Thus, only in the expert conditions did strong arguments lead to more positive attitudes (M = 4.34) than weak arguments (M = 3.16). Attitudes were similar for the nonexpert source regardless of argument quality (strong: M = 3.56; weak: M = 3.83).

**COGNITIVE RESPONSES**

A cognitive response index was computed similarly to Experiment 1.11 An ANOVA on this index (see Table 3 for means) revealed an argument quality main effect, F(1, 145) = 6.29, p < .02. Weak arguments led to more...
Favorability of Message-Related Thoughts as a Function of Need for Cognition, Source Expertise, Source Honesty, and Argument Quality (Experiment 2)

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th>Argument Quality</th>
<th>Expert Honest</th>
<th>Expert Dishonest</th>
<th>Nonexpert Honest</th>
<th>Nonexpert Dishonest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Strong</td>
<td>M=−0.30</td>
<td>0.42</td>
<td>0.15</td>
<td>−0.55</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>SD=0.37</td>
<td>0.46</td>
<td>0.49</td>
<td>0.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=7</td>
<td>7</td>
<td>12</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Weak</td>
<td>M=−0.40</td>
<td>−0.27</td>
<td>−0.25</td>
<td>−0.34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD=0.56</td>
<td>0.79</td>
<td>0.72</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=10</td>
<td>11</td>
<td>11</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>High Strong</td>
<td>M=−0.16</td>
<td>−0.04</td>
<td>−0.51</td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD=0.77</td>
<td>0.66</td>
<td>0.51</td>
<td>0.51</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=11</td>
<td>12</td>
<td>10</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Weak</td>
<td>M=−0.45</td>
<td>−0.48</td>
<td>−0.34</td>
<td>−0.31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD=0.57</td>
<td>0.71</td>
<td>0.65</td>
<td>0.57</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=10</td>
<td>8</td>
<td>11</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Higher numbers indicate more favorable thinking about the introduction of a library fee.

unfavorable message-related thoughts (M = −.35) than strong arguments (M = −.11). There was also a Need for Cognition × Source Expertise × Source Honesty interaction, F(1, 145) = 7.76, p < .01. Of greater interest, however, is that the predicted four-way interaction also was found significant, F(1, 145) = 4.35, p < .04. Therefore, similar to the analysis on attitudes, separate ANOVAs for high- and low-NC participants were conducted.

For low-NC participants, this resulted in a significant Source Expertise × Source Honesty interaction, F(1, 67) = 8.18, p < .007. More important, this two-way interaction was qualified by the predicted three-way interaction, F(1, 67) = 4.37, p < .05. To test for the effects of argument quality on thought favorability separately for consistent and inconsistent conditions, this interaction was further decomposed. For inconsistent source conditions, only the expected argument quality main effect emerged, F(1, 37) = 7.05, p < .02. Message-related thoughts were more favorable in the case of strong arguments (M = .25) as compared to weak arguments (M = .26). In contrast, no effect was found for consistent source conditions (all Fs < 1).

For high-NC participants, the three-way interaction was nonsignificant, F<1. Instead, only a marginally significant argument quality main effect emerged, F(1, 78) = 3.36, p < .08, indicating that weak arguments led to more unfavorable thoughts (M = −.38) than strong arguments (M = −.14).

CORRELATIONAL ANALYSES

To test for the relationship between the cognitive response index and participants’ attitudes, four separate correlational analyses were conducted. More specifically, the correlation was computed separately for high- and low-NC participants in consistent and inconsistent conditions (cf. Priester & Petty, 1995, Experiment 1). For high-NC participants, the relationship between thoughts and attitudes was significant regardless of source consistency (consistent: r = .54, p < .001; inconsistent: r = .49, p < .005).12 For low-NC participants, the correlation was significant in the case of inconsistent source characteristics, r = .43, p < .005, but nonsignificant in the case of consistent source characteristics, r = .20, p > .25.

To test whether the correlation for low-NC participants in consistent conditions differed significantly from correlations in the other three conditions, a single correlation coefficient was computed for the latter conditions (r = .49).13 Fisher’s r to z transformations showed a marginally significant difference between the low-NC participants in inconsistent source conditions and those participants in the other three conditions, z = 1.67, p < .05 (one-tailed). Thus, consistent-source/low-NC participants’ attitudes were based somewhat less on the favorability of their message-related thoughts than the attitudes of low-NC participants in inconsistent source conditions and of high-NC participants regardless of source consistency.

Discussion

The results of Experiment 2 lend further support to the hypothesized effects of different combinations of source characteristics on message scrutiny. With respect to both attitudes and valence of message-related thinking, low-NC recipients’ responses were affected by argument strength only when the message was presented by a dishonest expert or an honest nonexpert (source inconsistency). In contrast, attitudes were not affected by argument quality in consistent conditions. Instead, slightly more positive attitudes were found given an honest expert as compared to a dishonest nonexpert. It seems, then, that these recipients based their attitudes on heuristic processing (cf. Baker & Petty, 1994, Experiment 2). Furthermore, message-related thoughts were predictive of attitudes only in the case of inconsistent source characteristics. Thus, overall, low-NC participants concerned themselves more with the persuasive message when it was presented by either a dishonest (vs. honest) expert (cf. Priester & Petty, 1995) or an honest (vs. dishonest) nonexpert.

Findings are somewhat less clear for high-NC participants. Based on existing research findings, high-NC individuals were expected to evidence message elaboration irrespective of the combination of source characteristics. Indeed, in the case of an expert source, attitudinal findings replicate the results reported by Priester and Petty (1995, Experiment 2) that high-NC recipients’ attitudes
are determined by argument quality regardless of source honesty. Similarly, message-related thinking was affected by argument quality when the message was presented by an expert source. In contrast, argument quality did not affect attitudes and thought favorability in the honest nonexpert conditions. In the case of the dishonest nonexpert, although argument strength had no effect on attitudes, it did have an impact on message-related thinking. As mentioned above (cf. Note 11), however, the results regarding thought favorability are based only on those participants who listed at least one message-related thought. Indeed, although an analysis of these participants’ attitude scores revealed main effects of argument quality only in the high-NC/expert conditions and the low-NC/inconsistent conditions (cf. Attitudes section), attitudes were also somewhat affected by argument quality in the dishonest nonexpert conditions (strong: $M = 4.30$; weak: $M = 3.71$). However, assuming that the attitudinal results based on all participants reflect message processing more accurately, we think it fair to conclude that high-NC participants did not elaborate the message delivered by an honest as well as a dishonest nonexpert. Overall, then, it could be argued that in line with the ELM’s multiple roles notion (Petty & Wegener, 1998), source expertise affected the level of message scrutiny for high-NC individuals (cf. Heesacker et al., 1983).15

GENERAL DISCUSSION

Both experiments provide evidence that different combinations of two source characteristics (i.e., consistent vs. inconsistent) affect the amount of message scrutiny in moderate elaboration likelihood settings. In our first experiment, this was the case regardless of the individual differences in need for cognition. In the second experiment, the effect of source consistency occurred only for low-NC recipients but not for individuals high in NC. As mentioned in the introduction, the necessity to take individual differences in NC into account with respect to the effect of expectancy violation on message scrutiny seems not yet completely understood (cf. Baker & Petty, 1994; Smith & Petty, 1996). Nonetheless, in the following, we would like to discuss why NC may not have played a role in Experiment 1 but did so in Experiment 2.

Cacioppo, Petty, Feinstein, and Jarvis (1996) suggested that the (nonlinear) relation between situational demands (as one determinant of the elaboration likelihood) and the extent of thinking may differ for individuals low versus high in NC. More specifically, neither high-NC nor low-NC individuals may engage in effortful thinking when situational demands are low (e.g., very low personal relevance), and both groups of individuals may engage in extensive thinking when there are strong situational forces (e.g., high relevance). However, between these two extremes, less situational forces may be necessary to heighten high-NC (vs. low-NC) individuals’ amount of cognitive effort beyond negligible levels. Furthermore, high-NC individuals’ cognitive expenditure may reach its maximum at lower levels of situational demands than is true for individuals low in NC.

More generally, the ELM suggests that the elaboration likelihood is determined jointly by recipients’ (accuracy) motivation and ability, both of which are in turn influenced by individual differences as well as situational factors (Petty & Cacioppo, 1986). Thus, differences with respect to the role of source consistency for message scrutiny may result from differences in the elaboration likelihood as determined by recipients’ motivation and ability. More specifically, in the present research, the elaboration likelihood may have been slightly lower for the trimester system topic (as compared to the fee introduction topic) for two reasons. First, the trimester system topic may have been slightly less personally relevant for participants (resulting in lower motivation as situationally determined). Second, participants may have had less prior knowledge of this topic (i.e., lower ability as determined by topic-specific knowledge). As a consequence, prior to any source information, the background level of elaboration likelihood may have been more similar for individuals low and high in NC in the case of the trimester system topic than in the case of the library fee topic.

Therefore, source consistency affected the amount of message scrutiny for the trimester system topic similarly for individuals high and low in need for cognition. In contrast, for the comparatively somewhat more personally relevant and more familiar library fee topic, this background elaboration likelihood differed more strongly depending on individuals’ need for cognition; that is, prior to any source information, differences in NC led to a priori differences in the elaboration likelihood (i.e., higher for high-NC than low-NC individuals).

Accordingly, source consistency still acted as a moderator of message scrutiny for individuals low in NC. In comparison, the elaboration likelihood may have already been high enough for high-NC individuals to warrant message elaboration. However, as discussed previously, high-NC recipients’ readiness to elaborate was tempered in the case of the honest and dishonest nonexpert.

In fact, although there has not been any (public) discussion about a switch to a trimester system, in recent years, some discussion has revolved around whether certain other fees should be introduced (i.e., tuition fees similar to those common at North American universities, fees for long-term students). Thus, the fact that 16 participants were suspicious in the first experiment but none questioned the impression formation cover story in the
second experiment may have been due to participants’ lower familiarity with the trimester system. In contrast, the open discussions about university fees may have resulted in the participants being more familiar with the pros and cons of such fees. This is also suggested by a comparison of the proportion of message-related thoughts on the sum total of thoughts (i.e., including other-related thoughts). This proportion amounted to .53 for the trimester system topic and to .59 for the fee introduction topic. In sum, the elaboration likelihood indeed seems to have been somewhat lower in our first experiment.

In any case, we feel that the two experiments provide clear evidence that it is a worthwhile endeavor for persuasion researchers to take a closer look at the role of information related to more than one cue variable. In this respect, a study by Moskowitz (1996) is of interest because its results can be explained with reference to the multiple source characteristics perspective taken here. In a moderate elaborate likelihood setting, recipients were found to process systematically a message of a (numerical) minority member when this communicator was described in such a way that recipients formed positive attributions (i.e., the communicator was perceived as unbiased). In contrast, when negative attributions were elicited (i.e., the communicator was perceived as biased), recipients’ attitudes were rather negative irrespective of argument quality. From the current perspective, these results would be expected inasmuch as the two pieces of information given about the communicator may be more (minority status/positive attributions) or less (minority status/negative attributions) surprising to recipients. Of course, the further prediction would then follow that the attribution manipulation also affects message processing in the case of a majority status communicator; that is, it may also be more surprising to find that a majority communicator seems to be rather biased (vs. unbiased). Moreover, based on the multiplicity of cue variables identified in previous research (for an overview, see Petty & Wegener, 1998), one can think of numerous other combinations of two such variables. Consequently, future research should focus more on the combined effects of these variables. We would predict that whenever different combinations of cue variables violate expectancies and thus elicit surprise, message scrutiny should be heightened.

CONCLUSION

Clearly, more research is needed to understand not only the interplay of source likability and source expertise, and source honesty and source expertise, but of other combinations of cue variables as well. Thus, the source (in)consistency perspective outlined here may prove to be a rather general framework for understanding the effects of different combinations of cue variables on message scrutiny and attitude change. Moreover, although it was argued here that settings with elaboration likelihood not constrained to be either high or low seem most conducive to the effects of different combinations on message scrutiny, future research also should look at other levels of elaboration likelihood. For example, Maheswaran and Chaiken (1991) found that an incongruency between the valence of consensus information and message valence (positive consensus/negative message; negative consensus/positive message) promotes systematic processing in a low-motivation setting. We think it is possible that very high levels of surprise resulting from inconsistent cue variables lead to heightened message processing under low motivation as well.

Finally, it would be interesting to take the perspective of cue variable (in)consistency a step further and to focus on the role for persuasion of information pertaining to three or more different variables that either may function as heuristic cues or may help to determine the level of message processing. Although clearly present in people’s everyday lives, multiple cue variables have to date not been given due attention in attitude change research.

NOTES

1. We use the terms “moderate elaboration likelihood” and “unconstrained elaboration likelihood” interchangeably, meaning that the elaboration likelihood as determined by recipients’ motivation and ability is neither very high nor very low.

2. For the sake of simplicity, in the following, we use the term “cue variable” when we refer to a variable that either may serve as a heuristic cue (i.e., there is a stored heuristic that can be used to infer message validity) or may help to determine the level of message scrutiny.

3. This prediction also may be derived from the heuristic-systematic model. Source inconsistency (vs. consistency) may lead to systematic processing because opposite (vs. similar) heuristic inferences should lead to a higher discrepancy between recipients’ actual and desired confidence (cf. Chaiken et al., 1989).

4. Note further that Smith and Petty took need for cognition as a factor into account only in their second study (employing a fully crossed Framing Expectancy × Message Framing × Argument Strength design) but not in their first study (crossing only message framing and argument strength).

5. Participants with suspicion were distributed equally across experimental conditions.

6. In both experiments, preliminary ANOVAs did not reveal any differences in need for cognition scores as a function of the three remaining independent variables (all ps > .24).

7. Fifty participants did not list any message-related thought. Thus, a thought favorability score could be computed only for the remaining 200 participants. The percentage of participants evidencing no message-related thinking was slightly higher in consistent (22.2%) than in inconsistent conditions (17.8%). An ANOVA on attitudes based on those participants with at least one such thought revealed that the three-way interaction remained (marginally) significant (p < .06).

8. The reviewers were concerned about some of these unexpected effects regarding source perceptions. Therefore, we ran a follow-up study (n = 150) using identical instructions and operationalizations of expertise and honesty as in the second experiment. However, on the pretense that it would be of interest to gain information on certain source perceptions prior to having read the transcript of the interview.
on the library fee topic, participants were asked to rate the communica-
tor on a number of items directly after they had read the short descrip-
tion of the interviewee (i.e., source expertise and source honesty infor-
mation). In fact, after these ratings were made, participants were in-
formed that they would not be presented with the interview tran-
script. Need for cognition was measured as in Experiment 2.

Similar to Experiment 1, perceptions of source expertise were mea-
sured by asking, “How qualified do you think Mr. K. is to give his opin-
on on the user fee?” (cf. the question about “competence” in Experi-
ment 2). In the absence of any persuasive arguments, an ANOVA revealed only a source expertise main effect, F(1, 142) = 4.30, p < .0001
(all other Fs < 1), indicating that the expert was rated more qualified to
give his opinion (M = 5.25) than the nonexpert (M = 4.20). An ANOVA
on perceived source trustworthiness revealed a source honesty main effect,
F(1, 142) = 121.72, p < .0001 (honest: M = 5.53; dishonest: M = 3.27)
but no effect of source expertise (F < 1). Ratings of perceived self-
interest and bias of the speaker did not reveal any effects (all Fs > 16).

There was also a Source Expertise × Source Honesty interaction,
F(1, 180) = 6.78, p < .02, indicating that arguments presented by an
honest nonexpert were perceived more convincing (M = 4.38) than
arguments presented by a dishonest nonexpert (M = 3.48). Honesty
did not affect argument ratings in the case of an expert source (honest:
M = 4.96; dishonest: M = 4.30).

Inspection of the means might suggest a reversal of the typical
argument quality effect for low-NC participants receiving a message from
a dishonest nonexpert. However, a simple t test revealed this not to be
the case, p > 1.

11. Similar to Experiment 1, 35 participants did not list any mes-
 sage-related thoughts. Of interest, the percentage of such participants
seems to have been nonrandom. Computing the percentage for high-
and low-NC individuals separately revealed these figures to be 14.9% and
21.1%, respectively. Further analyses separately for consistent and
inconsistent conditions showed that for high-NC individuals, the per-
centage was similar regardless of source consistency (15.1% and
14.6%). For low-NC individuals, the percentage was higher in the case
of consistent (26.1%) as compared to inconsistent information
(16.3%). Thus, these data give further credence to the predicted mod-
erating effect of source consistency on message scrutiny for low-NC
individuals. An ANOVA of attitudes based on those participants listing
at least one message-related thought revealed that the four-way interac-
tion described in the Attitudes section remained significant.

12. Given the attitudinal findings for high-NC individuals, we also
conducted separate correlational analyses for expert and nonexpert
conditions. In the case of the expert source, the correlation coefficient
was r = .54, p < .001; for the nonexpert source, it was r = .50, p < .001.

13. Similar separate analyses for consistent and inconsistent condi-
tions also were conducted in Experiment 1. The correlation was signifi-
cant in both conditions (consistent: r = .50; inconsistent: r = .33; both
Fs < .0001).

14. A preliminary analysis was conducted to examine whether the
three conditions differed from one another. No significant result (chi-
square < 1) was found. Therefore, collapsing the three conditions is
warranted.

15. Participants in the follow-up study (cf. Note 8) also were asked,
“How interested are you in now reading the considerations of Mr. K.
on the fee topic?” (very intended not at all interested). An ANOVA revealed
an NC × Source Expertise interaction, F(1, 142) = 12.13, p < .001.
Although interest of low-NC participants was not affected by expertise
(expert: M = 4.30; nonexpert: M = 3.75), high-NC participants were less
interested in the case of a nonexpert (M = 4.66) than in the case of an
expert (M = 3.31). Thus, whether high-NC individuals regard persua-
sive information as thought-worthy may be contingent on the expertise
of the communicator. At least when combined with source honesty informa-
tion, a communicator’s lack of expertise seems to lower these
individuals’ interest in concerning themselves with his opinion.

Ironically, this suggests that Priester andetty’s (1995) speculation on
the role of a source low in expertise for low-NC recipients’ message
scrutiny seems to be valid for individuals high in NC. Of course, in view
of the uncontrolled amount of findings indicating high-NC individuals’
general willingness to elaborate persuasive messages (Cacioppo, Petty,
Feinstein, & Jarvis, 1996), this interpretation has to be treated with cau-
tion. Future research will have to show whether this effect is replicable.

REFERENCES

Source-position imbalance as a determinant of message scrutiny.

Need for Cognition: Eine Skala zur Erfassung von Engagement
und Freude bei Denkaufgaben [Need for Cognition: A scale for
the assessment of involvement and happiness in cognitive tasks].


Dispositional differences in cognitive motivation: The life and
times of individuals varying in need for cognition. Psychological

Chaiken, S. (1980). Heuristic versus systematic information processing
and the use of source versus message cues in persuasion. Journal
of Personality and Social Psychology, 39, 752-766.

Chaiken, S., Liberman, A., & Eagly, A. H. (1989). Heuristic and sys-
tematic information processing within and beyond the persua-
sion context. In J. S. Uleman & J. A. Bargh (Eds.), Unintended
thought (pp. 212-252). New York: Guilford.

Worth, TX: Harcourt, Brace, Jovanovich.

ence and attitude change: Source credibility can alter persuasion
by affecting message-relevant thinking. Journal of Personality, 51,
653-666.

and physical attractiveness upon opinion agreement and liking.
Sociometry, 37, 601-606.

Maddux, J. E., & Rogers, R. W. (1980). Effects of source expertise,
physical attractiveness, and supporting arguments on persuasion:
A case of brains over beauty. Journal of Personality and Social
Psychology, 39, 235-244.

ing in low-motivation settings: Effect of incongruent information
on processing and judgment. Journal of Personality and Social
Psychology, 61, 13-25.

Moskowitz, G. B. (1996). The mediational effects of attributions and
attributions in minority social influence. British Journal

sion: Central and peripheral routes to attitude change. New York: Springer.

Petty, R. E., Cacioppo, J. T., & Goldman, R. (1981). Personal involve-
ment as a determinant of argument-based persuasion. Journal of Personality
and Social Psychology, 41, 847-855.

for persuasion variables. In D. T. Gilbert, S. T. Fiske, & G. Lindzey
New York: Oxford University Press.

sion: Perceived honesty as a determinant of message scrutiny. Per-

relative impact of age and attractiveness stereotypes on persua-

Pyszczynski, T., & Greenberg, J. (1981). Role of disconfirmed expec-
tations in the instigation of attributional processing. Journal of Per-
social and Social Psychology, 40, 31-38.

message processing analysis. Personality and Social Psychology Bul-
tin, 22, 257-268.

Wood, W., & Kallgren, C. A. (1988). Communicator attributes and
persuasion: Recipient’s access to attitude-relevant information in

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