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## Reports

Beyond attitude consensus: The social context of persuasion and resistance<sup>☆</sup>Zakary L. Tormala<sup>a,\*</sup>, Victoria L. DeSensi<sup>b</sup>, Joshua J. Clarkson<sup>b</sup>, Derek D. Rucker<sup>c</sup><sup>a</sup> Graduate School of Business, Stanford University, 518 Memorial Way, Stanford, CA 94305, USA<sup>b</sup> Department of Psychological and Brain Sciences, Indiana University, 1101 E. 10th St., Bloomington, IN 47405, USA<sup>c</sup> Kellogg School of Management, Northwestern University, 2001 Sheridan Rd., Evanston, IL 60208, USA

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## ABSTRACT

The current research presents a new type of social context effect on attitude certainty. It is proposed that when people receive persuasive messages, they appraise their attitudes not only in terms of whether they are shared or not shared by others, but also in terms of whether they are based on similar or dissimilar assessments of the information presented. In two experiments, participants were presented with persuasive messages. In Experiment 1, they were induced to perceive that they responded favorably (persuasion) or unfavorably (resistance) to the message arguments. In Experiment 2, they were allowed to vary in their actual message responses. In both experiments, message response similarity—the degree to which people perceived that their evaluations of persuasive arguments were shared or unshared by others—moderated the classic effect of attitude similarity on attitude certainty. In particular, attitude similarity only affected attitude certainty under conditions of message response similarity. When message responses were believed to be dissimilar, attitude similarity had no effect on attitude certainty.

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## Introduction

People often receive persuasive messages in the context of other people. When they evaluate these messages, they do so in a context in which other people are also evaluating. In recognition of the prominent role that social factors play in attitudinal phenomena, a long history of research has been devoted to understanding the effects of other people on the attitudes we hold (e.g., Festinger, 1954; Heider, 1946; Terry & Hogg, 2000). Most germane to the current concerns, some of this research has focused on the notion that *attitude certainty*, the sense of conviction one has about one's attitude (Abelson, 1988; Gross, Holtz, & Miller, 1995), can be tied to perceptions of others' attitudes. The more people think that others agree with them, the more certain they tend to be of their own attitudes, because consensus provides social validation (Orive, 1988; Petrocelli, Tormala, & Rucker, 2007; Visser & Mirabile, 2004). This finding is important because certainty, like other dimensions of attitude strength (Petty & Krosnick, 1995), affects an attitude's durability and impact. As certainty increases, for example, attitudes become more influential over behavior (Fazio & Zanna, 1978; Tormala & Petty, 2002) and more resistant to attack (Bassili, 1996; Wu & Shaffer, 1987).

## Beyond attitude consensus

The present research goes beyond attitude consensus and investigates a new social context effect on attitude certainty. We submit that in persuasion situations, people can reflect not only upon others' attitudes as a means of social validation, but also upon others' *message responses*—that is, the degree to which other people have found a given message to be persuasive or unpersuasive. Indeed, in some persuasion situations people might have ready access to others' message responses even without knowing others' attitudes. When one listens to a speech in the company of strangers, for instance, one might observe others' message responses (e.g., head-nodding) without knowing others' postmessage attitudes. Thus, message responses might provide a useful source of social information. In recognition of this possibility, we propose a message response similarity hypothesis, suggesting that after receiving persuasive messages, people will be more certain of their attitudes when they believe their message responses are similar to rather than different from the responses of others.

Moreover, we distinguish this message response similarity effect from the well-documented effect of attitude similarity on certainty. After all, two individuals could hold the same attitude following a persuasive message, but perceive that they differed in their message responses, one finding the message arguments to be persuasive and the other finding them to be unpersuasive. Consider a situation in which two individuals hold equally favorable attitudes toward a tax cut after receiving a message promoting that cut. Perhaps one individual has always supported the tax

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\* Corresponding author.

E-mail address: [tormala\\_zakary@gsb.stanford.edu](mailto:tormala_zakary@gsb.stanford.edu) (Z.L. Tormala).

cut but found the particular arguments in the message unpersuasive, whereas the other individual previously opposed the tax cut but now supports it after finding the message very persuasive. We ask whether it is of any consequence to attitude certainty if these individuals perceive that, despite their attitudinal similarity, their message responses differ.

Based on past research, one reasonable answer to this question would be “no.” That is, perhaps perceived attitude similarity fosters greater certainty regardless of message response similarity. This prediction makes sense if we assume that message recipients focus primarily on their attitudes but do not reflect upon their message responses. Even if people do reflect upon their message responses, attitude similarity might trump response similarity. For example, if two individuals hold the same attitude following a message but differ in their message responses, these individuals might infer that no matter what one thinks of this message or how one thinks about the issue, the cumulative evidence points to one and only one attitude. Thus, attitude similarity might foster greater certainty regardless of message response similarity.

In contrast, we propose that attitude and message response similarity are distinct and mutually important layers of the social context. When people perceive that they hold the same attitude and message response, for example, they might feel certain because they can conclude they have both the correct attitude and the correct underlying beliefs and knowledge supporting that attitude. When people perceive that they hold the same attitude but *differ* in their message responses, they might be less certain because message response dissimilarity suggests that they hold the attitude for different reasons, have different background knowledge, different assessments of key arguments, and/or disagreement about other pertinent evidence. In this case, message response dissimilarity might undercut the certainty normally provided by attitude similarity. Following this logic, we propose that when people receive persuasive messages, message response similarity will moderate the effect of attitude similarity on certainty such that attitude similarity fosters greater certainty when message responses are similar, but not when they are dissimilar. When any dissimilarity is present (in attitudes or message responses), we expect attitudes to be held with less certainty.

If the predicted effects obtain, they would contribute to both the social context literature and a growing body of research exploring metacognitive factors in persuasion. Recent work suggests that when people receive persuasive messages, they can appraise their own message responses (e.g., persuasion or resistance) with implications for attitude certainty (see Tormala & Rucker, 2007). This work has revealed that when people positively (negatively) evaluate their own persuasion or resistance, they become more (less) certain of their attitudes (e.g., Rucker & Petty, 2004; Tormala, Clarkson, & Petty, 2006; Tormala, DeSensi, & Petty, 2007). Message response similarity effects would suggest that people's metacognitive assessments in persuasion situations target not only their own message responses, but also the responses of others.

## Experiment 1

Experiment 1 provided a test of our hypothesis by manipulating perceived message response similarity and attitude similarity while holding actual message responses and attitudes constant. To manipulate message response similarity we varied participants' perceptions of their own and others' persuasion or resistance after reading a persuasive message. We expected an interaction between message response and attitude similarity such that attitude similarity would produce high attitude certainty when message response similarity was high, but not when message response similarity was low.

## Method

### Participants and design

Eighty-two Indiana University undergraduates were randomly assigned to conditions in a 2 (message response similarity: similar or dissimilar)  $\times$  2 (attitude similarity: similar or dissimilar) between-participants factorial design.

### Procedure

Participants were seated at computers and read about a new university policy requiring students to pass comprehensive exams before graduation. Participants were told that the purpose of the study was to assess their reactions to this policy. Following this introduction, all participants reported their attitudes toward comprehensive exams. To make it difficult for participants to duplicate their premessage attitudes when they reported attitudes later in the experiment, different scales were used before and after the message. Immediately after reporting premessage attitudes, participants received a pro-exam message. All participants received the same message, which contained an equal number of strong (e.g., comprehensive exams would improve the quality of teaching) and weak (e.g., comprehensive exams would help the university join a national trend) arguments. We used both strong and weak arguments to induce middling message evaluations, which could be interpreted as reflecting either persuasion (positive message response) or resistance (negative message response), depending on false feedback.

Following the message, participants were instructed to list four positive thoughts and then four negative thoughts about comprehensive exams. When they finished typing their last negative thought, participants reported postmessage attitudes, received false feedback concerning message response and attitude similarity, and reported attitude certainty.

### Independent variables

*Message response similarity.* This manipulation had two phases. First, participants received false feedback about their own persuasion or resistance to the message, which was intended to imply positive or negative message responses, respectively. Participants were led to believe that the computers running the experiment employed a technology that assessed attitude change on the basis of subtle variations in: “(1) your responses to both sets of attitude scales, (2) the latency (i.e., time) with which you responded to those scales, and (3) the number, length, complexity, and content of the thoughts you listed, among other variables.” Following these instructions, participants received a score ostensibly reflecting the computer's analysis of their attitude change. They were told that this score could range from 1 to 10 and that scores greater (less) than 5 indicated that a measurable degree of attitude change had (not) been detected.

According to random assignment, some participants learned that their score was 9, indicating that they had changed their attitudes toward the exams. Other participants learned that their score was 2, indicating that they had not changed their attitudes. This manipulation, adapted from Tormala and Petty (2002), capitalized on the fact that people often are poor judges of their own attitude stability or change, particularly when situational factors suggest that change has or has not occurred (see Ross, 1989).

In the second phase of this manipulation, we told participants that they would receive additional information to help them understand their attitude change score. Participants were then led to believe that more than 800 students had taken part in our study and that either a majority (88.6%) or minority (12.2%) of them had shown evidence of attitude change after reading the same message. Again, this information was intended to imply positive and negative message responses, respectively. In the similar

response condition, participants were led to believe that most others' message responses (change or no change) matched their own. In the dissimilar response condition, participants were led to believe that most others' responses mismatched their own.

**Attitude similarity.** Following the manipulation of message response similarity, we manipulated attitude similarity. First, participants were told that students came to our studies with varying attitudes, and that attitude change had different meanings depending on people's initial attitudes. Participants then received false feedback that, based on the computer's analysis, their attitudes were now the same as or different from the attitudes of most other students.

#### Dependent measures

**Premessage attitudes.** At the outset of the experiment, participants rated comprehensive exams on three scales, ranging from  $-2$  to  $+2$  anchored at: *very much against*–*very much in favor*, *disagree strongly*–*agree strongly*, *very displeased*–*very pleased*. Responses were averaged to form a composite index ( $\alpha = .84$ ).

**Postmessage attitudes.** After receiving the message and listing their thoughts, participants rated the exams on scales ranging from 1 to 9 anchored at: *unfavorable*–*favorable*, *bad*–*good*, *negative*–*positive*. Responses were averaged to form a composite index ( $\alpha = .98$ ), with higher numbers reflecting more favorable attitudes.

**Attitude certainty.** Following all manipulations, we assessed attitude certainty using several items: How certain are you of your opinion about comprehensive exams? How sure are you that your opinion about comprehensive exams is right? How firm is your attitude on comprehensive exams? Overall, how much confidence do you have in your current opinion about comprehensive exams? How easily could your current opinion of comprehensive exams be changed? Responses, provided on scales ranging from 1 to 9 with higher numbers reflecting greater certainty, were averaged to form a composite index ( $\alpha = .92$ ).

#### Results

##### Attitudes

Both pre- and postmessage attitudes were measured before the manipulations. Premessage attitudes, assessed on scales ranging from  $-2$  to  $+2$ , were slightly negative ( $M = -0.76$ ,  $SD = .94$ ). Postmessage attitudes, assessed on 1–9 scales, also were slightly negative ( $M = 4.02$ ,  $SD = 1.91$ ). There were no differences in attitudes across conditions,  $ps > .31$ .

##### Attitude certainty

We submitted the attitude certainty data to a 2 (message response similarity)  $\times$  2 (attitude similarity) ANOVA. This analysis revealed a significant main effect for message response similarity,  $F(1, 78) = 4.98$ ,  $p < .03$ , and a marginal main effect for attitude similarity,  $F(1, 78) = 2.70$ ,  $p = .10$ , but these effects were qualified by a significant interaction,  $F(1, 78) = 5.81$ ,  $p < .02$ . As illustrated in Fig. 1, attitude similarity had a significant effect on attitude certainty under response similarity conditions,  $F(1, 78) = 8.20$ ,  $p < .01$ , but not under response dissimilarity conditions,  $F < 1$ . Viewed differently, attitude certainty was higher in the similar attitude/similar response condition than in the other three conditions,  $F(1, 80) = 14.10$ ,  $p < .001$ , which did not differ from each other,  $F < 1$ .

##### Discussion

Experiment 1 produced the hypothesized interaction between message response and attitude similarity on attitude certainty. Even when people perceived that they held the same attitude as others—a

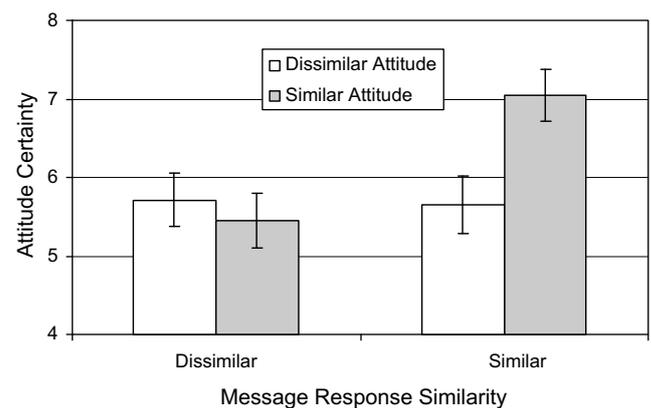


Fig. 1. Attitude certainty as a function of message response similarity and attitude similarity in Experiment 1. Error bars show standard errors.

perception with well-documented implications for certainty—they only were more certain of their attitudes when they also had the same message response. When message responses differed, attitude similarity had no effect on certainty. In essence, participants were most certain of their attitudes when they were led to believe they had both message response and attitude similarity. When either type of dissimilarity was believed to exist, certainty was lower.

#### Experiment 2

The results of Experiment 1 were consistent with our hypothesis that message response similarity can moderate the effect of attitude similarity on certainty. Nevertheless, because our manipulation of message response similarity revolved around the ostensible presence or absence of attitude change, participants may have inferred attitude (dis)similarity from message response (dis)similarity. When participants were led to believe that both they and others changed their attitudes following the message, for instance, they might have inferred that they now held the same attitudes. If true, message response similarity would be confounded with attitude similarity. The interaction between message response and attitude similarity on certainty suggested that participants did differentiate between the manipulations, but that differentiation could have been between two different sources of attitude consensus information.

Experiment 2 aimed to demonstrate more clearly that assessments of the convincingness of persuasive arguments (i.e., message responses) are distinct from perceptions of attitudes following those arguments, and that both have implications for attitude certainty in the social context. First, we separated message response and attitude similarity by having participants indicate whether each of a series of arguments was convincing or unconvincing before reporting their general attitudes toward the issue in question. Second, we changed the social situation such that participants believed they were interacting with an individual and receiving feedback from that individual as they made each response. This enabled us to make it clear to participants that their assessments of message arguments were being agreed or disagreed with and that later, their overall attitude was being agreed or disagreed with. Experiment 2 also included a manipulation check in which participants estimated others' attitudes toward the issue. We expected this measure to be influenced by attitude similarity (because participants should assume that they know others' attitudes if they know that others agree or disagree with them), but not by message response similarity, further highlighting the difference in these perceptions. Finally, to test the robustness of the effects, we changed the attitude issue.

## Method

### Participants and design

Sixty Indiana University undergraduates were randomly assigned to conditions in a 2 (message response similarity: similar or dissimilar)  $\times$  2 (attitude similarity: similar or dissimilar) between-participants factorial design.

### Procedure

Participants were seated at computers, where they read that they were participating in a joint study by the Psychology Department and Institute for Social Issues Research, and that this study had two goals: (1) to test new remote networking software designed for experimental research and (2) to develop an opinion profile of IU undergraduates. To accomplish these goals, participants were told, they would be linked to another student who was taking part in the study at the same time but from a different location, and they would interact with this student throughout the study. It was explained that each participant would be presented with information about a campus issue, and they would share their responses to that information with each other.

Following these instructions, participants were informed that they would be reading about a new university service program. This program required students to do several hours of weekly service to be eligible for graduation. All participants were led to believe that they would receive excerpts from a newspaper editorial written by “Joan Miller” in favor of the program. To assess their reactions, participants were told that they would receive Miller’s four main arguments in her own words. To make it clear that they were evaluating these individual arguments, rather than reporting their general attitudes, participants were instructed that they would receive arguments one at a time, and that after each argument they would indicate how convincing/persuasive they found that specific argument to be. To test the networking software, participants would also learn what the other participant thought of each argument. Specifically, participants received the following instructions:

According to random assignment, your identity will be set as either Participant A or Participant B. If you are Participant A, you will provide your response to each argument first by rating whether the argument is convincing or unconvincing. If you are Participant B, you will provide your responses second by rating whether you agree or disagree with Participant A.

Following these instructions, participants received their “participant identity.” All participants were told that they had been randomly assigned as Participant A, meaning they would indicate their reactions first and then learn whether Participant B agreed or disagreed. In reality, there was no Participant B. The computer was programmed to give agree or disagree responses according to random assignment. This approach was adapted from Visser and Mirabile (2004).

After learning their participant identity, participants received four individual arguments in favor of the service program. Each argument (e.g., the service program would provide students with beneficial hands-on experience) was presented on its own screen. Immediately after reading it, participants rated it for convincingness, learned whether Participant B agreed or disagreed with them, and then advanced to the next argument. After rating all four arguments, participants reported their overall attitudes toward the service program, learned whether Participant B held the same or a different attitude, and then reported attitude certainty.

### Independent variables

**Message response similarity.** After each argument, participants received the following instructions: “PARTICIPANT A: Please indicate whether you found the previous argument to be convincing (i.e., strong/persuasive) or unconvincing (i.e., weak/not persuasive).” Participants provided their argument rating on a scale with two response options: “convincing” and “unconvincing.” Once participants gave their response, text appeared in the center of the screen reading, “Please wait for Participant B to respond.” This text remained for between 6 and 11 s. We varied the delay to boost the plausibility of Participant B considering his/her own response. Following the delay, participants were informed of Participant B’s ostensible response. In the similar (dissimilar) response condition, participants received the following feedback for each rating: “Participant B’s response: AGREE (DISAGREE).”

**Attitude similarity.** After the message response feedback for their final argument rating, participants received the following instructions:

We would now like to assess your overall attitude toward the University Service Program. That is, we are interested in your GENERAL opinion of this program. You can base this on what you read about the University Service Program, other thoughts you might have about its strengths and weaknesses, and/or general gut feelings you have about this program.

On the next screen, participants reported their attitudes on a scale with two response options: “in favor” (1) and “against” (–1). Participants reported their attitudes on a binary response scale to facilitate the attitude similarity manipulation. After reporting their attitude, participants were asked to wait for Participant B to respond. Ten seconds later, participants in the similar (dissimilar) attitudes condition received the following information: “Participant B’s response: SAME (DIFFERENT) OPINION.”

### Dependent variables

**Attitude certainty.** Directly following the attitude similarity feedback, participants reported how certain they were of their attitude toward the service program, how sure they were that their opinion about the service program was right, how convinced they were of their opinion about the service program, and how much confidence they had in their attitude toward the service program. Responses were provided on scales ranging from 1 to 9, with higher numbers reflecting greater certainty. Responses were averaged to form a composite index ( $\alpha = .79$ ).

**Others’ attitudes.** Finally, we told participants that to determine how effective our software was in conveying information between participants, we wanted them to estimate what they thought was Participant B’s attitude toward the service program. Participants rated Participant B’s attitude on four scales ranging from 1 to 9 with the following anchors: *negative–positive*, *bad–good*, *unfavorable–favorable*, *against–in favor*. Responses were averaged to form a composite index ( $\alpha = .96$ ). This index served as a manipulation check for attitude similarity.

## Results

### Attitudes

Participants reported their own attitudes on a single 2-point scale labeled “in favor” (1) and “against” (–1). Because only the response similarity manipulation preceded this measure, we submitted attitudes to a one-way ANOVA with response similarity as the independent variable. There was no difference across conditions,  $F(1,58) = 1.60$ ,  $p > .21$ . On average, participants’ attitudes were slightly negative ( $M = -.13$ ,  $SD = 1.00$ ).

### Attitude certainty

We submitted the attitude certainty data to a 2 (message response similarity)  $\times$  2 (attitude similarity) ANOVA. This analysis revealed a main effect for attitude similarity,  $F(1,56) = 4.23$ ,  $p < .05$ , but not for message response similarity,  $F(1,56) = 1.03$ ,  $p < .32$ . Most important, the effect of attitude similarity was qualified by a significant interaction,  $F(1,56) = 4.72$ ,  $p < .04$ . As illustrated in Fig. 2, attitude similarity had a significant effect under similar,  $F(1,56) = 8.57$ ,  $p < .01$ , but not dissimilar,  $F < 1$ , message response conditions. Viewed differently, attitude certainty was higher in the similar attitude/similar response condition than in the other three conditions,  $F(1,58) = 10.05$ ,  $p < .01$ , which did not differ from each other,  $F < 1$ .

### Others' attitudes

We submitted estimates of Participant B's attitude to the same 2  $\times$  2 ANOVA. This analysis revealed a main effect for attitude similarity,  $F(1,56) = 5.49$ ,  $p < .03$ ; participants thought Participant B had more a favorable attitude in the dissimilar ( $M = 5.83$ ,  $SD = 2.10$ ) compared to the similar ( $M = 4.33$ ,  $SD = 2.29$ ) attitude condition. This was expected given participants' slightly negative attitudes. No other effects approached significance,  $F_s < 1$ .

### Discussion

Experiment 2 replicated the interaction from Experiment 1 despite a variety of procedural changes. In particular, we made a greater effort to distinguish message response and attitude similarity in our manipulations. Our manipulation check data also spoke to the independence of message response and attitude assessments. Participants' estimates of the other person's attitude were influenced by the attitude but not message response similarity manipulation. Although it is conceivable that a different result might have obtained had we measured perceptions of the other person's attitude immediately following the message response manipulation rather than at the end of the experiment, we opted to delay this measure to avoid rendering attitude consensus perceptions too salient before the attitude similarity manipulation. At a minimum, the manipulation check data suggested that once all the information had been received, participants were able to differentiate between others' attitudes and message responses, which was our primary interest. Thus, Experiment 2 helped establish the distinction between and mutual importance of attitude and message response similarity.

As a potential caveat, note that Experiment 2 focused the manipulation of Participant B's responses on agreeing/disagreeing with participant A's responses, rather than on supporting/opposing the original message arguments and allowing participants to infer

the agreement/disagreement. We focused the feedback on agreement with participants' responses to simplify the response similarity manipulation, but it is possible that this focus created interpersonal dynamics that influenced perceptions of Participant B and, thus, attitude certainty. For instance, perhaps when Participant B consistently disagreed with every response, participants viewed him or her as impolite or unpleasant. If true, this perception itself could moderate the impact of social consensus on attitude certainty. Although we suspect that if participants disliked Participant B they would have discounted his or her disagreement and maintained a high level of certainty, which we did not observe, this is an interesting potential moderator in its own right that deserves attention in future research.

A related question is whether participants in the dissimilar response/similar attitude or similar response/dissimilar attitude conditions assumed that Participant B had a weaker (e.g., more ambivalent) attitude than did participants in other conditions. Although we had no measure to directly test this possibility, the manipulation check data did indicate that message response similarity had no effect on estimates of Participant B's attitude extremity. Furthermore, it is not immediately clear how assuming that Participant B was ambivalent would affect participants' certainty. Would thinking Participant B is ambivalent make participants feel more certain by comparison, or would it simply make Participant B's feedback less diagnostic? If less diagnostic, we might have expected two main effects, such that the nondiagnostic (ambivalent) conditions induce certainty that falls between the consistent disagreement and consistent agreement conditions. These are interesting possibilities that merit attention in future studies.

### General discussion

Data from two experiments were compatible with our hypothesis that message response similarity affects attitude certainty, and that this effect is not redundant with the effect of attitude similarity. Using different methods and manipulations, both experiments revealed that perceiving social support for one's attitude can be insufficient to boost certainty if one perceives message response dissimilarity. That is, message response similarity moderates the effect of attitude similarity on attitude certainty following a persuasive message. This finding extends the social context beyond attitude consensus and highlights the value of considering people's perceptions of shared versus unshared assessments of persuasive arguments. Presumably, in past research showing attitude similarity effects on certainty, participants assumed that if their attitudes matched the attitudes of others, they also would share message responses, thoughts, beliefs, and so on. The current experiment suggests that when this assumption is not in place, attitude similarity does not affect attitude certainty.

To be clear, we do not contest the notion that perceived social support for one's attitude can be an important determinant of attitude certainty. In fact, just as our experiments demonstrated that message response similarity moderated the effect of attitude similarity, they also indicated that attitude similarity moderated the effect of message response similarity. Thus, we acknowledge the importance of attitude similarity, adding that message response similarity is another important layer of the social context. Perceptions of response and attitude similarity might often co-occur, but the results of our studies suggest that they are distinguishable. Both follow the logic of social validation, but the *target* of that logic differs.

As an alternative account for our findings, one might contend that our manipulations of attitude and message response similarity simply provided two different attitude consensus cues—that is, two different indicators that others agree or disagree with one's views. When these cues were consistent (and supportive), attitude

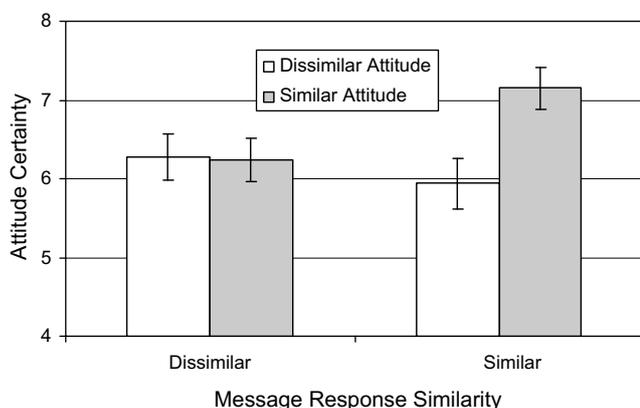


Fig. 2. Attitude certainty as a function of message response similarity and attitude similarity in Experiment 2. Error bars show standard errors.

certainty was bolstered. When these cues were inconsistent, confusion resulted and certainty was undermined. Based on this view, there would be no need to differentiate between attitude and response similarity per se. Rather, one simply needs to know if various attitude consensus cues match or mismatch. Response similarity might still prove important, but primarily as a new means of inducing perceived attitude consensus.

Although this explanation has intuitive appeal, and there is ample evidence from past research that consistency among persuasion variables can affect attitude certainty (e.g., Maheswaran & Chaiken, 1991), we do not think our overall pattern of data supports its application to the current studies. In particular, this alternative account seems to predict two main effects, such that attitude certainty is highest when both consensus cues are high, lowest when both cues are low, and somewhere in between when one is high and the other is low. Indeed, if our message response and attitude similarity manipulations both provided attitude consensus information, we would expect their effects to be additive rather than interactive in nature. Thus, we think the evidence supports the distinction between message response and attitude similarity. Nevertheless, this issue remains important as it speaks to the fundamental nature of what message response similarity conveys. Future research delving deeper into the psychological mechanism underlying response similarity effects would be useful.

Also useful would be future studies exploring the occurrence of message response similarity effects in everyday life. In this initial exploration, we made an effort to separate message response and attitude similarity by manipulating message response perceptions prior to attitude perceptions. The results were consistent with our hypothesis in suggesting that attitude and message response similarity can be separated in their effects on attitude certainty. In some real world persuasion situations, however, message recipients might have an idea or hypothesis regarding others' attitudes before observing others' message responses. It is possible that under these circumstances, people make different attitude-relevant inferences with different implications for certainty. For instance, perhaps observing others with dissimilar attitudes react similarly to a persuasive message boosts certainty when others' attitudes are known before their message responses. If true, this would still reflect the distinction between and importance of attitude and message response similarity, but the direction of effect might change. Investigating the timing of these manipulations in future research might shed additional light on these effects.

Ultimately, we view the current research as providing a first step in the exploration of additional layers of the social context. Our emphasis has been on whether one perceives that one has gauged a message or argument to be persuasive or unpersuasive, but there are other aspects of message responses that could be studied. For example, one might perceive not just that one's message response was favorable or unfavorable, but also that this re-

sponse was the result of deep versus shallow processing, consideration of the arguments in a message versus the source of that message (Tormala & DeSensi, 2008), or a host of other factors. We suspect that these more specific response and even process distinctions can be subject to social context effects as well. For now, our findings suggest that people's perceptions of social contextual factors might be more nuanced than previously known.

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