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# When in Doubt, Shout! Paradoxical Influences of Doubt on Proselytizing

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## Abstract

A seminal case study by Festinger found, paradoxically, that evidence that disconfirmed religious beliefs increased individuals' tendency to proselytize to others. Although this finding is renowned, surprisingly, it has never been subjected to experimental scrutiny and is open to multiple interpretations. We examined a general form of the question first posed by Festinger, namely, how does shaken confidence influence advocacy? Across three experiments, people whose confidence in closely held beliefs was undermined engaged in more advocacy of their beliefs (as measured by both advocacy effort and intention to advocate) than did people whose confidence was not undermined. The effect was attenuated when individuals affirmed their beliefs, and was moderated by both importance of the belief and open-mindedness of a message recipient. These findings not only have implications for the results of Festinger's seminal study, but also offer new insights into people's motives for advocating their beliefs.

## Keywords

advocacy, persuasion, confidence, compensatory processes

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When one's beliefs are shaken, is one more or less likely to advocate those beliefs? This was the central question that preoccupied Festinger and his colleagues in their seminal examination of religious beliefs (Festinger, Riecken, & Schachter, 1956). In their book *When Prophecy Fails*, Festinger et al. described infiltrating an American cult whose leader had predicted a cataclysmic flood and the arrival of flying saucers to rescue the group. After the predictions of the prophecy failed to materialize, the group proclaimed that the aliens had spared Earth because of the group's dedication. Moreover, whereas the group had been secretive and had actively discouraged proselytizing prior to the disconfirmation, subsequently the group engaged in active advocacy.

Although the finding that shaken beliefs led to increased advocacy is a classic topic in any introductory psychology course, and inspired Festinger's (1957) theory of cognitive dissonance, the finding derives from a single case study, and the proposition has never been experimentally examined. Further, there seem to be two competing explanations for the paradoxical increase in proselytizing. On the one hand, members of the group, who were motivated to believe their dedication had stopped the apocalypse (rather than believe that the prophecy failed), might have become more confident of their beliefs, and this increased confidence may have been what led to greater proselytizing. This explanation is consistent with dissonance theory, which assumes that people modify their beliefs

in order to resolve inconsistencies among beliefs (Festinger, 1957). On the other hand, members of the group, their beliefs shaken by disconfirmation, might have become less confident of their beliefs and begun proselytizing as a means to restore their confidence. At present, the relationship between shaken beliefs and proselytizing remains murky.

In the research presented in this article, we experimentally examined the link between shaken beliefs and advocacy. One perspective is that shaken confidence should decrease proselytizing. Specifically, a large body of research has found that people are more likely to engage in attitude-congruent behavior when they are confident of their attitudes than when they are not (Bizer, Tormala, Rucker, & Petty, 2006; Glasman & Albarracín, 2006; Rucker & Petty, 2004; Rucker, Petty, & Briñol, 2008; Tormala & Petty, 2004). In a study of particular relevance, Visser, Krosnick, and Simmons (2003) found that people who were confident of their attitude toward global warming were particularly likely to engage in attitude-expressive behaviors, such as donating money and attending discussions related to global warming. These findings suggest that the cult members in Festinger and his colleagues' (1956) field study

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proselytized not because they doubted their beliefs, but because they had become more confident in their beliefs (e.g., because they believed their dedication saved the world).

However, we propose that people might be more likely to advocate their beliefs when their confidence in those beliefs is temporarily shaken. This proposition is based on two assumptions: First, the beliefs and attitudes individuals hold are important in defining their self-concept (such that shaken confidence in a closely held belief functions as a threat), and second, advocacy can serve as a means to bolster these beliefs. We discuss these assumptions in the context of prior research and then report three experiments that tested our proposition that shaken confidence influences advocacy.

### Attitudes and Beliefs Define the Self

Traditionally, attitudes have been thought of as functional, acting as guides for information processing, perception, and behavior (Fazio & Petty, 2007). However, the literature also indicates that the attitudes and beliefs one holds serve to define (Eagly & Chaiken, 1993; Olson & Zanna, 1993; Shavitt, 1990) and protect (Herek, 1987; Shavitt, 1990) one's self-concept. For instance, an individual's belief in the value of volunteerism might be important to his or her self-concept of being a good and responsible person (Olson & Zanna, 1993).

Moreover, research shows that people are motivated to hold a well-defined self-view (Baumgardner, 1990; Gao, Wheeler, & Shiv, 2009), suggesting that people will defend against threats to beliefs that are closely linked to the self. Consistent with this notion, research has demonstrated that individuals process information in a biased manner in an effort to maintain their beliefs (e.g., Lord, Ross, & Lepper, 1979). This outcome is particularly likely for beliefs that individuals view as important to their identity, such as deeply held political and personal beliefs (Baron, 2000; Nickerson, 1998; Oswald & Grosjean, 2004; Risen & Gilovich, 2007; Trope & Liberman, 1996).

It has been found that affirming one's values generally leads to more objective processing (i.e., to less confirmatory processing) of proattitudinal information (Cohen, Aronson, & Steele, 2000; Correll, Spencer, & Zanna, 2004; Reed & Aspinwall, 1998). This finding is consistent with the perspective that attitude and belief confirmation is motivated by a need to maintain the self through protecting beliefs closely linked to one's identity. That is, when the self is protected via self-affirmation or other means, the need to protect one's beliefs is reduced.

### Advocacy as Affirmation

We contend that advocacy is a means to bolster a belief in the face of threats. Specifically, we propose that expressing one's beliefs to other people in the form of advocacy can affirm one's identity and self-concept, just as expressing or identifying one's values has been shown to do (e.g., Correll et al., 2004; Koole, Smeets, van Knippenberg, & Dijksterhuis, 1999; Steele,

1988). We also propose that the tendency to advocate a threatened belief will be moderated by whether individuals view the advocacy as effective. Specifically, advocating a threatened belief will be more effective in bolstering the belief if recipients of the advocated message accept the message than if they reject it. We expect this outcome because perceiving that other people hold beliefs similar to one's own helps validate one's beliefs through shaping one's social reality (e.g., Asch, 1955).

### Overview of the Experiments

In three experiments, we examined the proposition that shaking individuals' beliefs can lead them to increase their advocacy of those beliefs. Addressing Festinger's original work, we sought to answer the question of whether shaken confidence increases or decreases people's propensity to persuade other people of their belief. In addition, we tested the moderating effect of three factors: the opportunity to affirm one's identity (Experiment 1), the importance of the threatened beliefs (Experiment 2), and other people's receptivity to the advocated message (Experiment 3). Specifically, in Experiment 3, we examined whether people use advocacy in a strategic fashion to bolster their beliefs, such that advocacy is more likely when individuals believe there is a possibility of changing the opinion of another individual. We measured advocacy by evaluating the effort participants put into writing a persuasive message (i.e., number of words and time spent writing) and by determining participants' intention to advocate.

### Experiment 1

Experiment 1 tested the proposition that individuals engage in probelief advocacy when induced to feel less confident of their beliefs. Specifically, Experiment 1 examined M.B.A. students' beliefs regarding the use of animal testing in safety evaluations of consumer products. Beliefs about this topic are likely to depend on individuals' fundamental values (i.e., material progress vs. animal rights) and therefore relate to individuals' self-views. Moreover, Experiment 1 examined whether affirming one's identity attenuates the effect of shaken confidence on advocacy. If people increase their advocacy because shaken confidence in closely held beliefs threatens their self-views, this effect should be attenuated when the threat is mitigated by an opportunity to affirm their identity.

### Method

Participants were 88 M.B.A. students at the Kellogg School of Management, Northwestern University (58% female and 42% male; mean age = 28.5 years). They were randomly assigned to one of four experimental conditions in a 2 (confidence: doubtful vs. confident)  $\times$  2 (affirmation: affirmation vs. control) between-participants design. The study, described as a survey on consumer preferences, was completed using pencil and paper during an M.B.A. marketing class.

The affirmation manipulation was performed first. Because prior research has shown that individuals seek to express their identity through the products they own and the activities they pursue (Aaker, 1999; Belk, 1988; Berger & Heath, 2008; Rucker & Galinsky, 2008), we asked participants in the affirmation condition to identify items closely tied to their identity, namely, their favorite food, book, city, movie, song, and hobby. We asked participants in the control condition to identify their parents' favorites for the same series of items.

After the affirmation manipulation, as part of an ostensibly unrelated experiment, we asked participants for their views on the use of animal testing to promote the safety of consumer products. First, participants read a brief paragraph outlining how animal testing is used to ensure the safety of consumer products and indicated whether they supported or did not support such testing.

After participants read this paragraph, they were asked to summarize their views on animal testing in a brief sentence and to write this response using either their dominant or their nondominant hand. Ostensibly, the instruction regarding which hand to use was included to test whether the hand used correlated with participants' beliefs. Writing with the dominant hand and writing with the nondominant hand have been shown to generate similar content, but people who write with the nondominant hand have less confidence in the information written (see Briñol & Petty, 2003). To check this manipulation, we subsequently asked participants to indicate their confidence in their view on animal testing on a 7-point scale (from 1, *not at all confident*, to 7, *extremely confident*).

Next, participants were asked what they would say to persuade someone of their views on animal testing. They were asked to write as much or as little as they liked using their dominant hand. The number of words participants wrote in their persuasive message (our dependent measure) served as a proxy for participants' persuasive effort. After completing this task, participants were thanked and debriefed.

## Results and discussion

The manipulation of confidence was successful: Participants who wrote with their nondominant hand expressed less confidence in their views about animal testing ( $M = 4.91$ ,  $SD = 1.41$ ) than participants who wrote using their dominant hand ( $M = 5.51$ ,  $SD = 1.36$ ),  $F(1, 86) = 4.10$ ,  $p = .023$ .

Overall, 48% of participants supported animal testing, and 52% opposed it. However, the focus of the experiment was not on participants' specific views on animal testing, but on their advocacy of their views. Because the number of words participants used to advocate their views did not vary by the views themselves, we collapsed the data across the two views.

There was a significant main effect of confidence, such that participants who were induced to feel doubt ( $M = 27.22$ ,  $SD = 14.88$ ) used significantly more words in their persuasive message than participants who were induced to feel confident ( $M = 22.21$ ,  $SD = 12.60$ ),  $F(1, 86) = 2.90$ ,  $p = .046$ ,  $d = 0.36$ .

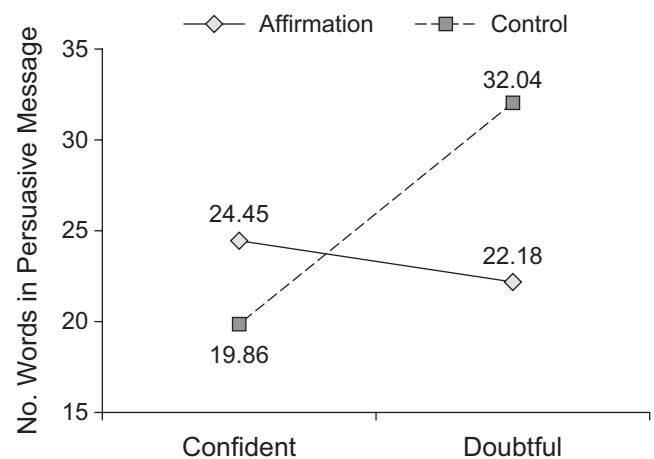
This finding is consistent with our account that shaken confidence in a view can lead to increased persuasive effort.

Furthermore, there was a significant Confidence  $\times$  Affirmation interaction,  $F(1, 84) = 6.39$ ,  $p = .013$  (see Fig. 1). Consistent with our predictions, decomposing this interaction revealed that among participants who were not given an opportunity to affirm their identity, those induced to feel doubt (through writing with their nondominant hand) wrote more words ( $M = 32.04$ ,  $SD = 16.89$ ) than those induced to feel confident (through writing with their dominant hand;  $M = 19.86$ ,  $SD = 11.39$ ),  $F(1, 42) = 7.71$ ,  $p = .004$ ,  $d = 0.85$ . In contrast, there was no difference in the number of words written by confident ( $M = 24.45$ ,  $SD = 13.52$ ) versus doubtful ( $M = 22.18$ ,  $SD = 10.62$ ) participants who were given an opportunity to affirm their identity,  $F < 1$ ,  $d = 0.19$ .

In summary, participants exerted more effort to persuade other people of their beliefs when their confidence in those beliefs was incidentally shaken. Moreover, this difference was attenuated when participants had a prior opportunity to affirm their identity, a result suggesting that if individuals already had compensated for their shaken confidence through self-affirmation, they did not need to bolster their beliefs through attempting to persuade other people.<sup>1</sup>

## Experiment 2

The issue we selected in Experiment 1 was important because it reflected fundamental values. However, research suggests that beliefs that individuals view as less important are not as tightly linked to the self-view, and individuals are correspondingly less likely to seek to affirm and defend them (see Correll et al., 2004). Therefore, in Experiment 2, we examined whether belief importance moderates the relationship between shaken confidence and persuasive effort. We also designed Experiment 2 to test for convergent evidence by manipulating confidence through a different means (a priming task), including an additional measure of persuasive effort (the time individuals



**Fig. 1.** Results from Experiment 1: the number of words participants used in a persuasive message as a function of confidence and affirmation condition.

spent writing their persuasive message), and using attitudes on a different issue.

## Method

Participants were 151 individuals (71% female and 29% male; mean age = 37 years) recruited from an online database of participants from across the United States. Participants were randomly assigned to either the confident or the doubtful condition, and the experiment was conducted online.

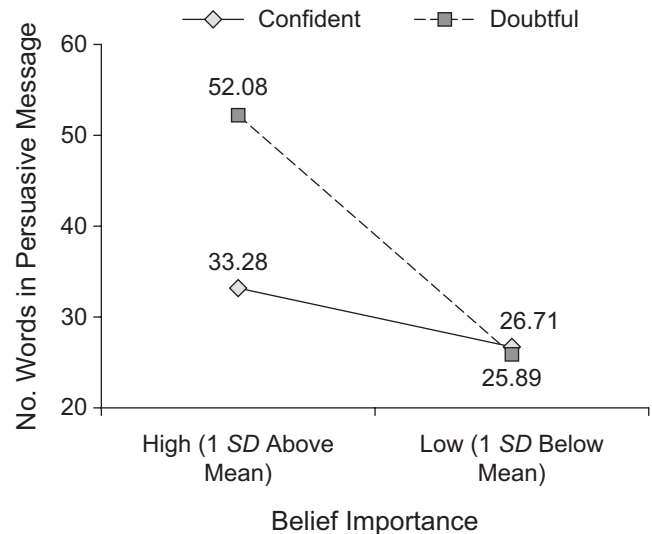
Confidence was manipulated by asking participants to describe either two situations in which they felt a great deal of uncertainty (doubtful condition) or two situations in which they felt a great deal of certainty (confident condition; see Petty, Briñol, & Tormala, 2002; Tormala, Rucker, & Seger, 2008). Subsequently, participants were asked to indicate their dietary preference (vegan, vegetarian, or meat eater) and, as a manipulation check, to indicate on a 7-point scale (from 1, *not at all confident*, to 7, *extremely confident*) their confidence that their dietary preference was the right way to eat.

Next, participants rated on a 7-point scale (from 1, *not at all important*, to 7, *extremely important*) how important their choice of diet was to them. Participants were then asked to imagine that they were discussing their choice of diet with someone with a different type of diet and to write what they would say to convince that person of the advantages of their diet.

## Results and discussion

Participants in the doubtful condition (who wrote about experiences involving feelings of uncertainty) expressed less confidence in their dietary preferences ( $M = 4.92$ ,  $SD = 1.63$ ) than participants in the confident condition (who wrote about experiences involving feelings of certainty;  $M = 5.40$ ,  $SD = 1.49$ ),  $F(1, 149) = 3.58$ ,  $p = .030$ . This suggests that our confidence manipulation was effective. Ninety percent of respondents were meat eaters, 8.6% were vegetarian, and 1.3% were vegan. As we were concerned with the effect of confidence on advocacy, rather than with participants' specific dietary preferences, we collapsed the data across dietary preferences.

Participants induced to feel doubt wrote longer messages ( $M = 39.15$  words,  $SD = 32.23$ ) than participants induced to feel confident ( $M = 29.97$  words,  $SD = 21.38$ ),  $F(1, 149) = 4.02$ ,  $p = .023$ ,  $d = 0.34$ .<sup>2</sup> In addition, there was a significant Confidence  $\times$  Belief Importance interaction for the number of words in participants' persuasive messages,  $\beta = 5.98$ ,  $t(147) = 2.27$ ,  $p = .025$  (see Fig. 2). We decomposed the interaction as advocated by Aiken and West (1991). Participants who viewed their dietary preference as particularly important (1  $SD$  above the mean) devoted more words to their advocacy if they were induced to feel doubt ( $M = 52.08$ ) than if they were induced to feel confident ( $M = 33.28$ ),  $\beta = 18.77$ ,  $t(147) = 3.08$ ,  $p < .01$ . In contrast, participants who did not view their dietary preferences as particularly important (1  $SD$  below the mean) devoted a similar number of words to their advocacy regardless of



**Fig. 2.** Results from Experiment 2: the number of words participants used in a persuasive message as a function of confidence condition and rated importance of the belief.

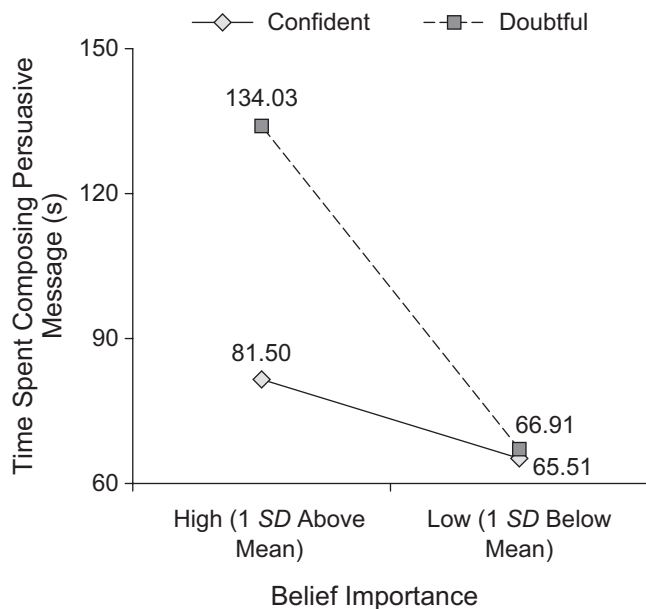
whether they had been induced to feel doubt ( $M = 25.89$ ) or confidence ( $M = 26.71$ ),  $t < 1$ .

When we analyzed the time participants spent composing their persuasive messages, 3 participants (less than 2% of the sample) were excluded because their times were more than 3 standard deviations above the mean. Participants in the doubtful condition devoted more time to composing their messages ( $M = 100.27$  s,  $SD = 95.56$ ) than participants in the confident condition ( $M = 73.43$  s,  $SD = 63.29$ ),  $F(1, 146) = 3.88$ ,  $p = .025$ ,  $d = 0.33$ . Furthermore, there was a Confidence  $\times$  Belief Importance interaction for the time participants devoted to writing the messages,  $\beta = 15.57$ ,  $t(144) = 1.95$ ,  $p = .054$  (see Fig. 3). Participants who viewed their dietary preference as particularly important (1  $SD$  above the mean) devoted more time to their advocacy if they were induced to feel doubtful ( $M = 134.03$  s) than if they were induced to feel confident of their beliefs ( $M = 81.50$  s),  $\beta = 52.46$ ,  $t(144) = 2.82$ ,  $p = .006$ . In contrast, participants who did not view their dietary preferences as particularly important (1  $SD$  below the mean) devoted similar amounts of time to their advocacy regardless of whether they were induced to feel doubtful ( $M = 66.91$  s) or confident ( $M = 65.51$  s) of their beliefs,  $t < 1$ .

Replicating Experiment 1, Experiment 2 demonstrated that persuasive effort was greater among participants whose confidence in their belief was shaken than among those whose confidence was not shaken. Moreover, the results support the proposition that this effect is due to the connection of the belief to the self, as the effect was more pronounced among participants who viewed the belief as particularly important.

## Experiment 3

In Experiment 3, we examined whether participants would be more motivated to persuade other people of a shaken



**Fig. 3.** Results from Experiment 2: time spent composing a persuasive message as a function of confidence condition and rated importance of the belief.

belief when the potential message recipients were receptive to the advocated message. We hypothesized that this effect would occur because receptive recipients would be more likely to be persuaded and hence more likely to affirm participants' own belief. In addition, rather than look at participants' persuasive effort, we examined their reported likelihood that they would undertake an attempt to persuade another person of their attitude. Finally, Experiment 3 used a new issue, involving Macintosh (Mac) computer users' beliefs about Macs.

## Method

Participants were 113 undergraduate Mac users at Northwestern University (66% female and 34% male). The experiment had a 2 (confidence: doubtful vs. confident)  $\times$  2 (message receptivity: open-minded vs. closed-minded) between-participants design and was conducted online.

Participants first completed the confidence manipulation described in Experiment 2 (i.e., they wrote about experiences involving feelings of either certainty or uncertainty). They were then asked to confirm that they used a Mac (rather than a Windows-based PC) as their primary computer and to indicate whether they believed that Macs were superior to PCs. Seven participants did not support this view and were not included in the analysis. Finally, as a manipulation check, participants were asked to rate their confidence that Macs were superior to a Windows-based PCs on a 7-point scale (from 1, *not at all confident*, to 7, *extremely confident*).

Next, participants were asked to imagine that they were discussing their use of a Mac with a user of a Windows-based PC who was happy with his or her PC but was either open-minded

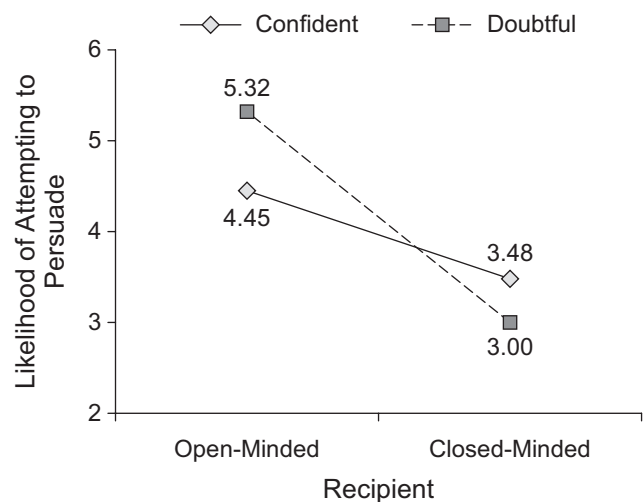
or closed-minded to the possibility of switching to a Mac. Participants then rated the likelihood that they would try to persuade the PC user to switch to a Mac (7-point scale from 1, *not at all likely*, to 7, *extremely likely*).

## Results and discussion

Participants in the doubtful condition expressed less confidence in their beliefs of the Mac's superiority ( $M = 4.73$ ,  $SD = 1.60$ ) than participants in the confident condition ( $M = 5.21$ ,  $SD = 1.20$ ),  $F(1, 104) = 2.98$ ,  $p = .044$ .

There was a significant Confidence  $\times$  Message Receptivity interaction,  $F(1, 102) = 4.22$ ,  $p = .043$  (see Fig. 4). Among participants in the open-minded condition, those induced to experience doubt reported a higher likelihood that they would attempt to persuade the message recipient to switch to a Mac ( $M = 5.32$ ,  $SD = 1.58$ ) than did those induced to experience confidence ( $M = 4.45$ ,  $SD = 1.44$ ),  $F(1, 51) = 4.18$ ,  $p = .023$ ,  $d = 0.58$ . In contrast, in the closed-minded condition, participants who were induced to experience doubt ( $M = 3.00$ ,  $SD = 1.96$ ) did not report a higher likelihood of attempting to persuade someone to switch to a Mac than did participants who were induced to experience confidence ( $M = 3.48$ ,  $SD = 1.63$ ),  $F < 1$ ,  $d = 0.27$ .

In sum, participants expressed a greater propensity to persuade another person to switch to a Mac when their belief in the Mac's superiority was shaken, but only when the other person was potentially open to change. This finding suggests that the degree to which people choose to engage in advocacy is determined by whether they view their attempts as a likely means of affirming their beliefs (e.g., through advocacy's influence on their social reality). It seems that if advocacy is unlikely to pave a path to one's desired destination, it is not used as a means to address doubt.



**Fig. 4.** Results from Experiment 3: participants' reported likelihood of attempting to persuade someone to switch computers as a function of that person's receptivity to being persuaded and participants' confidence in their belief.

## General Discussion

Across experiments, individuals induced to feel doubt about their beliefs exerted more effort toward advocating their beliefs (Experiments 1 and 2) and expressed a greater likelihood to attempt to persuade other people of their beliefs (Experiment 3) than did individuals induced to feel confident in their beliefs. Moreover, the effect was attenuated among individuals who were given an opportunity to affirm their identity (Experiment 1) and enhanced among individuals for whom the belief was particularly important (Experiment 2). Finally, participants' expressed propensity to persuade other people depended on the recipients' receptivity to the message (Experiment 3).

These experiments focused on incidentally induced doubt, but they also provide experimental evidence relevant to Festinger and his colleagues' (1956) classic interpretation that disconfirmatory evidence increased cult members' advocacy by increasing their confidence (i.e., because they believed their dedication had saved the world). Our finding that individuals use advocacy to restore shaken confidence suggests a different flow of causality: Cult members proselytized as a means to resolve their doubt.

Our findings can be related to research showing that people are motivated to reduce uncertainty. The main finding of this line of research is that people attempt to reduce uncertainty through processing information more thoroughly (e.g., Briñol, Petty, Valle, Rucker, & Becerra, 2007; Tormala et al., 2008). Moreover, research on uncertainty reduction has shown that the motivation to reduce ambivalence can sometimes lead to greater processing of proattitudinal information than usual in order to bolster one's attitude and decrease the ambivalence (Clark, Wegener, & Fabrigar, 2008). Our experiments differ from this prior research by suggesting that uncertainty reduction is motivated not only because uncertainty is intrinsically unpleasant, but also because doubt about closely held attitudes and beliefs can affect one's self-view.

To date, despite a large body of research devoted to understanding the factors that influence how individuals become persuaded of new ideas, little attention has been paid to what motivates individuals to persuade other people. Given that persuasion involves two parties, a message transmitter and a message receiver, focusing on the motivation to persuade seems like a potentially fecund area for future research and one the present research has only begun to address. In particular, such research might illuminate people's myriad motivations to disseminate their political, religious, economic, and other diverse attitudes and beliefs. Moreover, the notion suggested by our third experiment—that people might both form their social networks and propagate beliefs through their social networks in order to bolster closely held beliefs and attitudes—has potentially important policy implications and should be investigated further.

Finally, the present research also offers a warning to anyone on the receiving end of an advocacy attempt. Although it is natural to assume that a persistent and enthusiastic advocate

of a belief is brimming with confidence, the advocacy might in fact signal that the individual is boiling over with doubt. Given that individuals often rely on cues to guide their evaluations of persuasive appeals (Petty & Wegener, 1998), vigilance to cues that appear to imply confidence is warranted.

## Acknowledgments

The authors are grateful to Adam Galinsky for his comments. The two authors contributed equally to this research.

## Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

## Notes

1. One might wonder if participants wrote fewer words in their persuasive message in the confident condition because their dominant hand was tired. This seems unlikely given that participants in the confident condition and participants in the doubtful condition wrote similar amounts when affirmed. In addition, in a pilot test in which we asked individuals to write a nonpersuasive message (i.e., telling us about getting a haircut), we found no difference in message length as a function of the hand initially used for writing. This finding, along with the significant interaction between confidence and affirmation, suggests that differences in message length were not caused by differences in hand fatigue.
2. It is possible that participants wrote more when writing about feelings of certainty than when writing about feelings of uncertainty, which might have induced differences in typing fatigue. We found that participants wrote a similar number of words when expressing feelings of uncertainty ( $M = 52.99$  words,  $SD = 34.54$ ) and when expressing feelings of certainty ( $M = 49.30$  words,  $SD = 33.16$ ),  $F < 1$ . Thus, it appears that the manipulation did not induce differences in typing fatigue.

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