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FlashReport

Does attitude certainty beget self-certainty?

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ABSTRACT

This research explores the possibility that changes in attitude certainty can affect general self-certainty and, thus, have consequences that extend beyond the attitude domain. Across two studies, attitude certainty is manipulated using repeated attitude expression and attitude consensus paradigms. The implications of these manipulations are tested for feelings of general self-uncertainty (Study 1) and global self-doubt about one's abilities (Study 2). In each study, it is demonstrated that participants feel greater self-certainty under conditions of high rather than low attitude certainty, but only when they view aspects of the attitude as central to their self-concept.

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Securing certainty is a fundamental goal in judgment formation (Kruglanski, 1989; Petty, Briñol, Tormala, & Wegener, 2007). This has been revealed in research on a variety of topics, including attitudes (Tormala & Rucker, 2007), the self (DeMarree, Petty, & Briñol, 2007; Wright, 2001), impression formation (Yzerbyt, Schadron, Leyens, & Rocher, 1994), stereotyping (Sechrist & Stangor, 2001), and mental health (Weary & Edwards, 1994). Particularly extensive attention has been paid to certainty in the attitudes domain. Whereas an attitude refers to one's general evaluation of something (e.g., a product or policy), attitude certainty refers to the sense of conviction one has about that evaluation (Abelson, 1988; Gross, Holtz, & Miller, 1995). Attitude certainty has garnered considerable research attention primarily because of its important consequences for an attitude's durability and influence. High certainty attitudes typically are more resistant to change (Bassili, 1996; Wu & Shaffer, 1987) and more predictive of behavior/choice (Bizer, Tormala, Rucker, & Petty, 2006) than their low certainty counterparts.

The current research tests a novel consequence of attitude certainty. We explore the possibility that manipulations of attitude certainty can affect general *self-certainty* and, thus, have consequences that reach beyond the attitude domain. We define self-certainty broadly to include the sense of clarity one has about one's personality or self-concept and the sense of confidence one has about one's general competence and abilities. Could becoming less certain of one's attitude toward an issue like abortion increase one's need for individualized feedback following a personality

test? Could becoming more certain of one's attitude toward abortion reduce one's doubt about one's general abilities?

On the face of it, these effects seem highly improbable—one's attitude toward abortion is considerably different from one's general self-views. However, research and theory suggest that people's self-concepts are based to some extent on their perceptions of their own attitudes (e.g., Brown, 1991), particularly when the attitude is important or central to the self in some way (e.g., Correll, Spencer, & Zanna, 2004; Crano, 1995). Thus, one might expect attitude certainty to affect general self-certainty, but only when aspects of the attitude are central to the self-concept.

Previous research has shown that there are multiple ways to manipulate attitude certainty. For instance, attitude certainty can be increased by repeated attitude expression as well as by learning that one's attitude is supported by social consensus (e.g., Petrocelli, Tormala, & Rucker, 2007). We propose that these manipulations of attitude certainty can affect self-certainty, but only when aspects of the attitude are central to the self-concept. For instance, repeated attitude expression might increase self-certainty, but only when the attitude is perceived to reflect one's core values. Similarly, attitude consensus might affect self-certainty, but only when the consensus comes from an identity-relevant group.

Two studies investigate these possibilities. Across studies, we varied attitude certainty using attitude expression (Study 1) and social consensus (Study 2) manipulations. To assess self-certainty, we used a measure of self-uncertainty (desire for personality feedback) and self-doubt about one's competence and abilities. Our primary hypothesis was that when aspects of the attitude were viewed as central to their self-concept, participants would exhibit greater self-certainty in the high rather than low attitude certainty

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condition. When aspects of the attitude were less self-central, we expected no effect of attitude certainty on self-certainty.

Study 1

In Study 1, we manipulated attitude certainty by varying the number of times participants were asked to express their attitudes, as people have been shown to report greater certainty after expressing their attitudes multiple times compared to just once (e.g., Holland, Verplanken, & van Knippenberg, 2003; Petrocelli et al., 2007). Our interest was in whether reporting an attitude several times (versus once) would be sufficient to produce higher levels of self-certainty. To explore this possibility, we adopted a paradigm from Stapel and Tesser (2001) in which participants completed a false personality test and later reported their desire for personality feedback. The dependent variable was based on a large body of research showing that those who lack self-certainty express a greater interest in acquiring information about their personal characteristics (e.g., Gibbons & Buunk, 1999). Our hypothesis was that among individuals who viewed the attitude issue as central to their self-concept, more self-uncertainty (i.e., greater desire for personality feedback) would be evident in the single versus multiple expression condition. Among low centrality individuals, we expected no difference.

Method

Participants and procedure

Sixty-six Indiana University (IU) undergraduates, participating for course credit, were seated at computer terminals. On the opening screen, participants learned that we were creating a personality profile of IU students, and we were interested in their perceptions of themselves and various issues. Participants then completed 12 items from an ostensibly well-established personality inventory. Following the inventory, participants reported their attitudes toward one issue (gun control) before completing the self-uncertainty measure. After a ten minute filler task, participants reported attitude centrality.

Independent variables

Attitude expression. Participants were randomly assigned to express their attitudes toward gun control either once or several times. In the single expression condition, participants reported attitudes on a scale ranging from 1 (*against*) to 9 (*in favor*). In the multiple expression condition, participants rated gun control on five additional scales (e.g., *negative–positive, unfavorable–favorable*) before responding to the *against–in favor* item ($\alpha = .97$).

Attitude centrality. At the end of the experiment, participants indicated how central their attitude was by answering the following question: To what extent does your opinion toward gun control reflect your core values and beliefs? Responses were provided on a scale ranging from 1 (*not at all*) to 9 (*very much*). There was no difference in centrality across expression conditions, $t < 1$.

Self-uncertainty

Participants reported self-uncertainty on five items (e.g., To what extent would you like to learn more about your score on the personality test you took earlier?) ranging from 1 (*not at all*) to 9 (*very much*). These items were based on the notion that greater self-uncertainty would be indicated by greater desire to receive personality feedback (Stapel & Tesser, 2001). Responses were averaged ($\alpha = .83$); higher values indicated greater self-uncertainty.

Results

Attitudes

Responses to the shared attitude item were submitted to a hierarchical regression analysis, treating attitude expression (0 = single, 1 = multiple) and attitude centrality (continuous, mean centered) as main effect predictors in the first step, and their interaction in the second step. This analysis revealed a main effect of expression ($\beta = .25, p < .05$); participants reported more favorable attitudes in the multiple ($M = 7.03$) than single ($M = 5.91$) expression condition. No other effects were significant, $ps > .38$. Given the effect of expression on attitudes, we controlled for attitudes in subsequent analyses.

Self-uncertainty

We submitted the index of self-uncertainty to the same analysis, controlling for attitudes. There were no main effects, $ps > .24$, but we obtained the predicted expression \times centrality interaction ($\beta = -.71, p = .02$). As illustrated in Fig. 1, high centrality participants demonstrated more self-uncertainty (greater desire to receive personality feedback) in the single versus multiple expression condition ($\beta = -.43, p < .02$). Low centrality participants showed no effect ($\beta = .14, p < .43$).

Discussion

Study 1 provided initial evidence that attitude certainty manipulations can affect self-certainty. Participants reported less desire to receive feedback about their personalities after expressing their attitudes toward gun control multiple times (versus once). As hypothesized, however, this effect only occurred among high attitude centrality individuals. Low centrality individuals showed no self-certainty effect.

Study 2

Study 2 tested a different self-certainty consequence using a different manipulation of attitude certainty. In this study, we manipulated attitude certainty by leading participants to perceive high or low levels of social consensus for their attitudes (Festinger, 1954; Petrocelli et al., 2007; Visser & Mirabile, 2004). Given that social identity and self-categorization research has firmly established the importance of people's reference groups for their self-

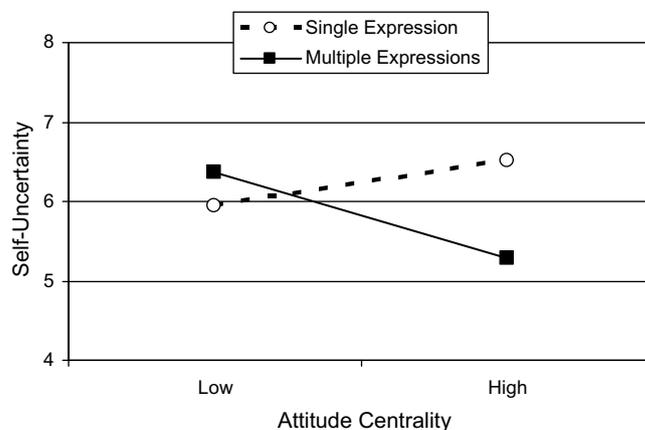


Fig. 1. Self-uncertainty as a function of expression condition (single or multiple) and attitude centrality in Study 1. Plot depicts predicted means at +1 SD and –1 SD on the centrality index. Uncertainty scores are coded such that greater values indicate greater self-uncertainty, or more desire to receive personality feedback.

concepts (e.g., Tajfel, 1978), we measured identification with the consensus group as a moderator of the link between attitude certainty and self-certainty. Moreover, because consensus has been shown to affect aspects of attitude certainty that relate to the feeling that an attitude is correct or right (Petrocelli et al., 2007), we used a new measure of self-certainty–self-doubt, defined as individuals' general uncertainty about their abilities or competence (Oleson, Poehlmann, Yost, Lynch, & Arkin, 2000). Finally, to establish the importance of attitude certainty in shaping self-certainty, we measured attitude certainty and tested for mediation of the self-doubt effect.

We expected consensus to affect attitude certainty regardless of group identification. Indeed, whether one identifies with others or not, learning that one's attitude is well-supported should boost one's confidence that the attitude is justified or valid. Consistent with the logic of Study 1, however, we expected the attitude certainty effect to spread to self-doubt only when participants were highly identified with the relevant reference group.

Method

Participants and procedure

Fifty IU undergraduates participated for course credit. All materials were presented via computer. Participants were told that we were constructing an opinion profile of IU students by gathering their reactions to various issues. Following this introduction, participants reported their attitudes toward three issues (capital punishment, freedom of expression, affirmative action) on scales ranging from 1 (*against*) to 9 (*in favor*). After reporting attitudes, participants received consensus feedback and then reported attitude certainty followed by self-doubt. Finally, after a 10-min filler task, participants reported their group identification. Importantly, there were no differences in attitudes or group identification across consensus conditions, $t_s < 1$.

Independent variables

Consensus. Participants were randomly assigned to high or low consensus conditions. Participants were told the attitude survey had been administered to approximately 2100 IU students, and that the computer would compare their responses to this database. Following a delay, participants were informed that their attitude profiles matched 89.33% (or 10.67%) of students surveyed (see Petrocelli et al., 2007).

Group identification. At the end of the experiment, participants reported group identification on nine items (e.g., How much do you identify with the other members of the IU student body?) ranging from 1 (*not at all*) to 9 (*very much*) (adapted from Grieve & Hogg, 1999; Tropp & Wright, 2001). Responses were averaged ($\alpha = .95$).

Dependent measures

Attitude certainty. Participants reported attitude certainty on four 9-point scales asking participants to reflect on all three issues simultaneously (e.g., How certain are you of your attitudes toward these issues?). These items were adapted from Tormala, Clarkson, and Petty (2006). We assessed certainty toward multiple issues at once to match the generality of the consensus information. Responses were averaged ($\alpha = .85$); higher numbers indicated greater certainty.

Self-doubt. Participants completed the self-doubt subscale of the Subjective Overachievement Scale (Oleson et al., 2000). This scale contains 8 items (e.g., More often than not I find myself unsure of my abilities) rated from 1 (*disagree strongly*) to 6 (*agree strongly*). Responses were averaged ($\alpha = .92$).

Results

Attitude certainty

We submitted the attitude certainty data to a hierarchical regression analysis with consensus (0 = low, 1 = high) and group identification (continuous, mean centered) as the predictors. As hypothesized, only the main effect of consensus reached significance ($\beta = .29$, $p < .05$); participants reported more certainty following high ($M = 7.28$) than low ($M = 6.65$) consensus. No other effects were significant, $p_s > .14$.

Self-doubt

Self-doubt scores revealed a significant negative association between group identification and self-doubt ($\beta = -.42$, $p < .01$), qualified by the predicted consensus \times group identification interaction ($\beta = -.30$, $p = .02$). As illustrated in Fig. 2, high identifiers reported less self-doubt in the high versus low consensus condition ($\beta = -.42$, $p = .02$). Low identifiers evinced no effect ($\beta = .19$, $p > .29$).

Mediation

Also important was determining whether attitude certainty mediated the self-doubt effect. We hypothesized that consensus would have a main effect on attitude certainty which would interact with group identification to determine self-doubt. That is, we expected a constant effect of the manipulation on the mediator (attitude certainty), but a moderated effect of the mediator on the final outcome (self-doubt). We tested this moderated mediation (Muller, Judd, & Yzerbyt, 2005) in two steps. First, to establish the significance of the mediating interaction, we examined whether attitude certainty interacted with group identification to determine self-doubt, controlling for the attitude certainty and identification main effect terms. This interaction was significant ($\beta = -.29$, $p < .05$). We then used the Preacher, Rucker, and Hayes (2007) procedure to test the significance of the full moderated indirect pathway (i.e., the complete mediation model). This procedure provides a significance test of whether the indirect effect of consensus on self-doubt through attitude certainty was moderated by group identification. This mediating pathway was significant ($\beta = .19$, $t = -2.00$, $p = .05$).

Discussion

Study 2 revealed that an attitude consensus manipulation influenced self-doubt, but only among individuals who identified with the consensus group. Furthermore, this effect was mediated by attitude certainty. Among low group identifiers, consensus still

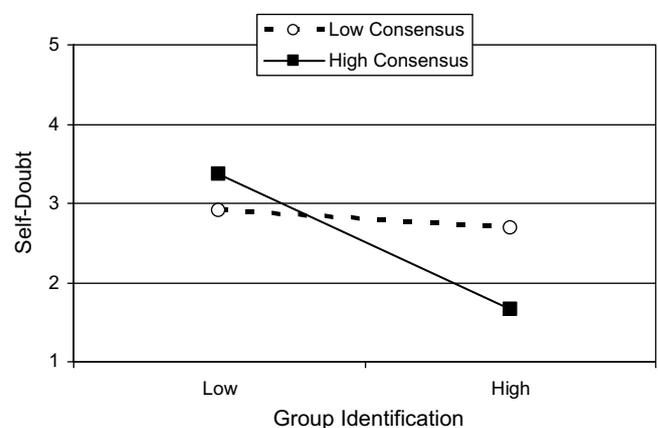


Fig. 2. Self-doubt as a function of attitude consensus and group identification in Study 2. Figure plots predicted means at +1 SD and -1 SD on the group identification index.

affected attitude certainty, but this effect did not generalize to self-doubt. The absence of generalization among low identifiers is important as it suggests that asking about three different attitude issues did not make attitude certainty self-relevant for all participants. It was only among those who identified with the consensus group that attitude certainty had self-relevant implications. Thus, the results provide clear evidence for the link between attitude certainty and self-certainty, but only when aspects of the attitude are central to the self-concept.

General discussion

Establishing psychological certainty is a fundamental part of judgment formation. The current research explored one type of certainty – attitude certainty – to better understand its full range of consequences. Although past studies have firmly established numerous consequences of feeling certain or uncertain of an attitude (see Tormala & Rucker, 2007), work in this area has been confined to attitude-relevant consequences. The current research examined whether attitude certainty has implications beyond the attitude domain.

In two studies, we explored the possibility that manipulations of attitude certainty could influence self-certainty. In Study 1, participants expressed their attitude once or multiple times, after which they revealed self-uncertainty by indicating the extent to which they wanted feedback concerning their personality. In Study 2, participants received attitude consensus information and later completed an established measure of self-doubt about their competence and abilities. The results were consistent across studies: Participants showed greater evidence of self-certainty (less desire to receive personality feedback, less self-doubt) when they were in the high versus low attitude certainty condition. Thus, becoming certain of an attitude produced outcomes that were completely independent of the attitude domain.

Of importance, however, these effects occurred only when participants viewed aspects of the attitude as central to their self-concept. Specifically, only when participants rated the attitude issue as relevant to their core values (Study 1) or indicated that they felt highly identified with the relevant reference group (Study 2) did attitude certainty spread to self-certainty. Thus, attitude certainty only fostered self-certainty among individuals for whom the attitude or reference group was self-relevant. Future research should explore the implications of these findings for subjective well-being.

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