

Evidence That Intellectual Humility Can Be Heightened via a Self-Affirmation Induction

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Author Note

This research was conducted with IRB approval under the direction of Ted V. Cascio, advisor to the Palm Beach State College Psi Beta Chapter. All guidelines of the APA regarding informed consent and ethical treatment of participants were followed. In addition, we would like to thank Dr. Cascio for his editorial feedback on multiple drafts of this manuscript. Correspondence concerning this article should be addressed to Lily G. Marie, Palm Beach State College, Palm Beach Gardens, FL 33410. Email: marielg@my.palmbeachstate.edu

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Abstract

The dispositional trait of intellectual humility (IH) refers to the degree to which people recognize their beliefs might be fallible. For the most part, it has been conceptualized as a “trait” variable that reflects a stable individual difference, however, in the current study, we examined whether IH also has “state”-like characteristics by testing whether it is susceptible to modification via a self-affirmation (SA) induction, which in previous research has been shown to reduce defensiveness in the face of information that threatens the self. To test this hypothesis, we first threatened participants by having them read a counter-attitudinal essay that contradicted their belief in God and then allowed half of the participants to affirm the self by writing about an important value that they hold. Following this SA induction, all participants completed a brief IH measure. Consistent with our hypothesis, statistical analyses revealed that participants in the SA condition reported significantly higher IH than participants in the control (no affirmation) condition. These findings suggest that in addition to having features associated with relatively fixed personality traits, IH is also amenable to change on the basis of a simple situational manipulation under conditions of self-threat.

Keywords: intellectual humility, self-affirmation, values affirmation, state, trait

Although everyday perception and judgment are susceptible to a host of powerful errors and systematic biases, people nevertheless tend to hold confidently to their assumptions, beliefs, and

decisions rather than tolerate a position of cognitive uncertainty. While this sort of overconfidence is indeed the norm (Koehler, 1991; Moore & Healy, 2008), people can also differ in terms of

their willingness to entertain the possibility that their beliefs might be incorrect or incomplete.

Intellectual Humility

The dispositional trait of intellectual humility (IH) refers to the degree to which people recognize that their beliefs might be fallible (Leary et al., 2017). This can apply to both matters of fact and opinion; this can also manifest through openness to other people's views or by a lack of rigidity and conceit regarding one's own beliefs. Originating within the philosophical field of virtue epistemology (Baehr, 2012; Roberts & Wood, 2006; Whitcomb et al., 2015), this trait has only recently become the target of empirical studies in the behavioral sciences, which have found that IH predicts a range of favorable cognitive and affective outcomes pertaining to the processing of viewpoints that conflict with one's own, including reactions to counter-attitudinal information (Hopkin et al., 2014; Krumrei-Mancuso & Newman, 2020; Leary et al., 2017; Porter, 2015), motivations to further investigate such information (Koetke, et al., 2021; Porter, 2015), and perceptions of ideological opponents (Colombo, et al., 2020; Leary et al., 2017; Stanley et al., 2020). Based on this research it has become evident that, in general, individuals high in IH appear better able to assimilate views that threaten their pre-existing beliefs, and also better able to tolerate the people who hold those views.

Across these various traditions, IH has been treated as a stable dispositional quality that has the potential to predict a range of desirable outcomes. In the current study, we aim to extend this previous literature by examining whether IH can be temporarily enhanced through a self-affirmation induction.

Self-Affirmation

Self-affirmation (SA) theory (Steele, 1988) posits that individuals are motivated to maintain global feelings of self-worth following a perceived threat to the self by means of various psychological defenses (Sherman & Cohen, 2002; Sherman & Hartson, 2011) and that one of the more adaptive of these defense strategies is to restore self-

perceptions of moral integrity in a separate domain from the one that is threatened. For example, when an athlete experiences defeat in a sporting context, she can deflect the resulting self-threat by privately affirming an alternate identity (e.g., parent, professional, religious devotee, etc.). The experimental SA paradigm, therefore, involves offering participants the opportunity to affirm their most important values, which provides an effective means to reestablish the integrity and self-worth that have been threatened, thereby lowering subsequent defensiveness while simultaneously bolstering resilience and equanimity in the face of the threat.

A large body of empirical work has demonstrated that SA lowers defensiveness in connection with a diverse range of threatening information, which in turn reduces bias in assimilating such information (e.g., Cohen et al., 2000; Cohen et al., 2005; Correll et al., 2004). These effects have been demonstrated in the domains of threatening health information (e.g., Harris & Napper, 2005; Reed & Aspinwall, 1998; Sherman et al., 2000), evaluative stress (e.g., Creswell et al., 2005; Taylor et al., 2003), and cognitive dissonance (e.g., Blanton et al., 2001; Matz & Wood, 2005).

On the other hand, the unfulfilled need to defend a valued identity or self-view is a major source of biased processing and closed-mindedness (Sherman & Cohen, 2006). Because strongly held beliefs are often connected to important identities, they may be surrendered only with significant hesitancy, and they may endure even when they conflict with reality (e.g., Abelson, 1986; Sears & Funk, 1991). Thus, we expect that the lowered defensiveness brought about by SA may enhance IH, a cognitive and affective stance that is fundamentally marked by openness, inquisitiveness, and a willingness to tolerate epistemic vulnerability.

The Current Study

Therefore, in the current study, we hope to experimentally test this potential impact of SA on IH by manipulating SA and measuring indices of IH in the presence of self-threat. Specifically, our hypothesis is that, upon being threatened, participants

that are subsequently self-affirmed will exhibit higher levels of IH than participants who are not self-affirmed.

Method

Participants

The participants ($N = 133$) included students enrolled in introductory-level psychology courses at a southeastern college of moderate size. All participants received extra credit as an incentive for their participation in the study which amounted to 3% of the total course grade. Complete datasets were obtained from 133 participants (38 males, 95 females) ranging in age from 18 to 49 ($M = 22.39$, $SD = 5.61$). Datasets from five participants were excluded for failure to follow the study instructions.

Measures & Procedure

All prospective participants were notified via email about the research project, and they were offered an opportunity to participate for extra credit. At the outset, all participants read a consent form describing the nature of the study and the instruments and measures included in the study protocol. Participants who chose to participate then digitally signed the form. Upon completing the form, participants then clicked a second link that directed them to the online study, which was administered via Qualtrics online study software.

In the online study, participants were first prompted to make up a random and anonymous 5-digit subject ID number and answer a few demographic questions, including their age and preferred gender identification. Next, all participants underwent a self-threat induction (adapted from Leary et al., 2017), which is designed to threaten a core belief. This procedure involved two steps. In step 1, participants responded to a binary, yes-no question that asked about their belief in God. In step 2, they were then prompted to read one of two counter-attitudinal essays that were assigned in such a way so as to contradict their previously expressed belief. That is, if participants indicated belief in God, then they read an essay arguing that God does not exist, and vice-versa.

Following the threat induction, participants were then randomly assigned to either the self-affirmation (SA) or non-affirmation (NA) condition. In the SA condition participants were prompted to rank six values from most to least important and then given five minutes to write about why their highest-ranked value is important to them. Similarly, in the NA condition participants were instructed to rank the six values, but they were then asked to write about why their lowest-ranked value might be important to another student at the same institution. This values-oriented procedure and others similar to it have been found to be highly effective for inducing SA in previous research (see McQueen & Klein, 2006, for a review).

Participants then completed the Intellectual Humility Scale (IHS; Leary et al., 2017), a 6-item self-report questionnaire that measures individual differences in IH. Participants responded to the six items, which included questions such as, "I reconsider my opinions when presented with new evidence," and "I accept that my beliefs and attitudes may be wrong," on a 1 (Not at all like me) to 5 (Very much like me) scale. This measure was found to have marginal internal consistency reliability ($\alpha = .60$).

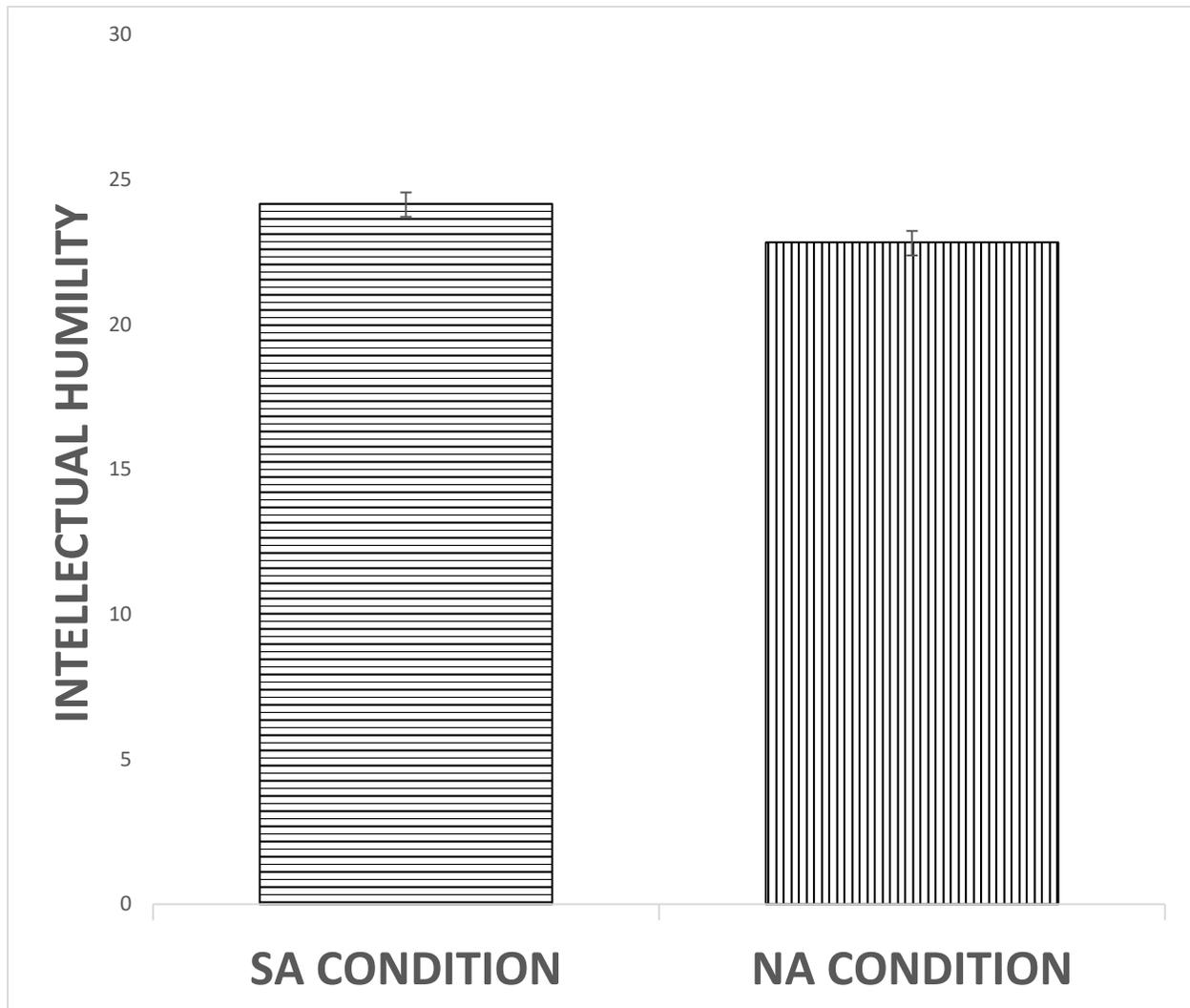
On the final page of the study, participants clicked on a link that redirected them to a separate webpage where they then entered their names and thereby received extra credit for their participation.

Results

We hypothesized that the mean IH score in the SA condition would be greater than the mean IH score in the NA condition. In order to test this hypothesis, we conducted a two-sample t-test, in which the mean IH score in the experimental SA group ($M = 24.16$; $SD = 3.27$) was significantly higher than the mean IH score in the control (NA) group ($M = 22.83$; $SD = 3.62$; $t(131) = 2.23$; $p < .05$; $d = .39$). See Figure 1 for a graphical depiction of these results.

Figure 1

Mean Intellectual Humility Scores by Study Condition



Note. SA CONDITION = self-affirmation condition; NA CONDITION = non-affirmation condition. Error bars represent standard errors.

Discussion

The current study provides evidence that IH can be increased via a self-affirmation induction. This finding is broadly consistent with previous research, which has shown that SA lowers defensiveness in the face of a range of threats to the self that appear in the form of counter-attitudinal information (Cohen et al., 2000; Cohen et al., 2005; Correll et al., 2004). Our findings serve to extend this literature by suggesting that this lowered defensiveness can result in heightened IH. In addition, by demonstrating that intellectual humility is susceptible to manipulation these findings represent a significant contribution to existing theory and research around IH itself. Specifically, this new evidence implies that in addition to its role as a so-called “trait” variable, IH can also be conceptualized as a “state” variable (see Fridhandler, 1986 for a discussion of the “state-trait” distinction) amenable to change on the basis of situational factors. Finally, from a practical perspective, establishing a means to bolster IH may be particularly important given its potential relevance to critical thinking, sound judgment and decision-making, civil political discourse, and other similarly desirable common goods.

Despite these strengths, the current study suffers from a number of limitations. First, although the mean difference in IH scores between the two SA study conditions was statistically significant the effect size ($d = .39$) was modest (Cohen, 1988; Cohen, 1992), which suggests either that the manipulation was not especially strong or that the instrument we used to measure IH was not especially sensitive, or both. Second, with a Cronbach’s alpha of .60, the IH scale we utilized in this study did not achieve adequate internal consistency reliability (Hulin, Netemeyer, & Cudeck, 2001), indicating that this instrument may contain items that are not representative of the IH construct or simply too few items, and thus that it may be somewhat prone to random measurement error (Kline, 1994; Nunnally & Bernstein, 1994). This lack of reliability may in turn have contributed to the modest effect size that

we observed. Third, we only measured self-reports of IH and did not also include a behavioral outcome measure that could be considered indicative of this construct, which limits the potential real-world applicability of our findings. Fourth, given the limited time frame of the study, our results provide scant insight into the longevity of the effect. Therefore, it remains plausible that SA enhances IH only temporarily and then the effect vanishes rather quickly.

Future research should therefore address these concerns by investigating stronger manipulations of SA in connection with IH, incorporating other measures of IH in lieu of or in addition to the one we used in this study (e.g., the measure devised by Krumrei-Mancuso & Rouse, 2016), testing behavioral measures (e.g., willingness to investigate additional counter-attitudinal information or converse with individuals who express counter-attitudinal viewpoints), and utilizing longitudinal designs that extend the period of time during which IH is measured following the SA manipulation, which would allow for firmer conclusions regarding the durability of this effect.

Everything considered, the findings of this study represent a meaningful addition to the current theoretical understanding of both IH and SA, as well as a useful new approach to boosting levels of IH under conditions of self-threat.

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