

**Conversations for Change: Affiliative Perceptions of Conversation Partners are
Associated with Increases in Intellectual Humility**

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Abstract

Intellectual humility involves awareness of the limitations of one's knowledge and that one's beliefs might be incorrect. Despite documented prosocial and cognitive benefits of intellectual humility, few studies have examined factors that support long-term changes in intellectual humility. The current study investigated whether affiliative interactions with a new conversation partner were associated with changes in intellectual humility over time. Participants (N = 937) completed four weekly guided conversations with an initially-unacquainted peer and reported on their relationship after each conversation. Participants also reported their intellectual humility prior to the first conversation, immediately after the last conversation, and one month following the last conversation. As hypothesized, perceiving greater affiliation with one's conversation partner was associated with greater increases in intellectual humility over time. These findings suggest a potential intervention for increasing intellectual humility and demonstrate that interpersonal factors are linked to open mindedness and awareness of the limitations of one's knowledge.

Keywords: Intellectual Humility, Conversation, Affiliation, Interpersonal Perception, Interpersonal Processes

Conversations for Change: Affiliative Perceptions of Conversation Partners are Associated with Changes in Intellectual Humility

Considered to be one of the wisest figures in Western history, Socrates apparently said that he knew nothing (Plato, 1871). Not everyone is so skeptical, yet there is merit in understanding the limits of our knowledge. For instance, there are personal, relational, and societal benefits associated with the mindset known as intellectual humility, which involves awareness of the limitations of one's knowledge, openness to new information, and willingness to learn from others (Porter & Schumann, 2018). Intellectual humility is positively related to prosocial values and tolerance for others' perspectives (Krumrei-Mancuso, 2017; Krumrei-Mancuso & Rouse, 2016; McElroy et al., 2014; Porter et al., 2022; Porter & Schumann, 2018). Those higher in intellectual humility show less aggression when their beliefs are criticized and demonstrate increased willingness to cooperate with outgroup members (Kross & Grossman, 2012; Van Tongeren et al., 2016). In addition, peer-rated intellectual humility is linked to responsiveness during conversations about a contentious topic (Meagher et al., 2020).

Psychological Interventions Promoting Intellectual Humility

Given the benefits of intellectual humility, scholars have been interested in psychological strategies that might promote its various aspects. For instance, imagining oneself as a distant observer increases wise reasoning or considering others' perspectives (Kross & Grossmann, 2012). Promoting a growth mindset about intelligence, or the idea that intelligence is not a fixed trait, has also been linked to increases in intellectual humility and openness to others' perspectives (Porter & Schumann, 2018). Additionally, recent research indicates that self-affirmation increases intellectual humility during what is typically a heated conversation—a university debate (Hanel et al., 2023).

Interpersonal processes are also associated with increases in intellectual humility and related constructs. For example, positive cross-partisan interactions have been associated with improved trust between members of different political parties (Levendusky, 2018; Levendusky & Stecula, 2021). Self-disclosure with an outgroup friend is significantly linked with positive attitudes towards the outgroup (for a review, see Davies et al., 2011). In experimental studies, increasing perceptions of responsiveness from one's partner reduced self-serving bias and increased open-mindedness and openness to new information—factors closely related to intellectual humility (Itzchakov & Reis, 2021; Reis et al., 2018). This work aligns with other research showing that dialogue with others has the power to enable long-term change in cognitive processes (Kalla & Broockman, 2020). Effective elements of these conversations include active listening and nonjudgmental behavior on the part of one's conversation partner. Such processes are associated with reductions in prejudiced or exclusionary attitudes—even across longer periods of time, such as four months post-conversation (Itzchakov & Reis, 2021; Kalla & Broockman, 2020).

The Present Study

In the present study, we extend prior research by exploring how interpersonal affiliation during conversations with new acquaintances might predict changes in intellectual humility over time. We expect that people will be more likely to show increased intellectual humility over time when they feel accepted by and trusting of new conversation partners and perceive them as potential friends. These predictions build on prior evidence that feeling valued increases people's open-mindedness and reduces people's need to defensively self-enhance by prioritizing their own views over others' views (Itzchakov & Reis, 2021; Reis et al., 2018). When people feel threatened, they tend to confirm their own viewpoints and dismiss different opinions (Porter et

al., 2022). When people feel accepted by and trusting of another person, they may become more open to questioning their own viewpoints and more accepting of others. We build on past work in three primary ways. One, we study changes in intellectual humility over time—and not just immediately post-manipulation (e.g., an interaction with another person or thinking about another person; Itzhakov & Reis, 2021; Reis et al., 2018). Two, we study how interpersonal processes with new acquaintances, instead of close relationship partners (Itzhakov & Reis, 2021; Reis et al., 2018), are associated with intellectual humility. Three, we build on past work identifying certain interpersonal processes—notably, perceived partner responsiveness, high-quality listening, and nonjudgmental dialogue—as key elements related to intellectual humility and similar processes. Here, we examine whether another interpersonal process—perceiving affiliation with others—is associated with changes in intellectual humility over time.

We studied people who participated in four weekly conversations with a new acquaintance via the Perspectives program of the Constructive Dialogue Institute (formerly known as OpenMind). Perspectives is a digital learning program with modules on psychological research, such as work on Moral Foundations Theory (Graham et al., 2013) and moral outrage (Crockett, 2017). With the goal of practicing difficult conversations, pairs had four conversations, each focused on following a specific norm (i.e., treating one another with dignity and respect, allowing for clumsy conversations) as they worked together on related activities (i.e., getting to know one another/icebreakers, and finding common ground).

This longitudinal design allowed us to explore how affiliative perceptions of new acquaintances—specifically, perceived potential for friendship, acceptance, and trust of one another—shapes people’s intellectual humility over time. We hypothesized that higher levels of each of these factors (i.e., greater perceived potential for friendship, partner acceptance, and trust

of one's partner) would predict greater increases in intellectual humility across three measurement timepoints: before the Perspectives program, immediately after the program, and one month after the program.

Method

Participants

Participants were recruited to complete Perspectives by an administrator who decided to use Perspectives. Administrators were college professors, high school teachers, organizational leaders, and workplace managers. People participated in the study through a college course (86.6% of analysis sample), workplace (10.8%), through a high school or college student group (1.3%), a non-workplace, non-educational group (e.g., a religious group or professional organization; 0.9%), or through a high school course in which they were enrolled (0.5%). Participants were included in the research if they were at least 18 years of age.

At the time of data collection 6,421 completed the component of Perspectives that involved the peer-to-peer conversations which we examine here. Data analysis was limited to dyadic pairings that were the same across all four peer-to-peer conversations. Although partners were assigned to remain stable across all interactions, there were logistical reasons for partners changing or not being pairs such as scheduling difficulties contacting, partner dropping the course, etc. Limiting the analysis to dyads that were the same across all four interactions was important given that, analytically, we had to average across the four conversations, creating composite measures of how participants felt about their partner generally. In total, there were 1,234 Perspectives participants who had the same partner for all four conversations. Of these, 937 completed at least one measure of intellectual humility and measures for potential for friendship, perceived partner acceptance, and trust of partner after at least one of their

conversations (88.7% completed these measures after all four conversations, 8.2% after three conversations, 1.9% after two conversations, and 1.2% after one conversation). We use these 937 participants from 52 different groupings (i.e., the same workplace or college course; ranging from 1 to 132 people per grouping) as our sample. We have data from both partners in the dyad for 910 individuals (455 dyads) and data from only one person in the dyad for 27 individuals. This sample size was adequately powered to detect small effect sizes for a variety of analyses. For example, it has adequate power to detect small correlations (power = 0.87, $r = 0.10$) and small mean differences using a paired sample t-test (power > 0.99, Cohen's $d = 0.2$), assuming a two-tailed alpha of .05.

For our analysis sample, 62.9% of participants identified as female, and 35.4% identified as male; 1.7% of participants identified as neither male nor female. The mean age of participants was 24.0 years old ($SD = 9.34$, $Min = 18.0$, $Max = 73.0$). Participants self-identified their race as White (49.8%), South Asian (13.4%), East or Southeast Asian (10.8%), Multiracial (7.0%), Black (6.9%), Latinx (5.9%), Middle Eastern / North African (3.1%), or "Other" (1.5%; missing data from an additional 1.5%).

Of these participants, 43.4% identified as either progressive (from slightly to very); 17.7% identified as conservative (from slightly to very), and 16.8% as moderate, 13.2% of participants did not know or were not political, 4.4% preferred not to say, 2.8% were libertarian, 1.6% identified as "other," and 0.1% selected "not applicable." The average political orientation on a scale where 1 is very progressive and 7 is very conservative was 3.32 ($SD = 1.58$).

Procedure

Participants completed a measure of intellectual humility prior to ("pre"; 100% of participants), immediately after ("post"; 94.4% of participants), and one month after finishing

Perspectives (“follow-up”; 35.4% of participants). Demographics were assessed prior to Perspectives.

Administrators created random pairings using a randomizing application or spreadsheet that we provided, or, paired up learners with different backgrounds or viewpoints, using knowledge they already had about the learners. We did not track which pairing method administrators used.

Participants were told that “These weekly conversations will provide you with an opportunity to establish relationships with your classmates and practice the skills you learned in the online lessons.” At the scheduled times, participants logged into a web-based platform and completed one of four weekly guided 30-minute peer-to-peer conversations. Participants first read expectations for their discussions, gaining one new expectation each week (see Table 1), and selected a specific action that they would do to follow this expectation. Then, they were instructed to get to know one another by responding to a list of potential questions (e.g., “What would you love to learn more about, if you had the time?” and “If you could donate a million dollars to any cause, what would you choose?”). Each person was instructed to answer one of the questions for three minutes. The guided discussion then began, with participants practicing concepts that they had learned in other parts of the Perspectives program. Participants took turns describing their own values and perspectives on a variety of situations (see Table 1 for greater detail).

Table 1. Expectations and guided discussion procedures for the four peer-to-peer conversations.

	Conversation 1	Conversation 2	Conversation 3	Conversation 4
Expectations	We will treat each other with dignity and respect, showing that we care about each other’s feelings and perspectives even when we don’t fully understand or agree.	We will work together to cultivate intellectual humility, a willingness to acknowledge the limits of our knowledge and the possibility of being wrong.	We will welcome clumsy conversations and be forgiving of mistakes.	We’ll manage our emotions.
Procedures for Guided Discussion	Partners took turns sharing their values by responding to a series of prompts. Partners paraphrased each other’s responses to ensure understanding and asked each other follow-up questions. Finally, partners discussed how their values were similar and how they were different.	Partners selected one of two morally-relevant scenarios to discuss. Partners took turns sharing how they would respond in the scenarios and paraphrasing their partner’s responses. Participants then answered questions together about how their backgrounds and values influenced their perspectives.	Partners took turns explaining issues that they felt strongly about. They asked each other guided questions about one another’s views and paraphrased each other’s responses. Participants then had an open discussion about their views, exploring, for example, what happens when others misunderstand or disagree with those views.	Partners indicated their opinions regarding a variety of morally-relevant issues in order to find one issue on which they disagreed. Partners then took turns explaining their opinions, asking each other guided questions, and paraphrasing each other’s views. Finally, partners had an open discussion about their opinions and concluded by discussing similarities and differences in their viewpoints.

After each conversation, participants responded to questions assessing potential for friendship, perceived partner acceptance, and trust of partner (see below) after each conversation with their partner (Conversation 1: $n = 905$, Conversation 2: $n = 923$, Conversation 3: $n = 908$, Conversation 4: $n = 866$). Additional measures were also assessed after each conversation and are listed in the supplement; none of these measures directly assessed perceptions of the dyadic relationship between both partners.

Measures

Intellectual humility. Participants indicated how much they agreed (1: *strongly disagree* to 7: *strongly agree*) with the following two statements selected from the general intellectual humility scale (Leary et al., 2017) at three measurement phases (pre, post, and follow-up): “I question my own opinions, positions, and viewpoints because they could be wrong” and “I accept that my beliefs may be wrong.” Responses to these two statements were highly correlated at all three measurement phases: $r(935) = .43$ for pre, $r(883) = .51$ for post, and $r(330) = .38$ for follow-up. We used a subset of items on the general intellectual humility scale to keep the survey short for an optimal user experience.

Potential for friendship. Participants indicated how much they agreed (1: *strongly agree* to 7: *strongly disagree*) with the following statement after each of four conversations with their partner: “My conversation partner seemed like someone I could be friends with.” We reverse-coded this item for ease of interpretation, so that higher numbers indicate a greater perceived potential for friendship. Responses to this item were highly consistent across all four conversations ($\alpha = .85$).

Perceived partner acceptance. Participants indicated how much they agreed (1: *strongly agree* to 7: *strongly disagree*) with the following statement after each of four conversations with

their partner: “I felt like my conversation partner accepted me.” We reverse-coded this item for ease of interpretation, so that higher numbers indicate greater perceived partner acceptance.

Responses to this item were highly consistent across all four conversations ($\alpha = .80$).

Trust of partner. Participants indicated how much they agreed (1: *strongly agree* to 7: *strongly disagree*) with the following statement after each of four conversations with their partner: “I felt like I could trust my conversation partner.” We reverse-coded this item for ease of interpretation, so that higher numbers indicate greater trust of one’s partner. Responses to this item were highly consistent across all four conversations ($\alpha = .83$).

Analytic Strategy

We averaged interpersonal impressions across the four conversations and used those averages to predict changes in intellectual humility across the three measurement periods. These composite measures generally represent how participants felt about their conversation partner on average across their four conversations, which all occurred after the pre- measurement of IH and before the post measurement of IH. This averaging was necessary given that the four conversation impressions did not align temporally with the intellectual humility measurements (Gordon & Thorson, in press). Although the interpersonal impression measures were strongly correlated, we examined them separately because trust, acceptance, and potential for friendship have been treated as distinct theoretical concepts in existing social psychological research (Krueger & Meyer-Lindenberg, 2019; Lehane et al., 2018; Pettigrew, 1997).

We present three primary analyses, each of which predicts intellectual humility from measurement phase (pre, post, and follow-up), one of the interpersonal impressions (potential for friendship, perceived partner acceptance, and trust of partner), and an interaction between measurement phase and the relevant interpersonal rating. When the interaction between phase

and interpersonal rating was significant, we conducted two follow-up analyses using contrast codes to examine whether the change in intellectual humility from (1) pre to post and (2) pre to follow-up was significantly moderated by interpersonal impressions. We report effect sizes as partial- R^2 s (Edwards et al., 2008).

We conducted analyses in SAS 9.4 using PROC MIXED. We specified a random intercept for each class, allowing for a different intercept from class to class. We used the residual error matrix to adjust for nonindependence in outcomes between measurement phases within-person and for nonindependence between dyad members. For each analysis, we estimated three residual variances (one for each phase); three within-person, between-phase covariances (constrained to be the same for both dyad members); three between-person, within-phase covariances; and three between-person, between-phase covariances (constrained to be the same for both dyad members). We report the results of these parameters in the supplement.

For each of the three primary analyses, we conducted three sets of sensitivity analyses to examine the robustness of each effect. We outline these analytic procedures in brief here (see the supplement for more details). First, when we aggregated the interpersonal impressions across four conversations, we excluded “repetitive responses”—that is, we excluded instances in which participants responded with the same answer for five questions in consecutive order that all followed a “strongly agree to strongly disagree” format in the answer choices. Second, we incorporated both partners’ age, race, and gender into our models as well as the combination of both partners’ characteristics together. We did this to ensure that the associations between interpersonal impressions and changes in intellectual humility existed above and beyond any similarity or matching between partners in demographic characteristics. Third, we incorporated both partners’ ideology (on a scale of very progressive to very conservative) as well as the

combination of both partners' ideology together. We did this to ensure that the associations between interpersonal impressions and changes in intellectual humility existed above and beyond any differences or matches between partners in ideology. Results are largely consistent with those in the main text and are reported in the supplement.

Results

All data and analysis syntax can be found on the Open Science Framework: https://osf.io/5p3jy/?view_only=ab732869bdee4c248de08d6dfec93761. Table 2 displays descriptive statistics and correlations for intellectual humility at each of three phases (pre, post, and follow-up) and for interpersonal impressions averaged across the four conversations.

Table 2. Correlations and descriptives for intellectual humility (at each of three phases) and interpersonal impressions (averaged across four conversations).

	Pre IH	Post IH	Follow-up IH	Potential for Friendship	Perceived Partner Acceptance	Trust of Partner
Pre IH	1	.44**	.47**	.06*	.11**	.09**
Post IH	.44***	1	.48**	.21***	.26***	.24***
Follow-up IH	.47***	.48***	1	.22***	.17**	.16**
Potential for Friendship	.06*	.21***	.22***	1	.66***	.71***
Perceived Partner Acceptance	.11**	.26***	.17**	.66***	1	.86***
Trust of Partner	.09**	.24***	.16**	.71***	.86***	1
Mean	5.50	5.89	5.88	6.45	6.74	6.68
SD	1.03	0.96	0.79	0.67	0.42	0.49

Note. IH = Intellectual humility. * $p < .05$, ** $p < .01$, *** $p < .001$

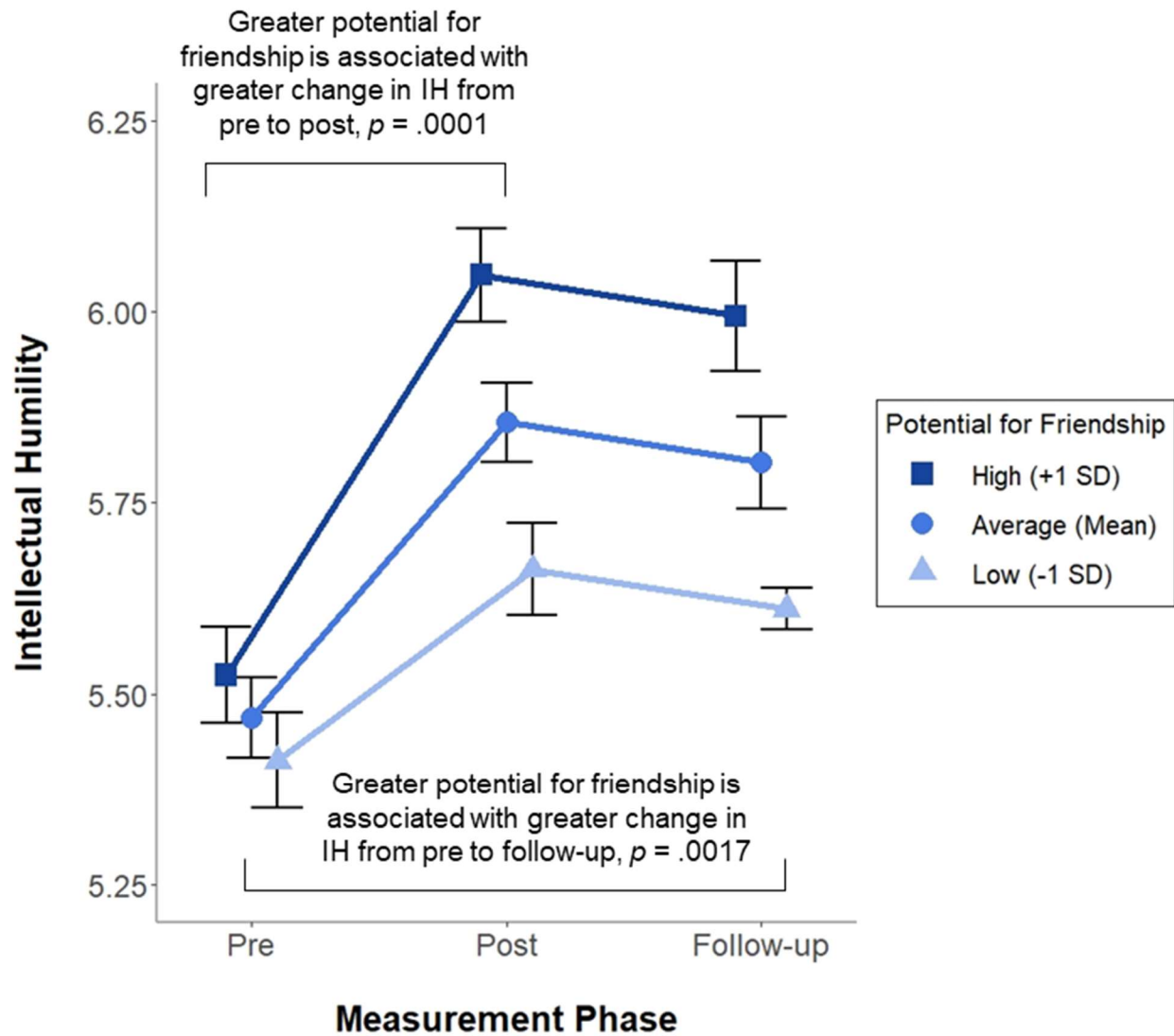
Potential for Friendship

Here, we examine whether people's impressions of the potential for friendship with their conversation partner were associated with the extent to which intellectual humility changed over time. Intellectual humility varied significantly by measurement phase ($F(2, 325) = 63.73, p < .001, R^2 = 28.2\%$), potential for friendship ($F(1, 835) = 31.31, p < .001, R^2 = 3.6\%$), and an interaction between phase and potential for friendship ($F(2, 593) = 9.01, p < .001, R^2 = 2.9\%$). Follow-up analyses showed that greater perceptions of the potential for friendship with one's conversation partner were associated with greater increases in intellectual humility from pre to post ($b = 0.21, SE = 0.05, t(899) = 3.91, p < .001, 95\% \text{ CI: } 0.10 \text{ to } 0.31, R^2 = 1.7\%$) and from pre to follow-up ($b = 0.20, SE = 0.06, t(470) = 3.16, p = .002, 95\% \text{ CI: } 0.08 \text{ to } 0.33, R^2 = 2.0\%$; see Figure 1). Additional analyses showed that the potential for friendship was positively related to intellectual humility at all three measurement phases ($p = .094, R^2 = 0.3\%$ for pre, $p < .001, R^2 = 4.1\%$ for post, and $p < .001, R^2 = 5.6\%$ for follow-up), but that it was a stronger predictor of intellectual humility during the post and follow-up phases, relative to the pre phase. With this moderator (potential for friendship), results from the sensitivity analyses were consistent with all results reported above (see the supplement).

Figure 1

Changes in Intellectual Humility as a Function of the Potential for Friendship with One's

Conversation Partner



Note. The figure displays estimated marginal means at varying levels of potential for friendship impressions. Bars indicate plus/minus one standard error from each marginal mean.

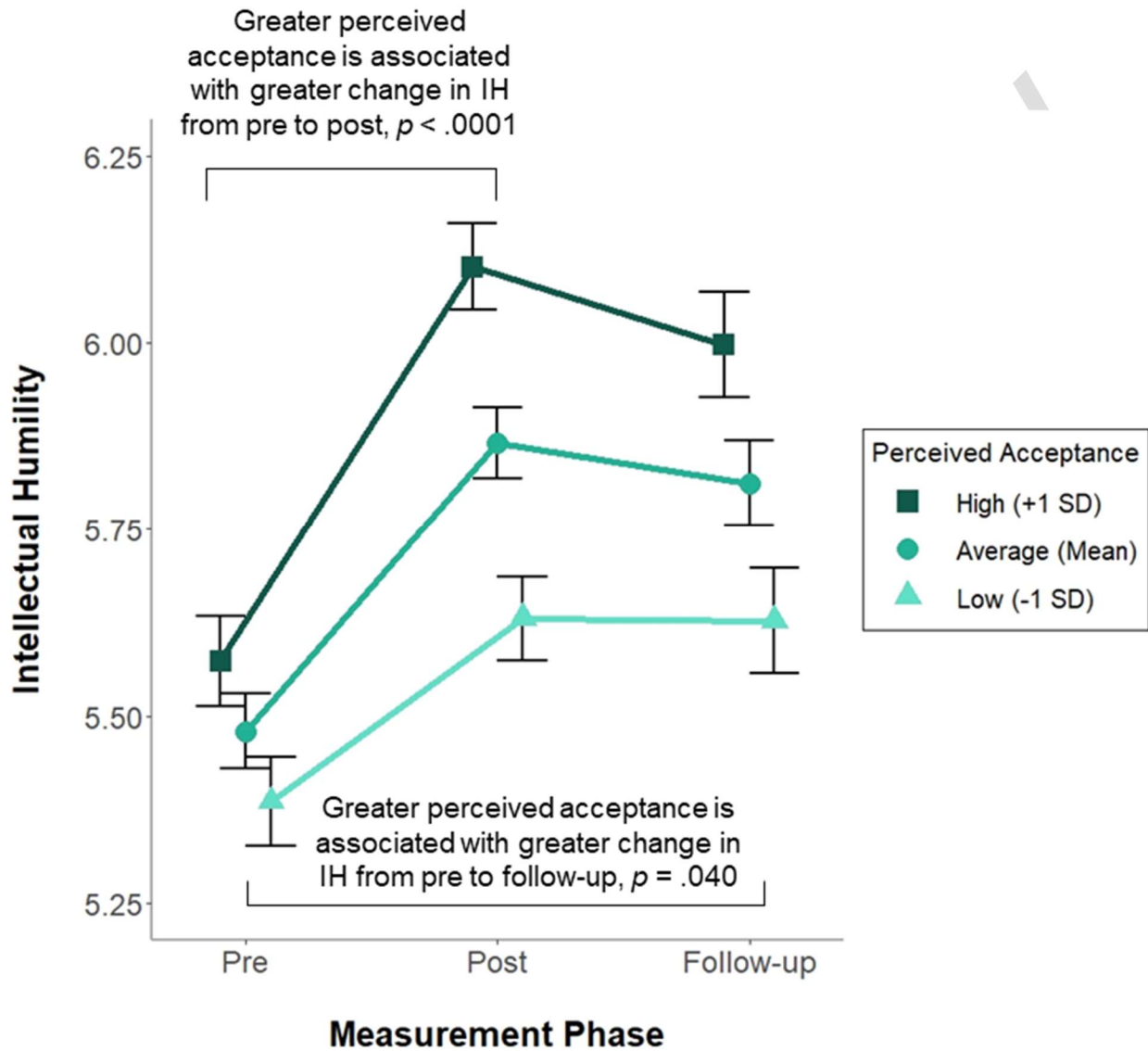
Perceived Partner Acceptance

Here, we examine whether people's perceptions of how much their conversation partner accepted them were associated with the extent to which intellectual humility changed over time. Intellectual humility varied significantly by measurement phase ($F(2, 324) = 63.66, p < .001, R^2 = 28.2\%$), perceived partner acceptance ($F(1, 842) = 41.15, p < .001, R^2 = 4.7\%$), and an interaction between phase and perceived partner acceptance ($F(2, 598) = 8.41, p < .001, R^2 = 2.7\%$). Follow-up analyses showed that greater perceived partner acceptance was associated with greater increases in intellectual humility from pre to post ($b = 0.34, SE = 0.08, t(898) = 4.08, p < .001, 95\% \text{ CI: } 0.18 \text{ to } 0.50, R^2 = 1.8\%$) and from pre to follow-up ($b = 0.22, SE = 0.11, t(468) = 2.06, p = .040, 95\% \text{ CI: } 0.01 \text{ to } 0.43, R^2 = 0.9\%$; see Figure 2). Additional analyses showed that perceived partner acceptance predicted intellectual humility at all three measurement phases ($p = .006, R^2 = 0.8\%$ for pre, $p < .001, R^2 = 6.0\%$ for post, and $p < .001, R^2 = 4.8\%$ for follow-up), but that it was a stronger predictor of intellectual humility during the post and follow-up phases, relative to the pre phase.

Figure 2

Changes in Intellectual Humility as a Function of Perceived Acceptance from One's

Conversation Partner



Note. The figure displays estimated marginal means at varying levels of potential for friendship impressions. Bars indicate plus/minus one standard error from each marginal mean.

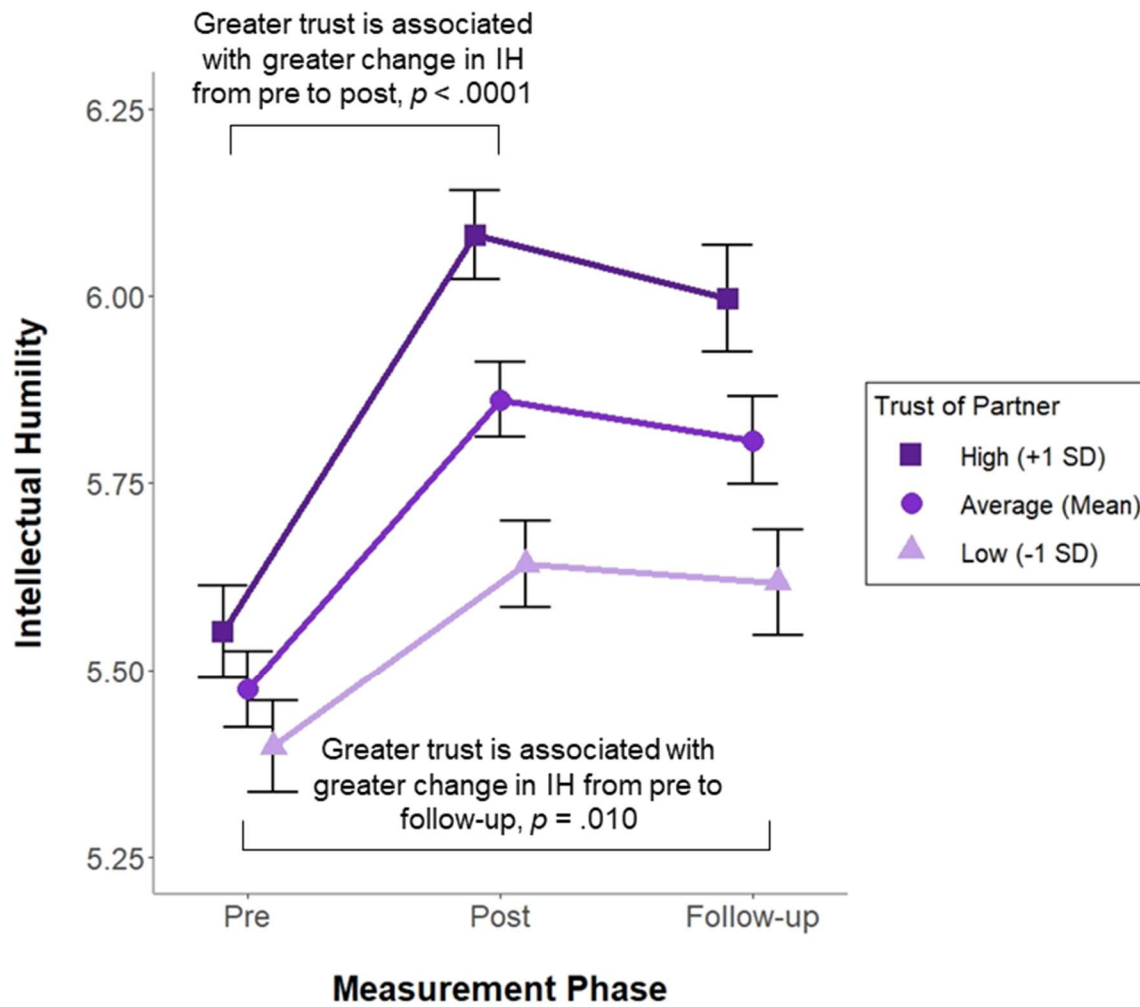
With this moderator (perceived partner acceptance), results from the sensitivity analyses were largely consistent with those reported above (see the supplement). Two differences emerged. One, for two of three sensitivity analyses, greater perceptions of acceptance from one's conversation partner were significantly associated with greater increases in intellectual humility from pre to post but not from pre to follow-up (ps of .13 and .14). Two, for one of three sensitivity analyses, greater perceptions of acceptance from one's conversation partner were significantly associated with greater increases in intellectual humility from pre to followup but not from pre to post ($p = .10$).

Trust of Partner

Here, we examine whether trust of one's conversation partner was associated with the extent to which intellectual humility changed over time. Intellectual humility varied significantly by measurement phase ($F(2, 323) = 64.35, p < .001, R^2 = 28.5\%$), trust of one's partner ($F(1, 821) = 37.30, p < .001, R^2 = 4.3\%$), and an interaction between phase and trust of one's partner ($F(2, 579) = 8.87, p < .001, R^2 = 3.0\%$). Follow-up analyses showed that greater trust of one's partner was associated with greater increases in intellectual humility from pre to post ($b = 0.29, SE = 0.07, t(880) = 4.11, p < .001, 95\% CI: 0.15$ to $0.43, R^2 = 1.9\%$) and from pre to follow-up ($b = 0.23, SE = 0.09, t(453) = 2.57, p = .010, 95\% CI: 0.05$ to $0.40, R^2 = 1.4\%$; see Figure 3). Additional analyses showed that trust of one's partner predicted intellectual humility at all three measurement phases ($p = .022, R^2 = 0.6\%$ for pre, $p < .001, R^2 = 5.3\%$ for post, and $p < .001, R^2 = 5.4\%$ for follow-up), but that it was a stronger predictor of intellectual humility during the post and follow-up phases, relative to the pre phase.

Figure 3

Changes in Intellectual Humility as a Function of Trust of One's Conversation Partner



Note. The figure displays estimated marginal means at varying levels of potential for friendship impressions. Bars indicate plus/minus one standard error from each marginal mean.

With this moderator (trust of partner), results from the sensitivity analyses were largely consistent with those reported above (see the supplement). One difference emerged: for one of three sensitivity analyses, greater trust of one's conversation partner was significantly associated

with greater increases in intellectual humility from pre to post but not from pre to follow-up ($p = .054$).

Discussion

How are interpersonal processes associated with intellectual humility? Here, we show that when people discuss their values and morals in guided conversations with another person, perceiving greater affiliation with that person is tied to changes in their own intellectual humility over time. Specifically, perceiving greater affiliation—the potential for friendship, acceptance by one’s partner, and trust of one’s partner—moderated the extent to which intellectual humility changed over time: from before to immediately after the conversations and from before to one-month post-conversations. As predicted, people showed increased intellectual humility over time when they perceived their conversation partners as potential friends and felt greater acceptance and trust.

The present findings extend prior evidence that feeling valued by others increases people’s open-mindedness and willingness to consider different perspectives (Itzhakov & Reis, 2021) and decreases people’s need to engage in defensive self-enhancement by prioritizing their own perspectives (Reis et al., 2018). Notably, we observed these patterns even when people interacted with someone who was not a close other (e.g., a romantic partner or a family member), suggesting that interpersonal affiliation can spark changes in intellectual humility, even via a new social connection.

Implications and Future Directions

Reflecting on the accuracy of one’s beliefs may be challenging when it comes to political beliefs, so intellectual humility is important when discussing sensitive moral topics with others. Interventions, such as the guided conversations used here, could be explored between individuals

with opposing views to promote understanding across differences. People are susceptible to believing falsified claims, even when confronted with evidence that contradicts those claims (Nyhan & Reifler, 2010; Oliver & Wood, 2014). Intellectual humility may have a protective effect against misinformation, as those with greater levels have been shown to engage in more fact-checking behaviors and seek alternative perspectives when presented with potential misinformation (Koetke et al., 2022). In recent years, there is a marked increase of dislike and distrust for those outside one's own political party, which may have dire consequences for democracy. Increasing intellectual humility through conversation is a promising mechanism for promoting dialogue between individuals with differing perspectives.

Future research might explore bidirectional relationships between intellectual humility and interpersonal factors, such as conflict-management and harmony in personal relationships. Recent work has shown that state intellectual humility was associated with positive feelings and an increased sense of closeness towards others following an interpersonal conflict between romantic relationships, colleagues, and acquaintances (Peetz & Grossmann, 2021). Attachment style appears to be associated with cognitive openness—a factor closely linked to intellectual humility, with secure individuals demonstrating more openness to counterpoints from one's own perspective than those with avoidant attachment style (Jarvinen & Paulus, 2017). Perceptions of a partner's intelligence positively predicted cognitive openness, indicating that interpersonal factors may play a role in intellectual humility at the state and trait level.

Recent research suggests that improving dialogue with those holding different perspectives involves more than just being open-minded, and that interpersonal factors may play a role in conversational dynamics. For example, some scholars have theorized that receptiveness is an interpersonal construct and that a positive interpersonal dynamic is key to engaging those

who hold opposing views and opinions (Minson & Chen, 2022). Receptiveness in a dialogue invites receptiveness in kind. The conceptualization of receptiveness as an interpersonal construct holds implications for the design of interventions promoting dialogue across differences, and suggests that having a receptive partner may be linked with greater increases in intellectual humility.

We speculate that the affiliative social interactions in this study might have influenced intellectual humility and attitudes through several interpersonal mechanisms. First, perceived partner responsiveness has been found to increase people's intentions to behave in an open-minded manner (Itzchakov & Reis, 2021), as does high quality listening (Itzchakov et al., 2017, 2018; Itzchakov & Kluger, 2017). The interaction activity also requires participants to acknowledge similarities between values, which may have created a sense of common ingroup identity (Gaertner & Dovidio, 2000) and interpersonal similarity (Brown & Lopez, 2001). Finally, participants were asked to practice forgiveness of mistakes during the conversations. Intellectual humility is linked to forgiveness of people with different views (Hook et al., 2015; Zhang et al., 2015) and forgiveness is also a critical component to improve intergroup conflict (Doosje et al., 1998; Doosje et al., 2006). Future research may examine whether these mechanisms explain how positive social interactions improve intellectual humility and attitudes toward those with different views.

Limitations

The current study has several strengths but is not without limitations. Of note, data were only included for participants who completed all four conversations with the same partner. This limits generalizability, as there may be qualitative differences between partners who remained together versus those who did not. Further, participation in the peer-to-peer discussions was

voluntary so there may be a self-selection bias: those who opted to participate in the conversations could be systematically different than those who did not participate.

Further, our data are correlational so we cannot conclude that acceptance, trust, and potential for friendship directly shape changes in intellectual humility. Future research could manipulate acceptance, trust, and potential for friendship to explore potential causal relationships with changes in intellectual humility over time.

Lastly, one challenge in the literature is the lack of a standardized measure of intellectual humility. A unifactorial general measure of intellectual humility used in the present study (Leary et al., 2017). Additional measures include bifactorial (McElroy et al., 2014) and four-factorial measures of intellectual humility (Alfano et al., 2017; Krumrei-Mancuso & Rouse, 2016). To make the best use of participants' time, brief versions of the measures of trust and intellectual humility were used in the present study. This poses potential difficulties with comparing our findings to other studies measuring trust and intellectual humility. To this end, scholars have recently synthesized and proposed a framework for measuring intellectual humility going forward, after reviewing 18 different definitions and 16 unique measures of the concept (Porter et al., 2022). Further still, multiple terms that relate to but are qualitatively different from intellectual humility exist, such as wise reasoning and cognitive openness, and these terms are sometimes used interchangeably in the literature. Continued research to examine and validate measures specific to intellectual humility is essential for future research that may compare across studies, such as meta-analyses.

Conclusion

Multiple interpersonal factors hold promise for promoting intellectual humility. The present study builds on previous research showing that perceived partner responsiveness

influences open-mindedness and the ability to hold opposing viewpoints (Itzhakov & Reis, 2021). The data presented here indicate that structured dialogue with others can increase levels of intellectual humility over time, particularly when people perceive the potential for friendship and feel accepted by and trusting of their conversation partner. Fostering positive social interactions through guided dialogue may be a powerful tool for building intellectual humility and, therefore, holds implications for building connections and reducing conflict.

Under Review

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