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Humble persons are more helpful than less humble persons: Evidence from three studies

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Connections between humility and other prosocial qualities led us to develop a *humility–helpfulness hypothesis*. In three studies, humble persons were more helpful than less humble persons. In Study 1, participants ($n = 117$) completed self-report measures of humility, the Big Five, and helpfulness. In Study 2, participants ($n = 90$) completed an implicit measure of humility and were presented with an unexpected opportunity to help someone in need. In Study 3, participants ($n = 103$) completed self-report and implicit measures of humility and were presented a similar helping opportunity. Humility and helpfulness correlated positively when personality and impression management were controlled. Humble participants helped more than did less humble participants even when agreeableness and desirable responding were statistically controlled. Further, implicit humility uniquely predicted helping behavior in an altruistic motivation condition.

Keywords: helping; implicit; humility; altruism; behavioral measure; personality; traits

Introduction

Helping one another in times of need is a cornerstone of quality human relationships. Several dispositional and situational variables influence whether one person helps another (Penner, Dovidio, Piliavin, & Schroeder, 2005). Our focus in the present studies was on dispositional or personality predictors of helpfulness. In each study, we tested the *humility–helpfulness hypothesis* (i.e., that humble persons are more helpful than less humble persons).

Most previous personality research on helping and altruistic motivation to help has focused more on cognitive or affective predictors, such as empathy, nurturance, and personal responsibility (Batson, Bolen, Cross, & Neuringer-Benefiel, 1986; Batson et al., 1989; Carlo, Eisenberg, Troyer, Switzer, & Speer, 1991; Midlarsky, Jones, & Corley, 2005; Rushton, Chrisjohn, & Fekken, 1981) than on higher-order personality traits such as the Big Five. One research team that did use a broad measure of personality (the Multidimensional Personality Questionnaire) found that positive emotionality accounted for unique variability in self-reported helpfulness when negative emotionality and constraint were statistically controlled (Krueger, Hicks, & McGue, 2001). Do other higher-order personality traits account for variability in helping as well?

Research on the traditional Big Five revealed associations between trait Agreeableness, helping behavior (Graziano, Habashi, Sheese, & Tobin, 2007) and other indicators of reciprocal altruism (Ashton, Paunonen, Helmes, & Jackson, 1998). Those familiar with Costa and McCrae's (1992) model may recall that altruism and modesty are two of the six facets of Agreeableness. According to Costa and McCrae (1992), high scorers on the modesty subscale are 'humble and self-effacing' whereas low scorers, 'believe they are superior people and may be considered conceited or arrogant by others' (p. 18).

In the five-factor model, humility appears to be subsumed by the larger Agreeableness factor. However, more recent research has indicated that humility was part of a unique sixth factor of personality (Ashton et al., 2004; Lee & Ashton, 2004; Saucier, 2009). Our primary purpose was to explore whether the understudied trait of humility correlated with helpfulness (Study 1) and whether humble persons were more helpful than less humble persons when presented with an unexpected opportunity to help (Studies 2 and 3).

Humility defined

At present, there is no consensus among researchers about how to define humility (Davis, Worthington, & Hook, 2010), nor is there a gold-standard measure.

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For our purposes, we define humility as the psychological quality of being humble and measure humility relative to arrogance or conceit (Rowatt et al., 2006). This definition of humility fits in part with a recent relational model (Davis et al., 2011) in which the humility of another person is judged by others in terms of global humility ('He or she is a truly humble person'), superiority ('He/she strikes me as self-righteous'), and accurate view of self ('He/she is self-aware'). Other scholars have theorized that humility includes an accurate understanding of self (Emmons, 1999), intellectual openness, and relatively low self-focus (Ashton & Lee, 2005; Exline et al., 2004; Owens, 2010; Roberts & Wood, 2003; Tangney, 2000, 2009; Tice, Butler, Muraven, & Stillwell, 1995).[1] We agree that humility involves low self-focus and an accurate view of self, but did not assess this facet directly.

Humility is also conceptually similar to modesty, but they are not identical (Exline et al., 2004). Modesty is outwardly observable (e.g., modest dress), whereas humility is more of an inner quality. Nevertheless, the two constructs are sometimes assessed together as humility–modesty (Peterson & Seligman, 2004). Another measure of humility conceptually overlaps with honesty (Lee & Ashton, 2004). Facets of honesty–humility include fairness, sincerity, greed-avoidance, and modesty. In Ashton and Lee's model, honesty is indicated by sincerity and fairness whereas humility is indicated by greed-avoidance and modesty.

In the three studies presented, we operationally defined humility with implicit and explicit measures that contrasted humility with arrogance (Rowatt et al., 2006) or superiority (Davis et al., 2011). We also used humility items from the HEXACO-PI (Lee & Ashton, 2004) because it has generated more empirical research than any other self-report measure to date. However, there is certainly merit in other humility measurement approaches that conceptualize humility as a personality judgment by others (Davis et al., 2011) or combine the construct with modesty (Peterson & Seligman, 2004) or honesty (Lee & Ashton, 2004).

A theoretical basis for humility–helpfulness connections

Ashton and Lee (2007) were some of the first scholars with empirical data to suggest what functions humility serves and to theorize why humans have various degrees of humility. They posited that humility represents a component of reciprocal altruism (Trivers, 1971). Low humility – marked by egotistical, pretentious, or narcissistic tendencies – was theoretically linked with exploitation of others (Ashton & Lee, 2001). If humility is a component of reciprocal altruism, then it could be positively related to helpfulness.

There are a few other reasons why we theorized that dispositional humility and helping would be connected. Some conceptual facets of humility (e.g., low selfishness, fair-mindedness; Ashton & Lee, 2005; Exline & Geyer, 2004) indicate humble persons may be more likely to help a person in need. Persons with a holier-than-thou attitude (or a 'noisy ego', Exline, 2008), arrogance (Rowatt et al., 2006), or sense of superiority (Davis et al., 2011) may be more likely to blame misfortune on others and use their resources to defend the self. Whereas more humble people (or a 'quiet ego', Exline, 2008) may have more attention to devote to others and may be willing to offer more of their time and resources to a person in need (Lee & Ashton, 2004).

Humility has not been the focus of as much research as the traditional Big Five personality dimensions, probably because of its recent classification as a facet of personality (Ashton et al., 2004; Lee & Ashton, 2004) or virtue (Peterson & Seligman, 2004). However, there is some empirical support for the theoretical connections between humility and helping. Self-reported humility correlated positively with prosocial qualities like forgiveness and gratitude (Rowatt et al., 2006). Relational humility correlated inversely with unforgivingness and revenge (Davis et al., 2011). With regard to prosocial behavior, persons high in humility have been more cooperative in economic games (Hilbig & Zettler, 2009). Trait humility has also correlated negatively with antisocial characteristics, such as delinquency and unethical business decisions (Ashton & Lee, 2008a). Despite these advances in the field, more research is needed to determine whether humble persons are more helpful than less humble persons.

The humility–helpfulness hypothesis

The primary hypothesis tested was that humble persons are more helpful than less humble persons (i.e., *the humility–helpfulness hypothesis*). There are several possible methods to assess humility, each with relative strengths and weaknesses (Davis et al., 2010). Across three studies, we used a multi-method approach including implicit and explicit measures of humility both to investigate the relative contributions of these measures and to assess the relationship between humility and more widely studied constructs such as agreeableness.

In Study 1, self-report measures of humility, helpfulness, and theoretically related constructs were administered. It was predicted that self-reported humility would correlate with self-reported helpfulness, even when statistically controlling for other personality

Table 1. Correlations and descriptive statistics for self-report measures of personality and helpfulness (Study 1).

Measures	1	2	3	4	5	6	7	Mean	SD	α
1. Helpfulness								2.72	0.45	0.81
2. Humility	0.27**							3.56	0.63	0.88
3. Extraversion	0.23*	−0.06						4.41	1.07	0.84
4. Agreeableness	0.16†	0.37**	0.07					5.22	0.82	0.76
5. Openness to experience	0.04	0.17†	−0.10	0.18				4.98	0.88	0.78
6. Conscientiousness	0.23*	0.32**	0.08	0.34**	0.04			4.86	0.87	0.76
7. Neuroticism	−0.10	0.01	−0.18†	−0.22*	−0.01	−0.24**		4.16	1.06	0.78
8. IM	0.21*	0.36*	−0.02	0.39**	0.13	0.47**	−0.22*	0.27	0.15	0.67

Note: *$p < 0.05$, **$p < 0.01$, and $^{\dagger}p < 0.10$.

factors (i.e., Big Five) and impression management (IM). In Studies 2 and 3, individuals came to a laboratory and were presented with an unexpected opportunity to help a student in need. It was predicted that humble persons would be more helpful than less humble persons. It was also predicted that humility would account for unique variability in helping when other known correlates of helping (e.g., empathy, distress, and agreeableness) were statistically controlled.

Study 1: Does trait humility correlate with helpfulness?

When attempting to 'gauge the broad social importance of a personality dimension' such as humility, Ashton and Lee (2008b) suggested, 'that cross-sectional studies based on self-reports... can give a likely indication of the links between personality and outcome variables, as long as those criteria are assessed by measures that possess strong content validity' (p. 1956). Others have used this approach with success, but did not include a measure of trait humility (cf. Ashton et al., 1998; Krueger et al., 2001). As such, we selected and administered reliable and valid self-report measures of humility and helpfulness. So that we could check whether a possible association between humility and helping was due to other factors (e.g., agreeableness and desirable responding), it was important to include measures of the Big Five and IM. It was predicted that humility would account for unique variability in helpfulness when other dimensions of personality and IM were controlled statistically.

Method

Participants and procedure

A total of 117 undergraduate students (95 women and 22 men; mean age = 19 yrs) attending a private university in the southwest United States completed an online survey for course credit. The sample reported their race/ethnicity as 75.2% White, 8.5% Hispanic/Latino, 7.7% Asian/Pacific Islander, 6% African-American, and 2.6% 'other'.

Measures

Helpfulness. The 20-item *Self-Reported Altruism Scale* (Rushton et al., 1981) was administered to measure helpfulness ($\alpha = 0.81$, means and standard deviations are reported for all variables in Table 1). Participants rated how often they performed specific helpful behaviors (e.g., 'I have done volunteer work for a charity'). Each item was rated on a five-point scale (0 = never, 4 = very often). Because items assessed frequency of performing helpful behaviors, but not the underlying motivation, we interpreted scores on this scale to indicate *helpfulness* but not altruistic motivation.

Humility. The 16 humility items ($\alpha = 0.88$) from the 32-item Honesty–Humility subscale of the HEXACO Personality Inventory were administered (Ashton & Lee, 2005; Lee & Ashton, 2004).[2] Example items were, 'Some people would say that I have an over-inflated ego' (reverse-keyed), and 'I am an ordinary person who is no better than others'. Each item was rated on a five-point scale (1 = strongly disagree, 5 = strongly agree).

Big Five personality dimensions. The 44-item Big Five Inventory (John & Srivastava, 1999) was used to assess Extraversion ($\alpha = 0.84$), Agreeableness ($\alpha = 0.76$), Conscientiousness ($\alpha = 0.76$), Neuroticism ($\alpha = 0.78$), and Openness ($\alpha = 0.78$). This measure was selected, in part, because it tapped the broader domain of agreeableness without specific reference to humility.

Impression management. The IM subscale of the Balanced Inventory of Desirable Responding (Paulhus & Reid, 1991) was also administered

Table 2. Multiple regression of helpfulness on personality dimensions (Study 1).

	β	t	p	R^2
Step one				0.090
Extraversion	0.24	2.64	0.009*	
Agreeableness	−0.02	−0.178	0.859	
Conscientiousness	0.16	1.66	0.099	
Neuroticism	−0.04	−0.373	0.710	
Openness to experience	0.02	0.267	0.790	
Step two				0.112
IM	0.16	1.61	0.110	
Extraversion	0.23	2.51	0.014*	
Agreeableness	−0.04	−0.407	0.685	
Conscientiousness	0.12	1.20	0.232	
Neuroticism	−0.02	−0.198	0.843	
Openness to experience	0.01	0.148	0.882	
Step three				0.151
Humility	0.22	2.21	0.029*	
Extraversion	0.24	2.63	0.010*	
Agreeableness	−0.09	−0.883	0.379	
Conscientiousness	0.09	0.909	0.365	
Neuroticism	−0.05	−0.537	0.592	
Openness to experience	0.00	0.016	0.988	
IM	0.09	0.909	0.365	

Note: *Predictor is significant at the $p < 0.05$ level, Step two $\Delta R^2 = 0.022$, $p = 0.110$, Step three $\Delta R^2 = 0.039$, $p = 0.029$.

($\alpha = 0.67$). Each item was rated on a seven-point scale (e.g., 'I have some pretty awful habits' (reversed-keyed); 1 = not true, 7 = very true). Participants received one point for each response of 6 or 7 and 0 for each response ≤ 5.

Results

First, a series of correlations were computed. Humility was the strongest correlate of self-reported helpfulness ($r = 0.27$, $p = 0.003$) followed by extraversion, conscientiousness, and IM (Table 1). Humility correlated positively with agreeableness and conscientiousness. Humility, conscientiousness, and agreeableness correlated positively with IM.

To examine whether the relationship between humility and helpfulness was an artifact of desirable responding or another personality dimension we conducted a hierarchical regression analysis with Big Five personality dimensions entered in step one, IM entered in step two, and the humility measure entered in the third step. In further support of the *humility–helpfulness hypothesis*, humility accounted for unique variability in self-reported helpfulness ($\beta = 0.22$, $p = 0.029$) when the Big Five and IM were simultaneously statistically controlled (Table 2). Extraversion also remained a significant predictor of helpfulness. No other personality variable was significantly associated with helpfulness in this analysis.

Discussion

This study documents that humility is uniquely associated with self-reported helpfulness. Others have found that humility accounts for unique variability in negative qualities when the Big Five are statistically controlled (i.e., inverse correlations with materialism, delinquency, social adroitness, unethical business decisions, and sociosexuality; Ashton & Lee, 2008b). Taken together, humility appears to be a positive quality that may contribute to improved social relations.

Although the unique association between humility and helpfulness is promising, Study 1 has some limitations. First, self-reports of past helping require accurate memory. An individual could forget a helping event or accidentally recall an incident that did not happen. Either act of misremembering would affect the self-reported frequency of helping. A related problem is that people could self-report being more humble or helpful than they really are. On the other hand, humble persons could be reluctant to report being humble. For example, when a small group of Cistercian monks and nuns were surveyed ($n = 37$), only 5% reported that they were very successful exhibiting humility (Smith, 2006). Narcissists, in contrast, sometimes create the appearance of humility to mask their arrogance or grandiose sense of self (American Psychiatric Association, 2004).

In an attempt to circumvent these limitations, two additional behavioral helping studies were conducted. In studies 2 and 3, a laboratory situation was created in which a participant could volunteer time to help a student in need. By observing participants in a controlled lab environment, we could obtain a proximal measure of helping that did not rely on memory and which made self-presentation more costly and thus less likely. In studies 2 and 3, we also included an implicit measure of humility, in part because implicit measures are more difficult to fake than self-report (Fiedler & Bluemke, 2005).

Study 2: Implicit humility and helping behavior

In a chapter about humility theory and research, Tangney (2002) concluded that, 'humility may represent a rare personality construct that is simply unamenable to direct self-report methods' (p. 415). She may be correct. Fortunately, other measurement approaches exist. For example, one research team developed an implicit, reaction-time measure of humility relative to arrogance (Rowatt et al., 2006). The basic assumption was that a humble person would associate humility trait terms more quickly with the self than arrogant trait terms. The implicit measure of humility correlated with self-reported humility and narcissism (inversely) but was not correlated with IM

(Rowatt et al., 2006). The implicit measure of humility was also internally and temporally consistent like many similar implicit measures (Nosek, Greenwald, & Banaji, 2007) and explained unique variability in course grades even when statistically controlling for self-reported narcissism, conscientiousness, and implicit self-esteem.

To test more carefully the *humility–helpfulness hypothesis*, a better indicator of helping was needed than the self-report helpfulness scale used in Study 1. Each participant was presented with an unexpected opportunity to help a student in need. To do this, we used portions of a lab procedure developed by Toi and Batson (1982). In short, participants listened to a recorded interview in which a student talked about his or her need for help. After listening to the recording, participants were presented with an opportunity to help the student by volunteering time. Would implicitly humble persons help a student in need more than implicitly less humble persons? Would a humility main-effect persist when agreeableness was controlled?

Method

Participants

A total of 95 introductory psychology students participated in this study for course credit. During the post-experiment interview/debriefing session, five participants (5.3%) expressed a high degree of suspicion concerning the manipulations. Data from these five participants were omitted prior to Study 2 analyses. Study 2 results were based on the final sample of 90 participants (59 women and 31 men; mean age = 19 years). The self-reported ethnicity of the sample was 62% White, 15% Hispanic, 13% Black, and 10% Asian.

Measures and procedure

Each participant worked individually. The opportunity to help a fellow student was presented within an experiment titled 'Radio Broadcast Evaluation'. In this phase of the study, participants were told that they would be evaluating a recording that may be broadcast later on the campus radio station. Participants then listened to the recorded interview of a same-sex introductory psychology student (Carl or Carol) who injured his or her leg and, as a result, could not attend class regularly (cf. Toi & Batson, 1982). Carol/Carl indicated that without some assistance reviewing lecture notes for her or his introductory psychology course, she or he would likely be unable to continue at the university.

After listening to the radio broadcast, each student was presented with an opportunity to help Carol/Carl. Participants were asked how many hours over the next three weeks they would be willing to meet with Carol/Carl to provide aid. Responses were scored to reflect the total number of hours offered over a three-week period (e.g., a response of 'three hours a week' was scored as 9).

Next, participants took part in a seemingly unrelated study about personality and self-concept. In this phase, participants completed the self-report measure of agreeableness described in Study 1 (John & Srivastava, 1999) and a standard Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) adapted to assess humility relative to arrogance (Rowatt et al., 2006). In the critical blocks of the Humility IAT, participants were instructed to associate as quickly as possible humility or arrogance trait terms with the self or other. An implicitly humble person should more quickly associate 'humble' with the self than 'arrogant' with the self. Stimulus words used in the Humility IAT were as follows: *humility* (humble, modest, tolerant, down-to-earth, respectful, and open-minded); *arrogant* (arrogant, immodest, egotistical, high-and-mighty, closed-minded, and conceited); *self* (I, me, my, mine, and self); *others* (they, them, their, it, and other). Standard IAT scoring procedures were used to compute the D_1 measure with built-in error penalties described by Greenwald, Nosek, and Banaji (2003, pp. 208, 214). The scoring algorithm included data from both practice and test blocks and eliminated trials >10,000 ms. The resulting D_1 score was used as an indicator of implicit humility (relative to arrogance). Below we refer to this construct simply as implicit humility.[3] As mentioned, it was predicted that implicitly humble persons would volunteer more time to help a fellow student in need than would implicitly less humble persons.

Results and discussion

Implicit humility was weakly associated with greater time offered to help a peer in need ($r = 0.11$, *ns*). Since the IAT is a relative measure and we were most interested in the difference between participants who were relatively more humble and relatively less humble, a median split on the Humility IAT score was computed. Persons with higher scores (≥ 0.395; $n = 45$) were included in the high implicit humility group and those with lower scores (≤ 0.394; $n = 45$) were included in the low implicit humility group. An ANOVA was computed to determine whether implicitly humble persons offered more help than less implicitly humble persons.

As predicted, participants in the high implicit humility group volunteered significantly more time to help their fellow student ($M = 9.23$ h, SD = 8.76) than did participants in the low implicit humility group ($M = 5.85$ h, SD = 5.90), $F(1,89) = 4.60$, $p = 0.035$,

$\eta^2 = 0.050$. The same pattern was found when agreeableness was added as a covariate. That is, persons in the high implicit humility group volunteered significantly more time (Adjusted $M = 9.23$ h, SD = 8.76) than did participants in the low implicit humility group (Adjusted $M = 5.38$ h, SD = 5.74), $F(1,87) = 6.79$, $p = 0.01$, $\eta^2 = 0.075$. No gender difference in helping was found. The two-way interaction between gender and humility was not significant.

Taken together, Studies 1 and 2 reveal a clear connection between dispositional humility and helpfulness. Persons who self-reported humility indicated being more helpful in the past (Study 1). Those who scored above the median on an implicit measure of humility spontaneously offered more time to help a fellow student in need than those who were implicitly less humble, even when agreeableness was statistically controlled (Study 2). The finding that humble people are helpful could be an artifact of desirable responding, but that seems less likely in light of the Study 2 finding that implicitly humble people actually offered more time to help, and the Study 1 finding that self-reported humility and helpfulness still correlated positively when desirable responding was statistically controlled.

One relative limit to Study 2 was that participants did not have any information about whether other classmates had helped the student in need. A participant could assume that others had already helped or offered to help. Assuming that others already helped could reduce the apparent need of the 'victim'. Alternatively, assuming that others were helping could also create perceived pressure to help. Such perceived action or inaction of other helpers or 'bystanders' has been shown to evoke egoistic or altruistic motivations and these motivations influence helping (Batson et al., 1989). In a final test of the *humility–helping hypothesis*, we investigated whether the perceived action or inaction of others interacted with dispositional humility to predict helping. This also allowed us to investigate whether humility was associated with egoistic or altruistic motivations for helping.

Study 3: Possible motives for helping

Why are humble people more helpful than less humble persons? Recall that Ashton and Lee (2007) theorized that humility represents a component of reciprocal altruism. Could trait humility be associated with altruistic motives for helping (cf. Batson et al., 1986)?

Altruistically motivated helping is given ultimately to benefit the person in need, not the self. Egoistically motivated helping, in contrast, is given to gain personal benefits (Batson, Fultz, & Schoenrade, 1987). Batson and his colleagues searched for personality correlates of altruistic and egoistic helping. Trait self-esteem, ascription of responsibility, and empathic concern correlated positively with egoistically motivated helping, but not with altruistically motivated helping (Batson et al., 1986). Extrinsic religious orientation also correlated negatively with altruistically motivated helping; whereas quest religious orientation (viewing religious doubts as positive, openness to religious change) correlated positively with altruistically motivated helping (Batson et al., 1989). To our knowledge, no core personality trait predictor of altruistically motivated helping has been discovered.

We theorized that the sixth component of personality, which we refer to as humility, could be a personality trait associated with altruistic motives for helping. A conceptual basis for this prediction was that humble persons are more unselfish, concerned for others in need, and willing to help than are arrogant persons. We predicted that trait humility would correlate positively with helping, especially in a situation where few people are offering help to the person in need.

Hypotheses and predictions

We selected the 'Katie Banks' procedure to examine prosocial motivations for helping (Batson et al., 1989; Coke, Batson, & McDavis, 1978; Graziano et al., 2007). The key to evoking prosocial motives in this procedure was the action or inaction of other potential helpers. Participants were led to believe that two of seven or five of seven previous participants had volunteered to help a fellow student named Katie. According to Batson et al. (1988, 1989), if most peers have volunteered help, participants could anticipate social or self-censure if they violate the norm to help. Help offered in this high-pressure condition is thought to be motivated egoistically to avoid censure for not helping. However, if most peers have not volunteered help, then the belief that participants themselves should help may be weakened, and participants could anticipate feeling less negative emotions if they do not help. Since pressure to help is limited, help offered in a low-pressure condition is thought to be altruistically motivated. Batson et al. (1989) predicted that a personality trait related to an altruistic motive for helping would be positively correlated with helping under low-pressure.

Using the previous research as a guide (Batson et al., 1988, 1989), we formulated the *humility altruistic motivation hypothesis*: if humble people are altruistically motivated to help out of concern for an individual in need, then dispositional humility should be positively related to helping, but only in the low-pressure condition. In contrast, if the relationship between helping and humility is due to egoistically motivated self-interest to avoid censure for not helping, then dispositional humility should be positively related to

helping in the high-pressure condition. It was predicted that dispositional humility would be positively correlated with helping when an altruistic (but not egoistic) motive was evoked.

If a humility–helping correlation was found in the low-pressure condition, it would be important to examine whether humility accounts for unique variability in helping when other known predictors of helping behavior were statistically controlled, such as states or traits of empathy and distress (Batson, O'Quin, Fultz, Vanderplas, & Isen, 1983; Eisenberg & Miller, 1987). If it does, this would provide further evidence for the prosocial nature of humility, and its potential importance as a personality trait.

Method

Participants were 103 introductory psychology students (73 women and 30 men; mean age = 19 years).[4] This sample was somewhat racially diverse (65% White, 13% Black, 11% Hispanic, 8% Asian, and 3% 'other').

Measures and procedures

Participants completed the Humility IAT (described in Study 2). Participants then completed a self-report survey with personality measures followed by the helping opportunity. Two self-report measures of humility were administered. First, seven semantic-differentials were rated on a seven-point scale between the following end-labels: humble/arrogant, modest/immodest, respectful/disrespectful, egotistical/not self-centered, conceited/not conceited, intolerant/tolerant, closed-minded/open-minded (Rowatt et al., 2006). These seven pairs of terms closely parallel words used in the Humility IAT. Second, participants completed a 10-item humility–modesty measure ['I never brag about my accomplishments' (1 = very much unlike me, 5 = very much like me)] developed by Peterson and Seligman (2004).[5] Participants completed the same IM measure detailed in Study 1. The *Interpersonal Reactivity Index* (Davis, 1983) was used to assess *empathic concern, personal distress*, and *perspective-taking* so that we could examine whether humility predicted helping when trait empathy, distress, and perspective-taking were statistically controlled. State empathy and distress were measured after participants heard about the student in need.

An unexpected opportunity to help. As mentioned, we used the 'Katie Banks' procedure (Coke et al., 1978) to investigate prosocial motivations for helping (Batson et al., 1989, pp. 879–880). Participants (individually) listened to two pilot broadcasts said to be developed for the campus radio station. The *Bulletin Board* broadcast announced campus activities. The *News from the Personal Side* (*NPS*) broadcast was an interview with Katie Banks, a fictitious college senior whose parents and sister had recently died in a car accident. Katie was now struggling to support two surviving siblings and to complete college. Immediately after the *NPS* broadcast, participants rated emotion terms (1 = not at all, 9 = extremely; Batson et al., 1987), from which we created indicators of *state empathy* (i.e., moved, compassionate, warm, softhearted; $\alpha = 0.77$) and *state personal-distress* (i.e., distressed, alarmed, upset, disturbed; $\alpha = 0.84$).

Manipulation of social pressure/prosocial motives. Prior to arrival in the lab, participants were randomly assigned to a high-pressure/egoistic ($n = 52$) or low-pressure/altruistic condition ($n = 51$). In both conditions, participants received a schedule form with lines for eight responses on which participants could offer to volunteer help for Katie. The first seven spaces were already filled in with the handwritten names of (fictitious) previous participants. In the *high-pressure condition*, five of the seven had volunteered to help Katie: three volunteered 1–2 h, one volunteered 3–4 h, and one volunteered 7–8 h. In the *low-pressure condition*, only two of the seven had helped: one had volunteered 1–2 h, the other 3–4 h.

Dependent variables. Like Batson et al. (1989), the schedule form included space for participants to provide their name and phone number, to indicate whether they wished to *help* Katie (0 = no; 1 = yes), and if so, to circle the number of *hours of help* they wished to volunteer: 0, 1–2, 3–4, 5–6, 7–8 or 9–10 (coded 0–5). Participants were asked to complete the schedule form and seal it in an envelope to be delivered to the person organizing help for Katie. After participants finished filling out the schedule form, each completed a survey with a question about whether Katie deserved help (1 = not at all, 9 = extremely). Finally, participants completed a post-experiment interview during which they were probed for suspicion[4] and carefully debriefed.

Result

Overall, participants rated Katie's need to be great ($M = 7.98$, SD = 1.79), and her need was perceived to be just as great when five of seven ($M = 8.14$, SD = 1.48) or two of seven previous participants had volunteered help ($M = 7.82$, SD = 2.06), $F < 1$. Additionally, participants in the high-pressure condition noticed that a higher percentage of participants volunteered help ($M = 56.73$, SD = 19.25) than in the low-pressure condition ($M = 35.78$, SD = 14.36), $F(1,102) = 39.06$, $p = 0.000$, $\eta^2 = 0.279$.

Helping Katie

Overall, 72% of participants indicated that they would help Katie. On average, participants volunteered to help approximately 1–2 h. Across conditions, positive correlates of helping were state and trait empathy, state (but not trait) personal distress, and the humility aggregate variable (Table 3).

A higher percentage of participants in the high-pressure condition volunteered to help Katie (81%) than in the low-pressure condition (63%), $\chi^2 = 4.13$, $p = 0.05$, $\varphi = 0.20$. Likewise, participants in the high-pressure condition said they would help Katie longer ($M = 1.15$, $SD = 0.83$) than those in the low-pressure condition ($M = 0.82$, $SD = 0.74$), $F(1,102) = 4.56$, $p = 0.035$, $\eta^2 = 0.043$.

Humility and helping

As in Study 2, we examined whether dispositionally humble persons volunteered more time to help than less humble persons. Data were condensed prior to analysis. A self-reported humility aggregate variable was created by standardizing and summing the self-report measures of humility. To examine the unique contribution of each predictor, a hierarchical linear regression was then computed entering self-reported humility in step one, implicit humility in step two, and finally the social-pressure condition (high, low) in step three. Consistent with studies 1 and 2, self-reported humility and social pressure condition were unique significant predictors of helping behavior. Across both conditions, implicit humility was not a significant predictor of hours of help offered (Table 4).

We also examined the percentage of participants who indicated that they would or would not help in each condition. In the low-pressure (altruistic motive) condition, a significantly higher percentage of humble persons (defined as above the median on the aggregate measure of humility) volunteered to help (76.9%) than less humble persons (47.8%), $\chi^2 = 4.45$, $p < 0.05$, $\varphi = 0.30$. In the high-pressure (egoistic motive) condition, the percentage of humble persons who volunteered to help (87.0%) did not differ from the percentage of less humble persons who volunteered to help (69.6%), $\chi^2 = 2.04$, $p = 0.28$.

A moderated regression approach (Cohen, Cohen, West, & Aiken, 2003) was also used to examine the effect of dispositional humility and social pressure on the total number of hours volunteered to help. For this analysis, the aggregate humility variable was centered and multiplied by the pressure condition variable to create the appropriate interaction term. Then, the number of hours helped was regressed on the centered humility variable, pressure condition, and interaction term. The overall model was significant ($R^2 = 0.32$, $F(3,102) = 3.80$, $p = 0.013$). As shown in Figure 1, participants volunteered more hours in the high pressure than low pressure condition (Batson et al., 1989). Consistent with studies 1 and 2, humility was positively associated with number of hours helped. The pressure–humility interaction was not statistically significant ($\beta = 0.35$, $t = 1.08$, $p = 28$).

To further investigate the possibility that humility engenders altruistically motivated helping, we followed the within-cell correlation approach used by Batson et al. (1986, 1989). As shown in Table 5, in support of the *humility-altruistic motivation hypothesis*, each measure of humility significantly correlated positively with helping in the low-pressure condition (r's = 0.27–0.37), but not in the high-pressure condition (r's = −0.05–0.15). Further, when examining only the altruistic motivation condition, only the implicit humility measure was a unique predictor of hours of help offered even when controlling for socially desirable responding (Table 6). Trait humility is significantly related to helping in the altruistic motivation condition but not in the egoistic motivation condition.

Next, we explored whether dispositional humility accounted for unique variability in helping above and beyond that due to empathy, distress, or perspective-taking. Again, for ease of comparison with previous altruism research in which correlations were reported (Batson et al., 1986, 1989), we focused our analyses on the low-pressure condition. To reduce the number of analyses, the humility aggregate variable was used in the 10 regression analyses (Table 7). Within the low-pressure condition, dispositional humility accounted for unique variability in helping above and beyond variability due to state or trait empathy or distress or trait levels of perspective-taking.

Discussion

Overall, humble persons offered more time to help a student in need than less humble persons did. This finding replicates the patterns observed in studies 1 and 2 (i.e., that humble persons are more helpful than less humble persons). We also found that a higher percentage of humble persons than less humble persons volunteered to help in the altruistic motivation condition. Within this condition, dispositional humility correlated positively with amount of time offered, even when state and trait empathy, state and trait personal distress, and trait perspective taking were statistically controlled. Further, humility measured implicitly was a stronger predictor of help offered in the altruistic motivation condition than self-reported humility. This finding combined with the demonstration that humility measured implicitly accounts for unique variability in helping behavior when self-reported personality predictors are controlled (Study 2) and data from previous studies (Rowatt et al., 2006) indicates that implicit and explicit

Table 3. Correlations and descriptive statistics for measures of dispositional humility, prosocial motives, and helping (Study 3).

Measures	1	2	3	4	5	6	7	8	9	10	11	Mean	SD	α
1. Humility aggregate[a]												0.35	1.79	0.58
2. Humility–arrogance	0.87**											5.36	0.63	0.60
3. Humility–modesty	0.85**	0.52**										3.27	0.50	0.71
4. Implicit humility	0.22*	0.10	−0.03									0.36	0.32	0.88
5. State empathy	0.28**	0.25**	0.14	0.20*								5.82	1.70	0.77
6. State personal distress	0.17†	0.10	0.13	0.09	0.57**							4.90	1.88	0.84
7. Trait empathic concern	0.46**	0.46**	0.28**	0.23*	0.35**	0.23**						2.95	0.58	0.79
8. Trait personal distress	0.00	−0.13	0.14	−0.13	0.16	0.17†	0.04					1.65	0.72	0.83
9. Trait perspective-taking	0.38**	0.46**	0.17†	0.15	0.06	0.00	0.40**	−0.23*				2.63	0.55	0.64
10. BIDR-IM	0.33**	0.39**	0.22*	0.03	0.04	0.02	0.30**	−0.20*	0.21*			0.29	0.17	0.71
11. Hours willing to help	0.20*	0.15	0.18†	0.11	0.29**	0.29**	0.30**	0.09	0.17†	0.19†		0.99	0.80	–
12. Willing to help (0 = no; 1 = yes)	0.27**	0.18†	0.21*	0.17†	0.26**	0.23**	0.30**	0.14	0.13	0.20*	0.78**	0.72	–	–

Notes: [a]The humility aggregate variable was created by first standardizing, then summing, the measures of humility–arrogance, humility–modesty, and implicit humility. In row 12, the percentage of people who indicated 'yes' when asked if they would help (72%) is shown in the column labeled 'Mean'.
*$p < 0.05$, **$p < 0.01$ and $^{\dagger}p < 0.10$.

measurement strategies in humility may inform and complement each other rather than overlap. Future research should continue to clarify the relationships between implicit and explicit measurement approaches and continue to examine potential differences in behavioral or motivational correlates of these measures. This fits with the finding of Batson et al. (1989) that a dispositional trait related to an altruistic motive for helping (in their case, quest religious orientation) would positively correlate with helping under low-pressure (when others were inactive). Humility did not correlate with the amount of time volunteered in the egoistic motivation condition. We did not find a statistical interaction between humility (high, low) and pressure/motive on the amount of time offered to help. As in Study 2, we found that humble persons were more helpful than less humble persons, regardless of social pressure. To our knowledge, this is one of the first laboratory studies to document a correlation between a personality dimension (i.e., trait humility) and altruistically motivated helping. Although every act of helping is not motivated by altruism, humility could be a personality trait that is linked with some altruistically motivated acts of helping. Until future research replicates this finding, it should be interpreted with caution.

Table 4. Multiple regression of hours offered to help on humility measures and condition (Study 3).

	β	t	p	R^2
Step one				0.043
Self-reported humility	0.21	2.02	0.046*	
Step two				0.052
Self-reported humility	0.20	1.99	0.050*	
Implicit humility	0.10	0.964	0.338	
Step three				0.090
Self-reported humility	0.22	2.19	0.031*	
Implicit humility	0.11	1.05	0.298	
Social pressure manipulation	−0.21	−2.09	0.039*	

Notes: *Predictor is significant at the $p < 0.05$ level, Step Two $\Delta R^2 = 0.010$, $p = 0.338$, Step three $\Delta R^2 = 0.038$, $p = 0.079$.

General discussion

Three studies provide clear evidence that humble persons are more helpful than less humble persons. Humility correlated with self-reported helpfulness even when Big Five personality dimensions and IM were statistically controlled (Study 1). Humble persons were more generous with their time than less humble persons (Studies 2 and 3). The unique feature of Study 2 was that an implicit measure of humility was used. The unique contribution of Study 3 was that humility correlated positively with time volunteered to help even when known predictors of helping behavior such as empathy, distress, and perspective-taking were controlled.[6] Study 3 further demonstrated that implicit measures of humility may be better at predicting helping that is more altruistically motivated.

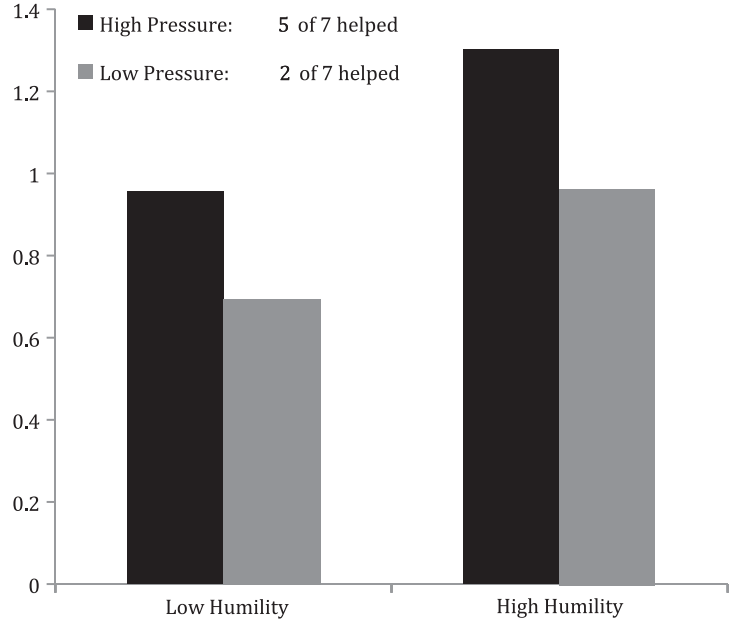

Figure 1. Regression of humility on hours willing to help in high and low pressure conditions.

Table 5. Associations between measures of dispositional humility, prosocial motives, and helping (Study 3).

		Pressure condition	
	Overall	Low pressure	High pressure
DV: Will you help Katie? (1 = No; 2 = Yes)			
Humility aggregate variable[a]	0.27**	0.41**	0.13
Humility–modesty	0.21*	0.37**	0.08
Humility–arrogance semantic differentials	0.18†	0.29*	0.09
Implicit humility	0.17†	0.30*	0.06
State empathy	0.26**	0.27*	0.22
State personal distress	0.23**	0.18	0.25†
Trait empathy	0.30**	0.27*	0.39*
Trait personal distress	0.14	0.06	0.18
Trait perspective taking	0.13	0.14	0.19
DV: How many hours will you help Katie?			
Humility aggregate variable[a]	0.20**	0.37**	0.08
Humility–modesty	0.18†	0.27*	0.15
Humility–arrogance semantic differentials	0.15	0.31*	0.04
Implicit humility	0.11	0.34*	−0.05
State empathy	0.29**	0.32*	0.23†
State personal distress	0.29†	0.24†	0.31*
Trait empathy	0.30**	0.32*	0.33*
Trait personal distress	0.09	−0.11	0.22
Trait perspective taking	0.17	0.28*	0.15

Notes: [a]The humility aggregate variable is the sum of humility–modesty, humility–arrogance, and implicit humility (summed after each variable was standardized). Analyses of non-humility associates of helping behavior are presented for illustrative purposes and for comparison with previous research and should be interpreted with caution.
*$p < 0.05$, **$p < 0.01$, and †$p < 0.10$.

Table 6. Multiple regression of hours offered to help on humility measures in the altruistic motivation condition (Study 3).

	β	t	p	R^2
Step one				0.135
VIA humility	0.19	0.986	0.330	
Humility semantic differentials	0.19	1.03	0.310	
BIDR-IM	0.13	0.899	0.373	
Step two				0.256
Humility IAT	0.35	2.61	0.012*	
VIA Humility	0.23	1.29	0.205	
Humility semantic differentials	0.16	0.880	0.384	
BIDR-IM	0.10	0.717	0.478	

Note: *Predictor is significant at the $p < 0.05$ level, $\Delta R^2 = 0.121$, $p = 0.012$.

In three studies, humility assessed using a combination of measurement approaches, including explicit and implicit measurements, predicted unique variability (over and above that predicted by other facets of dispositional personality traits) in a complex human behavior: helping a peer in need. This multi-method model suggests not only that humility as a trait is uniquely predictive of both self-report and behavioral measures of helpfulness, but that an implicit measure of humility predicts helping behavior over and above that which is predicted by traditional self-report measures and in situations that evoke a more altruistic motive for helping. This multi-method approach could be expanded by the inclusion of other novel approaches to measuring humility which have been suggested recently, such as the relational humility approach, theorized by Davis et al. (2010, 2011). Given the present data, a combination of measurement approaches could also clarify the contributions of humility toward prediction of theoretically relevant behaviors.

Limitations and caveats

Although the humility–helping connections documented are intriguing, we would be wise to exercise intellectual humility with regard to the scope and magnitude of our findings. The use of college student convenience samples, although very common, is a limitation. Research with college students lacks the depth and richness of research with people who risked their lives to save another person being persecuted (cf. Oliner & Oliner, 1988) or who intervened to help after an actual accident (Bierhoff, Klein, & Kramp, 1991). Helping opportunities that occur in a lab are also less risky or costly than some that occur in the

Table 7. Multiple regressions of helping on dispositional humility, empathy, distress, and perspective-taking (within the low-pressure condition of Study 3).

	Will you help? (0 = no; 1 = yes)			Hours volunteered		
Regression models	β	t	R^2	β	t	R^2
1. Humility	0.36	2.60*	0.19	0.30	2.11*	0.18
State empathy	0.16	1.14		0.23	1.63	
2. Humility	0.36	2.46*	0.18	0.28	1.92†	0.17
Trait empathy	0.13	0.89		0.21	1.41	
3. Humility	0.39	2.90**	0.18	0.34	2.46**	0.17
State personal distress	0.11	0.81		0.18	1.31	
4. Humility	0.41	3.06**	0.17	0.36	2.64**	0.14
Trait personal distress	0.07	0.55		−0.10	−0.71	
5. Humility	0.44	2.88**	0.17	0.30	1.98*	0.15
Trait perspective-taking	−0.06	−0.37		0.14	0.91	

Notes: *Humility* = humility aggregate variable. Two separate regression models are shown per row. *$p < 0.05$, **$p < 0.01$ and $^{\dagger}p < 0.10$.

field and could introduce demand characteristics. However, multi-trait, multi-method basic research in a controlled lab environment complements less controlled survey research that happens after an act of helping. Furthermore, volunteering to help a fellow student in need may correspond more closely to everyday mundane acts motivated by reciprocal altruism than rare instances to be a first responder or heroic rescuer (cf. Midlarsky et al., 2005).

Conclusion

Humility appears to be an important personality quality related to helping others in need. Trait humility could be associated with other personal, social, or organizational behaviors, such as self-control, aggression (inversely), prejudice (inversely), or leadership (Collins, 2001). We encourage other personality researchers to include a brief measure of humility in their studies and to examine whether humility accounts for unique variability in these or other psychological processes or social behaviors.

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Notes

1. Readers with additional interest in definitions and measurement of this complex construct may see Davis et al. (2010, 2011) for reviews.
2. The honesty–humility subscale was designed by Ashton and Lee (2005) to measure four facets: sincerity, fairness, greed-avoidance, and modesty. To assess humility independently from honesty, we used the greed-avoidance and modesty facets of Honesty–Humility but not the sincerity or fairness subscales.
3. IATs have been utilized extensively to measure various aspects of personality and self-concept (cf. Schnabel, Asendorpf, & Greenwald, 1990), for a review of the validity of the IAT, see Greenwald, Poehlman, Uhlmann, and Banaji (2009).
4. During the post-experiment interview/debriefing session of Study 3, 11 of 114 participants (9.6%) expressed high suspicion about the cover story. Five suspicious participants were in the high-pressure condition and six in the low-pressure condition. Data from these 11 participants were omitted prior to Study 3 analyses. Study 3 results were based on the final sample of 103 participants (52 in the high-pressure condition and 51 in the low-pressure condition).
5. In general, correspondence between implicit and explicit measures of constructs is somewhat variable (Hofmann, Gawronski, Gschwender, Le, & Schmitt, 2005; Nosek, 2005). In this study, the implicit measure was loosely associated with individual explicit measures of humility but positively correlated with an aggregate explicit measure (Table 3), consistent with Rowatt et al. (2006) and a meta-analysis which revealed a 0.17 weighted mean effect size between implicit and personality measures (Greenwald et al., 2009). Given that both implicit and explicit measures appear to explain unique variability in humility-related behaviors and the suggestion by several researchers in the field to investigate multimodal and supplemental measurement approaches to self-report (e.g., Davis et al., 2010, 2011; Tangney, 2002), the inclusion of multiple measures allowed the investigation of the relative contributions of different measurement strategies while providing a broader overall measure of the construct in the aggregate humility measure.
6. We note that our primary purpose was to investigate the *humility–helpfulness hypothesis*, not mediators of this relationship. Given that we did not know at the outset whether a humility main-effect on helping would be found, we did not speculate *a priori* about statistical mediators of the effect. Like Krueger et al. (2001), we examined whether a component of personality accounted for unique variability in helping. After finding the humility–helpfulness connection, we simply tested whether humility remained a significant predictor when certain other qualities were controlled. Now that the humility–helpfulness link has been established, others

may decide to examine whether other qualities mediate the relationship.

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