Boosting State Humility Via Gratitude, Self-Affirmation, and Awe:

Theoretical and Empirical Perspectives

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Abstract

Humility has typically been studied as a stable personality trait, but it can also be examined as a transient—and malleable—psychological state. Treating humility as a state facilitates research on both the immediate causes and moment-to-moment correlates of humility. A state approach also allows for the development of interventions that provide short-term—and, potentially, long-term—boosts in humility. We discuss the methodological challenges and implications of a state approach to humility, including the measurement of state humility. We then review the theoretical basis and empirical evidence for three humility interventions—self-affirmation, gratitude, and awe—each of which operates through distinct mechanisms. Self-affirmation secures self-esteem and reduces self-focused defensiveness. Gratitude deflects focus from the self to the importance and value of other people. Awe increases self-concept accuracy and promotes feelings of connectedness to others. Future directions for state humility research, including the development of a long-term humility-boosting intervention, are examined. (150 words)

Keywords: humility, state, intervention, self-affirmation, gratitude, awe

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Humility is a psychological characteristic marked by a balanced, accurate self-concept and pronounced focus on other people rather than oneself (Tangney, 2000). We propose that humility is characterized by five hallmarks, or observable markers: (a) a secure and accepting self-identity; (b) freedom from distortion about one's strengths and weaknesses; (c) openness to new information about oneself and the world; (d) high focus on others relative to the self; and (e) a belief that other people are equally worthy (Chancellor & Lyubomirsky, 2013). Each hallmark must be present, but none is individually sufficient, for a person to be humble. These hallmarks thus both define humility and differentiate it from what it is not. In particular, the opposite of humility is high self-focus, including an excessively positive (e.g., narcissism or arrogance) or negative (e.g., depression or low self-esteem) self-view. Further, under this hallmarks-based definition, humility can be distinguished from modesty. Although humble people are frequently modest, they may sometimes behave immodestly when speaking frankly about their genuine strengths and accomplishments. Additionally, narcissistic individuals may behave outwardly modestly for self-presentational purposes while maintaining an inwardly inflated self-worth. As such, humility is neither merely the absence of arrogance nor the presence of modesty.

In contrast with alternative perceptions of it as self-deprecation or weakness (Tangney, 2000), humility is generally viewed as a positive personal characteristic (Exline & Geyer, 2004). Humility has also been linked to a number of prosocial outcomes. For example, humble undergraduates were more likely to help a fellow student than their less humble peers, even when the social pressure to help was minimal (LaBouff et al., 2012). Humble people have also been found to be particularly generous with their time and money (Exline & Hill, 2012) and more

likely than non-humble people to cooperate in economic games, even when cooperation is costly to them (Hilbig & Zettler, 2009; Hilbig, Zettler, & Heydasch, 2012).

Humility may also have benefits in specific domains such as medicine and business. In a study from our laboratory of patient-physician interactions, humble physicians were rated as more effective at communicating with patients than their less-humble counterparts (Ruberton et al., in press). Because physician communication is associated with better patient outcomes (Ong, de Haes, Hoos, & Lammes, 1995; Stewart, 1995), physician humility may thus have downstream benefits for patients. Furthermore, humility in a sample of business CEOs was associated with greater empowerment in followers (Ou, Tsui, Kinicki, Waldman, Xiao, & Song, 2014), whereas narcissism in a sample of business managers was positively associated with rates of white-collar crime (Blickle, Schlegel, Fassbender, & Klein, 2004).

State Humility

Using the hallmarks-based definition of humility as its foundation, our research treats humility as a malleable psychological state. By contrast, most research to date—including the work cited above on the benefits of humility—has approached humility as a relatively stable personality trait (e.g., Ashton & Lee, 2008; Davis, Worthington, & Hook, 2010). Traits indicate stability in people's experiences across time and situations. Thus, trait humility is necessarily composed of a sequence of consistently experienced states of humility. Although we recognize that individuals do vary in their overall levels of humility, we propose that humility also varies within individuals across time in a potentially predictable, controllable manner. People high in trait humility may simply experience the states more often and more consistently than do others.

This state-based approach allows for the examination of specific psychological and contextual antecedents of humility, and thus ways to increase momentary feelings of humility.

To that end, our laboratory has already tested three experimental interventions to boost state humility: practicing self-affirmation (Kruse, Chancellor, & Lyubomirsky, 2015a), expressing gratitude (Kruse, Chancellor, Ruberton, & Lyubomirsky, 2014), and experiencing awe (Chancellor, Nelson, Cornick, Blascovich, & Lyubomirsky, 2015). The background and details of each intervention are described in detail below. The success of interventions to date at boosting humility demonstrates that humility is not necessarily a permanent characteristic of an individual; rather, it is also a transient state that can be elicited by specific cognitive activities or situational cues. If people can be made more sensitive to such activities and cues, then they may be able to become more humble across situations.

Methodologically, the state approach facilitates at least two kinds of research designs. First, it lends itself to building a state measure of humility that may be used as a manipulation check. Presently, the lack of such a published measure impedes experimentation. Second, state humility can be explored in non-experimental prospective investigations, as well as daily diary and experience sampling studies. Unlike trait-based studies, in which temporal variability is often interpreted as error, a state approach assumes that change across time may be substantively meaningful and correlated with other psychological factors.

Measurement of State Humility

Humility, by definition, resists self-rating: Those who label themselves as humble may be self-aggrandizing and those who truly are may not be aware of it or reluctant to report it (Davis et al., 2010, 2011). Given this paradox, many past researchers have regarded self-report measures of humility to be unfeasible, preferring to use indirect measures, such as other (peer)-report (e.g., Davis et al., 2011). Other-reports are ideal for assessing observable phenomena, such as visible behavior and stable dispositions. However, they are less useful for tracking subtle fluctuations in

humility, for implementing experimental paradigms, and for identifying humility's intrapersonal dimensions. In light of these considerations, we propose that self-reporting state humility is both possible and necessary. To that end, we developed a short instrument that can measure fluctuations in self-reported humility: the Brief Humility Scale (BHS; see appendix). Notably, the BHS can be adapted to assess both state and trait humility. The BHS shows strong construct validity and good reliability, is sensitive to experimental manipulation, and does not correlate with social desirability (Kruse, Chancellor, & Lyubomirsky, 2015b).

The Brief Humility Scale facilitates three novel methodological approaches in the humility literature. First, as demonstrated by our experimental studies (below), the measure is responsive to experimental change and therefore may be used as a dependent variable (or a manipulation check). The Brief Humility Scale can be used alone, as the only direct measure of humility, or can complement other measures of humility, such as informant reports. Second, our new scale enables researchers to explore whether state humility may moderate other constructs that hinge upon a "quiet ego." For example, if people who feel humble experience greater openness and attentiveness (Kruse et al., 2015b), then they may be more likely to enter the state of flow (Csikszentmihalyi, 1997). Third, in longitudinal research, other-report depends on coordinating multiple people and assumes that the informant has interacted with the participant meaningfully and sufficiently between time points. Self-report circumvents both of these requirements and as such can facilitate research with multiple time points. In summary, the Brief Humility Scale complements current measures and opens pathways to new research directions.

Humility Interventions

As noted above, a state-based approach to studying humility enables the development of cognitive or behavioral interventions that may provide short-term boosts to humble thoughts and

feelings. Our research has tested three such interventions: affirming personal values, writing letters of gratitude, and experiencing awe-inspiring moments. We will now discuss the theoretical basis and empirical evidence supporting each intervention. Although some of the studies presented in this chapter are still under review, to our knowledge, they represent among the best evidence for state-humility interventions available.

Self-Affirmation

Self-affirmation (aka values affirmation; e.g., Logel & Cohen, 2012) is a process by which people reflect on personal values when confronted with information that threatens their self-concept (Sherman & Cohen, 2006). Self-affirmation theory posits that people seek to preserve a positive self-image, and thus may respond defensively to information that threatens the self (Steele, 1988). For example, they may dismiss or discredit information that challenges their closely held beliefs (e.g., arguments against the death penalty presented to a proponent of capital punishment; Lord, L. Ross, & Lepper, 1979) or attribute their failures to external causes rather than to themselves (e.g., Miller & M. Ross, 1975). These defensive biases are often unconscious and automatic (Sherman & Cohen, 2006) and so may serve to reduce dissonance that results from encountering a threat to one's self-view (Steele & Liu, 1983). Notably, self-affirmation does not mean directly asserting one's *own* goodness or worth as a person (e.g., the *Saturday Night Live* catchphrase, "I'm good enough, I'm smart enough, and doggone it, people like me!"); rather, it refers to reinforcing central, self-relevant *values*, which in turn promotes a more stable self-image. Self-affirmation thus serves as a substitute for defensive biases by reinforcing the self-image in other domains unrelated to the threatening information (Sherman & Cohen, 2006; Steele, 1988). By strengthening other aspects of the self, self-affirmation enables individuals to accept threatening information in an open and non-defensive manner.

Relatedly, humility is associated with a secure, accepting identity and an acceptance of negative self-information (Chancellor & Lyubomirsky, 2013; Tangney, 2000). As such, bias reduction is one pathway by which self-affirmation may increase humility. Affirming one's central values may allow one to accept one's limitations because it is not necessary to dismiss or ignore those limitations to preserve a sense of self-worth. Additionally, self-affirmation may boost humility by increasing positive other-focus. In one study, self-affirmation promoted feelings of loving and connectedness, which in turn predicted greater acceptance of self-relevant information about the risks of smoking (Crocker, Niiya, and Mischkowski, 2008). Completing a self-affirmation activity also decreased narcissistic aggression in a sample of adolescents for a period of up to 1 week following the affirmation activity (Thomaes, Bushman, de Castro, Cohen, & Denissen, 2009). Self-affirmation thus promotes positive, egalitarian attitudes and behaviors towards other people, which is a key hallmark of humility (Chancellor & Lyubomirsky, 2013). Finally, humility involves relatively low negative affect and depression, and self-affirmation has been found to temper negative affect (Nelson, Fuller, Choi, & Lyubomirsky, 2014).

In line with this theory, a series of studies by our lab experimentally examined the relationship between self-affirmation and humility (Kruse, Chancellor, & Lyubomirsky, 2015a). Across five experiments, participants who completed a self-affirmation activity showed greater self-reported (using the BHS) and observer-rated (using a short writing activity; e.g., "Imagine that someone is angry with you") state humility. However, this effect was only present when the self-affirmation was immediately followed by exposure to self-relevant information (e.g., when participants wrote about their strengths and weaknesses or why someone may have been angry with them). That is, self-affirmation alone did not increase humility, but rather enabled a humble response to a self-threatening or self-enhancing cue. This finding is consistent with past research

showing that self-affirmation enables non-biased responses to self-relevant information: Only when such information is salient is the effect of affirmation felt. Furthermore, exposure to negative self-information alone (e.g., self-denigration) did not promote humility, and the effects of self-affirmation on humility could not be explained by increased positive affect or self-esteem. That is, affirmed participants did not report greater humility than non-affirmed participants simply because they felt good about themselves in general.

In sum, both theory and empirical evidence suggest that self-affirmation is associated with high humility. Self-affirmation reduces defensive biases towards threatening information, enables greater acceptance of one's limitations, promotes a more positive view of other people, and diminishes negative moods—all key components of the experience of humility. Consistent with this theoretical framework, experimentally manipulated self-affirmation did, indeed, lead to increases in humility in response to self-relevant information. Although further research is needed to explore other mechanisms by which self-affirmation may boost humility, it is clear that self-affirmation and humility are inexorably linked.

Gratitude

Gratitude is a cognitive and emotional reaction to externally-attributed positive events and circumstances. It has been described as a moral emotion that occurs when individuals recognize that they have benefited from another person's actions (McCullough, Kilpatrick, Emmons, & Larson, 2001), particularly when people believe that the benefits they received were altruistically motivated and costly to the benefactor (Wood, Maltby, Stewart, Linley, & Joseph, 2008). Additionally, gratitude may be conceptualized as a broader appreciation of positive factors in life, rather than merely of a specific positive event (Wood, Froh, & Geraghty, 2010). Similar to humility, gratitude may be treated as a stable trait (i.e., a grateful disposition;

McCullough, Emmons, & Tsang, 2002) or a transient, but malleable, state (e.g., Emmons & McCullough, 2003; Fredrickson, 2004; Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2011).

Gratitude and humility are linked through several overlapping mechanisms. First, gratitude is an other-focused—and, indeed, other-praising (Algoe & Haidt, 2009)—emotion. As such, it inherently requires recognition of the positive influence of other people (or other factors outside of the self) in one's life, which naturally decreases self-focus and thus increases humility (Chancellor & Lyubomirsky, 2013; Tangney, 2000). In a similar vein, experiences that promote gratitude may also bring about feelings of dissonance or uncertainty about one's capabilities because they imply that the recipient of the benefit was unable to, or simply did not, carry out a particular goal independently. Accordingly, gratitude prompts individuals to recognize that their capabilities are limited—that is, to acknowledge that they cannot "go it alone" to achieve their goals. In other words, gratitude invokes themes of humility because one cannot simultaneously be grateful for someone else's efforts and attribute successes completely to oneself.

Consistent with this idea, writing letters of gratitude has not been found to be a wholly positive experience; rather, in three studies, the activity evoked feelings of indebtedness, guilt, and humility, suggesting that it made participants cognizant of their own shortcomings (Layous, Sweeny, Armenta, & Lyubomirsky, 2015). Furthermore, practicing gratitude appears to promote increased effort towards self-improvement goals (Layous, Nelson, Kurtz, & Lyubomirsky, 2015), suggesting that gratitude-evoking experiences make individuals more aware of a need to improve themselves. In sum, experiences that bring about gratitude may also bring a greater recognition of one's limitations, a key facet of humility (Chancellor & Lyubomirsky, 2013).

A recent series of studies by our lab empirically tested the relationship between humility and gratitude (Kruse et al., 2014). Consistent with the hypothesis that gratitude-inducing

activities can also induce humility, participants who wrote a letter of gratitude were rated by others (in response to a humility-eliciting writing activity) as more humble at that moment than those who completed a neutral activity. This effect was mediated by ratings of low self-focus in the letters of gratitude. Additionally, humility moderated the impact of writing a letter of gratitude on gratitude itself: Only participants who were initially humble reported feeling more grateful after writing the letter. Finally, in a daily diary study, day-to-day gratitude and humility mutually predicted one another over a 14-day period. Participants who felt particularly grateful on a certain day were more likely to become more humble (as measured by the BHS) by the next day, and vice-versa, than less grateful participants. Taken together, these findings suggest the possibility that gratitude and humility may exist in a mutually-reinforcing upward spiral: Gratitude boosts humility, which in turn enables one to feel more grateful.

Awe

Awe is an emotional response to grand, powerful, overwhelming, or unexpected environmental stimuli (see Fredrickson, 2013; Keltner & Haidt, 2003), such as nature, beauty, or great accomplishments by other people (Shiota, Keltner, & Mossman, 2007). It is a discrete emotion (Ekman, 1992; Shiota, Campos, & Keltner, 2003) and is regarded as a positive state (Fredrickson, 2004; Griskevicius, Shiota, & Neufeld, 2010; Shiota et al., 2007; cf. Lazarus, 1991) or even a moral emotion (i.e., an emotion triggered by non-self-relevant stimuli that promotes prosocial behavior; Haidt, 2003; Keltner & Haidt, 2003). Keltner and Haidt (2003) propose that awe is distinguished by two primary components. First, awe evokes a sense of vastness, or a recognition of forces larger (either physically or socially) than the self. Second, awe promotes cognitive accommodation, or the expansion of mental structures to make sense of new or overwhelming experiences.

The empirical research on awe suggests that awe-eliciting experiences may also evoke feelings of humility. Specifically, awe promotes a diminished, detached sense of self (Shiota et al., 2007), and humility involves low self-focus and an accurate view of oneself and one's position in the world (Tangney, 2000). Additionally, awe is associated with increased cognitive openness and a broader, less close-minded worldview (Griskevicius et al., 2010; Rudd, Vohs, & Aaker, 2011; Shiota et al., 2007), and humility is associated with high levels of openness to new information about oneself and the world (Chancellor & Lyubomirsky, 2013).

A study from our laboratory provided support for the hypothesized awe-humility relationship by using a virtual-reality environment to induce awe (Chancellor et al., 2015). Participants were exposed to either a high-awe simulation (a spaceship slowly moving away from Earth with narration of a passage from the book Pale Blue Dot [Sagan, 1994]) or a neutral simulation (a generic office setting with narration of an encyclopedic description of the dwarf planet Pluto). As expected, participants who viewed the awe simulation subsequently reported greater awe and humility than participants who viewed the neutral simulation. However, the increase in humility was not directly mediated by increases in awe itself, suggesting that the mechanisms by which awe-eliciting experiences induce humility operate parallel to the mechanisms by which the experiences induce awe. For example, viewing the Pale Blue Dot may have fostered accurate self-awareness, which simultaneously promoted both greater awe and greater humility. Hence, reported feelings of awe itself may not be necessary for awe-related experiences to increase humility.

Furthermore, little is known about the conditions under which awe-eliciting stimuli might be most effective at increasing humility. For example, insecure individuals may be reluctant to diminish their self-view and thus resistant to the cognitive effects of awe. Consistent with this

hypothesis, the awe simulation increased humility via increased feelings of connectedness to other people, but only in individuals with high self-esteem (Chancellor et al., 2015), perhaps because people without a stable sense of self-regard found the experience to be threatening. Awe-related experiences may therefore be most impactful on humility when individuals have already been made to feel somewhat humble. Although further research is needed to understand how and when awe-related experiences elicit humility, it is clear that such experiences are nonetheless a valuable means of boosting humility, particularly in conjunction with other techniques such as self-affirmation and gratitude.

Limitations and Future Directions

Taken together, our laboratory's interventions provide a diverse set of paths to boosting state humility. Theoretically, each intervention links to humility through a distinct mechanism: self-affirmation by securing self-esteem, gratitude by promoting other-focus over self-focus, and awe by increasing accuracy of self-judgments and openness to new information. However, further experimental research is needed to replicate these interventions, to test the duration of their effects and, most important, to understand precisely how and when the interventions increase humility. Furthermore, these activities are by no means the only ones that might promote humility. For example, practicing forgiveness in response to a transgression—or working to make amends for one's own transgressions—may encourage an accurate view of one's own importance and a higher valuation of others, both defining characteristics of humility.

In addition to catalyzing the development of state humility interventions, the state-based view of humility opens a number of exciting new directions for humility research in general. From a theoretical perspective, by acknowledging that humility may fluctuate, several new research questions become available. First, as discussed above, if humility can rise and wane

over short periods of time, it can be experimentally boosted and lowered. As such, the state approach opens questions about what precedes, causes, and results from shifts in humility. Second, the state approach also makes possible the study of how trait humility develops—for example, whether people acquire humility (or lose it) in response to humbling (or ego-inflating) life events (e.g., birth of a child, unexpected success or failure), through slow personal growth over time due to daily behaviors and uplifts (e.g., loving interactions with one's spouse, expressions of gratitude to co-workers), or a combination of these and other factors (e.g., genetics, values). Third, the state approach has implications beyond humility itself, as it raises questions about the dynamic nature of the self and self-focus (Exline, 2008; Leary, Adams, & Tate, 2006), as well as about what thoughts, emotions, and behaviors precede, follow, or co-occur with humble feelings, as they arise in real time.

Finally, our research on humility interventions has examined only short-term changes in humble thoughts and feelings. However, a state approach to humility also enables the development of interventions to promote long-term boosts to humility by accruing and building short-term humble states into long-term humble traits. Recent models of volitional personality change have proposed that behavioral techniques—such as identifying values, setting goals, and monitoring behaviors and their effects—that succeed at stimulating behaviors consistent with the desired personality trait will, in turn, boost the trait itself (Hudson & Fraley, 2015; Madigson, Roberts, Collado-Rodriguez, & Lejuez, 2014; see also English & Carstensen, 2014). (Or, as Funder [2014] succinctly put it: "Change the behaviors, and the trait will follow.") Humility change may follow a similar approach: Promote repeated humble thoughts and behaviors (e.g., via humility interventions or contextual cues) and people will become sustainably more humble. To that end, our lab is conducting a series of studies (funded by the John Templeton Foundation)

aimed at translating our short-term activities into a long-term humility intervention. State-level humility interventions may thus be the first step toward lasting increases in humility.

Practical Lessons

A recurring theme of our studies is that humility can be induced by positive activities, rather than by self-denigration or other negative behaviors. As such, people who wish to become more humble can do so in natural, even enjoyable, ways, such as by taking more time to appreciate the awe-inspiring ways in which other people have helped them. Because our interventions are not explicitly about "humility," they may also be humbling even for those who do not consciously seek to become more humble. Indeed, our interventions may provide a means of boosting humility in domains where it may be beneficial but has often been dismissed as an undesirable weakness. For example, research has shown that humble physicians are particularly effective at communicating with their patients (Ruberton et al., in press), in contrast with media portrayals of arrogant physicians as successful physicians (e.g., the long-running television show *House, M.D.*). Humility interventions for physicians may therefore benefit both the physicians themselves and the patients under their care. Furthermore, although humility is not often viewed as a strength in business leaders (Exline & Geyer, 2004), leader humility has been linked to positive outcomes in the workplace (see Owens, Rowatt, & Wilkins, 2011, for a review). Because our interventions avoid explicit self-deprecation, they may be particularly useful for CEOs who might benefit professionally from being more humble, but would not accept an intervention that (they believe) would make them weaker. Experimental studies on the impact of humility interventions for people in influential positions thus represents a promising future direction in state humility research.

References

Algoe, S. B., & Haidt, J. (2009). Witnessing excellence in action: the "other-praising" emotions of elevation, gratitude, and admiration. *The Journal of Positive Psychology, 4*, 105-127. doi:10.1080/17439760802650519

Ashton, M. C., & Lee, K. (2008). The prediction of honesty-humility-related criteria by the HEXACO and Five-Factor models of personality. *Journal of Research in Personality*, 1216-1228. doi:10.1016/j.jrp.2008.03.006

Blickle, G., Schlegel, A., Fassbender, P., & Klein, U. (2006). Some personality correlates of business white-collar crime. *Applied Psychology, 55*, 220-233. doi:10.1111/j.1464-0597.2006.00226.x

Campbell, W. K., & Foster, J. D. (2007). The narcissistic self: Background, an extended agency model, and ongoing controversies. In C. Sedikides, & S. J. Spencer (Eds.), *The Self* (pp. 115-138). Philadelphia, PA: Psychology Press.

Chancellor, J., & Lyubomirsky, S. (2013). Humble beginnings: Current trends, state perspectives, and hallmarks of humility. *Social and Personality Psychology Compass, 7*, 819-833. doi:10.1111/spc3.12069

Chancellor, J., Cornick, J., Nelson, S. K., Blascovich, J., & Lyubomirsky, S. (2014). *Above the Pale Blue Dot: Awe and state humility in immersive virtual environments*. Manuscript under review.

Crocker, J., Niiya, Y., & Mischowski, D. (2008). Why does writing about important values reduce defensiveness? Self-affirmation and the role of positive other-directed feelings. *Psychological Science, 19*, 740-747. doi:10.1111/j.1467-9280.2008.02150.x

Csikszentmihalyi, M. (1997). *Finding flow: The psychology of engagement with everyday life*. New York: Basic Books.

Davis, D. E., Hook, J. N., Worthington, E. L., van Tongeren, D. R., Gartner, A. L., Jennings, D. J., & Emmons, R. A. (2011). Relational humility: Conceptualizing and measuring humility as a personality judgment. *Journal of Personality Assessment, 93*, 225-234. doi:10.1080/00223891.2011.558871

Davis, D. E., Worthington, E. L., & Hook, J. N. (2010). Humility: Review of measurement strategies and conceptualization as personality judgment. *The Journal of Positive Psychology, 5*, 243-252. doi:10.1080/17439761003791672

Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion, 6*, 169-200. doi:10.1080/02699939208411068

Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology, 84*, 377-389. doi:10.1037/0022-3514.84.2.377

English, T., & Carstensen, L. L. (2014). Will interventions targeting conscientiousness improve aging outcomes? *Developmental Psychology, 50*, 1478-1481. doi:10.1037/a0036073

Exline, J.J. (2008). Taming the wild ego. In J.A. Bauer & H.A. Wayment (Eds.), *Transcending self-interest: Psychological explorations of the quiet ego* (pp. 53-62). Washington, DC: American Psychological Association.

Exline, J. J., & Geyer, A. L. (2004). Perceptions of humility: A preliminary study. *Self and Identity, 3*, 95-114. doi:10.1080/13576500342000077

Exline, J. J., & Hill, P. C. (2012). Humility: A consistent and robust predictor of generosity. *The Journal of Positive Psychology, 7*, 208-218. doi:10.1080/17439760.2012.671348

Fredrickson, B. L. (2004). Gratitude, like other positive emotions, broadens and builds. In R. A.

   Emmons, & M. E. McCullough (Eds.), *The psychology of gratitude* (pp. 145-166).

   Oxford: Oxford University Press.

Fredrickson, B. L. (2013). Positive emotions broaden and build. In P. Devine, & A. Plant (Eds.),

   Advances in experimental social psychology (pp. 1-53). Burlington: Academic Press.

Funder, D. C. (2014, May 6). *Can personality change?* Retrieved from Funderstorms:

   http://funderstorms.wordpress.com/2014/05/06/can-personality-change/

Griskevicius, V., Shiota, M. N., & Neufeld, S. L. (2010). Influence of different positive emotions

   on persuasion processing: A functional evolutionary approach. *Emotion, 10*, 190-206.

   doi:10.1037/a0018421

Haidt, J. (2003). The moral emotions. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith

   (Eds.), *Handbook of affective sciences* (pp. 852-870). Oxford: Oxford University Press.

Hilbig, B. E., & Zettler, I. (2009). Pillars of cooperation: Honesty-Humility, social value

   orientations, and economic behavior. *Journal of Research in Personality, 43*, 516-519.

   doi:10.1016/j.jrp.2009.01.003

Hilbig, B. E., Zettler, I., & Heydasch, T. (2012). Personality, punishment and public goods:

   Strategic shifts towards cooperation as a matter of dispositional Honesty-Humility.

   European Journal of Personality, 26, 245-254. doi:10.1002/per.830

Hudson, N. W. & Fraley, R. C. (2015). Volitional personality trait change: Can people choose to

   change their personality traits? *Journal of Personality and Social Psychology*. doi:

   10.1037/pspp0000021

Keltner, D., & Haidt, J. (2003). Approaching awe, a moral, spiritual, and aesthetic emotion.

   Cognition and Emotion, 17, 297-314. doi:10.1080/02699930244000318

Kruse, E., Chancellor, J., & Lyubomirsky, S. (2015a). *Self-affirmation increases humility*. Manuscript under review.

Kruse, E., Chancellor, J., & Lyubomirsky, S. (2015b). *State humility: Measurement, conceptual validation, and intrapersonal processes*. Manuscript under review.

Kruse, E., Chancellor, J., Ruberton, P. M., & Lyubomirsky, S. (2014). An upward spiral between gratitude and humility. *Social Psychological and Personality Science, 5*, 805-814. doi:10.1177/1948550614534700

LaBouff, J. P., Rowatt, W. C., Johnson, M. K., Tsang, J., & Willerton, G. M. (2012). Humble persons are more helpful than less humble persons: Evidence from three studies. *The Journal of Positive Psychology, 7*, 16-29. doi:10.1080/17439760.2011.626787

Layous, K., Nelson, S. K., Kurtz, J., & Lyubomirsky, S. (2015). *What triggers prosocial effort? A positive feedback loop between positive activities, kindness, and well-being*. Manuscript under review.

Layous, K., Sweeny, K., Armenta, C. N., & Lyubomirsky, S. (2014). *Gratitude interventions induce more than gratitude.* Manuscript under review.

Lazarus, R. S. (1991). *Emotion and adaptation.* New York: Oxford University Press.

Leary, M. R., Adams, C. E., & Tate, E. B. (2006). Hypo-egoic self-regulation: Exercising self-control by diminishing the influence of the self. *Journal of Personality, 74,* 1803-1832.

Logel, C. & Cohen, G. L. (2012). The role of the self in physical health: Testing the effect of a values-affirmation intervention on weight loss. *Psychological Science, 23*, 53-55. doi: 10.1177/0956797611421936

Lyubomirsky, S., Dickerhoof, R., Boehm, J. K., & Sheldon, K. M. (2011). Becoming happier takes both a will and a proper way: An experimental longitudinal intervention to boost well-being. *Emotion, 11*, 391-402.

Magidson, J. F., Roberts, B. W., Collado-Rodriguez, A., & Lejuez, C. W. (2014). Theory-driven intervention for changing personality: Expectancy value theory, behavioral activation, and conscientiousness. *Developmental Psychology, 50*, 1442-1450. doi:10.1037/a0030583

McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology, 82*, 112-127. doi:10.1037//0022-3514.82.1.112

McCullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin, 127*, 249-266. doi:10.1037/0033-2909.127.2.249

Miller, D. T., & Ross, M. (1975). Self-serving biases in the attribution of causality: Fact or fiction? *Psychological Bulletin, 82*, 213-225. doi:10.1037/h0076486

Nelson, S. K., Fuller, J. A., Choi, I., & Lyubomirsky, S. (2014). Beyond self-protection: Self-affirmation benefits hedonic and eudaimonic well-being. *Personality and Social Psychology Bulletin*. doi:10.1177/0146167214533389

Ong, L. M., de Haes, J. C., Hoos, A. M., & Lammes, F. B. (1995). Doctor-patient communication: A review of the literature. *Social Science & Medicine, 40*, 903-918. doi:10.1016/0277-9536(94)00155-M

Ou, A. Y., Tsui, A. S., Kinicki, A. J., Waldman, D., Xiao, Z., & Song, L. J. (2014). Humble chief executive officers' connections to top management team integration and middle

managers' responses. *Administrative Science Quarterly, 59*, 34-72.
doi:10.1177/0001839213520131

Owens, B. P., Rowatt, W. C., & Wilkins, A. L. (2011). Exploring the relevance and implications of humility in organizations. In K. S. Cameron & G. M. Spreitzer (Eds.), *Handbook of positive organizational scholarship* (pp. 260-272). Oxford: Oxford University Press.

Ruberton, P. M., Huynh, H., Miller, T., Kruse, E., Chancellor, J., & Lyubomirsky, S. (in press). The relationship between physician humility, physician-patient communication, and patient health. *Patient Education and Counseling*.

Rudd, M., Vohs, K. D., & Aaker, J. (2012). Awe expands people's perception of time, alters decision-making, and enhances well-being. *Psychological Science, 23*, 1130-1136. doi:10.1177/0956797612438731

Sagan, C. (1994). *Pale blue dot: A vision of the human future in space.* New York: Random House.

Sherman, D. K., & Cohen, G. L. (2006). The psychology of self-defense: Self-affirmation theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 38, pp. 183-242). San Diego, CA: Academic Press.

Shiota, M. N., Campos, B., & Keltner, D. (2003). The faces of positive emotion: Prototype displays of awe, amusement, and pride. *Annals of the New York Academy of Sciences, 1000*, 296-299. doi:10.1196/annals.1280.029

Shiota, M. N., Keltner, D., & Mossman, A. (2007). The nature of awe: Elicitors, appraisals, and effects on self-concept. *Cognition and Emotion, 21*, 944-963. doi:10.1080/02699930600923668

Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In

L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 261-302).

San Diego, CA: Academic Press. doi:10.1016/S0065-2601(08)60229-4

Steele, C. M., & Liu, T. J. (1983). Dissonance processes as self-affirmation. *Journal of*

Personality and Social Psychology, 45, 5-19. doi:10.1037/0022-3514.45.1.5

Stewart, M. A. (1995). Effective physician-patient communication and health outcomes: a

review. *Canadian Medical Association Journal, 152*, 1423-1433.

Tangney, J. P. (2000). Humility: Theoretical perspectives, empirical findings and directions for

future research. *Journal of Social and Clinical Psychology, 19*, 70-82.

doi:10.1521/jscp.2000.19.1.70

Thomaes, S., Bushman, B. J., de Castro, B. O., Cohen, G. L., & Denissen, J. J. A. (2009).

Reducing narcissistic aggression by buttressing self-esteem: An experimental field study.

Psychological Science, 20, 1536-1542. doi:10.1111/j.1467-9280.2009.02478.x

Wood, A. M., Froh, J. J., & Geraghty, A. W. (2010). Gratitude and well-being: A review and

theoretical integration. *Clinical Psychology Review, 30*, 890-905.

doi:10.1016/j.cpr.2010.03.005

Wood, A. M., Maltby, J., Stewart, N., & Linley, P. A. (2008). A social-cognitive model of trait

and state levels of gratitude. *Emotion, 8*, 281-290. doi:10.1037/1528-3542.8.2.281

Appendix

Brief Humility Scale

Please answer these questions based on how you feel right this moment.

(1 = *strongly disagree*; 4 = *neither agree nor disagree*; 7 = *strongly agree*)

1. I feel that, overall, I am no better or worse than the average person.

2. I feel that I have both many strengths and flaws.

3. I feel that I do not deserve more respect than other people.

4. To be completely honest, I feel that I am better than most people.

5. I feel that I deserve more respect than everyone else.

6. I feel that I do not have very many weaknesses.

Items 4-6 are reverse-scored.