

Teaching Transformational Leadership to Undergraduate Agricultural Leadership Students: Using the Personality Trait of Agreeableness To Improve Understanding

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Abstract

Training undergraduate agricultural students to be strong, positive leaders will have a large impact on the industries they work within and therefore should be of utmost importance to agricultural educators. Transformational leaders (TL) tend to have higher performing, more satisfied teams; consequently, development of TL characteristics should result in a more productive future workforce. The personality trait of agreeableness has been associated with the interpersonal aspects of leadership; however, the literature is unclear whether agreeableness is a significant predictor of TL. The purpose of this study was to examine the relationships between the personality trait agreeableness and TL in undergraduate agricultural leadership students. The findings indicated the facets of agreeableness had more predictive power on TL than the broader trait of overall agreeableness. Recommendations include framing TL development in a personality context. When discussing personality, a review of the facets of agreeableness should result in more meaningful learning for participants.

Keywords: transformational leadership; leadership development; agreeableness; personality; undergraduate

Developing positive forms of leadership in undergraduate students is more important than ever (Robbins & Judge, 2009) when educating future agricultural industry leaders. Training undergraduate agricultural students to be strong, positive leaders will have a large impact on the industries they work within and therefore should be of utmost importance to agricultural educators. The impact of negative leadership styles on organizations has been well documented, from business school case studies to newspaper headlines (Kellerman, 2004). Leaders have had a direct effect on their organizations and those around them because “the culture of the company is the behavior of its leaders. Leaders get the behavior they exhibit and tolerate” (Bossidy, Charan, & Burck, 2002, p. 105). For example, the executive suite of Enron acted as “...agents of change. What they did affected the lives and pocketbooks of tens of thousands of Americans... These men were not just a

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few rotten apples. Rather they created, indeed encouraged, an organizational culture that allowed many apples to spoil and, in turn, ruin others” (Kellerman, 2004, p. 11).

On the other hand, transformational leadership has been found to be one of the more positive forms of leadership. Judge and Bono (2000) found that followers tend to view their supervisors to be more effective when they exhibit transformational leadership. Furthermore, Bass (1997) found followers tend to identify transformational leader characteristics when asked to describe their ideal leader. In addition, work units are more effective (Lowe, Kroeck, & Sivasubramaniam, 1996), and employees exhibit higher levels of affective and normative commitment to their work (Jackson, Meyer, & Wang, 2013) when led by a transformational leader.

Due to its importance, leadership has been extensively researched over the past three decades (Judge & Bono, 2000) as confirmed by the 50,000 results returned when the term leadership is entered into the PsychINFO database with over 33,000 of the returned results published since 2000. Although leadership is a broad and well-studied topic, there have been a limited number of studies looking specifically at the relationship between personality and leadership characteristics (Barrick, Mount, & Judge, 2001; Judge & Bono, 2000), and no studies examining TL and personality in undergraduate agricultural leadership students. Personality represents a reliable platform for social science research as personality traits are generally stable and observable by others (Costa & McCrae, 1992). Without being able to clearly articulate the nature of the relationship between personality and leadership, agricultural educators and practitioners focused on teaching leadership have been challenged to design and provide instruction accordingly (Judge & Bono, 2000; McCormick, Dooley, Lindner, & Cummins, 2007). Furthermore, research by Kleihauer, Stephens, Hart, and Stripling (2013) has specifically recommended the exploration of relationships between leadership and personality within agricultural leadership contexts.

Within the confines of personality research, the trait of agreeableness has been associated with the interpersonal aspects of leadership (Derue, Nahrgang, Wellman, & Humphery, 2011). However, how the six facets making up the trait of agreeableness relate to leadership have not been researched extensively, especially within the area of transformational leadership. In fact, because of inconsistent findings, the literature recommends further investigation into how the specific facets of agreeableness are related to leadership (Bono & Judge, 2004).

Simonsen and Birkenholz (2010) found that “Leadership is a content area that has evolved in agricultural education to...include...classroom instruction and supervised agricultural experience programs.” Within the context of enhancing and improving leadership education under the broader heading of agricultural education, this research was directly supportive of the National Research Agenda for Agricultural Education within the priority area related to meaningful and engaged learning in all environments (Doerfert, 2011).

Due to the importance of developing positive leadership characteristics within the future workforce, agricultural leadership development has been a top priority in both academic and professional settings (Kelsey & Wall, 2003; McCormick et al., 2007). Illuminating the relationships between personality and leadership will enhance the quality of subsequent educational interventions (Judge & Bono, 2000) by helping to inform what variables influence leadership styles (Kleihauer et al., 2013; Nistler, Lamm, & Stedman, 2011; Strong, Wynn, Irby, & Lindner, 2013). Based on a more comprehensive understanding of the variables that influence leadership, more meaningful learning experiences can be planned and implemented (Simonsen & Birkenholz, 2010).

Theoretical Framework

The theoretical framework for this study was based on transformational leadership developed by Bass and Avolio (1997) as part of the full range leadership model and the Five Factor Model (FFM) of personality (Norman, 1963) with a focus on the agreeableness trait.

Transformational Leadership

Transformational leadership is concerned with tasks and outcomes, but also for consideration of follower well-being and personal development (Northouse, 2013). Transformational leadership includes serving as a role model for followers, inspiring and motivating followers to pursue challenging goals, encouraging followers to be creative, and treating each follower as an individual (Bass & Riggio, 2006). Interpersonal skills, that can be developed or taught, are a key to transformational leadership (Greiman, 2009).

Transformational leaders have been shown to have a large effect on what followers think and feel (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009) and followers tend to demonstrate higher levels of satisfaction with transformational leaders (Fuller, Patterson, Hester, & Stringer, 1996). When conducting a meta-analysis of transformational leadership, Wang, Oh, Courtright, and Colbert (2011) found that followers of transformational leaders had higher levels of performance across a number of measures.

Although transformational leadership has been related to a number of positive organizational outcomes (Judge & Bono, 2000), some research findings have been inconclusive. For example, Podsakoff, MacKenzie, and Bommer (1996) found that followers of transformational leaders were not more committed to their organization than followers of non-transformational leaders. Similarly, Barling, Weber, and Kelloway (1996) found there was no difference in job satisfaction between followers of transformational and non-transformational leaders. All this taken in to account, in general, transformational leaders are viewed positively with a strong orientation towards follower care and development (Northouse, 2013).

Five Factor Model of Personality Agreeableness Trait

The second theoretical framework used in this study was the Five Factor Model (FFM) of personality (Norman, 1963), specifically the factors proposed by Costa and McCrae (1985). The FFM is composed of five primary personality constructs: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (Costa & McCrae, 1985). This study looked specifically at the six facets of agreeableness, as it is the trait most closely associated with the interpersonal aspects of leadership (Derue et al., 2011), the primary focus of transformational leadership.

Numerous scholars have called for the investigation of how facet level personality items relate to specific characteristics or behaviors (Barrick et al., 2001; Murphy & Dziewieczynski, 2005; Ones, Dilchert, Viswesvaran, & Judge, 2007; Moon & Livne, 2011; Thomason, Weeks, Bernardin, & Kane, 2011), such as transformational leadership. Empirical studies have shown that examining the facets of personality traits has provided supplementary value and clarity to specific performance measures. For example, a comprehensive meta-analysis found that performance across a number of criteria was incrementally predicted by the facets of conscientiousness beyond the construct of conscientiousness (Dudley, Orvis, Lebiecki, & Cortina, 2006). Kausel and Slaughter (2011) identified two reasons facet-level data contributed additional value over construct-level data as well. They found overall trait-level construct scores obscured important facet level details and that, “predictive validity increases when the predictor and the criterion are thematically linked, and specificity bolsters the advantage by refining conceptual linkages” (Kausel & Slaughter, 2011, p. 11).

The agreeableness trait is comprised of six facets: trust, straightforwardness, altruism, compliance, modesty and tender-mindedness (Costa & McCrae, 1995). Based on previous research, each of the facets is expected to uniquely contribute to the overall personality trait of agreeableness (Hough & Ones, 2001). The first facet is trust (Costa, McCrae, & Dye, 1991). Trustworthy individuals have been shown to be predisposed to believe that others have positive motives and are honest about those motives (Costa et al., 1991). An ability to trust has been shown to directly impact employees' ability to free the cognitive resources necessary to focus on their tasks, versus focusing on self-protective behaviors (Mayer & Gavin, 2005).

The second facet, straightforwardness, has been defined as frankness and directness when interacting with others (Costa et al., 1991). Low levels of straightforwardness were highly correlated with admissions of dishonesty (Pauonen & Nicol, 2001). The third facet, altruism, has been defined as selflessness and a concern for others, especially in a considerate and courteous manner, as opposed to more obvious self-sacrifice (Costa et al., 1991). Altruism motivation has been defined as "the self-initiated desire to work for the benefit of others, without expectation of external rewards sufficient to justify the desire" (Deckop, 1995 p. 359).

Individuals with a disposition towards the fourth facet, compliance, tend to defer to others and are willing to cooperate rather than being confrontational when conflict occurs (Costa et al., 1991). Morris, Brotheridge, and Urbanski (2005) found that modesty or humility, the fifth facet, was not a lack of confidence or ability, but rather a persistent orientation towards objectively appraising one's abilities and limitations. Modesty has also been identified as a core organizational virtue (Owens & Hekman, 2012), one that leads to exceptional performance, altruistic behaviors, and prosocial behaviors (Cameron & Caza, 2004). Individuals that were modest and high in humility "are likely to avoid being competitive with others in a zero-sum game and to avoid disrespectful behaviors such as ridiculing, interrupting, or coercing others, they are more likely to form supportive relationships" (Morris et al., 2005 p.1341).

The final facet, tender-mindedness has been related to an individual's tendency to be guided by feelings (Costa et al., 1991). Costa et al. (1991) found that individuals high in tender-mindedness were concerned with others and were capable of expressing sympathy. Based on concern, tender-minded individuals tended to emphasize interpersonal relationships (Thomason et al., 2011). From an organizational perspective, Costa and McCrae (1992) found that tender-minded individuals were good team players with strong cooperative tendencies.

Purpose and Research Objectives

The purpose of this study was to examine the relationships between the personality trait agreeableness and transformational leadership in undergraduate agricultural leadership students. The study was driven by the following research objectives:

1. Identify the relationships between levels of transformational leadership, the trait of agreeableness, and the facets of the trait of agreeableness.
2. Determine if the trait of agreeableness predicts transformational leadership.
3. Determine if the facets of the trait of agreeableness predict transformational leadership.

Methods

This study used survey research methods to address the research objectives. The target population for this study was undergraduate agricultural leadership students at a single southern land-grant university. Agricultural leadership students were specifically targeted due to their interest in becoming future industry leaders. Given this is the population most likely to benefit from targeted agricultural leadership education; the level to which their agreeableness relates to transformational leadership was most pertinent. The course selected was AEC3414, Leadership Development. A convenience sample was employed and included students enrolled in the course

during the spring semester of 2013. Convenience sampling of college students is frequently used in psychology research (Peterson, 2001) and was appropriate given the population of interest.

Participant responses were collected during a single class period using a paper-based questionnaire ($n = 65$). A response rate of 92% was obtained for a total of 60 completed surveys. Follow up measures were not taken to contact those absent from class since over 90% of the students were in attendance and completed the questionnaire. Due to the high level of response, respondents were considered representative of the sample. The respondents were 36.7% ($n = 22$) male and 60.0% ($n = 36$) female. Two individuals did not report gender. The mean age of respondents was 20.5 ($SD = 1.2$), with ages ranging between 18 and 24. In regard to respondents' race, 75.4% ($n = 46$) identified themselves as White, 11.5% ($n = 7$) identified themselves as Black or African American, 6.6% ($n = 4$) identified themselves as Asian or Pacific Islander, and 6.6% ($n = 4$) identified themselves as Other.

The survey was developed using previously established instruments. The personality trait agreeableness was measured using the International Personality Item Pool Representation of the NEO PI-R™ (IPIP-NEO), specifically a researcher-adapted version developed by Johnson (2011). The adapted version of the IPIP-NEO requires respondents indicate their level of agreement with four statements within each of the six agreeableness facets, or 24 statements total. Individuals indicated their responses on a five-point, Likert-type scale with 1 – *Strongly Disagree*, 2 – *Disagree*, 3 – *Neutral*, 4 – *Agree*, 5 – *Strongly Agree*. Responses to all 24 statements were summed to create an overall agreeableness score ranging from 24 to 120. The four statements within each of the six facets were summed to create six facet scores with each ranging from four to 20. *Ex post facto* reliability was calculated on the overall trait of agreeableness and the six agreeableness facets. Results indicated overall agreeableness had a Cronbach's α of .86, trust had a Cronbach's α of .85, straightforwardness had a Cronbach's α of .72, altruism had a Cronbach's α of .65, compliance had a Cronbach's α of .83, modesty had a Cronbach's α of .74, tender-mindedness had a Cronbach's α of .79. The researchers established a Cronbach's α of .70 or greater as acceptable based on existing social science standards (Cortina, 1993; Schmitt, 1996; Streiner, 2003).

In addition, transformational leadership was measured using the Multifactor Leadership Questionnaire (MLQ) 5X-Short (Avolio & Bass, 1995). Twenty of the 45 items on the MLQ were related to transformational leadership and used in this study to determine the respondents' level of transformational leadership. The MLQ asked respondents to indicate their level of engagement in a series of behaviors on a five-point Likert-type scale with 0 – *Not at all*, 1 – *Once in a while*, 2 – *Sometimes*, 3 – *Fairly often*, 4 – *Frequently, if not always*. Responses to the 20 items were summed to create a transformational leadership score ranging from zero to 80. Reliability was calculated *ex post facto*, resulting in a Cronbach's α of .77.

Responses were coded for computer analysis using SPSS. Descriptive correlational statistics were used to calculate the first objective. Relationships between agreeableness, the facets of agreeableness and transformational leadership were described by calculating Pearson's product-moment correlation coefficient. Linear regression was used to calculate the second objective and multiple regression was used to calculate the third objective. A level of significance of .05 was established *a priori*.

Results

Relationships Between Overall Agreeableness, the Six Facets of Agreeableness and Transformational Leadership

Correlation between overall agreeableness, the six facets of agreeableness and transformational leadership were completed. Correlation coefficients and statistical significance between agreeableness and transformational leadership items are provided in Table 1.

Overall Agreeableness and Transformational Leadership

Simple linear regression was used to determine the level at which overall agreeableness predicts transformational leadership. Transformational leadership was treated as the dependent variable and overall agreeableness was treated as the independent variable. Overall agreeableness was not a significant predictor of transformational leadership with only four percent of the variance in transformational leadership explained by overall agreeableness (Table 2).

Facets of Agreeableness and Transformational Leadership

Multiple regression was completed to examine the level at which the six facets of agreeableness predict transformational leadership. Transformational leadership was treated as the dependent variable and the six facets of agreeableness were treated as the independent variables. Overall, 27% of the variance in transformational leadership was explained by the facets of agreeableness ($R^2 = .27$, $F(6, 53) = 3.28$, $p = .01$). Modesty was the only facet of agreeableness found to be a statistically significant predictor of transformational leadership when controlling for trust, straightforwardness, altruism, compliance, and tender-mindedness (Table 3).

Table 1

Relationships Between Overall Agreeableness, the Facets of Agreeableness and Transformational Leadership

Variable	1	2	3	4	5	6	7	8
1. Transformational Leadership								
2. Overall Agreeableness	0.19							
3. Trust	0.15	0.51**						
4. Straightforwardness	0.10	0.71**	0.18					
5. Altruism	0.23	0.63**	0.33*	0.32*				
6. Compliance	0.21	0.76**	0.18	0.55**	0.32*			
7. Modesty	-0.28*	0.51**	0.03	0.27*	0.20	0.30*		
8. Tender-mindedness	0.36**	0.69**	0.21	0.45**	0.42**	0.48**	0.07	

Note: * $p < .05$, ** $p < .01$

Table 2

Linear Regression of Overall Agreeableness on Transformational Leadership

Agreeableness	<i>r</i>	β
Overall Agreeableness	.19	.19
<i>R</i>		.19
<i>R</i> ²		.04

Table 3

Multiple Regression of the Facets of Agreeableness and Transformational Leadership

Agreeableness facet	<i>r</i>	β
Trust	.14	.03
Straightforwardness	.09	-.08
Altruism	.23	.14
Compliance	.21	.18
Modesty	-.28*	-.37**
Tender-mindedness	.36**	.27
<i>R</i>		.52
<i>R</i> ²		.27

Note. **p* < .05; ***p* < .01

Conclusions, Implications, and Recommendations

As the relationship between agreeableness and transformational leadership in undergraduate agricultural leadership students were examined, interesting findings were revealed. First, there was not a significant relationship between overall agreeableness and transformational leadership. However, when agreeableness was examined at the facet level, transformational leadership had a significant positive relationship with tender-mindedness ($r = .36$) and a significant negative relationship with modesty ($r = -.28$). These findings supported the belief that facets of personality traits are able to add greater insight to the nature of the relationship between personality and variables of interest than the trait-level variables (Kausel & Slaughter, 2011).

When regression analysis was used to illuminate the predictive nature of agreeableness items relative to transformational leadership, again overall agreeableness was not found to be a statistically significant predictor of transformational leadership. In this case, the negative effects of modesty and straightforwardness had a cancellation effect on the positive effects of tender-mindedness, compliance, and altruism. These findings supported that it is more appropriate to predict transformational leadership using the facets of agreeableness than the overall agreeableness trait, which is consistent with Dudley et al. (2006) findings.

Within the facet level regression model, the facets of agreeableness predicted 27% of the variance in transformational leadership. Surprisingly, modesty was the only statistically significant predictor of transformational leadership. The negative direct effect between modesty and overall transformational leadership was unexpected because previous research had found that agreeableness was positively related to transformational leadership (Judge & Bono, 2000). Agricultural educators trying to encourage the use of transformational leadership should focus their efforts on discussing the merits and downfalls associated with modesty. Specifically, students should be taught that avoiding too much modesty may improve their perceived levels of transformational leadership.

Since tender-mindedness had a significant positive correlation with transformational leadership it was expected to be a significant predictor, but it was not. Perhaps individuals who exhibited transformational leadership had learned to be more tender-minded rather than tender-minded individuals being more transformational in their leadership style. Future research is recommended to more fully explore the nature of the relationship between transformational leadership and tender-mindedness. Additional research could include using a larger sample size, a different audience, and asking respondents whether or not they had received training on how to be more tender-minded when working with others while leading.

The findings of this study showed the most effective way to predict transformational leadership with agreeableness was by focusing on the individual facets of agreeableness, not the overall trait of agreeableness. This implies that by breaking down personality traits into facets allows for a deeper understanding of how transformational leadership style can be predicted (Kausel & Slaughter, 2011). Perhaps an even deeper understanding of these relationships, and predictive capacity, would be found by breaking down the overall concept of transformational leadership into the four factors used to measure levels of transformational leadership (Avolio & Bass, 1995). Future research could examine whether the same pattern of predictive capacity in agreeableness facets with overall agreeableness is consistent at the transformational leadership factors level (idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration).

Another recommendation for future research would be to design an experiment testing whether including agreeableness training had the expected impact on transformational leadership (McCormick et al., 2007). Although the results from this study are clear that there is a significant amount of variance in transformational leadership accounted for by agreeableness facets it is not clear that attempts to modify the agreeableness antecedents will have the expected result on

transformational leadership. An experimental design used to test this supposition would contribute additional clarity and further inform effective, engaged, and meaningful learning.

By better understanding the antecedents of transformational leadership, agricultural educators will be better enabled to provide the most effective instruction possible (McCormick et al., 2007; Strong et al., 2013). Taking the time to teach students how personality influences the way they see the world, and consequently their interaction with it, may help to engage undergraduate agricultural students further in the learning process. Personality based discussion may also encourage undergraduate agricultural students to stay engaged, even when the content is not necessarily consistent with their perspective. Finding common ground and then building content accordingly might be a very effective approach. In this regard, agricultural educators teaching leadership could start with a discussion of personality before the concept of leadership is ever introduced. Once a common understanding of personality is established, the discussion of leadership behaviors, and transformational leadership in particular, should be more meaningful. Improved attention and understanding of the material should then lead to increased levels of transformational leadership capacity.

Although the MLQ is a robust measure of transformational leadership, the cost associated with the instrument is a limitation; therefore examining alternative measures of transformational leadership is encouraged. Furthermore replication studies conducted within an undergraduate population will help to confirm or clarify the findings of this study. Finally, further investigation into the nature of the relationship between agreeableness and transformational leadership is encouraged in non-undergraduate student populations, industry professionals and academic faculty in particular.

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