

Personality and Transformational and Transactional Leadership: A Meta-Analysis

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This study was a meta-analysis of the relationship between personality and ratings of transformational and transactional leadership behaviors. Using the 5-factor model of personality as an organizing framework, the authors accumulated 384 correlations from 26 independent studies. Personality traits were related to 3 dimensions of transformational leadership—idealized influence—inspirational motivation (charisma), intellectual stimulation, and individualized consideration—and 3 dimensions of transactional leadership—contingent reward, management by exception—active, and passive leadership. Extraversion was the strongest and most consistent correlate of transformational leadership. Although results provided some support for the dispositional basis of transformational leadership—especially with respect to the charisma dimension—generally, weak associations suggested the importance of future research to focus on both narrower personality traits and nondispositional determinants of transformational and transactional leadership.

A recent PsycINFO search revealed that 1,738 of the 15,000 articles (12%) published since 1990 on the topic of leadership included the keywords *personality* and *leadership*. Clearly, scholars have a strong and continuing interest in the dispositional bases of leadership behavior. Indeed, a meta-analysis by Lord, DeVader, and Alliger (1986) reported some associations between personality traits and perceptions of leadership. A more recent meta-analysis (Judge, Bono, Ilies, & Gerhardt, 2002) further advanced this literature, providing evidence that some traits were consistently associated with leadership emergence and effectiveness. Although these meta-analyses made an important contribution to our knowledge of the link between personality and leadership, they do not address the relationship between personality and transformational, transactional, and charismatic leadership. Given the volume of recent research attention focused on these types of leadership, it is important to understand the dispositional bases of transformational and transactional leadership.

The purpose of this article was to extend what is known about the association between personality and leadership by focusing directly on the relationship between personality and the eight dimensions of transformational and transactional leadership. These leadership dimensions have been found to be valid predictors of follower job performance and satisfaction (see Fuller, Patterson, Hester, & Stringer, 1996; Lowe, Kroeck, & Sivasubramaniam, 1996). Thus, understanding the personality traits associated with transformational and charismatic leadership has important implications for the selection, training, and development of such lead-

ers. For example, if charisma is linked to stable traits of the individual, organizations may wish to select leaders with these traits. Barling, Weber, and Kelloway (1996) demonstrated that some transformational leadership behaviors can be trained. Thus, an understanding of the role of personality can aid in determining which individuals might gain the most from such training and how training approaches might differ on the basis of trainee personality (i.e., aptitude by treatment interaction).

Transformational Leadership

According to Yukl and Van Fleet (1992), neocharismatic leadership theories are a hybrid approach to leadership and include elements of many other theoretical approaches to leadership (e.g., traits, behaviors, attributions, and situations). Burns (1978) introduced the distinction between transactional and transformational leaders, and Bass (1985) identified eight dimensions of leadership behaviors covering these two broad domains. The first transformational leadership behavior, *idealized influence*, refers to leaders who have high standards of moral and ethical conduct, who are held in high personal regard, and who engender loyalty from followers. The second transformational leadership behavior, *inspirational motivation*, refers to leaders with a strong vision for the future based on values and ideals. Leader behaviors falling into this dimension include stimulating enthusiasm, building confidence, and inspiring followers using symbolic actions and persuasive language. The idealized influence and inspirational motivation dimensions are highly correlated and are sometimes combined to form a measure of charisma (Bass, 1998, p. 5). The third transformational leadership dimension is *intellectual stimulation*, which refers to leaders who challenge organizational norms, encourage divergent thinking, and who push followers to develop innovative strategies. *Individual consideration*, the fourth transformational leadership dimension, refers to leader behaviors aimed at recog-

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nizing the unique growth and developmental needs of followers as well as coaching followers and consulting with them.

Transactional leadership behaviors (Bass, 1985) are aimed at monitoring and controlling employees through rational or economic means. *Contingent reward* refers to leadership behaviors focused on exchange of resources. That is, leaders provide tangible or intangible support and resources to followers in exchange for their efforts and performance. *Management by exception-active* refers to monitoring performance and taking corrective action as necessary. The focus of management by exception is on setting standards and monitoring deviations from these standards. In the less active version of management by exception (*management by exception-passive*), leaders take a passive approach, intervening only when problems become serious. Finally, Bass (1985) included *laissez-faire* under the transactional leadership label, though it can be thought of as nonleadership or the avoidance of leadership responsibilities.

Dimensions of Transformational Leadership

Conceptually, these eight dimensions each represent a unique set of leader behaviors. However, the independence of the dimensions has been a topic of some debate (Avolio, Bass, & Jung, 1999; Bycio, Hackett, & Allen, 1995). Lowe et al. (1996) reported an average meta-analytic correlation among the transformational leadership dimensions of $\rho = .78$. There has also been research that has focused on the factor structure of transformational and transactional leadership behaviors. In a recent study using 14 samples and nearly 4,000 leadership reports, Avolio et al. (1999) found that a six-factor model (combined idealized influence–inspirational motivation, intellectual stimulation, individualized consideration, contingent reward, management by exception–active, and combined management by exception passive–laissez-faire) best represented the structure of transformational and transactional leadership. However, when only transformational leadership behaviors are considered, a single transformational leadership factor appears to represent the data well (Carless, 1998; Judge & Bono, 2000).

In past studies (Judge, Bono, et al., 2002; Lord et al., 1986), it has been difficult to separate attributions about leaders and their effectiveness from the specific behaviors they exhibit. Indeed, experimental studies have demonstrated that even when survey measures of leadership focused on specific behaviors, they did not perfectly reflect leaders' behavior (Phillips & Lord, 1986). However, these studies also demonstrated that questionnaire measures were able to capture differences in leader behavior. In support of a link between ratings of behavior and actual behaviors, Bono and Ilies (2002, 2003) analyzed the vision statements and speeches of two groups of leaders and found that the use of positive emotion words was associated with ratings of charisma but not with ratings of intellectual stimulation or individual consideration. Moreover, Barling et al. (1996) found that when leaders were trained to be more intellectually stimulating, subsequent followers' ratings were significantly higher for intellectual stimulation but not for charisma or individual consideration. In conducting our analysis, we recognized that—at least to some extent—survey measures of transformational and transactional leadership confound perceptions, attributions, and implicit theories with behaviors. Nonethe-

less, because there was some evidence of discriminant validity between the dimensions of transformational leadership (Bono & Ilies, 2002) and between transformational and transactional dimensions (Lowe et al., 1996), we examined the associations between personality and each of the six dimensions identified by Avolio et al. (1999) as well as the associations between personality and an overall transformational leadership composite.

Personality and Ratings of Leadership Behavior

Although there is not complete agreement among researchers about the five-factor structure of personality (see Block, 1995), one advantage of the Big Five framework is the opportunity it provides for integrating commonalities among diverse approaches to personality (John & Srivastava, 1999). This makes the Big Five framework particularly useful for cumulating results across studies (Barrick & Mount, 1991). In the following sections, we describe the Big Five traits and their relationship to ratings of transformational and transactional leadership behaviors.

Extraversion. Extraverts are described as assertive, active, talkative, upbeat, energetic, and optimistic (Costa & McCrae, 1992). They seek excitement (H. J. Eysenck & Eysenck, 1975) and social attention (Ashton, Lee, & Paunonen, 1999). Depue and Collins (1999) argued that extraversion is composed of two central components, affiliation (having and valuing warm personal relationships) and agency (being socially dominant, assertive, and influential). Watson and Clark (1997) suggested that positive emotionality is at the core of extraversion—extraverts experience and express positive emotions. Thus, it is likely that extraverts will tend to exhibit inspirational leadership (e.g., having an optimistic view of the future). Because they are positive, ambitious, and influential, they are likely to generate confidence and enthusiasm among followers. Extraverts also may score high on intellectual stimulation, as they tend to seek out and enjoy change.

Neuroticism. Individuals high in neuroticism tend to view the world through a negative lens. According to Costa and McCrae (1992), at the core of neuroticism is the tendency to experience negative affects, such as fear, sadness, guilt, and anger. Individuals who score high in neuroticism tend to experience emotional distress, whereas those who score low on the trait are calm, even tempered, and relaxed. Recent work by Judge, Erez, Bono, and Thoresen (2002) revealed a strong association between neuroticism and low self-esteem and low general self-efficacy. As Northouse (1997, p. 17) noted, self-confidence is requisite to the initiation of leadership. Thus, individuals high in neuroticism should be less likely to attempt to lead and less likely to “involve themselves in their subordinates' efforts” (Bass, 1985, p. 173), tending to avoid leadership responsibilities. Furthermore, they are not likely to be seen as role models, are unlikely to have a positive view of the future, and may be too anxious to undertake transformational change efforts. Hence, it is unlikely that they will exhibit transformational leadership behaviors, such as idealized influence, inspirational motivation, or intellectual stimulation.

Openness to experience. Traditional conceptualizations of openness to experience include culture (an appreciation for the arts and sciences and a liberal and critical attitude toward societal values) and intellect (the ability to learn and reason; McCrae & Costa, 1997). Openness to experience also represents individuals'

tendencies to be creative, introspective, imaginative, resourceful, and insightful (John & Srivastava, 1999). Individuals high in this trait are emotionally responsive and intellectually curious (McCrae, 1996). They tend to have flexible attitudes and engage in divergent thinking (McCrae, 1994). Judge and Bono (2000) found that openness to experience was associated with transformational leadership. Because they are creative, individuals high in openness to experience are likely to score high in intellectual stimulation. However, individuals high in openness to experience may also exhibit inspirational leadership behaviors. Because they are imaginative and insightful, they are likely to be able to see a vision for the organization's future.

Agreeableness. Agreeableness represents the tendency to be cooperative, trusting, gentle, and kind (Graziano & Eisenberg, 1997). Individuals high in agreeableness value affiliation and avoid conflict (Graziano, Jensen-Cambell, & Hair, 1996). They are modest, altruistic, and tend to be both trusting and trustworthy (Costa and McCrae, 1992). There are several leadership behaviors that might be exhibited by individuals high in agreeableness. First, because of their concern for others, they are likely to be concerned with individuals' growth and development needs (individualized consideration) and are likely to be sure that individuals are rewarded appropriately and praised "for work well done" (contingent reward; Bass, 1985, p. 122). The modesty and kindness of agreeable individuals is not the hallmark of charismatic leaders. Nonetheless, they may score high in idealized influence and be seen as role models because of their trustworthiness and consideration for others. Finally, agreeable leaders are likely to be available when needed, leading to low scores on passive leadership.

Conscientiousness. Conscientiousness has been one of the most commonly studied traits in work psychology. Conscientious individuals tend to have a strong sense of direction and work hard to achieve goals (Costa & McCrae, 1992). They are also cautious, deliberate, self-disciplined, and tend to be neat and well organized (Costa & McCrae, 1992), which suggests a link between conscientiousness and contingent reward. Furthermore, because contingent-reward leadership entails defining constructive transactions (Bass, 1998) whereby informal contracts are established between the leader and follower (Bass, 1985), conscientious leaders should better define and deliver on such contracts because of their integrity (Hogan & Ones, 1997), or "honor [their] transactions with people" (Avolio, 1999, p. 37). There is no particular reason to expect that conscientious individuals will exhibit vision, enthusiasm, or creativity. However, because conscientious individuals are goal and detail oriented (Hogan & Ones, 1997), they may be more likely to engage in management by exception-active, which involves both setting and monitoring goals (Bass, 1998). Also, because they are dependable and unlikely to shirk their work responsibilities, they are unlikely to exhibit passive leadership behaviors, which involve lack of self-discipline and the default of leadership responsibilities (Bass, 1998).

Hypothesis 1: Extraversion will be positively related to (a) charisma, (b) intellectual stimulation, (c) and transformational leadership overall.

Hypothesis 2: Neuroticism will be negatively related to (a) charisma, (b) intellectual stimulation, and (c) transformational leadership overall, and positively related to (d) passive leadership.

Hypothesis 3: Openness to experience will be positively related to (a) charisma, (b) intellectual stimulation, and (c) transformational leadership overall.

Hypothesis 4: Agreeableness will be positively related to (a) charisma, (b) individualized consideration, and (c) contingent reward, and negatively related to (d) passive leadership.

Hypothesis 5: Conscientiousness will be positively related to (a) contingent reward, (b) management by exception-active, and negatively related to (c) passive leadership.

Method

Literature Search

We searched the PsycINFO database (from 1887 to 2002) using the keywords *personality, neuroticism, extraversion, openness, agreeableness, conscientiousness, and transformational leadership*. This search produced 41 articles and dissertations. We excluded theoretical and review articles and articles without the data necessary to calculate a correlation between personality and transformational and transactional leadership. Eighteen articles contained correlations appropriate for our study. We also contacted authors who had recently published in the area of transformational leadership, which resulted in 7 additional studies. Finally, we contacted the Center for Global Leadership studies at Binghamton University, uncovering 1 additional study. These combined efforts resulted in a total of 26 articles containing 384 correlations.

Our analysis included only studies in which a rating of leadership behaviors was provided by an observer. Except in the cases involving historical analysis of presidents, observers were subordinates or peers of the target leader. Personality was generally a leader self-report. In 12 of the 26 studies included in our analysis, the Big Five were explicitly measured. For 13 additional studies, we classified the personality traits measured into the Big Five on the basis of empirical associations reported in the literature. For example, Marusic and Bratko (1998) found that the femininity scale of the Bem Sex Role Inventory (Bem, 1974) had a strong positive association with agreeableness and weak associations with the other Big Five traits. Our classifications for the traits in these 13 studies were consistent with Hough and Ones's (2002) review of empirical relationships between a broad variety of personality inventories and the Big Five. For just 1 study (Dubinsky, Yammarino, & Jolson, 1995), we classified a trait on the basis of its conceptual definition. Emotional coping referred to individuals who were excessive worriers and lacking in self-confidence; we classified this trait as neuroticism.

Criterion measures were coded as representing either (a) an overall composite of transformational leadership or (b) one of the eight dimensions of transformational or transactional leadership. The Multifactor Leadership Questionnaire was the most commonly used measure of transformational and transactional leadership. However, other measures were used, including an ad hoc measure (Ployhart, Lim, & Chan, 2001) and the Leadership Practices Inventory (Kouzes & Posner, 1997). In coding the overall composite measure of transformational leadership, we included studies that reported an overall transformational leadership composite and studies that reported multiple transformational leadership dimensions. In the latter case, we used the correlations between personality and each of the multiple transformational dimensions to calculate a composite correlation (Hunter

Table 1
Meta-Analysis of the Relationship Between the Big Five Personality Traits and Charisma (Combined Idealized Influence and Inspirational Motivation)

Trait	Average					% variance due to sampling error	80% CV		95% CI	
	<i>k</i>	<i>N</i>	<i>r</i>	ρ	<i>SD</i> _{ρ}		Lower	Upper	Lower	Upper
Neuroticism	10	1,650	-.13	-.17	.00	100	-.17	-.17	-.12	-.21
Extraversion	9	1,706	.17	.22	.00	100	.22	.22	.18	.27
Openness	9	1,706	.15	.22	.22	17	-.06	.49	.07	.36
Agreeableness	9	1,706	.15	.21	.24	13	-.10	.52	.04	.38
Conscientiousness	8	1,605	.05	.05	.06	67	-.03	.13	-.01	.12

Note. Whitener's (1990) formula for standard error of the mean correlation was used in computing confidence intervals. *k* = number of correlations; *N* = combined sample size; ρ = estimated population correlation; *SD* _{ρ} = standard deviation of estimated population correlation; CV = credibility interval; CI = confidence interval.

& Schmidt, 1990). For the charisma dimension, we created a composite of idealized influence and inspiration motivation, and for passive leadership we created a composite of the management by exception-active and laissez-faire dimensions.

Meta-Analysis Procedures

We used procedures recommended by Hunter and Schmidt (1990) in conducting our meta-analysis. We calculated a sample-sized weighted mean correlation for each of the personality traits with each of the leadership dimensions and corrected the correlations for measurement error in both the predictor and the criterion. For personality, we used reliability data reported in the study when it was available. When reliability data were not available, we used average reliabilities for the trait as reported in the literature and in manuals (see Judge, Bono, et al., 2002).

There has been some controversy over the appropriate correction for reliability in the criterion (Murphy & DeShon, 2000; Schmidt, Viswesvaran, & Ones, 2000). As noted earlier, multiple observers provided ratings of leadership behavior in most studies. Thus, it is appropriate to think of raters as items and estimate measurement error on the basis of interrater reliabilities (Viswesvaran, Ones, & Schmidt, 1996). Hence, we used Viswesvaran et al.'s (1996) estimate of the reliability of a single, peer rating of leadership. We used the Spearman-Brown formula to correct this reliability estimate upward on the basis of the number of ratings obtained in a particular study. If the number of raters was not reported, we used the average reliability for the leadership ratings across studies (.75).

We also calculated two estimates of variability—80% credibility intervals and 95% confidence intervals. Confidence intervals estimate variability in the estimated mean correlation, and credibility intervals estimate

variability of the individual correlations in the population of studies. Thus, a credibility interval that does not include zero indicates that at least 90% of the correlations reported are greater than zero (or less than zero, in the case of a negative correlation). In contrast, the confidence interval provides information about the variability around the estimated mean correlation.

Results

In Tables 1–4, we reported the relationships between the Big Five traits and the ratings of transformational leadership behaviors. Results in Table 1 indicate that extraversion ($\rho = .22$) and neuroticism ($\rho = -.17$) were linked to the charisma dimension of transformational leadership. Indeed, there is little variability in this relationship across studies, indicating that extraversion and neuroticism are linked to charisma across samples and situations. Although the effect sizes for agreeableness and openness to experience were about the same size as those for extraversion and neuroticism ($\rho = .21$), the credibility values for these traits included zero, indicating that sometimes these traits were positively linked to charisma and sometimes they were negatively linked. In Table 2 (intellectual stimulation) and Table 3 (individualized consideration), we found a similar pattern of associations. Extraversion (positively) and neuroticism (negatively) were linked to all three transformational leadership dimensions. Table 4 presents the results of our analysis using the overall transformational leadership composite, which confirmed that extraversion ($\rho = .24$) and neuroticism ($\rho = -.17$) were linked to ratings of transformational

Table 2
Meta-Analysis of the Relationship Between the Big Five Personality Traits and Intellectual Stimulation

Trait	Average					% variance due to sampling error	80% CV		95% CI	
	<i>k</i>	<i>N</i>	<i>r</i>	ρ	<i>SD</i> _{ρ}		Lower	Upper	Lower	Upper
Neuroticism	9	1,772	-.10	-.12	.05	80	-.18	-.06	-.18	-.07
Extraversion	7	1,574	.14	.18	.03	91	.14	.21	.12	.23
Openness	8	1,828	.07	.11	.11	16	-.03	.25	.02	.15
Agreeableness	8	1,828	.10	.14	.11	40	-.01	.28	.04	.23
Conscientiousness	8	1,828	.02	.03	.08	56	-.07	.12	-.04	.10

Note. Whitener's (1990) formula for standard error of the mean correlation was used in computing confidence intervals. *k* = number of correlations; *N* = combined sample size; ρ = estimated population correlation; *SD* _{ρ} = standard deviation of estimated population correlation; CV = credibility interval; CI = confidence interval.

Table 3
Meta-Analysis of the Relationship Between the Big Five Personality Traits and Individualized Consideration

Trait	Average					% variance due to sampling error	80% CV		95% CI	
	<i>k</i>	<i>N</i>	<i>r</i>	ρ	<i>SD</i> ρ		Lower	Upper	Lower	Upper
Neuroticism	9	1,772	-.08	-.10	.11	40	-.24	.04	-.19	-.02
Extraversion	7	1,574	.14	.18	.00	100	.18	.18	.13	.23
Openness	8	1,828	.07	.11	.22	14	-.17	.40	-.05	.27
Agreeableness	8	1,828	.13	.17	.22	13	-.11	.46	.01	.34
Conscientiousness	8	1,828	.10	.14	.22	13	-.15	.42	-.02	.30

Note. Whitener's (1990) formula for standard error of the mean correlation was used in computing confidence intervals. *k* = number of correlations; *N* = combined sample size; ρ = estimated population correlation; *SD* ρ = standard deviation of estimated population correlation; CV = credibility interval; CI = confidence interval.

leadership behaviors. Relationships with the transformational leadership composite were also found for conscientiousness ($\rho = .13$), agreeableness ($\rho = .14$), and openness to experience ($\rho = .14$), but there was considerable variability in the size of correlations across studies. Credibility intervals included zero, indicating that more than 10% of the corrected correlations reported were in a negative direction. It is important to note that the relationships between the Big Five and ratings of transformational leadership reported in Tables 1–3 were not independent of those reported in Table 4.

Tables 5–7 report the results of our analysis for ratings of transactional leadership behaviors. Examination of the personality–transactional leadership relationships indicated that in general, ratings of transactional leadership behaviors were less strongly related to personality than were ratings of transformational leadership behaviors. Agreeableness was the strongest predictor of contingent reward ($\rho = .17$; see Table 5), but the credibility interval showed a great deal of variability across studies. Although the mean correlation was positive, more than 10% of the correlations between agreeableness and contingent reward were negative. Extraversion and neuroticism had nonzero associations with contingent reward ($\rho = .14$ and $\rho = -.10$, respectively).

All of the traits except neuroticism were negatively associated with management by exception–passive (see Table 6). With the possible exception of agreeableness ($\rho = .09$), these associations were small enough to be of little practical use. As expected, both

agreeableness and conscientiousness displayed negative associations with passive leadership (see Table 7), though the correlations were not large ($\rho = -.12$ and $\rho = -.11$, respectively). Extraversion was also associated negatively with passive leadership ($\rho = -.09$). Both neuroticism and openness to experience had positive but practically insignificant relationships with ratings of passive leadership behaviors.

In our final analysis, we conducted a multiple regression to examine the extent to which personality (all traits combined) predicted ratings of the six dimensions of leadership behavior and the transformational leadership composite. Results, presented in Table 8, indicated that charisma was the trait most related to personality ($R^2 = .12$) and management by exception the least ($R^2 = .01$).

Discussion

Given the ascendance of dispositional factors as explanations for organizational attitudes and behaviors (House, Shane, & Herold, 1996) and a pervasive belief that leaders are born, not made (Judge, Bono, et al., 2002), we examined the relationship between personality and transformational–transactional leadership. Recently, Bass (1998) concluded, “When it comes to predicting transformational leadership and its components, there is no shortage of personality expectations. However, the empirical support has been spotty.” (p. 122). Especially when empirical results

Table 4
Meta-Analysis of the Relationship Between the Big Five Personality Traits and Transformational Leadership (Composite of the Three Transformational Leadership Dimensions)

Trait	Average					% variance due to sampling error	80% CV		95% CI	
	<i>k</i>	<i>N</i>	<i>r</i>	ρ	<i>SD</i> ρ		Lower	Upper	Lower	Upper
Neuroticism	18	3,380	-.15	-.17	.02	95	-.20	-.15	-.21	-.14
Extraversion	20	3,692	.19	.24	.05	80	.18	.31	.21	.28
Openness	19	3,887	.11	.15	.15	29	-.04	.35	.08	.23
Agreeableness	20	3,916	.10	.14	.16	28	-.07	.34	.06	.21
Conscientiousness	18	3,516	.10	.13	.12	41	-.02	.28	.06	.19

Note. Whitener's (1990) formula for standard error of the mean correlation was used in computing confidence intervals. *k* = number of correlations; *N* = combined sample size; ρ = estimated population correlation; *SD* ρ = standard deviation of estimated population correlation; CV = credibility interval; CI = confidence interval.

Table 5

Meta-Analysis of the Relationship Between the Big Five Personality Traits and Contingent Reward

Trait	Average					% variance due to sampling error	80% CV		95% CI	
	<i>k</i>	<i>N</i>	<i>r</i>	ρ	<i>SD</i> ρ		Lower	Upper	Lower	Upper
Neuroticism	7	1,532	-.08	-.10	.07	58	-.19	.00	-.17	-.02
Extraversion	5	1,215	.11	.14	.04	80	.08	.19	.07	.20
Openness	6	1,469	.02	.03	.00	100	.03	.03	-.02	.08
Agreeableness	7	1,622	.13	.17	.16	22	-.04	.38	.04	.30
Conscientiousness	6	1,469	.02	.02	.02	94	-.01	.05	-.03	.07

Note. Whitener's (1990) formula for standard error of the mean correlation was used in computing confidence intervals. *k* = number of correlations; *N* = combined sample size; ρ = estimated population correlation; *SD* ρ = standard deviation of estimated population correlation; CV = credibility interval; CI = confidence interval.

do not lead to clear conclusions, meta-analyses can make a valuable contribution to cumulative knowledge, even when findings indicate that some presumed relationship is tenuous.

Overall, our results linking personality with ratings of transformational and transactional leadership behaviors were weak. Judge, Bono, et al. (2002) noted that the Big Five explain 28% of the variability among ratings of leadership emergence and 15% of the variability among ratings of leadership effectiveness. In our study, the Big Five explained 12% of the variability in charisma and only 5% and 6% of the variability in ratings of intellectual stimulation and individualized consideration, respectively. In another meta-analysis on the dispositional basis of leadership perceptions, Lord et al. (1986) found that masculinity was the strongest personality predictor of leadership perceptions, explaining 11% of the variability among leaders (the other traits they examined had R^2 s ranging from .02 to .05). In the following sections, we consider three possible explanations for the weak associations found in this study: (a) Perhaps transformational and transactional leadership behaviors are not as heritable or trait-like as are leadership emergence and effectiveness, (b) transformational and transactional leadership may have dispositional antecedents that cannot be captured in analyses using the five-factor model of personality, and (c) our focus on ratings of specific leadership behaviors at work, rather than broad leadership constructs in laboratory settings, may have reduced the extent to which implicit theories account for the personality leadership link.

First, it may be that transformational and transactional leadership behaviors are more malleable, more transient, and less trait-like than one might otherwise believe. Even if personality traits predict the tendency toward certain leadership behaviors, the observed trait-behavior association may be weakened by leadership training. This is most likely to be true for transactional behaviors (especially contingent reward and management by exception-active), which are commonly taught in MBA and management training programs. Furthermore, there is empirical evidence that transformational leadership behavior can be learned (Barling et al., 1996; Dvir, Eden, Avolio, & Shamir, 2002) and that life experiences play a role in the development of transformational leadership (Avolio, 1999). Given how little we know about the content of leadership training in universities and organizations, this is an important area for future research.

Second, one might argue that we have obscured specific trait-leadership links by lumping narrower traits into the five-factor model for our study. As noted earlier, nearly half of the primary studies in our analysis explicitly measured the Big Five traits. Thus, we conducted a post hoc analysis linking the transformational leadership composite to the Big Five using only studies that explicitly measured the Big Five traits. The benefit of this analysis is that it eliminates concerns about whether and how specific, narrow traits (e.g., locus of control) should be classified in a Big Five framework. This analysis indicates that all of the Big Five traits—when measured explicitly with five-factor model mea-

Table 6

Meta-Analysis of the Relationship Between the Big Five Personality Traits and Management by Exception-Active

Trait	Average					% variance due to sampling error	80% CV		95% CI	
	<i>k</i>	<i>N</i>	<i>r</i>	ρ	<i>SD</i> ρ		Lower	Upper	Lower	Upper
Neuroticism	7	1,532	.02	.02	.04	81	-.03	.08	-.04	.08
Extraversion	5	1,215	-.02	-.03	.00	100	-.03	-.03	-.09	.03
Openness	6	1,469	-.03	-.04	.00	100	-.04	-.04	-.09	.01
Agreeableness	6	1,469	-.09	-.11	.02	93	-.14	-.09	-.06	-.17
Conscientiousness	6	1,469	-.02	-.02	.00	100	-.03	-.02	-.07	.03

Note. Whitener's (1990) formula for standard error of the mean correlation was used in computing confidence intervals. *k* = number of correlations; *N* = combined sample size; ρ = estimated population correlation; *SD* ρ = standard deviation of estimated population correlation; CV = credibility interval; CI = confidence interval.

Table 7
Meta-Analysis of the Relationship Between the Big Five Personality Traits and Passive Leadership (Combined Management by Exception–Passive and Laissez-Faire)

Trait	Average					% variance due to sampling error	80% CV		95% CI	
	<i>k</i>	<i>N</i>	<i>r</i>	ρ	<i>SD</i> _{ρ}		Lower	Upper	Lower	Upper
Neuroticism	8	1,627	.04	.05	.00	100	.05	.05	.00	.09
Extraversion	6	1,310	-.07	-.09	.07	64	-.17	.00	-.16	-.01
Openness	7	1,564	.03	.04	.00	100	.04	.04	-.01	.09
Agreeableness	7	1,564	-.09	-.12	.06	92	-.19	-.05	-.19	-.06
Conscientiousness	7	1,564	-.09	-.11	.06	65	-.19	-.03	-.18	-.04

Note. Whitener's (1990) formula for standard error of the mean correlation was used in computing confidence intervals. *k* = number of correlations; *N* = combined sample size; ρ = estimated corrected correlation; *SD* _{ρ} = standard deviation of corrected correlation; CV = credibility interval; CI = confidence interval.

asures—are linked to transformational leadership (see Table 9), although only the correlations with extraversion and neuroticism are large enough to be practically meaningful. Overall, results using only direct measures of the Big Five (presented in Table 9) were quite similar to those using all studies (see Table 4).

This additional analysis does not address the issue of whether the Big Five are the most theoretically relevant traits for studying the dispositional bases of transformational and transactional leadership. Some researchers argue that the five-factor model provides too coarse a description of personality (Block, 1995; Hough, 1992). As Block (1995) notes, “for an adequate understanding of personality, it is necessary to think and measure more specifically than at this global level if behaviors and their mediating variables are to be sufficiently, incisively represented” (Block, 1995, p. 208). Hough (1992) argued that the Big Five traits are so broad that they mask relations between traits and criteria. Our results suggest that continued use of the Big Five traits may not be fruitful in revealing the dispositional bases of transformational and transactional leadership. Studying the relationship of the facets of the Big Five traits or other narrower traits and transformational and transactional leadership might prove worthwhile, though Judge and Bono's (2000) results suggested inconsistent results for NEO-PI-R inventory facets (Costa & McCrae, 1992) and transformational leadership.

Table 8
Effects of Big Five on Transformational and Transactional Leadership Behaviors

Leadership dimension	Multiple correlation	Adjusted <i>R</i> ²
Charisma	.34*	.12*
Intellectual stimulation	.22*	.05*
Individualized consideration	.25*	.06*
Contingent reward	.17*	.03*
Management by exception–Active	.10*	.01*
Passive leadership	.17*	.03*
Transformational composite	.31*	.09*

Note. *R* = Multiple correlation.

* *p* < .01.

Third, it appears that the personological basis of transformational–transactional leadership is weaker than that of leadership effectiveness and emergence. One possible explanation for the results here and those of previous research is that many of Judge, Bono, et al.'s (2002) studies were in laboratory settings. Indeed, our effect sizes for transformational leadership (see Table 4) are slightly stronger (average ρ = .17) than the Judge et al. results in business (average ρ = .14) or military or government (average ρ = .13) settings. Organizations can be argued to be “strong” situations in which leadership behaviors are subject to many contextual factors. Conversely, the typical leadership laboratory studies are “weak” situations such as leaderless group discussions in which strong cultures and histories are absent (Judge, Bono, et al., 2002). Thus, it may be that the strong situations characteristic of organizational settings suppress, to some degree, the natural demonstration of transformational–transactional leadership.

It may also be that our focus on ratings of leadership behaviors—rather than on broader assessments such as effectiveness or emergence—reduced the extent to which implicit theories account for the personality–leadership link. It is interesting to note, in this regard, that the strongest personality–leader behavior rating link in our study was found for charisma, the one leadership dimension we analyzed that included both behavioral ratings and attributions. As we are aware of no field studies that used behavioral (as opposed to perceptual) measures of transformational leadership, it is hard to know what effect using more rigorous measures might have had on the results. As noted earlier, we expected ratings of leadership behavior to be influenced by attributions and implicit theories. However, given recent evidence (Bono & Ilies, 2003) that ratings of transformational leadership are linked to objectively measured behaviors (e.g., use of positive emotion words), such biases may be reduced by the use of specific behavioral measures of leadership in field settings.

A strength of this study was that participants in studies included in the meta-analysis were actual leaders behaving in authentic (as opposed to simulated) leadership situations. This serves to reduce the biasing effects of raters' implicit leadership theories. Furthermore, in no cases were the personality traits of the leaders and the leadership behaviors measured with common methods or from common sources. Our results are free of percept–percept inflation

Table 9
Meta-Analysis of the Relationship Between Direct Measures of the Big Five Traits and Transformational Leadership

Trait	Average r	ρ	SD_{ρ}	% variance due to sampling error	80% CV		95% CI	
					Lower	Upper	Lower	Upper
Neuroticism	-.14	-.16	.00	100%	-.16	-.16	-.20	-.13
Extraversion	.20	.23	.06	67%	.17	.32	.20	.29
Openness	.07	.09	.07	63%	.00	.17	.03	.14
Agreeableness	.09	.12	.07	60%	.03	.21	.06	.17
Conscientiousness	.09	.11	.12	31%	.00	.27	.04	.19

Note. Whitener's (1990) formula for standard error of the mean correlation was used in computing confidence intervals. The analysis was based on 12 studies, with a combined sample size of 3130. ρ = estimated population correlation; SD_{ρ} = standard deviation of estimated population correlation; CV = credibility interval; CI = confidence interval.

to which correlations between personality and leadership are susceptible (Crampton & Wagner, 1994).

Despite generally weak results, our results do indicate that extraversion may be an important trait in predicting and understanding transformational and transactional leadership. Extraversion correlated .24 with transformational leadership (.23 when using only direct Big Five measures). Indeed, given the relative strength of extraversion in both this meta-analysis of transformational leadership and a prior meta-analysis of leadership emergence-effectiveness (Judge, Bono, et al., 2002), it seems that extraversion is a trait that shows robust relations with both leadership outcomes and rated leadership behaviors. Thus, it seems worthwhile for future leadership research to focus on extraversion and its dimensions (e.g., dominance and positive emotionality). For example, perhaps the predisposition of extraverts to convey positive emotions and project optimism and enthusiasm (Watson & Clark, 1997) explains the dual link of extraversion to ratings of leadership behaviors and leadership outcomes.

With respect to the other four Big Five traits, our results are quite modest, indicating that the Big Five may not be the best way to discover personality antecedents of ratings of transformational and transactional leadership behaviors. Whereas a broad personality taxonomy, such as the Big Five, can be a useful framework for cumulating research results, it appears that more narrow or specific traits may be relevant in predicting and understanding transformational and transactional leadership.

In summary, results of the present study provide the first meta-analytic evidence on the relationship between personality and transformational and transactional leadership. Results indicate generally modest validities overall. Extraversion was the strongest correlate of ratings of transformational leadership behavior. Future research can build on the results of this review by focusing on the role of extraversion in leadership. In addition, research aimed at uncovering the dispositional bases of transformational and transactional leadership should focus on specific traits relevant for each type of leadership behavior. Finally, considering research evidence that transformational leadership behaviors can be learned (Barling et al., 1996) along with the relatively weak trait-behavior links found in this study, it is critical that we gain a deeper understanding of how these leadership behaviors are developed.

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