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Personality and Job Performance:
The Impact of Contextual Self-ratings and Observer ratings
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Abstract

This study examined the effects of observer (supervisor and coworker) ratings and contextual (work specific) self-ratings of the Big Five personality dimensions on the prediction of in-role and extra-role job performance. Results showed Conscientiousness to be the best predictor of in-role job performance and Agreeableness and Emotional Stability to be the best predictors of extra-role performance across sources. Overall, results showed some support for observer ratings of personality in predicting job performance above and beyond general self-ratings. However, work specific self-ratings of personality, with the exception of Emotional Stability, generally did not account for incremental variance above and beyond that accounted for by general self-ratings. Limitations of the current study and suggestions for future research are discussed.

Personality and the Work Place

History.

Personality measurement has been used for some time to predict human behavior. Measuring personality became popular during World War I as a means of screening army recruits (Hogan, 1991). Today, industrial and organizational psychologists also use it for personnel selection. Although its applied use has only recently grown in popularity, personality was being studied over 85 years ago. Several early psychologists (e.g., Webb, 1915; Fiske, 1949; Eysenck, 1947), who were hard at work trying to measure personality, kept finding many of the same personality factors in their analyses (Digman, 1996).

Today, it is generally agreed that personality does have multiple dimensions, and at least five factors are needed to sufficiently describe it. Those “Big Five” factors, as identified by Goldberg, are as follows: Surgency (or Extraversion), which measures how sociable, talkative, and active a person is; Agreeableness, which measures how kind, cooperative, and helpful a person is; Conscientiousness (or Dependability), which measures how organized, thorough, and practical a person is; Emotional Stability (or Neuroticism), which measures how anxious, temperamental, or moody a person is; and finally, Intellect (or Culture or Openness to experience), which measures how creative, bright, and artistic a person is (Goldberg, 1992). These five dimensions have been combined into three broader dimensions (Extraversion, Neuroticism, and Psychoticism; Digman, 1996), and they can also be broken down into their more specific facets (e.g., Neuroticism contains the facets of low self-esteem, depression, guilt, and others; Hogan, 1991). Even considering these various levels of conceptualization, the Five-Factor Model has been replicated over and over again (Digman, 1996).

Although the Five Factor Model had been identified and had proven to be quite robust, personality was believed to be unimportant in the work setting from the mid-1960s until the 1980's (Hough & Schneider, 1996). A major contributor to the lack of interest in personality in applied settings was Mischel's book, Personality and Assessment, which criticized the trait approach altogether. He believed that personality traits were simply stereotypes, and had nothing to do with stable characteristics of people. Rather, he held that behavior was better explained by differences in situations than by differences in individuals. He based this argument on the finding that personality did not account for a large amount of variance in behavior (Mischel, 1968). Several other issues contributed to the notion that personality was unimportant for understanding or predicting work behavior. Specifically, there were concerns about invasion of privacy, and distortion of self-ratings, as well as concerns that people would perceive personality measures as unfair to groups protected by the Civil Rights Act of 1964 (Hough & Schneider, 1996). In addition, researchers were getting very low correlations between personality and job performance (Digman, 1996). Part of the reason for these findings was the fact that measures designed for diagnosis of psychological disorders in clinical settings (e.g., the Minnesota Multiphasic Personality Inventory, MMPI) were being used in organizational settings (Hogan, 1991). These clinical measures were created by comparing persons with mental disorders to "normal" people and were not designed to assess normal population or to predict job performance. Also, researchers were trying to predict overall job performance and not taking into account the fact that job performance is multidimensional: that different "personality variables correlate differently with different job performance constructs" (Hough & Schneider, 1996, p. 34.)

However, by the 1980's, the person versus situation debate was starting to settle down. Kenrick and Funder (1988) showed that personality was not simply a product of stereotyping, and that the correlation between personality and behavior was larger than previously believed. Research began to show that personality was an important predictor of behavior, and in particular, behavior at work (see for example, Barrick & Mount, 1991; Tett, Jackson, & Rothstein, 1991; Mount, Barrick, & Strauss, 1994). And although it was found that some people do, in fact, intentionally distort their responses to personality inventories, such distortion was shown to not decrease the predictive validity of the measures (Hough, Eaton, Dunnette, Kamp, & McCloy, 1990; Ones & Viswesvaran, 1998; Hough, 1998). In addition, because personality tests have been shown to generally have less adverse impact than cognitive ability tests (Ones, Viswesvaran, & Schmidt, 1993; Hough, 1998), their appeal to applied researchers has grown. Finally, with the increase in jobs with a larger interpersonal component (e.g., service jobs and team-based organizations), the impact of some personality traits on job performance has increased. Researchers have begun to recognize the changing nature of job performance and began to design personality measures specifically for employment settings (Hough & Schneider, 1996).

Predictive validity of personality.

In the past decade, the study of personality as a predictor of job performance has become quite popular. Barrick and Mount (1991) conducted a landmark meta-analysis of the Big Five personality factors in relation to three different job performance criteria (job proficiency, training proficiency, and personnel performance data) for five different job types (professionals, police, managers, sales, and skilled/semi-skilled). They found that Conscientiousness was a valid predictor for all jobs and all job performance criteria (uncorrected mean r ranged from .09 to

.13)¹. Thus, it appears that those people who are more organized, thorough, and practical tend to perform better than those who are not. Extraversion was a valid predictor for jobs relying heavily upon social interaction [managerial ($r=.11$) and sales jobs ($r=.09$)], suggesting that individuals who are more sociable, talkative, and active will tend to perform better in these types of jobs. However, these traits are not as important for other job types, such as professionals (e.g., engineers) or skilled/semi-skilled workers (e.g., accountants), which do not involve as much interaction with others. Openness to Experience predicted training proficiency criteria across all occupations ($r=.14$), as did Extraversion ($r=.15$). These findings suggest that those who have a positive outlook and are more open to new things learn more easily. Barrick and Mount (1991) suggested that people who are more active and sociable will perhaps perform better in training programs that are more interactive, as the ones in this study were (e.g., police academies, assessment centers, etc.). Finally, Emotional Stability ($r=.05$) and Agreeableness ($r=.04$) seemed to be the least important factors in predicting job performance. Therefore, if the goal is to predict job performance for a wide range of jobs using personality, the Conscientiousness dimension of the Big Five will probably be the best predictor. However, for jobs that have a high social component, Extraversion may also be an important predictor (Barrick & Mount, 1991).

Tett et al. (1991) conducted a similar meta-analysis and found much stronger results than those reported by Barrick and Mount (1991). The overall corrected correlation between personality (averaged across dimensions) and job performance was .24, much higher than that obtained by Barrick and Mount (1991), which was .11. Job performance had a negative relationship with Neuroticism (the opposite of Emotional Stability) ($r=-.15$), and positive relationships with the other four factors: Extraversion ($r=.10$), Openness ($r=.18$), Agreeableness

($r=.22$), and Conscientiousness ($r=.12$). So, whereas Barrick and Mount (1991) found uncorrected mean correlations ranging from .03 for Openness to .13 for Conscientiousness, Tett et al. (1991) found much higher uncorrected mean correlations, with magnitudes ranging from .10 for Extraversion to .22 for Agreeableness. The differences in the two studies can most likely be attributed to different coding procedures and the fact that Tett et al. (1991) included both civilian and military samples, while Barrick and Mount (1991) only included civilian samples.

Salgado (1998) conducted a meta-analysis using only European studies, with both civilian and military samples. His results partially confirmed Barrick and Mount's (1991) results in that Conscientiousness was a valid predictor for job performance across all occupations and criteria ($r=.09$). However, he also found Emotional Stability to be a strong predictor for all occupations and criteria ($r=.10$), similar to findings by Tett et al (1991).

Recently, however, Hurtz and Donovan (2000) conducted a meta-analysis in an attempt to further clarify the relationship of the Big Five with job performance. One of their main concerns was that the measures of personality included in these prior meta-analyses were not Big Five measures, but were intended to measure different conceptualizations of personality. Rather, the Big Five dimensions were inferred from similar scales or facets of personality factors from other personality configurations. Thus, no meta-analyses examined the relationship between job performance and personality measured with instruments designed for the Big Five.

Hurtz and Donovan (2000) included in their meta-analysis only studies that used a personality inventory designed to measure the Big Five and that contained an explicit measure of job or training performance. They found mean sample-size weighted correlations ranging from .04 (Openness to Experience) to .14 (Conscientiousness), which is very similar to the findings of both Barrick and Mount (1991) and Salgado (1998). They also found that Conscientiousness

predicted all performance criteria with about the same level of true validity, which was no stronger than the overall performance analyses. Conscientiousness does, in fact, seem to have the strongest relationship to overall job performance.

All of these findings together generally support the use of personality to predict job performance. They indicate that the dimensions of Conscientiousness and Emotional Stability can be used with a good deal of confidence to predict job performance across jobs and across cultures (Salgado, 1998). Additionally, as argued by Barrick and Mount (1991), Extraversion may also be a strong predictor for jobs that have a large social interaction component. However, as Hertz and Donovan (2000) point out, due to the low magnitudes of the relations, personality should probably not be given “a status similar to that of general cognitive ability for personnel selection purposes” (p. 876).

In-role versus contextual job performance

In order to maximize the predictive validity of these personality dimensions, it is important to carefully consider the dimensions of job performance (Hough, 1998). Borman and Motowidlo (1993), for example, make a distinction between contextual performance and task performance. Task performance includes those activities that either directly or indirectly contribute to performance. It involves how well employees perform their official job duties or their in-role tasks. Contextual performance (a construct very similar to organizational citizenship behavior, OCB; Organ, 1988), on the other hand, includes activities that are not formally part of the job, but enhance the effectiveness of an organization by supporting the organization's social environment. It essentially involves extra-role activities, such as volunteering, being conscientious, helping others, putting forth extra effort, following company rules, and defending the organization (Borman & Motowidlo, 1993). Although cognitive ability

is a valid predictor of task (or in-role) performance, personality dimensions have been hypothesized to be better predictors of contextual performance (or OCBs) for two reasons. First, OCBs are more discretionary, and therefore, the decision to engage in OCBs may be more related to one's disposition or personality. Secondly, in-role job performance can often be constrained by factors such as ability and technology, leading to range restriction on the criterion (Organ & Ryan, 1995; Brown, Diefendorff, Kamin, & Lord, 1999). OCBs, on the other hand, will have less range restriction because they are not influenced by ability or work-process technology.

Hogan, Rybicki, Motowidlo, and Borman (1998) designed an experiment to test the relationship between supervisor evaluations of contextual performance and personality. They also distinguished between jobs in which there was an opportunity for advancement and jobs in which there was not. They found that for situations in which there was no opportunity for advancement, Conscientiousness (measured by the Hogan Personality Inventory dimension Prudence) predicted two dimensions of contextual performance: Work Dedication ($r = .20$) and Interpersonal Facilitation ($r = .17$). However, in situations in which there was an opportunity for advancement, Extraversion (measured by the Hogan Personality Inventory dimension Ambition) was a strong predictor of contextual performance ($r = .12$ for primary sample and $.23$ for secondary sample). These findings suggest that, depending on the job situation, different aspects of personality will differentially predict the level of OCB a person exhibits (Hogan et al., 1998).

Organ and Ryan (1995), on the other hand, found in a meta-analysis that attitudes, such as job satisfaction, perceived fairness, organizational commitment, and leader consideration, were stronger predictors of the OCB constructs of Altruism (approximated mean $r = .22$) and Compliance (approximated mean $r = .24$) than were the personality factors. Agreeableness and

Conscientiousness did not correlate quite as strongly with Altruism ($r=.10$ and $.16$, respectively) or Compliance ($r=.08$, and $.21$, respectively). However, they also note that the difference in their findings could be due to the fact that they examined only a few personality factors and that they only examined self-reports of personality. The present investigation includes measures of both in-role job performance and OCB, along with the big five personality dimensions assessed from the perspective of the self, supervisor, and peer.

Increasing the Predictive Validity of Personality

Despite the previous research that has shown personality to be a valid predictor of job performance, the amount of variance in job performance accounted for by personality is rather small (less than 2% for Conscientiousness, as reported by Barrick & Mount, 1991). In this study, two possible ways to increase the predictive validity of personality are examined. The first method is to use observer (coworkers and supervisors) ratings of participants' personalities as predictors, instead of only self-ratings. The second method is to provide a specific frame of reference or context in which the participants can rate their own personalities (e.g., personality at work), and use these ratings as predictors. Both of these approaches may predict job performance and OCBs above and beyond traditional global self-ratings of personality. The underlying rationale for each approach is further outlined below.

Personality from the perspective of others.

Hogan's Socioanalytic Theory (Hogan, 1996) is a theory of personality that suggests that personality from the perspective of others is different from personality from the perspective of the actor. Personality from the observer's perspective is essentially a person's reputation. It deals with the way others perceive a person and how much status that person has within groups. A person's reputation can be directly observed, is somewhat objective, and can be described

using trait words. Reputations are essentially made of others' descriptions of a person based on the way that person has behaved in the past. They are restricted to the context in which the observer knows the target person. Therefore, when the observer is from the job setting, his or her perception of personality may be more closely related to behaviors at work and could perhaps better predict job performance than a global (i.e., cross-situational) self measure of personality (Hogan, 1996; Hogan & Shelton, 1998). Thus, personality ratings from others in the workplace may predict job performance above and beyond global self-ratings.

Personality from the perspective of the actor, on the other hand, reflects a person's "inner nature" (Hogan, 1991, p. 875), or identity. It consists of what goes on inside a person's head that explains why he or she behaves in a certain way, creating the reputation that others perceive; it is a person's hopes, dreams, goals, strategies, and self-image. Because it is inside a person's head, personality from the perspective of the actor cannot be directly observed; it must be inferred from behavior and the individual's self-reported personality (Hogan & Shelton, 1998).

Mount, Barrick, and Straus (1994) designed an experiment to test the theory that personality from the observer's perspective is different from personality from the actor's perspective. They obtained supervisor, coworker, and customer personality ratings of sales representatives, in addition to employees' own self-ratings, using a shortened version of Goldberg's Inventory (Goldberg, 1992). They also had the participants' supervisors and coworkers rate the participants' job performance. Using aggregate supervisor ratings of job performance, Mount et al. (1994) conducted hierarchical regression analysis, entering self-ratings in the first step, each observer rating separately in the second step, and all sources (self and observer) together in the third step to determine the percentage of variance accounted for by all of the sources. They found that observer ratings (from supervisors, coworkers, and customers)

of Conscientiousness, Extraversion, and Agreeableness accounted for an additional 24%, 11%, and 18% (respectively) of the variance in job performance beyond that accounted for by self-ratings.

Brown et al. (1999) also tested the incremental validity of others' ratings beyond self-ratings of personality. They were specifically interested in whether other ratings would predict Organizational Citizenship Behaviors (OCBs) better than in-role job performance, since OCBs are a more discretionary aspect of job performance, and therefore perhaps more contingent upon personality. They obtained self-ratings, supervisor ratings, and coworker ratings of the Big Five personality factors for participants, as well as supervisor and coworker ratings of five OCB dimensions (Altruism, Courtesy, Civic Virtue, Sportsmanship, and Conscientiousness) and in-role job performance. They found that supervisor ratings of Conscientiousness, Agreeableness, and Openness to Experience predicted coworker ratings of the five dimensions of OCBs (average $r = .39, .28, .28$, respectively). The average correlations for these dimensions were much higher for OCBs than for in-role job performance ($r = .29, -.02, .09$, respectively). In addition, supervisor ratings for these three dimensions accounted for significant additional variance in OCBs beyond that accounted for by self-ratings (average $\Delta R^2 = .134, .088, .079$, respectively). Conscientiousness was the only personality dimension for which supervisor ratings predicted in-role job performance and accounted for additional variance beyond that accounted for by self-ratings.

Based on previous research, the current study tests whether observer ratings of personality are positively correlated with OCBs and job performance, and whether they account for additional variance in these criteria beyond that accounted for by self-ratings of personality.

Personality in a specific context.

A second possible way to enhance the predictive validity of personality in organizational settings is to provide a specific frame of reference or context in which the participants can respond. Essentially, this would mean asking the participant, “What is your personality at work?” When a person rates his or her own personality, he or she may be drawing upon several life domains that may be salient at that moment (e.g., family life, work, friends). Therefore, constraining the context from which they can draw upon to only work may result in a personality assessment that more closely maps onto job behaviors and is more predictive of performance and OCBs.

Several theories on the contextual nature of personality exist. According to the “identity salience hierarchy” theory (Stryker & Serpe, 1982), a person’s total identity is a collection of his or her different role identities, and people behave differently and exhibit different personalities in different roles. This suggests that the expression of one’s personality will depend on the context. Furthermore, the theory states that identities are arranged in order of importance, with those roles that are more important to a person contributing more to their general self-concept (Roberts & Donahue, 1994). In a similar sense, the bandwidth-fidelity trade-off suggests that the general self-ratings of personality should moderately predict a wide range of life outcomes, while personality measured within a specific context should more strongly predict those outcomes within that context (Cronbach, 1965; Robert & Donahue, 1994).

Another theory to consider is the “self presentation theory” (Hogan, 1991; Schmit, Ryan, Stierwalt, Powell, 1995). Self-presentation is the idea that people, often unconsciously, respond to personality inventories in a way that may not be accurate, but that promotes the way they would like to be seen (Schmit et al., 1995). The theory suggests that the way people respond to inventory items depends on what kind of statement they want to make about themselves.

People's everyday behavior is guided by a need for status and approval, which they seek through the presentation of a self-image. Some people have a better conception of their self-images than others, and some people are better self-presenters than others. So, Hogan (1991) suggests that the way a person responds to a personality inventory item reflects that person's attempt to "negotiate an identity with an anonymous interviewer" (p. 902).

In terms of measurement, some researchers suggest that items asked within a specific context, might reduce validity by making socially desirable responding easier [even though socially desirable responding has recently been shown to not reduce validity (see Hough et al, 1990; Ones & Viswesvaran, 1998; Hough, 1998)]. Self-presentation theory, would suggest that this is not a problem, but rather personality inventories should be designed to make self-presentation easier by providing a context or frame-of-reference that people can refer to. Doing so should increase validity by increasing the face validity of the items and reducing the misinterpretation associated with more general items. In fact, general personality inventories may introduce error into the self-presentation process, because the items are so broad that people find it difficult to connect the general test items to their specific roles in the work context. This causes people to misinterpret items and reduces their validity (Schmit et al., 1995).

A few studies on this frame-of-reference concept have been conducted. Roberts and Donahue (1994) tested whether people see themselves differently in different roles, while maintaining a stable sense of self across the roles. Women rated 16 personality attributes (ten of which represented the Big Five) for their general self and for each of five roles (worker, parent, partner, daughter, and friend). These 16 personality attributes were collapsed into three scales: Positive affect, Competence, and Dependability. They found that the women did rate themselves higher on some attributes in certain roles than they did in other roles. However, the rank-order

of the attributes was very similar across roles. In other words, they did find support for the idea that people view themselves differently depending on the context while still maintaining a stable sense of self.

Roberts and Donahue (1994) also tested the bandwidth-fidelity trade off hypothesis. They used open-ended questions and rating scales (e.g., marital happiness, work satisfaction) to collect role-specific criteria from different areas of the women's lives, such as their marriages and work lives. They correlated the role-specific and general personality assessments with participants' role-specific criteria and found that for the Positive Affect personality scale, the role-specific measure predicted the role-specific criteria better than the general measure for all outcomes. However, for the Competence personality scale (the Dependability scale was not used in this part of the analysis), only some of the role-specific correlations were greater than the general-self correlations. So, the bandwidth-fidelity trade-off hypothesis was partially supported.

Schmit et al. (1995) also tested frame-of-reference effects of personality on criterion related validity in two studies. In the first study, they altered the personality items (whether they were work-specific or noncontextual) and the testing situation (whether participants were given instructions to imagine that they were job applicants or given general instructions). The work-specific items were simply the NEO Five Factor Inventory (Costa & McCrae, 1989) with "at work" tagged on to each item. The Openness to experience scale was not used because the items did not make sense in the "at work" condition. These rating formats (work-specific versus noncontextual) and instructions (applicant versus general) were administered in both a between- and a within-subjects procedure.

They found that the item specificity and the testing situation both affected scores, suggesting that mean personality responses are more positive when work specific items rather than noncontextual items are used (for all dimensions except Extraversion) and when job applicant instructions rather than general instructions are used. However, there were larger mean differences for instruction type than for item type for most comparisons, as well as an interaction between item and instruction type for Conscientiousness and Neuroticism (within subjects condition). The interaction revealed that for both Conscientiousness and Neuroticism, the highest ratings were in the applicant instruction-work-specific item condition, and the lowest ratings were in the general instruction-noncontextual item condition. These two findings suggest that socially desirable responding, as opposed to self-presentation, is at least part of the reason for the differences in the scores. In other words, people seem to be responding in a way that is socially desirable when they are in a situation in which they are applicants for a job that they want (applicant instruction condition), rather than engaging in self-presentation due to easier interpretation of the work-specific items (work-specific items condition).

Since socially desirable responding may lower validity and self-presentation may increase it, Schmit et al. (1995) conducted a second study to determine whether item type, instruction type, or both affect criterion related validity, using college cumulative GPA as the criterion. They had four conditions: noncontextual items-general instructions, noncontextual items-school applicant instructions, school-specific items-general instructions, and school-specific items-school applicant instructions. In the school applicant instruction conditions, participants were told to imagine that their admission to a school that they wanted to attend was dependant upon the scores of the personality test. To enhance motivation, those individuals meeting the qualifications would receive \$10 in prize money. They hypothesized that if self-

presentation affects responding, the school applicant instruction-school-specific items condition should have the highest predictive validity because the frame-of-reference would be greatest, since both the instruction type and item type provide the same context. This condition would be followed by the general instruction-school-specific items condition, since the participants would still be provided a frame-of-reference in which to respond, but would have no reason to try to respond in a socially desirable manner. The general instructions-noncontextual items condition should have the third highest predictive validity, due to the fact that participants would have no frame-of-reference to go by nor any reason to respond in a socially desirable way. Finally, the school applicant instructions-noncontextual items condition would have the lowest predictive validity because only socially desirable responding would be at work.

Schmit et al. (1995) found that the validity of school-specific items was indeed significantly higher than the validity of noncontextual items, supporting self-presentation theory. Also, the validity in the general instruction-school-specific items condition was higher than in the applicant instruction-noncontextual items condition, further supporting the self-presentation theory. Therefore, they concluded that giving participants a context in which to respond to the personality inventory items decreases the misinterpretation caused by participants trying to answer general items in a specific context using self-presentation. In short, providing a frame-of-reference in the personality inventory items did indeed increase predictive validity. Based on previous research, work-specific self-ratings of personality in the present study were expected to be positively correlated with OCBs and in-role job performance and were also expected to provide additional variance beyond that accounted for by general self-ratings.

Current Investigation

The current study is basically a combination of Brown et al. (1999), which examined the validity of observer ratings and self-ratings of personality, and Schmit et al. (1995), which examined how providing a frame of reference influences responses on personality measures. This study extends the Brown et al. (1999) study, by including contextual self-ratings in a within subject design. This study also extends the Schmit et al. (1995) study by using job performance and OCB criteria instead of college cumulative GPA, as well as ratings of personality obtained from observers. The most significant contribution of the current study is that it examines the simultaneous combined effects of observer ratings and contextual self-ratings of personality.

Based on Socioanalytic Theory (Hogan, 1991; Hogan, 1996; Hogan & Shelton, 1998) and studies by Mount et al. (1994) and Brown et al. (1999), it was believed that in the present study, observer ratings of personality would predict job performance and account for additional variance beyond that accounted for by general self-ratings. Also, based on identity saliency hierarchy theory (Roberts & Donahue, 1994), the band-width fidelity tradeoff (Cronbach, 1965; Robert & Donahue, 1994), and self-presentation theory (Schmit et al., 1995) as well as studies by Schmit et al. (1995) and Roberts and Donahue (1994), it was believed that contextual self-ratings of personality would also predict job performance and account for additional variance beyond that accounted for by general self-ratings. In addition, the relationship between work-specific self-ratings and observer ratings of personality and their ability to uniquely predict OCBs and in-role job performance was examined.

In summary, it was hypothesized that:

Hypothesis 1: Observer ratings of the Big Five will be positively correlated with extra-role and in-role job performance.

Hypothesis 2: Work specific self-ratings of the Big Five will be positively correlated with extra-role and in-role job performance.

Hypothesis 3: The predictive validity of observer and contextual self-ratings of personality will be stronger for extra-role performance than for in-role performance.

Hypothesis 4: Observer ratings of the Big Five will account for incremental variance in extra-role and in-role job performance above that accounted for by general self-ratings.

Hypothesis 5: Work specific self-ratings of the Big Five will account for incremental variance in extra-role and in-role job performance above that accounted for by general self-ratings.

Hypothesis 6: Observer ratings and work specific self-ratings combined will account for incremental variance in extra-role and in-role job performance beyond that accounted for by each other and general self-ratings.

To test these hypotheses, personality ratings were collected from full time working adults. A general personality inventory (Goldberg, 1992) and a work-specific personality inventory (the same inventory as the general measure with instructions for the participants to rate themselves as they are at work) were administered to participants. Then, the general personality measure was used by the participant's supervisor and coworker to rate the employee. Finally, the supervisor and coworker rated the employee's in-role job performance (Williams & Anderson, 1991) and extra-role performance (Podaskoff, MacKenzie, Moorman, & Fretter, 1990).

Method

Participants

Participants were full time working adults recruited across a variety of organizations by trained undergraduate students. Each participant gave permission to have a supervisor and a

coworker fill out questionnaires about the participant's personality, OCB, and in-role job performance. 460 surveys were given to an employee, their supervisor, and their coworker. The return rate was 49% for employees, 41% for supervisors, and 41% for coworkers. Complete data (all three sources) was obtained for 151 employees (33%). This percentage is consistent with that reported in other studies where data was collected from three sources (e.g., Brown et al., 1999). Further surveys were later dropped due to outlier analysis and missing responses, which will be discussed below, resulting in 143 complete observations. The mean ages for this sample were 39.7 for employees, 38.0 for coworkers, and 44.3 for supervisors. 72.7% of employees, 72.7% of coworkers, and 48.3% of supervisors were female. Employees had an average tenure of about 2 years at the present organization.

Measures

Demographics. Participants were asked to provide their age, sex, race, education level, how many hours per week they work, tenure in the company and in their current position, job duties, primary function of the company, how often they socialize outside of work with the coworker and supervisor who will rate them, and how well they know the supervisor and coworker who will rate them. Supervisors and Coworkers were also asked to provide their age, sex, race, the amount of social contact outside of work they have with the participants, how well they know the participants, and how long they have worked with the participants.

Personality. Saucier's (1994) shortened measure of Goldberg's (1992) measure of the Big Five personality factors was used. This scale consists of 40 adjectives assessing the Big Five personality factors (8 items for each dimension; scale reliabilities range from .76 to .86). It was used by employees to rate themselves once in general and once as they are at work. Supervisors

and coworkers also used the scale to rate the focal employee. All responses were made on a 7-point Likert scale (7="Strongly Agree"; 1="Strongly Disagree").

Organizational citizenship behavior. OCBs were measured using supervisor and coworker ratings of Podsakoff et al.'s (1990) Organizational Citizenship Behavior Questionnaire. This scale measures five dimensions of OCB (Altruism, Conscientiousness, Sportsmanship, Courtesy, and Civic Virtue) identified by Organ (1988). Altruism includes discretionary behaviors that help another person with a job-related task. Conscientiousness refers to instances in which people go beyond the required level of performance. Sportsmanship refers to acts of not engaging in certain negative behaviors, such as complaining. Courtesy includes behaviors that help prevent problems from occurring for another person, such as giving reminders or passing along information. Civic Virtue involves responsible participation and involvement in the organization's policies. Civic Virtue is measured with four items, but the other four scales are measured with five items (scale reliabilities range from .70 to .85, as reported by Podsakoff et al., 1990). Respondents indicated the extent to which they agree with the statements regarding the participants' OCB performance on a 7-point Likert scale (7="Strongly Agree;" 1="Strongly Disagree"). In an attempt to simplify the interpretation of findings, we combined these five OCB dimensions into one dimension, which we called Extra-role Performance. Analyses were conducted on separate OCB dimensions and are included in Appendices A and B.

In-role job performance. Williams and Anderson's (1991) seven-item measure of in-role behavior was used to measure in-role job performance ($\alpha = .91$). Participants' supervisors and coworkers rated the participants, indicating the extent to which the participants perform activities outlined in their job descriptions, on a 7-point Likert scale (7="Strongly Agree;" 1="Strongly Disagree").

Procedure

Participants were recruited by trained LSU students who received extra credit toward their course grades in psychology and a chance to win one of three \$50 prizes for recruiting full-time employed adults. The recruited participants gave permission to have a coworker and supervisor, which they selected, complete the measures of in-role and extra-role job performance and personality. Participants rated themselves on personality in general and at work (contextual). The order in which participants filled out these personality measures was counterbalanced to examine and control for any order effects. The supervisors and coworkers also responded individually to the performance and personality measures. All surveys were returned by mail to the researchers in a self-addressed, stamped envelope.

Data Preparation

Missing responses. To reduce the impact of missing data, we dropped those surveys that were missing over 10% of the items in a given scale from a given source. For example, any survey that was missing over 4 of the 40 personality items, or over 3 of the 31 performance appraisal items was dropped. For scales in which a particular source was missing less than 10% of the items, we replaced the missing response with the mean of the item. This procedure resulted in the replacement of 0.1% of all responses.

Transformed Variables. After analyzing the skewness and kurtosis of the personality and performance measures, 1 personality dimension (work specific Agreeableness) and both in-role job performance ratings (coworker and supervisor) were transformed. All three of these scales were either highly negatively skewed (skewness statistic over 2.00), highly kurtotic (kurtosis statistic over 2.00), or both. We performed a reflect and logarithm transformation (Tabochnick & Fidell, 2001) on these three scales in order to make them more normal.

Outlier Analysis. Univariate outlier analyses were conducted to examine the presence of influential data points and remove them from further analyses. Eight individuals were excluded from further analyses because they were outliers on at least one personality dimension from at least one source and/or coworker or supervisor performance ratings.

After all of this data preparation work, we were left with 143 participants with complete data (all three sources) to conduct further analyses on. That is, 31% of the original 460 survey packets that were distributed were actually used in data analysis.

Results

Although we gathered data on all five dimensions of OCB, due to the large number of analyses and variables, we chose to combine these dimensions into a single dimension called extra-role performance. Correlation tables for all five OCB dimensions are included in Appendices A and B.

Descriptive Statistics

Table 1 presents the correlations between general self, work specific self, supervisor, and coworker ratings of the Big Five personality dimensions, as well as the reliabilities for all Big Five variables examined. Table 2 presents the correlations between supervisor and coworker in-role and extra-role job performance and the reliabilities of those scales. The average correlation between observer ratings of personality was .34, which is consistent with other research (Conway & Huffcutt, 1997). The average correlation between general self-ratings and work specific self-ratings was .74, showing that a little more than 50% of the variance is shared between these measures. This indicates that individuals are distinguishing between their personality in general and their personality at work, although half of the variance is shared. The correlations between supervisor and coworker ratings of in-role and extra-role performance were

.31 and .29, respectively. The average correlations between self and observer ratings of personality were .32 for general self-ratings and .29 for work specific self-ratings.

To determine if order of administration and item type (work specific or general) impact personality ratings, means and standard deviations are reported in Table 3 and results of a two by two Analysis of Variance examining item type and order of administration is reported in Table 4. Main effects for item type were found for Conscientiousness, Extraversion, and Emotional Stability, with work specific self-ratings being higher than general self-ratings. Main effects for order of administration were also found for Conscientiousness and Emotional Stability, suggesting that when work specific ratings were presented first, both general and work-specific ratings were higher than when general self-ratings were presented first. There was no interaction for order of administration and item type.

For those Big Five dimensions with significant order effects (Conscientiousness and Emotional Stability), we examined whether order moderated the relationship between job performance and personality ratings (which pertains to the substantive hypotheses in the paper). We found no significant interactions, suggesting that the relationship between self-ratings of personality and others' ratings of job performance does not differ based on the order in which the self-ratings were made. Thus, order will not be further examined in this investigation.

Table 5 presents the means and standard deviations of all variables as well as correlations between all Big Five ratings from each source (general self, work specific self, coworker, and supervisor) and extra-role and in-role performance ratings from both coworkers and supervisors. Consistent with prior research (e.g., Barrick & Mount, 1991), several significant relationships (7 out of 20) were found between general self-ratings of personality and observer performance ratings. General self-ratings of Conscientiousness, Agreeableness, and Emotional Stability were

significantly related to supervisor ratings of extra-role performance ($r = .17$, $r = .23$, and $r = .20$, respectively), and Conscientiousness was also related to supervisor ratings of in-role performance ($r = .22$). General self-ratings of Agreeableness were significantly related to coworker extra-role and in-role performance ($r = .30$ and $r = .21$, respectively). Extraversion was the only Big Five factor for which the general self-rating was not related to any of the performance criteria (see Table 5).

Tests of Hypotheses

Hypothesis 1 proposed that observer ratings of the Big Five would be positively correlated with extra-role and in-role job performance. As can be seen in Table 5 in bolded values, many of the significant relationships occur when the same source provided both the personality and performance ratings. However, coworker and supervisor ratings of Conscientiousness were significantly related to both coworker and supervisor ratings of both extra-role and in-role job performance. A similar pattern is seen for supervisor ratings of Agreeableness (with the exception of supervisor in-role ratings). Extraversion was the only Big Five factor for which observer ratings were not related to any of the performance criteria. When examining ratings of personality and performance from different sources, there is support for hypothesis 1 only for the dimensions of Conscientiousness and Agreeableness (see Table 5).

Hypothesis 2 proposed that work specific self-ratings of the Big Five would be positively correlated with extra-role and in-role job performance. Table 5 shows that for Conscientiousness, work-specific ratings were related to both coworker and supervisor ratings of in-role job performance ($r = .20$ and $r = .20$), but not extra-role performance. For Agreeableness and Emotional Stability, work specific ratings were significantly related to both coworker and supervisor ratings of extra-role performance (see Table 5). For Openness to Experience,

significant correlations were in the opposite direction than hypothesized ($r = -.19$ for work specific and $r = -.17$ for general self-ratings), suggesting that the more creative, intellectual, and complex a person is at work, the less likely they are to perform well on the job. This result is inconsistent with other research and may be due to sample specific characteristics not examined in this investigation. Again, Extraversion was the only Big Five factor that had no significant relationships with any of the performance criteria. Thus, there is support for hypothesis 2 only for Conscientiousness with in-role performance and Agreeableness and Emotional Stability with extra-role performance.

To test hypothesis 3, that correlations would be stronger for extra-role performance-personality relationships than for in-role performance-personality relationships for contextual self-ratings and observer ratings of personality, we used Fisher's z Transformation test to examine differences between dependent r s (Cohen & Cohen, 1983). Significant differences between correlations are indicated by a cross (†) in Table 5. Support for this hypothesis came primarily from the Agreeableness dimension in predicting supervisor performance ratings and the Emotional Stability dimension in predicting coworker performance ratings (see Table 5). Interestingly, the opposite pattern of relations was found for the correlations between Conscientiousness and performance, with stronger relationships with in-role performance ratings than with extra-role performance ratings. In general, there was very little support for hypothesis 3 (see Table 5).

Hypotheses 4 and 5 posed that observer and work specific (respectively) ratings of the Big Five would account for incremental variance in extra-role and in-role job performance above that accounted for by general self-ratings. To test these hypotheses, hierarchical regression was used, entering general self-ratings at Step 1, and coworker, supervisor, and contextual self-

ratings at Step 2, in separate regressions (see Table 6). A significant ΔR^2 at step 2 would reveal support for the hypotheses.

Support for hypothesis 4 was found for 18 out of 20 relationships when observer ratings of personality and performance were from the same source. A more stringent test of this hypothesis involves looking at the relationship between personality and performance ratings from different sources. Thus, interpretation of findings will pertain primarily to these analyses. As can be seen in Table 6, support for hypothesis 4 was found for supervisor ratings of Conscientiousness in predicting coworker ratings of both in-role and extra-role performance and for coworker ratings of Conscientiousness in predicting supervisor in-role ratings. One other significant relationship was found for supervisor ratings of Emotional Stability in predicting coworker ratings of extra-role performance. Generally, we did find some support for hypothesis 4.

In regards to hypothesis 5, Emotional Stability was the only Big Five dimension in which work specific self-ratings accounted for significant incremental variance in performance above and beyond that accounted for by general self-ratings (see Table 6). Work specific self-ratings of Emotional Stability accounted for 3.6% incremental variance in supervisor ratings of extra-role performance and 5.5% incremental variance in coworker ratings of extra-role performance. Thus, we found very little support for hypothesis 5.

Hypothesis 6 posed that observer and work specific ratings combined would account for incremental variance in extra-role and in-role job performance above that accounted for by each other and general self-ratings. Separate regressions were conducted to test this hypothesis, in which general self-ratings were entered in Step 1, and both contextual self-ratings and others' ratings were entered simultaneously in Step 2. A significant beta weight at this step would

indicate that the personality variable uniquely predicts performance. As can be seen in Table 6, for Conscientiousness, observer ratings and work specific self-ratings combined accounted for significant incremental variance above and beyond that accounted for by general self ratings for coworker and supervisor ratings of in-role performance (11.1% and 12.4% respectively) as well as coworker ratings of extra-role performance (4.2%). Consistent with findings in hypothesis 4 and 5, this increment in variance is contributed primarily by observer ratings. For Emotional Stability, observer ratings and work specific self-ratings accounted for 8.0% incremental variance in coworker ratings of extra-role performance above and beyond that accounted for by general self-ratings. This increment in variance is contributed primarily by work specific self-ratings. In generally, little support was found for hypothesis 6 that had not already been found in the results from testing hypotheses 4 and 5.

Discussion

Consistent with previous research (Barrick & Mount, 1991; Brown et al., 1999; Tett et al., 1991) several significant relationships existed between general self-ratings of the Big Five and performance ratings. Conscientiousness was the best predictor of in-role performance across rater sources, and was related to extra-role performance to a lesser extent. Thus, people who are more organized, systematic and practical will do better at formal job duties. Agreeableness and Emotional Stability, on the other hand, were the best predictors of extra-role performance, suggesting that people who are cooperative and kind (agreeable) and relaxed and undemanding (emotionally stable) will perform better on voluntary activities that are not necessary but enhance the working environment. Previous research has not demonstrated a relationship between Emotional Stability and extra-role behavior.

We found the most support for our expectation that observer ratings of the Big Five would predict job performance for Conscientiousness and Agreeableness. However, only observer ratings of Conscientiousness predicted both in-role and extra-role performance above and beyond general self-ratings (Agreeableness did not add incremental prediction). Supervisor ratings of Emotional Stability also added incremental variance in coworker ratings of extra-role performance. With regard to work specific self-ratings, Emotional Stability was the only Big Five factor for which work-specific self-ratings provided any incremental variance above and beyond general self-ratings and observer ratings.

We found little support for our expectation that ratings of oneself within the work context would predict job performance above and beyond general self-ratings, with the exception of Emotional Stability in predicting extra-role performance. Thus, “self presentation theory” (Hogan, 1991; Schmitt et al., 1995), the idea that context-specific personality inventories should increase validity by decreasing misinterpretation and thus making self-presentation easier, received little support in the current study. This finding may be due to the nature of the personality measurement used and the way that the data was collected in this study. Specifically, Schmit et al. (1995) modified the NEO-FFI by adding “at work” to the phrases tapping the personality dimensions. In contrast, we used an adjective measure of the Big Five (Saucier, 1994) and instructed participants to rate themselves at work. Manipulating the instructions instead of the items may not have been a strong enough manipulation to make salient the work context when rating an item.

The data shows somewhat stronger support for our hypothesis that personality, as rated by observers, would predict job performance. Conscientiousness and Agreeableness are particularly strong predictors of both in-role and extra-role performance, which is consistent with

Brown et al. (1999). However, only Conscientiousness provides incremental variance above that accounted for by general self-ratings in situations in which personality and performance ratings are provided by different sources. It may be that observers in the work setting are providing more context specific ratings, which correspond better to job behavior than do self-ratings, even if the self-ratings are contextual. Overall, support was found for Hogan's Socioanalytic Theory (Hogan, 1996), the idea that personality from the observer's perspective is restricted to the context in which the observer knows the person and should predict job performance above and beyond more global, context-independent self-ratings.

From the beginning, the purpose of this paper was two-fold: to replicate the findings of Brown et al. (1999), that ratings obtained from observers would predict job performance above and beyond general (non-contextual) self-ratings, and to find support for the theory that contextual self ratings would do the same. Although, we did find some support for the former objective, further research is needed to replicate these findings and to explore the latter argument. The current study did find results that were similar to, although generally not as strong as, those found by Brown et al. (1999) with regard to observer ratings of personality. In terms of general self-ratings, findings were similar to and slightly stronger than those found by Barrick and Mount (1991). Generally, we found some results similar to Schmit et al. (1995), in that for three of the Big Five factors (Conscientiousness, Extraversion, and Emotional Stability), work specific ratings were more positive than general ratings. However, contextual self-ratings did not provide incremental variance in job performance above and beyond general self-ratings. In this respect, the current study did not produce results similar to those found by Schmit et al. (1995), and further research is needed to examine this hypothesis.

Limitations and Future Research

As with any investigation, the present study has some limitations. First, the current study was limited in the way the contextual (work specific) self-ratings were gathered. Simply providing instructions for the participants to rate themselves as they are at work may not be as strong of a manipulation as attaching “at work” to the end of each item. Thus measures of general personality and contextual (work specific) personality may not have been clearly distinguished in people’s minds. Support for this notion is provided by the fact that the correlations between the general and work specific ratings were nearly as high as the reliabilities for the scales (see Table 1).

Another possible reason for the relatively weak findings in the present study is the range restriction in the job performance criteria. The job performance ratings were uniformly high, suggesting a leniency effect. Mean supervisor and coworker extra-role performance ratings were 5.75 and 5.74, respectively, much higher than the midpoint of the scale (3.5). Mean supervisor and coworker in-role performance ratings were even higher (6.16 and 6.26, respectively). If greater variability in the performance constructs were present, the correlations may have been higher.

Finally, an exploration of moderators of the job performance and personality relationship could be conducted. For example, job category, the sex of the rater and focal employee, and how much time the rater and focal employee spend together outside of the work environment may moderate the relationships between these variables. In accordance with previous research, occupations that have a large social component (e.g., sales and management) should show strong relationships between Extraversion and performance ratings (Barrick & Mount, 1991; Mount, Barrick, & Strauss, 1994), as being talkative, assertive, and ambitious will lead to greater success

in those jobs. In addition, knowing the individual on a more personal level may result in stronger relationships between ratings of personality and performance. These possibilities should be explored in future research

Summary

In summary, relying on self-ratings of personality alone may underestimate the predictive validity of personality. Results of the present study, as well as previous studies (Mount et al., 1994; Brown et al., 1999) show that supervisor and coworker ratings of personality do account for significant incremental variance in job performance beyond that of general self-ratings. Work specific (contextual) ratings of personality may also be important in providing incremental variance in job performance, although future research is needed to further explore this issue. The overall message is that general, non-contextual measures of personality are still important, but they should not be the only method of assessing personality for purposes of predicting job performance.

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Footnote

¹ All remaining correlations are mean uncorrected values.

Table 1

Between Source Correlations of the Big Five Personality Dimensions.

Rating Source	1	2	3	4	5	6	7	8	9	10
General Self										
1 Conscientiousness	0.79									
2 Extraversion	0.11	0.81								
3 Agreeableness	0.31***	0.07	0.83							
4 Openness	0.13	0.31***	0.20*	0.74						
5 Emotional Stability	0.36***	0.11	0.39***	0.11	0.79					
Work Specific Self										
6 Conscientiousness	0.74***	0.05	0.27***	-0.02	0.26***	0.80				
7 Extraversion	0.16	0.77***	0.13	0.28***	0.12	0.27***	0.81			
8 Agreeableness	0.24**	-0.01	0.72***	0.08	0.41***	0.42***	0.18*	0.82		
9 Openness	0.15	0.15	0.18*	0.70***	0.06	0.19*	0.32***	0.24**	0.75	
10 Emotional Stability	0.31***	0.11	0.47***	0.09	0.79***	0.40***	0.22**	0.60***	0.15	0.77
Supervisor										
11 Conscientiousness	0.28***	-0.14	0.06	-0.16	0.07	0.29***	-0.14	0.07	-0.17*	0.11
12 Extraversion	0.07	0.43**	-0.04	0.18*	0.10	0.01	0.31***	-0.06'	0.09	0.10
13 Agreeableness	0.09	0.00	0.41***	-0.01	0.25**	0.08	0.01	0.34***	-0.01	0.29***
14 Openness	0.02	0.12	0.10	0.16*	-0.04	-0.03	0.09	0.03	0.13	0.06
15 Emotional Stability	0.14	-0.12	0.26**	0.02	0.28***	0.08	-0.06	0.25**	0.06	0.30***
Coworker										
16 Conscientiousness	0.30***	-0.04	0.07	-0.12	0.13	0.23**	-0.13	0.06	-0.16	0.15
17 Extraversion	0.03	0.44***	0.09	0.05	-0.07	0.01	0.41***	-0.08'	-0.06	0.00
18 Agreeableness	-0.04	0.03	0.30***	0.00	0.20*	-0.02	0.02	0.31***	-0.04	0.24**
19 Openness	-0.07	0.08	0.09	0.34***	0.05	-0.11	0.05	0.03	0.33***	0.10
20 Emotional Stability	-0.10	-0.02	0.01	-0.01	0.24**	-0.14	-0.04	0.08	-0.07	0.27***

* p < 0.05, ** p < 0.01, *** p < 0.001

Note. Values along the diagonal represent the reliabilities of the scales.

Table 1 (continued)

Between Source Correlations of the Big Five Personality Dimensions.

Rating Source	11	12	13	14	15	16	17	18	19	20
General Self										
1 Conscientiousness										
2 Extraversion										
3 Agreeableness										
4 Openness										
5 Emotional Stability										
Work Specific Self										
6 Conscientiousness										
7 Extraversion										
8 Agreeableness										
9 Openness										
10 Emotional Stability										
Supervisor										
11 Conscientiousness	0.86									
12 Extraversion	-0.01	0.81								
13 Agreeableness	0.36***	0.03	0.81							
14 Openness	0.29***	0.27***	0.35***	0.73						
15 Emotional Stability	0.35***	0.00	0.518***	0.11	0.76					
Coworker										
16 Conscientiousness	0.49***	-0.10	0.10	0.00	0.12	0.85				
17 Extraversion	-0.03	0.37***	0.00	0.15	-0.07	0.02	0.80			
18 Agreeableness	0.17*	-0.08	0.29***	0.06	0.21*	0.38***	0.22**	0.83		
19 Openness	0.02	0.11	-0.04	0.29***	0.06	0.23**	0.18*	0.34***	0.75	
20 Emotional Stability	0.11	-0.13	0.11	-0.01	0.25**	0.37***	0.03	0.52***	0.24**	0.79

* p < 0.05, ** p < 0.01, *** p < 0.001

Note. Values along the diagonal represent the reliabilities of the scales.

Table 2

Correlations between sources of supervisor and coworker ratings of job performance.

Rating Source	1	2	3	4
1 Supervisor In-Role	0.89			
2 Supervisor Extra-Role	0.70***	0.92		
3 Coworker In-Role	0.31***	0.20*	0.85	
4 Coworker Extra-Role	0.31***	0.29***	0.63***	0.90

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note. Values along the diagonal represent reliabilities of the scales.

Table 3

Means and Standard Deviations Collapsed Across Item Type and Order of Administration.

Big Five Rating Source	General First		Work Specific First	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Conscientiousness				
General	5.51	0.87	5.87	0.73
Work Specific	5.63	0.83	6.09	0.71
Extraversion				
General	4.86	0.98	5.08	1.09
Work Specific	4.99	1.03	5.27	1.01
Agreeableness				
General	5.97	0.79	5.96	0.74
Work Specific	5.90	0.91	6.05	0.74
Openness				
General	4.88	0.83	4.93	0.92
Work Specific	4.80	0.85	4.93	0.88
Emotional Stability				
General	4.76	1.08	5.03	0.96
Work Specific	5.10	0.96	5.44	0.91

Table 4

F Values, Probabilities, and Effect Sizes for the Big Five Factors

Big Five Dimension	Item Type			Order of Administration			Item Type X Order of Administration		
	<u>F</u>	<u>p</u>	eta ²	<u>F</u>	<u>p</u>	eta ²	<u>F</u>	<u>p</u>	eta ²
Conscientiousness	11.676	0.001	0.076	11.334	0.001	0.074	0.979	0.324	0.007
Extraversion	7.495	0.007	0.050	2.414	0.123	0.017	0.253	0.616	0.002
Agreeableness	0.013	0.908	0.000	0.348	0.556	0.002	2.011	0.158	0.014
Openness	0.465	0.496	0.003	0.460	0.499	0.003	0.452	0.503	0.003
Emotional Stability	49.252	0.000	0.259	3.927	0.049	0.027	0.510	0.476	0.004

Table 5

Means, Standard Deviations, and Correlations Between the Big Five Factors and Job Performance by Rater Source

Rating Source	M	SD	Supervisor Performance Ratings		Coworker Performance Ratings	
			Extra-Role Performance	In-Role Performance	Extra-Role Performance	In-Role Performance
			r	r	r	r
Conscientiousness						
Self-General	5.70	0.82	0.17*	0.22**	0.00	†0.14
Self-Work Specific	5.87	0.80	0.11	0.20*	0.01	†0.20*
Supervisor	5.87	0.87	0.51***	0.59***	0.20*	†0.36***
Coworker	5.87	0.93	0.19*	†0.38***	0.35***	†0.51***
Extraversion						
Self-General	4.97	1.04	-0.05	-0.08	-0.05	-0.09
Self-Work Specific	5.14	1.02	-0.03	-0.08	-0.03	-0.04
Supervisor	5.11	1.02	0.14	0.04	-0.06	-0.13
Coworker	5.22	1.03	0.01	0.00	0.16	0.13
Agreeableness						
Self-General	5.97	0.76	†0.23**	0.07	0.30***	0.21*
Self-Work Specific	5.97	0.83	†0.20*	0.02	0.24**	0.15
Supervisor	5.95	0.80	†0.62***	0.31***	0.25**	0.18*
Coworker	5.88	0.89	0.18*	0.09	0.44***	0.34***
Openness to Experience						
Self-General	4.90	0.87	-0.14	-0.17*	0.06	-0.05
Self-Work Specific	4.87	0.86	0.03	†-0.19*	†-0.15	-0.01
Supervisor	5.07	0.80	0.29***	0.24**	-0.01	0.05
Coworker	5.10	0.82	-0.05	0.05	0.28***	0.20*
Emotional Stability						
Self-General	4.90	1.02	0.20*	0.11	†0.11	-0.04
Self-Work Specific	5.28	0.95	0.28***	0.16	†0.23**	0.05
Supervisor	5.06	0.98	†0.44***	0.25**	0.21**	0.13
Coworker	4.93	1.07	0.04	0.02	†0.38***	0.15
Extra-Role Job Performance						
Supervisor	5.75	0.77				
Coworker	5.74	0.74				
In-Role Job Performance						
Supervisor	6.16	0.85				
Coworker	6.26	0.76				

p < 0.05, ** p < 0.01, *** p < 0.001

† = There is a significant difference in the correlation between personality and in-role performance and personality and extra-role performance within a rating source.

Note: Bolded values represent same source correlations.

Table 6

Regressions of Big Five ratings on extra-role and in-role performance ratings

Big Five Dimension	Supervisor Performance Ratings					Coworker Performance Ratings				
	Extra-Role Performance		In-Role Performance			Extra-Role Performance		In-Role Performance		
	R ²	ΔR ²	F	R ²	ΔR ²	F	R ²	ΔR ²	F	R ²
Conscientiousness										
General Self	0.029	0.029	4.169*	0.049	0.049	7.304**	0.000	0.000	0.001	0.020
Supervisor	0.261	0.233	44.103***	0.354	0.305	66.102***	0.042	0.042	6.145*	0.134
Coworker	0.051	0.022	3.221	0.159	0.110	18.254***	0.134	0.134	21.573***	0.255
Work Specific Self	0.029	0.000	0.064	0.052	0.002	0.348	0.000	0.000	0.035	0.020
Work Specific + Observer	0.051	0.022	1.641	0.161	0.111	9.231***	0.042	0.042	3.058*	0.144
Extraversion										
General Self	0.003	0.003	0.368	0.007	0.007	0.947	0.002	0.002	0.352	0.008
Supervisor	0.034	0.031	4.519*	0.014	0.008	1.071	0.004	0.002	0.231	0.017
Coworker	0.004	0.001	0.201	0.009	0.002	0.268	0.043	0.041	5.955*	0.042
Work Specific Self	0.003	0.000	0.041	0.007	0.000	0.066	0.003	0.000	0.024	0.010
Work Specific + Observer	0.004	0.002	0.110	0.009	0.003	0.186	0.004	0.002	0.124	0.019
Agreeableness										
General Self	0.055	0.055	8.166**	0.004	0.004	0.603	0.082	0.082	12.546***	0.046
Supervisor	0.385	0.331	75.342***	0.103	0.099	15.442***	0.103	0.021	3.281	0.056
Coworker	0.069	0.014	2.117	0.010	0.006	0.789	0.216	0.134	23.966***	0.131
Work Specific Self	0.057	0.002	0.329	0.006	0.002	0.285	0.084	0.002	0.306	0.046
Work Specific + Observer	0.070	0.015	1.124	0.013	0.009	0.613	0.104	0.022	1.733	0.056
Openness to Experience										
General Self	0.020	0.020	2.948	0.030	0.030	4.415*	0.004	0.004	0.515	0.002
Supervisor	0.121	0.101	16.091***	0.106	0.076	11.835***	0.004	0.001	0.086	0.006
Coworker	0.020	0.000	0.001	0.043	0.013	1.841	0.078	0.074	11.249***	0.055
Work Specific Self	0.025	0.005	0.702	0.040	0.009	1.344	0.004	0.000	0.019	0.004
Work Specific + Observer	0.026	0.005	0.360	0.056	0.025	1.860	0.004	0.001	0.051	0.007
Emotional Stability										
General Self	0.041	0.041	5.999*	0.012	0.012	1.762	0.013	0.013	1.850	0.001
Supervisor	0.201	0.160	28.095***	0.062	0.050	7.457**	0.049	0.036	5.264*	0.023
Coworker	0.041	0.000	0.018	0.012	0.000	0.010	0.147	0.134	22.061***	0.027
Work Specific Self	0.077	0.036	5.420*	0.026	0.014	1.957	0.068	0.055	8.318**	0.016
Work Specific + Observer	0.078	0.037	2.791	0.027	0.014	1.012	0.093	0.080	6.167**	0.034

*p<.05; **p<.01; ***p<.001

Note: General self-ratings are always entered at Step 1. Other ratings are entered at Step 2 in separate regressions. Work Specific + Observer indicates that the same rater source was not used in conducting the regressions. For example, if coworker ratings of Performance was used, then the "observer" would be supervisor ratings of personality.

Bolded values represent same source correlations.