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Effects of Impression Management and Self-Deception on the Predictive Validity of Personality Constructs

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This study tests whether 2 types of response distortion (self-deception and impression management) affect the predictive validity of 2 of the "Big 5" personality dimensions, conscientiousness and emotional stability, in 2 applicant samples of long-haul semitruck drivers (n = 147 and n = 139). As hypothesized, conscientiousness (ρ = −.26 and −.26) and emotional stability (ρ = −.23 and −.21) were valid predictors of voluntary turnover in the 2 samples. Also as hypothesized, conscientiousness was a valid predictor of supervisory ratings of performance (ρ = .41 and .39) in the 2 samples. Although not hypothesized, emotional stability was also significantly related to supervisor ratings of performance (ρ = .23 and .27). Results from structural equations modeling indicated that applicants did distort their scores on both personality dimensions and the distortion occurred both through self-deception and impression management; however, neither type of distortion attenuated the predictive validities of either personality construct.

The emergence and widespread acceptance of the five-factor framework of personality in combination with results of recent construct-oriented meta-analyses of personality and job performance (Barrick & Mount, 1991; Hough, 1992; Hough, Eaton, Dunnette, Kamp, & McCloy, 1990; Mount & Barrick, 1995a) have led to renewed interest in personality measures for selection purposes. Although a great deal of progress has been made in recent years in understanding relationships between personality constructs and job performance in different occupations, several important issues have received relatively little attention.

The primary purpose of this study was to examine the effect of response distortion on the predictive validity of personality constructs. Our focus was not so much on whether response distortion influences validity (as most of the research indicates it does not), but rather whether the type of response distortion differentially influences validity. The second purpose was to assess the extent to which personality measures are useful for predicting voluntary turnover. Although prior meta-analyses have assessed the relationship between personality constructs and withdrawal behaviors, these analyses have not distinguished between withdrawal initiated by the organization (involuntary turnover) and withdrawal initiated by the individual (voluntary turnover). This distinction is important because the predictors of involuntary turnover are likely to differ from those of voluntary turnover (Abelson, 1987; Campion, 1991).

This study uses the five-factor model of personality (FFM), frequently referred to as the *Big Five*. The FFM provides a well-accepted taxonomy that enhances understanding of the relationship between personality constructs and important organizational criteria. The construct labels and representative traits of the FFM are Extraversion (sociable, talkative, active, and ambitious); Agreeableness (courteous, trusting, cooperative, and empathic); Conscientiousness (dependable, organized, persistent, and achievement-oriented); Emotional Stability (calm, unemotional, secure, and not angry); and Openness to Experience (imaginative, cultured, broad-minded, and flexible).

Response Distortion

It is often assumed that applicants differ from current employees in their motivation to make themselves "look better." Given the seemingly straightforward or transparent nature of some of the items, it seems likely that some applicants will try to "beat" the test (i.e., get hired when they should not). To illustrate, a few examples of commonly used personality items are "I am very thorough in

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any work I do; "I am very dependable; and "I am very sociable." Evidence is clear that applicants can make themselves look better on such items if they choose to do so (Braun, 1962; Dunnett, Koun, & Barber, 1981; French, 1958; Hough et al., 1990; White, Nord, Mael, & Young, 1993; Zalinsky & Abrahams, 1979). Furthermore, most evidence suggests that there is more response distortion among applicants than among job incumbents (Bass, 1957; Dunnette, McCartney, Carlson, & Kirchner, 1962; Kirchner, Dunnette, & Mousley, 1960; Michaelis & Eysenck, 1971). A few studies suggest that the incidence of response distortion on personality inventories in real applicant settings is low (McClelland & Rhodes, 1969; Orpen, 1971; Schwab & Packard, 1973). However, very few of these studies have distinguished between the types of distortion that are possible.

Most studies investigating the effects of response distortion have assumed that it is a unitary construct. However, Paulhus and associates (Paulhus, 1984; 1988; 1989; Paulhus & Reid, 1991; Zerbe & Paulhus, 1987) have demonstrated that response distortion (also referred to as *social desirability*) consists of two separate constructs: self-deception and impression management. *Self-deception* is a dispositional tendency to think of oneself in a favorable light, whereas *impression management* refers to a deliberate attempt to distort one's responses in order to create a favorable impression with others.

Paulhus and associates have collected compelling evidence for the construct validity of these two constructs. In a series of factor analyses, Paulhus (1984; 1988; Paulhus & Reid, 1991) found strong discriminant validity for these two scales across many different response distortion scales (e.g., Byrne's Repression–Sensitization scale, Edwards' Social Desirability scale, Eysenck's lie scale, Ihilevich & Gleser's Defense Mechanisms Inventory, the Minnesota Multiphasic Personality Inventory Lie scale, the Marlowe–Crowne scale, and Wiggins Social Desirability scale). Measures of self-deception reflect a positively biased, psychologically well-adjusted self-presentation. High-scoring individuals tend to exhibit more illusion of control, have excessive confidence in memory judgments, and claim more familiarity with nonexistent products (Paulhus, 1988; Paulhus & Reid, 1991). In contrast, measures of impression management correlate strongly with traditional lie scales (e.g., Eysenck's lie scale, the MMPI lie scale, and Wiggins SD scale). They appear to reflect a conscious form of self-presentation motivated by a desire to obtain social approval. Paulhus (1984) showed that scores on the impression management construct are particularly responsive to social demands. He reported that under public, as opposed to annonymous administrations, impression management resulted in significantly higher scores, whereas scores on the self-deception construct were not significantly higher. Overall, these studies showed that widely used response distortion measures form separate constructs best characterized as self-deception and impression management.

Several different methods have been developed for managing the potential problem of response distortion in personality assessment (for a thorough review of these methods, see Paulhus, 1988). The most frequently used method is to include response distortion scales, often called *lie* scales or *social desirability* scales, on personality inventories. Scores on these lie scales are then used to detect those who may be attempting to present themselves in a favorable light. Typically, the effects of response distortion are then partialed out of responses on the other personality scales through covariate techniques.

Particularly informative, though rare, are criterion-related validity studies in which the personality-scale scores obtained from applicants have been corrected for response distortion. In one study (Christiansen, Goffin, Johnston, & Rothstein, 1994), personality and supervisory ratings of performance were obtained from 84 assessment center candidates. Response distortion was detected with the two response validity scales ("faking good" and "faking bad") recommended for use with the Sixteen Personality Factor (16PF). Both of these scales correspond to the impression management construct. To assess whether response distortion produced spurious observed validities, the two response validity scales were partialed from the relevant personality scores and ratings of performance. Results indicated that correction for response distortion (i.e., impression management) had little effect on criterion-related validity.

Ones, Viswesvaran, and Reiss (1995) used meta-analytic data to estimate the effect of partialing social desirability from the Big Five dimensions in the prediction of job performance. To do this, two meta-analytically cumulated correlations were used. The first used the correlation between social desirability scale scores and the Big Five dimensions of personality, and the second used the correlations between social desirability and job performance. Applying the formula for a semipartial correlation, Ones et al. reported that partialing social desirability from the Big Five personality dimensions did not attentuate the criterion-related validities of the Big Five variables. They concluded that controlling for social desirability has little effect on the predictive validity of relevant personality dimensions.

Similarly, Hough et al. (1990) reported no significant differences in the predictive validities of a large group of soldiers (N = 5,896–5,997) that scored lower on the social desirability score compared with soldiers (N = 2,428–2,480) who might have been trying to look good, as suggested by their higher social desirability scores. In a second study (Hough et al., 1990), the Assessment of Background and Life Experiences (ABLE) personality

inventory was administered twice to 245 newly enlisted soldiers, once instructing the subjects to respond as honestly as possible and the second time instructing them to either fake "good" or fake "bad" on the inventory. Results demonstrated that when instructed to do so, soldiers did distort their responses. Thus, Hough et al. (1990) showed that even though response distortion did not reduce predictive validities, soldiers were able to distort their responses when instructed to fake. Although some research shows that response distortion lowers validity (e.g., Dunnette et al., 1962), the preponderance of evidence shows that response distortion does not attenuate the validity of personality measures (e.g., Christiansen et al., 1994; Hough et al., 1990; Ones, Viswesvaran, & Schmidt, 1993).

However, an important question that remains unanswered is whether the effect of response distortion depends on the type or nature of response distortion studied. It is possible that the effects of self-deception may be quite different from the effects of impression management. High scorers on self-deception (Krug, 1978; McCrae & Costa, 1983; Paulhus, 1989; Paulhus & Reid, 1991; Zerbe & Paulhus, 1987) tend to be well-adjusted people who have positively biased self-images and perceive themselves as achievement-oriented. It is possible that self-deception, though conceptually distinct, is substantively related to emotional stability and to a lesser extent conscientiousness. This suggests that partialing the variance because of self-deception from conscientiousness and emotional stability may actually remove some valid variance from these two predictors. Therefore, one question we investigated is whether partialing self-deception from personality constructs will reduce the predictive validities.

High scorers on impression management tend to be applicants who are motivated to intentionally raise their scores in order to "look better." This suggests that scores on impression management should be substantially higher if applicants do in fact intentionally distort their responses when applying for a job because of a strong desire to "look better." However, as previously noted, even if impression management occurs, the literature suggests that the predictive validity of personality constructs will not be attenuated. To examine this issue, we compared the effects of partialing impression management on predictor validities with the "unpartialed" validities for both personality constructs by using voluntary turnover as the criterion. To our knowledge, the effects of response distortion have not been investigated with this criterion.

Voluntary Turnover

Most models of antecedents of voluntary turnover have focused on either the ease of employee movement (e.g., number of job alternatives) or the perceived desirability of employee movement (e.g., job satisfaction and job attitudes) as antecedents of the employee's intentions to quit (Hom & Griffeth, 1991; Hulin, Roznowski, & Hachiya, 1985; Mobley, 1977; Muchinsky & Morrow, 1980; Steers & Mowday, 1981). Because practitioners are generally unable to influence whether alternative job opportunities are available, researchers have devoted considerable attention to modifying job content and the work environment (e.g., group cohesion, leader–member exchange, promotions, role clarity, conflict, etc.) to try to influence job satisfaction, which in turn is expected to lead to reduced turnover. Taken together, these studies have attempted to reduce withdrawal cognitions (e.g., intent to search, thoughts of quitting, etc.)

Very little research has examined individual differences at the time individuals apply for the job and the influence these differences have on decisions regarding voluntary turnover. The potential value of such a perspective has recently been illustrated by Arvey, Bouchard, Segal, and Abraham (1989). They demonstrated that job satisfaction appears to have a substantial genetic component. Job satisfaction, in turn, has been shown to be an important antecedent of voluntary turnover (Carsten & Spector, 1987; Cotton & Tuttle, 1986; Hom, Caranakis-Walker, Prussia, & Griffeth, 1992; Steel & Ovalle, 1984; Tett & Meyer, 1993). Therefore, applicants may have a dispositional tendency to leave or remain with a firm. Recent research also has demonstrated that individuals who view life negatively (i.e., lower emotional stability) are more prone to absenteeism, intentions to quit, and voluntary turnover (George, 1989; 1990; Judge, 1992). Furthermore, Barrick, Mount, and Strauss (1994) recently illustrated that one dimension of personality, conscientiousness, was a valid predictor of involuntary turnover. Although the antecedents of voluntary turnover are likely to differ from those of involuntary turnover, we believe that conscientiousness should also be a valid predictor of voluntary turnover. Because conscientious employees are more responsible and reliable, they are more likely to be involved in and committed to the organization; according to the voluntary turnover literature, such individuals are less likely to leave the organization voluntarily (Mathieu & Zajac, 1990). Such results suggest that personality or dispositional measures play a key role in reducing voluntary turnover. Thus, the second major purpose of this study was to examine the validity of specific personality constructs for predicting voluntary turnover.

Although recent meta-analyses have assessed the relationship between personality constructs and turnover, it should be noted that there are considerably fewer studies available than those that used more traditional criterion measures. Furthermore, these analyses failed to differentiate between voluntary and involuntary turnover.

Nevertheless, the limited meta-analytic results available indicate that conscientiousness is a valid predictor of turnover. Hough et al. (1990) reported observed validities of .24 and .17 for two personality constructs, achievement and dependability (both aspects of conscientiousness), respectively, for measures of job involvement. In their meta-analytic study, Barrick and Mount (1991) reported observed validities of approximately the same magnitude for measures of conscientiousness when predicting a broad category of criterion measures that they labeled withdrawal behaviors.

Recent data also suggests that emotional stability may be negatively related to voluntary turnover. DeMatteo, White, Teplitzky, and Sachs (1991) reported that the best personality predictor of 1-year attrition in the Army's Project A data was emotional stability, although conscientiousness (labeled *dependability*) was also a significant predictor. This conclusion was also supported by the meta-analysis of Hough et al. (1990), where emotional stability (labeled *adjustment*) was found to be significantly correlated with turnover (labeled *job involvement*).

Hypothesized Relations Among Variables

In the present study, data were collected from individuals applying for the same job (long-haul semitruck driver) in two separate organizations. In both settings, the firms were very interested in reducing the rate of voluntary turnover. Therefore, the success of applicants who were hired was determined by measures of voluntary turnover, as well as more traditional supervisory ratings of job performance.

The proposed model that we tested posited relationships among two personality constructs, conscientiousness and emotional stability, and two criteria, supervisory ratings of job performance and voluntary turnover. Specifically, we expected that individuals high in conscientiousness would have higher ratings of job performance and less voluntary turnover. Furthermore, those high in emotional stability were expected to have less voluntary turnover. Finally, performance ratings were hypothesized to be negatively correlated with voluntary turnover. A meta-analysis by McEvoy and Cascio (1987) provided support for the latter hypothesis, as they found that voluntary turnover had a true score correlation of −.31 with job performance.

In addition, we examined the effects of the two-response distortion measures, self-deception and impression management, on these predictor–criterion relationships. We expected that controlling for self-deception would attenuate the validities between conscientiousness and emotional stability with voluntary turnover and conscientiousness with supervisory ratings of job performance. Furthermore, although impression management was expected to affect responses to both conscientiousness and emotional stability, these effects were not expected to attenuate the predictive validities of these constructs. We also examined the validity of extraversion, agreeableness, and openness to experience after controlling for both types of response distortion; however, because previous research (Barrick & Mount, 1991) suggested that these constructs were not valid predictors for the job and criteria assessed in this study, no hypotheses were tested.

Method

Participants

The sample consisted of job applicants hired by two transportation companies as long-haul semitruck drivers. The total sample was 166 participants in Sample 1 and 153 participants in Sample 2. However, 19 applicants in Sample 1 and 14 applicants in Sample 2 involuntarily left each firm; consequently, the actual sample size was 147 in Sample 1 and 139 in Sample 2. The typical participant was male, in his late 20s or early 30s, with a high-school education.

Procedure

As part of the hiring process, all applicants completed a personality inventory, the Personal Characteristics Inventory (PCI), and a response distortion questionnaire, the Balanced Inventory of Desirable Responding (BIDR), during the final interview. Applicants were informed later that they were actually hired on the basis of the brief employment interview and a background check. Although neither the personality inventory nor the response distortion questionnaire was used for hiring, comments to the test administrators demonstrated that applicants thought this information was part of the hiring decision. Applicants not hired (a total of 35 applicants were not hired; n = 21 and 14 in Samples 1 and 2, respectively) were told so at that time and were excluded from consideration for the purposes of this study.

Personal Characteristics Inventory (PCI). Form C of the PCI consists of 120 items designed to comprehensively measure the Big Five personality constructs. Coefficient alpha reliabilities are .87, .85, .82, .86, .82, for Conscientiousness, Extraversion, Agreeableness, Emotional Stability, and Openness to Experience, respectively. The PCI has been shown to have acceptable evidence of construct validity (for a more thorough description of the item content, development methods, and construct validity, see Barrick & Mount, 1993; Barrick, Mount, & Strauss, 1993).

Balanced Inventory of Desirable Responding (BIDR). The BIDR, Version 6 (Paulhus, 1988) is a 40-item Likert-type measure with two subscales that measure self-deception and impression management. In a series of factor analyses, Paulhus (1984; 1988) demonstrated that measures of self-deception and impression management form two separate factors. Sample items from the 20-item self-deception scale include "I never regret my

decisions" and "My first impressions of people usually turn out to be right." Sample items from the 20-item impression management scale include "I always obey laws, even if I'm unlikely to get caught" and "I never cover up my mistakes." Higher scores indicate greater self-deception and impression management. A 5-point Likert scale was used, but scores were converted according to the standard scoring procedure (Paulhus, 1988). Thus, only extreme responses are counted; 1 point was given for each 4 or 5 on both scales. Thus, total scale scores could range from 0 to 20 for each scale. Paulhus (1988) reported that coefficient alphas range between .74 and .86 for the two subscales (alpha was .77 and .81 for self-deception and .83 and .79 for impression management in the two samples, respectively).

Turnover. In both firms, turnover data were collected 6 months after the applicant was hired. There were two turnover categories of interest: stayers (n = 57 and 45) and voluntary leavers (n = 90 and 94). The latter category refers to turnover that reflected the individual's choice to leave for Samples 1 and 2, respectively. It should be noted that the turnover rate reported in these two organizations were quite similar to that traditionally reported in the industry. Employment records were used to identify the reason for turnover. In both organizations, turnover reasons were categorized as employee-initiated reasons (quitting) or organization-initiated reasons (being fired). Reasons for leaving were also obtained from the director of human resources and the traffic dispatchers. Across all turnover cases, there was more than 90% agreement between the personnel file and the human resources director and the dispatchers. Disagreements were resolved by obtaining additional information from the supervisors and coworkers about the reason for turnover.

Job performance ratings. In both organizations, the employees' supervisors rated their job performance after a 30-day probationary period. Supervisors rode with the drivers throughout this period; consequently they were very familiar with the driver's performance. Drivers were evaluated on nine-dimensions in the two organizations. These included quality of work, quantity of work, suitability for the position, personal appearance, attendance, dependability, driving skills, and oral and written communication skills. Performance was evaluated on a 5-point Likert scale from *definitely unsatisfactory* to *outstanding*. Overall performance was the mean of the ratings across all dimensions. The alpha coefficicents were .75 and .83, respectively, in the two organizations.

Analyses. Two methods of analysis were used to assess the potential effect of response distortion on the predictive validity of the personality measures. First, the personality scale was regressed on the response distortion score. The residual was then used as a corrected score free of contamination from response distortion. This procedure results in a semipartial correlation that corrected the unadjusted personality scores by an amount commensurate with the contamination because of response distortion, thereby making it possible to assess the effect of response distortion on the predictive validity of the personality constructs. In the second method, latent-variable modeling was used to illustrate the relationship of response distortion to the validity of personality measures. Two recent articles illustrated the advantages of using LISREL analysis (Schmitt, Nason, Whitney, & Pulakos, 1995; Williams & Anderson, 1994). Similar to the procedure described in these two articles, we tested a series of nested models to examine whether either response distortion construct affected the predictors or criteria, or more importantly, whether distortion affected the correlation between the predictors and criteria.

To maximize the power of the test for the effect of either response distortion construct, the data from both firms were merged into one large data set (N = 286). In this analysis, each latent variable had three indicator variables, except for voluntary turnover, which had a single indicator. Three indicator variables were developed by randomly combining an equal number of items from the supervisory ratings of job performance measure described above. Three other indicator variables were similarly formed for both self-deception and impression management. Three subscales have previously been formed for conscientiousness (Mount & Barrick, 1995b). They are dependability (being responsible, careful, and reliable), efficiency (having the ability to plan, and being neat, orderly, punctual, and disciplined), and industriousness (being hardworking, persistent, energetic, and achievement-striving). Thus, the sum of the items for each subscale provided the three indicator variables for conscientiousness. The emotional stability measure consisted of two subscales; steadiness (patient, not jealous, even-tempered, and steady) and security (not nervous, secure, not worrisome, and not vulnerable). An equal number of items were randomly selected from each subscale to form the third indicator variable for emotional stability.

Finally, it should be noted that the point biserial correlations for the turnover constructs were corrected to biserial correlations (Cohen, 1984; Hunter & Schmidt, 1990) to reflect continuous constructs. That is, even though the turnover classifications were dichotomous (voluntary leavers vs. stayers) because decisions to leave are a function of both the organization and the employee, these measures may be better viewed as continuous theoretical constructs (Campion, 1991). For example, an employee voluntarily deciding to leave may be better conceived as a continuum ranging from completely voluntary turnover (e.g., the employee quits because of better pay elsewhere) through mutual agreement (e.g., the employee agrees to quit because of a disagreement with management) to involuntary turnover (dismissed).

Results

Descriptive statistics and correlations between variables uncorrected for statistical artifacts are presented in Table 1 for Samples 1 and 2. As shown in this table, the direction and magnitude of the relations reported in both samples are comparable. As hypothesized, the results showed that voluntary turnover was predicted by both conscientiousness (r = −.23 and −.23; ρ = −.26 and −.26, respectively) and emotional stability (r = −.20 and −.18; ρ = −.23 and −.21, respectively) in both samples (ρ represents the true score correlation after correcting for unreliability in the predictor and criterion). Also as hypothesized, supervisory ratings of job performance were predicted by conscientiousness (r = .27 and .26; ρ

Table 1
Correlation Matrix for Applicants in Both Samples

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
1. Conscientious	2.67	0.31	(.87)	.52**	.51**	.24**	.47**	.29**	.26**	.23**	.27**
2. Emotional Stability	2.43	0.39	.55**	(.86)	.47**	.13	.41**	.54**	.43**	−.20**	.15*
3. Agreeable	2.52	0.35	.52**	.46**	(.82)	.09	.39**	.24**	.23**	−.13	.06
4. Extraversion	2.13	0.31	.24**	.13	.34**	(.85)	.37**	.25**	.01	−.04	.02
5. Openness	2.31	0.35	.42**	.39**	.40**	.32**	(.82)	.32**	.25**	−.05	.07
6. Self-Deception	5.23	4.30	.24**	.35**	.17*	.22**	.17*	(.77)	.43**	−.11	.09
7. Impression Management	10.17	3.89	.39**	.44**	.42**	.12	.39**	.51**	(.81)	−.15*	.17*
8. Turnover	0.64	0.71	−.23**	−.18**	−.13*	−.12	.10	−.10	−.10	(.90)	−.20**
9. Performance	4.58	0.84	.26**	.18**	.00	−.04	−.05	.15*	−.07	−.23*	(.50)

Note. Correlations reported above the diagonal are from Sample 1 (n = 147); correlations below the diagonal are from Sample 2 (n = 139). Values in parentheses represent coefficient alpha except for the criterion measures, which were assumed to be .90 for voluntary turnover and .50 for supervisory ratings of job performance. The average interrater reliability of a single supervisor's rating of .50 was based on the average mean estimate reported by Rothstein (1990). For voluntary turnover, voluntary leavers = 1 and stayers = 0. Means and standard deviations represent average values across Samples 1 and 2.
* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

= .41 and .39, respectively) in both samples. Emotional stability was also found to be a valid predictor of ratings of performance (r = .15 and .18; ρ = .23 and .27, respectively). Furthermore, self-deception was significantly correlated with ratings of job performance in one sample (r = .15, ρ = .24), and impression management was significantly correlated with both voluntary turnover and ratings of performance in one of the samples (r = −.15 and .17; ρ = −.18 and .27, respectively). Finally, ratings of performance were significantly correlated with voluntary turnover in both samples (r = −.20 and −.23; ρ = −.30 and −.34, respectively).

An important purpose of this study was to establish whether the validity of these two personality constructs for predicting voluntary turnover differed after adjusting (partialing) for the effect of two facets of response distortion with the regression procedures described earlier. These adjusted validities are compared with the unadjusted validities in Tables 2 and 3. Table 2 shows the adjusted validities for self-deception for conscientiousness and emotional stability. As shown, they were smaller, but contrary to our hypotheses, were not substantially different from the unadjusted correlations. Table 3 shows that the adjusted validities for impression management were quite similiar to those for self-deception in that the adjusted validities are slightly smaller. As expected, none of the differences between adjusted and unadjusted (for impression management) correlations for conscientiousness and emotional stability was substantially different. Finally, for the other personality constructs, none of the differences between unadjusted and adjusted validities in Tables 2 and 3 was substantially different, although the adjusted validities generally were slightly smaller.

Structural equation modeling (LISREL; Joreskog & Sorbom, 1989) was also used to investigate the role that response distortion might play in over- or underestimating the predictor–criterion relationships. These analyses are based on similar procedures proposed recently by others (Schmitt et al., 1995; Williams & Anderson, 1994) with an all-Y model specification. Table 4 provides the means, standard deviations, and intercorrelations of the indicator variables used in the structural analysis.

An important advantage of using LISREL is that allows a series of hierarchically nested model comparisons to be tested to establish the relative fit associated with specific changes in parameter estimates. The difference in model chi-square values were used to test a series of

Table 2
Difference Between the Unadjusted Validities and the Adjusted Validities for Voluntary Turnover and Job Performance After Partialing Self-Deception

Variable	Unadjusted r_{xy}	Adjusted r_{xy}	Difference in r_{xy}
Voluntary turnover and job performance with			
1. Conscientiousness	−.23**	−.19*	−.04
	.27**	.22**	−.05
2. Emotional Stability	−.19*	−.18*	−.01
	.17*	.09	−.08
3. Agreeableness	−.13*	−.12	−.01
	.03	.00	−.03
4. Extraversion	−.08	−.07	−.01
	−.01	−.01	.00
5. Openness to Experience	.07	.03	−.04
	.01	.05	+.04

Note. All values represent average values across Samples 1 and 2; N = 286.
* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

Table 3
Difference Between Unadjusted Validities and Adjusted Validities for Voluntary Turnover and Job Performance After Partialing Impression Management

Variable	Unadjusted r_{xy}	Adjusted r_{xy}	Difference in r_{xy}
Voluntary turnover and job performance with			
1. Conscientiousness	−.23**	−.17*	−.06
	.27**	.25**	−.02
2. Emotional Stability	−.19*	−.13*	−.06
	.17*	.13*	−.04
3. Agreeableness	−.13*	−.09	−.04
	.03	.02	−.01
4. Extraversion	−.08	−.09	+.01
	−.01	.03	+.04
5. Openness to Experience	.07	.07	.00
	.01	.09	+.08

Note. All values represent average values across Samples 1 and 2; $N = 286$.
* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

nested structural models. The first of these nested models consisted of the structural model specified in the hypothesis section, hereafter referred to as Model 1. Model 1 also included structural parameters for the method effects of both response distortion constructs on the indicators of the substantive predictor and criterion constructs. The second nested model, Model 2, is the same structural model as Model 1 except that the method effects for either response distortion construct on the substantive constructs were eliminated by fixing these parameters to zero. Comparing these two models enabled us to test whether there were response distortion effects in these data.

The chi-square values, associated degrees of freedom, and fit statistics from Model 1 (i.e., the hypothesized distortion model) are reported in the first six columns in Table 5. As shown, this model fit the data acceptably, $\chi^2(79, N = 286) = 205.98, p < .01$; goodness of fit index (GFI) = .924, normed fit index (NFI) = .926, root mean square residual (RMSR) = .021. These fit statistics were within the range normally considered to indicate an acceptable fit. Furthermore, as shown in the seventh through ninth columns in Table 5, a comparison of the fit statistics for a structural model including method effects for both response distortion constructs (Model 1) fit significantly better than a structural model without the method effects of either response distortion construct (Model 2): $\Delta\chi^2(20, N = 286) = 130.50, p < .01$. This evidence indicates that there was support at this stage for retaining the effects (factor loadings) of the two response distortion constructs on the indicators of the substantive predictor and criterion constructs.

Although not shown in the table, for Model 1 (i.e., the hypothesized distortion model), 6 of the 10 factor loadings for each response distortion construct on the indicators of the substantive constructs were significant ($ts > 1.96$). All three indicators for the two predictors (conscientiousness and emotional stability) had significant loadings from both self-deception and impression management. This means that both response distortion constructs significantly affect scores on both personality constructs. In contrast, none of the factor loadings because of self-deception or impression managment was significant for any of the criterion indicators (supervisory ratings of job performance or voluntary turnover) demonstrating that response distortion constructs did not affect scores on the criterion indicators.

To examine the nature of the method effects of each response distortion construct individually on the predictor and criterion measures, we conducted additional model comparisons. In Model 3, the method effects associated with self-deception were estimated, whereas the structural parameters for the method effects of impression management were fixed at zero. In Model 4, the method effects associated with impression management were estimated, whereas the structural parameters from self-deception were fixed at zero. These models permitted examination of the relative effects of measures for each response distortion construct. Comparisons of these two models with Model 2 (i.e., the model with no response distortion) provided a test whether method effects for either of the response distortion constructs would better fit the data than a model that did not account for the method effects of response distortion. Furthermore, a comparison of Model 3 (i.e., the model with self-deception only) and Model 4 (i.e., the model with impression management only) with Model 1 (i.e., the hypothesized distortion model) established the method effect of just one of the response distortion measures relative to the method effects of both response distortion measures.

As reported in Table 5, structural models that included the effects of either response distortion construct (Model 3 or 4) resulted in significantly better fit than a structural model without the method effects; Model 2 vs. Model 3: $\Delta\chi^2(10, N = 286) = 97.07, p < .01$; or Model 2 vs. Model 4, $\Delta\chi^2(10, N = 286) = 91.09, p < .01$, respectively. However, the model that included the effects of both response distortion constructs (Model 1) fit the data significantly better than either of the models (Model 3 or 4), which only included the effect of one response distortion construct; Model 1 vs. Model 3: $\Delta\chi^2(10, N = 286) = 33.43$, $p < .01$; or Model 1 vs. Model 4, $\Delta\chi^2(10, N = 286) = 39.41$, $p < .01$, respectively. Thus, at this stage, we concluded that the method effects of both response distortion constructs were significant and that both self-deception and impression management had important effects on the manifest indicators for the personality constructs.

Table 4
Means, Standard Deviations, and Intercorrelations of Manifest Variables Used in the Latent Variable Model (Hypothesized Distortion Model)

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Performance[a]																		
1. 1	4.66	0.60	—															
2. 2	4.61	0.88	.79	—														
3. 3	4.48	0.98	.73	.80	—													
4. Staying	0.64	0.71	−.25	−.17	−.21	—												
Conscientiousness[b]																		
5. 1	2.74	0.30	.27	.28	.31	−.25	—											
6. 2	2.66	0.35	.30	.26	.29	−.23	.74	—										
7. 3	2.73	0.29	.20	.21	.25	−.20	.71	.66	—									
Emotional Stability[c]																		
8. 1	2.38	0.46	.14	.10	.11	−.23	.49	.42	.41	—								
9. 2	2.39	0.43	.19	.24	.24	−.19	.38	.36	.41	.68	—							
10. 3	2.52	0.38	.10	.14	.17	−.16	.44	.39	.42	.75	.70	—						
Self-Deception[d]																		
11. 1	2.19	1.91	.07	.08	.10	−.05	.20	.17	.25	.31	.30	.37	—					
12. 2	1.38	1.67	.09	.13	.16	−.11	.21	.08	.17	.33	.32	.24	.49	—				
13. 3	1.66	1.71	.05	.05	.07	−.14	.37	.34	.38	.40	.34	.43	.52	.57	—			
Impression Management[e]																		
14. 1	2.99	1.42	.16	.11	.12	−.14	.33	.32	.36	.40	.32	.45	.26	.29	.45	—		
15. 2	2.76	1.18	.06	.03	.02	−.09	.27	.19	.20	.37	.31	.39	.19	.14	.31	.75	—	
16. 3	4.45	1.70	.14	.06	.07	−.12	.33	.35	.28	.40	.29	.39	.28	.19	.44	.75	.71	—

[a] Performance 1–3 are three indicators of a Job Performance construct; staying is a single indicator of voluntary turnover. [b]Conscientiousness 1–3 are three subscales for the Conscientiousness construct. [c]Emotional Stability 1–3 are three subscales for the Emotional Stability construct. [d]Self-Deception 1–3 are three indicators of the Self-Deception Response Distortion construct. [e]Impression Management 1–3 are three indicators of the Impression Management construct.

Table 5
Fit Statistics and Estimates of Predictor–Criterion Relationships for the Various Latent-Variable Models Evaluated

Structural model no. and type	χ^2 ($N = 286$)	*df*	GFI	AGFI	NFI	RMSR	Model comparison test: Comparison	$\Delta\chi^2$	*df*	Conscientiousness: Performance *p*	Conscientiousness: Turnover *p*	Emotional Stability turnover
1, hypothesized distortion[a]	205.98	79	.924	.870	.926	.021				.34**	−.14*	−.08
2, no response distortion	336.48	99	.884	.840	.878	.063	1 vs. 2	130.50**	20	.35**	−.16*	−.11
3, self-deception only	239.41	89	.911	.865	.914	.028	2 vs. 3[b]	97.07**	10	.34**	−.14*	−.08
							1 vs. 3[c]	33.43**	10			
4, impression management only	245.39	89	.909	.861	.911	.028	2 vs. 4[d]	91.09**	10	.34**	−.15*	−.09
							1 vs. 4	39.41**	10			
5, self-deception and impression management direct effect only	206.12	84	.924	.876	.926	.025	1 vs. 5[e]	0.14	5	.35*	−.16*	−.11
6, null	2,768.63	120	.350	.263	—	.998						

Note. GFI = goodness of fit index; AGFI = adjusted goodness of fit; NFI = normed fit index (any goodness of fit > .9 is an indication of acceptable overall model fit); RMSR = root mean square residual (any RMSR < .10 is an indicator of acceptable fit). All NFIs are based on chi-square values.
[a] With response distortion effects. [b]Without response distortion effects. [c]With self-deception effect only. [d]With impression management effect only. [e]This comparison tests for response distortion effects on estimates of the predictor-criterion parameters.
* $p < .05$. ** $p < .01$.

A further comparison was conducted with Model 5. Model 5 was similar to Model 1, in that it accounted for the method effects of both response distortion constructs. However, in Model 5, the structural coefficients relating the predictors to the criteria were constrained to equal the estimates obtained from Model 2, which did not include method effects for either response distortion construct. Therefore, Model 5 fixed the relationship between the predictors and criteria to the estimates derived from a model that did not account for response distortion, yet included the method effects of both response distortion constructs on the indicators of the two predictors and the two criteria. A comparison between Model 1 (i.e., the hypothesized distortion model) and Model 5 (i.e., the model with self-deception and impression management direct effects only) provided a test of the effects the response distortion constructs had on the predictive validities of interest, which is the most important model comparison when conducting a validation study.

The nonsignificant chi-square difference between Model 1 (i.e., the hypothesized distortion model) and Model 5 (i.e., the model with self-deception and impression management direct effects only, $\Delta\chi^2(5, N = 286) = 0.14$, *ns*, indicated there was no significant influence of response distortion on the key parameter estimates representing the relationships among the predictor–criterion constructs. The magnitude of the changes in the estimates of the predictor–criterion relationships across the various structural models is reported in the last three columns of Table 5; they vary only slightly regardless of whether the effects of response distortion are adjusted for. Therefore, even though the initial model comparison indicated that both response distortion constructs affect scores on conscientiousness and emotional stability, such effects did not affect the magnitude of the validities reported for either personality predictor.

The last of the hierarchical nested models consisted of the absolute null latent model (Model 6), which proposes that the relationships among the latent variables are constrained to zero. The chi-square value from this model was used for calculating the NFI for Models 1–5.

Discussion

The results of the present study confirm previous findings showing that respondents can and do distort their responses on personality inventories and that this distortion does not influence the predictive validity of personality constructs. Our results also extend these findings by showing that the effects are the same for two distinct types of response distortion, self-deception and impression management. Furthermore, our findings extend previous research by showing that personality measures are useful for predicting voluntary turnover, a criterion measure that has not been investigated frequently.

The major finding of this study with regard to response distortion is that although both types of response distortion influenced scores on personality constructs, neither type attenuated the predictive validity of the personality measures. In two separate samples, the unadjusted criterion-related validities for conscientiousness and emotional stability across two separate criteria (supervisory ratings of performance and voluntary turnover) were slightly larger than the adjusted criterion-related validities (either adjusted for unintentional self-deception or intentional impression management). Thus, two types of

response distortion in two separate applicant settings did not reduce the predictive validity of relevant personality constructs for either criterion.

Contrary to our expectations, the type of response distortion did not differentially affect these findings. Partialing either self-deception or impression management from conscientiousness and emotional stability consistently reduced (albeit only slightly) their predictive validity. These findings are particularly interesting because applicants did in fact distort their responses in a more socially desirable manner. The results of the structural equations analyses were useful in demonstrating that both self-deception and impression management constructs significantly influenced responses on all indicators of conscientiousness and emotional stability. This means applicants with higher scores on the response distortion measures also had higher scores on both of these personality constructs. Such results can be interpreted as evidence that applicant scores on the personality measures are inflated by trying to look good in order to get hired. It should also be noted that the correlations among the Big Five constructs are higher in these two applicant samples than in nonapplicant settings with the same instrument (e.g., Barrick & Mount, 1993; Mount, Barrick, & Strauss, 1994). The existence of such high correlations between constructs is consistent with the findings of Schmit and Ryan (1993) that the factor structure of the Big Five may differ in applicant settings. Taken together, these findings suggest that applicants respond in a more socially desirable manner than do nonapplicants.

The existence of inflated personality scores from response distortion effects does have some important implications for practitioners and researchers. First, the finding that personality scores are likely to be higher on average in selection settings than applicant settings suggests that test administrators should not apply cut-off scores derived from a sample of present employees to job applicants because the applicant scores are likely to be inflated. Second, Christiansen et al. (1994) demonstrated that personality scores adjusted for response distortion may result in different hiring decisions than would have occurred with unadjusted scores. Therefore, it may prove quite difficult to defend the practice of hiring applicants on the basis of personality scores adjusted for response distortion, given that adjusting for response distortion does not improve criterion-related validities.

The second major finding in this study is that two measures of personality, conscientiousness and emotional stability, were found to predict voluntary turnover, a criterion that had not been the focus of much personality-related research. Also as hypothesized, conscientiousness was significantly related to supervisory ratings of job performance. Finally, emotional stability was also a valid predictor of supervisor ratings of job performance. These results contribute to a growing body of evidence that suggests relevant personality constructs are important predictors of job proficiency.

As pointed out above, the point biserial correlations for turnover constructs were corrected to biserial correlations to reflect continuous constructs. Although some advocate this procedure (e.g., Campion, 1991; Hunter & Schmidt, 1990), others (Williams, 1990) have suggested that such corrections are inappropriate or unneccessary. Had we not corrected for dichotimization in the present study, the magnitude of the correlations between the predictor variables and the turnover construct would have been approximately one third smaller.

The finding that conscientiousness and emotional stability were significant predictors of voluntary employee turnover is important because much of the research on individual choices regarding voluntary employee turnover has focused on understanding the intermediate linkages between the employees' satisfaction with the job and decisions to voluntarily leave, and only rarely considers the dispositional tendencies applicants bring when joining the organization. Our results demonstrate that an individual's personality characteristics may provide valuable insight into an applicant's propensity to withdraw in general or, as shown in this study, to voluntarily leave the organization. An advantage of this approach is information about one's propensity to withdraw can be assessed before the individual joins the organization. This suggests a quite different approach to understanding turnover than that traditionally taken in the voluntary employee-turnover literature and should provide relatively inexpensive, but quite useful information to organizations interested in reducing the rate and cost of voluntary turnover.

In conclusion, the most important implication of our results is that even though response distortion does occur in applicant settings, it does not reduce the predictive validity of relevant personality constructs. This conclusion corresponds to that reported by Hough et al. (1990), Ones et al. (1995), and Christiansen et al. (1994). More importantly, the results contribute to the literature by examining two separate constructs of response distortion and showing that neither influences the validity of personality constructs. Additionally, an important strength of the present study is that it used actual job applicants rather than newly hired employees and included two relatively large, independent samples (N = 147 and 139) from two companies. Furthermore, the use of structural equations modeling better enhances our understanding of the nature of the method effects attributed to the two response-distortion measures assessed. On the basis of present findings, we have concluded that neither type of response distortion attenuates correlations between personality constructs and job proficiency.

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