

RICE UNIVERSITY

**Approval Motivation and Situational Judgment Tests:  
The Role of Personality and Implicit Trait Policies**

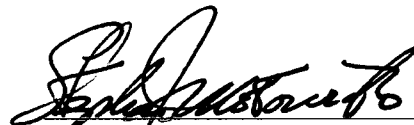
by

**Harrison James Kell**

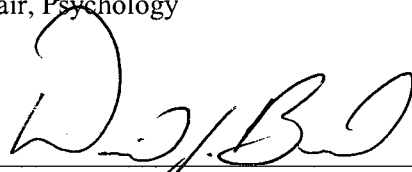
A THESIS SUBMITTED  
IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE

**Master of Arts**

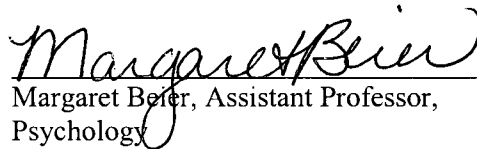
APPROVED, THESIS COMMITTEE:



Stephan Motowidlo, Herbert S. Autrey Professor,  
Chair, Psychology



Daniel Beal, Assistant Professor,  
Psychology



Margaret Beier, Assistant Professor,  
Psychology

HOUSTON, TEXAS

JANUARY 2009

UMI Number: 1466789

### INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

**UMI<sup>®</sup>**

---

UMI Microform 1466789  
Copyright 2009 by ProQuest LLC  
All rights reserved. This microform edition is protected against  
unauthorized copying under Title 17, United States Code.

---

ProQuest LLC  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106-1346

## ABSTRACT

### Approval Motivation and Situational Judgment Tests: The Role of Personality and Implicit Trait Policies

by

Harrison J. Kell

The effects of faking on situational judgment test (SJT) scores have only recently been explored. The research reported here tested a model linking an individual difference frequently associated with social desirability, approval motivation, with SJT score through its associations with agreeableness, conscientiousness, and implicit trait policies (ITPs) for those traits. One-hundred fifty-seven undergraduates completed a managerial SJT along with a measure assessing personality. Approval motivation was assessed using the Marlowe-Crowne Social Desirability Scale. Results indicated that approval motivation is correlated with SJT score and the ITP for conscientiousness. Path analyses revealed approval motivation is causally related to SJT score through its influence on the ITP for conscientiousness, and is also linked to conscientiousness and agreeableness. Findings extend ITP theory (Motowidlo, Hooper, & Jackson, 2006a) by suggesting that personality traits are associated with SJT scores through their causal influence on their ITPs.

## Table of Contents

Table of Contents.....	iii
List of Tables.....	iv
List of Figures.....	v
Introduction.....	1
Method.....	24
Results.....	27
Discussion.....	34
References.....	41

## List of Tables

Table 1. Correlations Among Variables for Full Sample .....	29
Table 2. Regression Analyses for Full Sample .....	30
Table 3. Correlations Among Variables for Reduced Sample .....	32
Table 4. Regression Analyses for Reduced Sample.....	33

## List of Figures

Figure 1. Proposed model linking personality traits, approval motivation, ITPs, and procedural knowledge .....	23
Figure 2. Standardized path coefficients for full sample .....	31
Figure 3. Revised model for full sample .....	32
Figure 4. Standardized path coefficients for reduced sample .....	34
Figure 5. Revised model for reduced sample .....	35

## Introduction

Situational judgment tests (SJTs) present applicants with descriptions of challenging work scenarios and alternative behavioral responses to them. For each scenario, applicants indicate the actions they think would be most and least effective or that they would be most and least likely to carry out. Motowidlo, Hooper, and Jackson (2006a) contend that SJTs are predictive of performance because they measure procedural knowledge required to behave effectively on the job. According to their model, the procedural knowledge measured by SJTs is composed of both job-specific knowledge and general knowledge about the costs and benefits of behavioral expressions of personality traits, represented by implicit trait policies (ITPs; Motowidlo et al., 2006a). ITPs are implicit beliefs about the value of personality expressions that individuals take into account when judging the effectiveness of behavioral episodes like those depicted in the response options of an SJT (Motowidlo & Beier, 2008; Motowidlo, Hooper, & Jackson, 2006b). While job-specific knowledge is likely acquired through experience in relevant work situations, ITPs may be acquired through fundamental socialization processes that occur outside the workplace (Motowidlo & Beier, 2008). Daily social interactions may teach people to value some trait expressions over others (e.g., agreeableness versus neuroticism), as those personality expressions are more frequently associated with effective actions and successful outcomes (Motowidlo & Beier, 2008). People often possess ITPs favoring their own traits as they tend to think behaviors expressive of their personalities are most effective in difficult situations (Motowidlo, 2005).

Approval motivation (Crowne & Marlowe, 1960) describes a trait that directs individuals to desire the approval of others. One way in which approval motivated people (or, approval-seekers) meet this interpersonal goal is by carrying out behaviors that others regard positively. Accordingly, approval motivated people are especially concerned with the behaviors that people view favorably and will devote cognitive resources to learning about them (Ackerman, 1996). In the course of this learning process, approval motivated individuals should also become aware of the personality traits that tend to be associated with behaviors that are regarded favorably. Consequently, approval-seekers' ITPs should stress the importance of traits that commonly lead to social approval when they are expressed behaviorally. Oftentimes, although not always, carrying out socially-favorable actions has positive results that extend beyond facilitating the approval of others. It is possible, in fact, that many behaviors are the subject of approval because they are effective and have positive consequences. For example, behaviors that are expressive of conscientiousness, such as working diligently to achieve goals and persisting despite hardships, are generally regarded positively (Digman, 1990). These behaviors also often have beneficial results as they can lead to tasks being completed on time and in the face of situational difficulties. To some extent, it seems reasonable to assume that these behaviors are approved of *because* they are associated with positive results. Consequently, approval-seekers' ITPs should stress the importance of traits that are the subject of social approval *and* whose expression commonly leads to favorable outcomes. Since part of the procedural knowledge SJTs measure is general knowledge, and ITPs comprise this general knowledge, when approval motivated individuals take an SJT their ITPs for socially favored traits are being assessed (Motowidlo & Beier, 2008).



Approval-seekers should judge the effectiveness of SJT response options based upon the extent to which the behaviors they represent express various traits. As approval motivated people hold ITPs heavily weighing personality traits that often truly are more effective when expressed (e.g., conscientiousness), they will be able to correctly differentiate between more or less effective response alternatives, leading to a higher score. Due to their concern with learning about socially desirable behaviors, highly approval motivated individuals may be more likely than less approval motivated individuals to possess ITPs heavily weighing traits that truly are effective when expressed. Alternatively, highly approval motivated people's ITPs may weigh effective traits *more* heavily than less approval motivated people's ITPs. Consequently, in situations where socially favorable actions truly are effective, approval-seekers may possess a competitive advantage over less approval-seeking individuals because their ITPs will lead them to be more accurate judges of behavioral effectiveness. When truly effective behaviors are less socially desirable, however, approval motivated people could be at a disadvantage, as they may inaccurately judge highly favorable actions to also be highly effective actions. Under these circumstances, approval-seekers may be less able to differentiate between effective and ineffective responses due to the disconnect between social approval and effectiveness.

Despite its title, the Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne & Marlowe, 1960) measures approval motivation. Social desirability and approval-seeking are not synonymous, as social desirability is often equated with faking in evaluative contexts while approval-seeking is more trait-like and remains stable across situations (Crowne & Marlowe, 1964; Strickland & Crowne, 1962). Approval motivated

people consistently desire social favor, regardless of the situation. Accordingly, when presented with questionnaires, tests, or other types of evaluations, approval-seekers will respond in ways likely to gain them approval, whether they are being evaluated in more formal (e.g., a pre-employment test) or informal (e.g., a friend's psychology experiment) contexts. In sum, response distortion among approval-seekers is rooted less in the situation and more in their stable, trait-like tendency to want to present a positive image. In spite of this distinction, due to the widespread use of the MCSDS (Leite & Beretvas, 2005) approval motivation has come to be identified with social desirability.

Despite its association with deception and social desirability, the study of approval-seeking has not been incorporated into investigations of SJT faking (Hooper, Cullen, & Sackett, 2006). The research reported here examines the effects of approval motivation on procedural knowledge as measured by SJTs. It further proposes a theory to explain this association that incorporates agreeableness, conscientiousness, and their concurrent ITPs.

### *Situational Judgment Tests*

SJTs are popular instruments used to predict performance in the selection context. SJTs present applicants with job-related scenarios and ask them to choose response options from a list of alternatives. Applicants are usually directed to select response options in one of two ways. The first instructional format features knowledge-based instructions that direct individuals to select the most (and sometimes least) effective response to a work-related scenario. The second features behavioral tendency instructions that ask individuals to choose alternatives representing the behaviors they would be most and least likely to carry out in response to a problematic work situation. Meta-analytic

results indicate scores on both types of SJT are equally associated with measures of job performance ( $\rho = .26$ ; McDaniel, Hartman, Whetzel, & Grubb, 2007).

SJTs are scored by comparing test-takers' response choices with experts' judgments of effectiveness (Motowidlo et al., 2006a). First, experts read over each scenario's response options and rate how effective they believe they are. Experts' ratings for each option are then averaged, with the mean score approximating the "true effectiveness" for the response option. Test-takers earn higher scores by choosing as best or most likely response options that experts consider effective or by choosing as worst or least likely response options that experts consider ineffective. SJT scores are derived by summing the effectiveness scores for response options chosen as most effective or likely and subtracting the sum of the effectiveness scores for the response options chosen as least effective or likely. This difference score represents the extent to which applicants are capable of distinguishing between effective and ineffective work-related behaviors. This scoring approach assumes that, due to their knowledge and experience, experts' judgments of effectiveness are "correct" for a particular organization or job type. In assessing what applicants know about effective and ineffective work-related behaviors, SJTs measure procedural knowledge (Campbell, Gasser, & Oswald, 1996; McDaniel & Nguyen, 2001; Motowidlo et al., 2006a).

Scores on both knowledge and behavioral tendency SJTs have consistently been found to be correlated with personality, specifically the Big Five traits. McDaniel et al.'s (2007) recent meta-analysis showed conscientiousness ( $\rho = .23$ ) and agreeableness ( $\rho = .22$ ) to be most strongly associated with SJT scores, and openness to be least strongly associated ( $\rho = .11$ ).

Motowidlo et al. (2006a) offered a theoretical basis for correlations between SJT scores and personality traits. The theory specifies that the procedural knowledge measured by SJTs consists of two components: specialized knowledge about how to behave in situations specific to the job in-question and general knowledge about the costs and benefits of the behavioral expression of personality traits in job-like contexts.

Specialized, job-specific knowledge is likely acquired through experiences at the target job or those similar to it. As individuals work at their jobs they learn the consequences, negative and positive, of particular behaviors in particular situations. These experiences shape individuals' knowledge of effective and ineffective behavior for their specific jobs, allowing them to identify and carry out actions that are more likely to result in positive outcomes. General knowledge, as noted previously, is likely acquired over the lifespan through everyday interactions in various social contexts (Motowidlo & Beier, 2008).

### *Implicit Trait Policies*

ITPs are implicit beliefs about the value of personality expressions that individuals acquire over time (Motowidlo et al., 2006a). People's opinions about the effectiveness of different behaviors are impacted by the degree to which they value certain trait expressions. If a person possesses an ITP that heavily weighs conscientiousness that person will judge conscientious work behaviors to be much more effective than less conscientious work behaviors. If a person possesses an ITP that does not heavily weigh conscientiousness, that individual will judge more conscientious behaviors only slightly more effective than less conscientious behaviors. When conscientious behavior truly is effective in a work setting, individuals with ITPs strongly weighing conscientiousness will be more likely to correctly judge behaviors as more or

less effective. In jobs where this is the case, individuals who associate conscientiousness with effectiveness will have more knowledge of effective behavior.

Although different jobs may have different rules dictating behavioral effectiveness, the workplace environment is still a part of the general social realm that human beings inhabit. Consequently, personality expressions that are effective during everyday social interactions are presumably often effective in the workplace as well. Individuals who possess ITPs that correctly associate various personality expressions with effectiveness possess more knowledge of effective behavior in-general, and this knowledge should be applicable to both everyday and job-specific situations. Individuals who possess more procedural knowledge should behave more effectively overall, whether that behavior occurs in day-to-day social interactions or in the workplace. The results of Motowidlo and Beier (2008) support this idea, along with providing evidence that ITPs comprise a portion of the procedural knowledge SJTs measure.

Motowidlo and Beier utilized the materials and data reported by Motowidlo, Dunnette, and Carter (1990), a study that developed a managerial SJT and validated it using supervisory performance ratings of a sample of 164 incumbent managers. Criterion-related validity for the SJT ranged from .24 to .43. In order to score this SJT, experienced managers rated its response options for effectiveness. ITP theory suggests these effectiveness judgments were a product of managers' job-specific knowledge, acquired through first-hand work-related experiences, and general knowledge acquired through socialization processes and represented by ITPs. For the purposes of Motowidlo and Beier (2008), values for these effectiveness judgments served as the basis for the "expert" scoring key.

During Motowidlo and Beier's study, undergraduates also provided effectiveness ratings for the response options for the same SJT. These judgments were assumed to solely be the product of ITPs, as students presumably have little to no experience with managerial jobs. While students' judgments were assumed to be somewhat correct because they were the product of ITPs, they were also assumed to be less correct than experts', whose judgments were the product of both ITPs and job-specific knowledge. Values for these effectiveness judgments served as the basis for the "novice" scoring key. Doctoral students also rated the response options for conscientiousness and agreeableness using a measure adapted from Gosling, Rentfrow, and Swann (2003).

If SJTs are predictive of job performance because they measure procedural knowledge needed for effective work-related behaviors, the more fully they assess this knowledge, the more strongly their scores should be related to job performance. Thus, it was hypothesized that SJT scores derived from both the novice and expert keys would be associated with incumbents' performance ratings. Additionally, it was also predicted that scores derived from the expert key would be more strongly correlated with performance because the effectiveness ratings comprising that key were the product of both general and job-specific knowledge.

It was also reasoned that partialing response options' trait scores from their effectiveness scores would remove variance in effectiveness ratings due to personality expressions. Consequently, it was hypothesized that partialing trait scores out of novices' effectiveness ratings would remove most or all of the accurate information about response options' effectiveness, because undergraduates' ratings were solely the product of their ITPs. Since experts possess both general and job-specific knowledge, however, it

was hypothesized that partialing trait scores out of managers' effectiveness ratings would not remove all the information about response options' effectiveness. Accordingly, it was hypothesized that SJT scores determined using a scoring key based on novices' residualized effectiveness ratings would not be associated with performance ratings but that scores derived using a key based on experts' residualized effectiveness ratings would still be related to performance.

All predictions were supported. Scores derived using the novice key were associated with job performance ratings ( $r = .29$ ), but not as strongly as scores derived using the expert key ( $r = .37$ ). Scores derived from the residualized expert key were related to job performance ( $r = .25$ ), while scores derived from the residualized novice key were not ( $r = .05$ , NS). Together, these results provide evidence that SJTs measure both job-specific and general knowledge and that general knowledge alone can be informative when making effectiveness judgments about work-related behaviors.

ITPs tend to be consonant with individuals' personality traits (Motowidlo et al., 2006a; 2006b). Motowidlo's (2005) theory of dispositional fit suggests this is because people believe that the best way to handle challenging social situations is by carrying out behaviors consistent with their personality traits. The formation of these beliefs, and by extension ITPs, is influenced both directly and indirectly by those personality traits.

Shamir (1990) argues that humans are self-expressive and tend to act in ways that are consistent with their traits, values, and attitudes. The expression of something as fundamental as an individual's personality may be satisfying or pleasurable in and of itself (Côte & Moskowitz, 1998; Moskowitz & Côte, 1995). People may consider the behavioral expressions of their personalities to be effective in a general sense as they tend

to lead to positive affective states. Personality may also directly facilitate ITP acquisition through individuals' efforts to maintain positive self-regard (Allport, 1955; James, 1890; Steele, 1988). People can preserve positive self-views by believing that behaviors expressing their basic traits are effective. For example, agreeable people will consider agreeable behavior to be more effective than disagreeable behavior as doing so should maintain or enhance their self-esteem.

Personality also shapes ITPs indirectly as it can dictate the social environment people choose to inhabit (Motowidlo et al., 2006a). Similarity breeds attraction (Byrne, 1971; Klohnen & Luo, 2003) and people with similar personality traits will tend to affiliate with one another as they often share interests, beliefs, and values. For example, agreeable people will select themselves into social situations where they will be surrounded by other agreeable people. In these situations, agreeable behavior will be considered effective because it *is* effective, as perceived by the majority of the individuals present. Agreeable people will learn to judge agreeable actions as more effective than disagreeable actions through the consistent reinforcement of their behaviors, leading them to acquire ITPs heavily weighing their own trait.

Although personality facilitates ITP acquisition, results have shown ITPs to be only moderately associated with their consonant traits (Motowidlo et al., 2006a; 2006b). Motowidlo et al. (2006a) found correlations between self-reports of traits and ITPs to range from .17 (extraversion and the ITP for extraversion) to .35 (agreeableness and the ITP for agreeableness). These findings suggest that other factors impact individuals' beliefs about trait expressions and behavioral effectiveness. In addition to personality, ITPs may also be influenced by people's experiences and their recognition that traits they



themselves do not score high on may still be effective when expressed (D. J. Beal, personal communication, May 2, 2008). People's personalities are partially determined by factors beyond their control, including genetics and various environmental influences (Jang, Livesley, & Vernon, 1996). These determinants may proscribe individuals' behaviors such that people scoring low on a trait may be unable to carry out behaviors characteristic of people scoring high on a trait. For example, it may be nearly impossible for a highly introverted person to behave in an extremely extraverted way. Through observation and experience, however, introverted people may learn to recognize that highly extraverted behaviors are sometimes effective and develop ITPs that more heavily weigh extraversion. Consequently, the correlation between introverts' extraversion scores and their ITPs for extraversion will not be overly large, as their ITPs will be more a product of their social experiences than their traits.

Situational influences may also impact the relationship between traits and their consonant ITPs. Motowidlo et al. (2006b) identifies ITPs as a type of characteristic adaptation (McCrae & Costa, 1996), a skill, attitude, or preference formed as individuals' traits interact with their environments over time. Agreeable people frequent contexts where agreeable behaviors *are* effective but will also inevitably be put in situations where agreeable actions are less effective or even ineffective. Through these experiences agreeable people will develop ITPs that weigh agreeableness less heavily in certain situations. For example, highly agreeable people may think that agreeableness is generally effective but recognize that if they were employed as a tax collector it might be more effective to be less agreeable or even disagreeable. Highly agreeable people might also recognize that it would be more effective to be very agreeable if they were employed

as a museum tour guide. Due to the differing natures of these jobs, the correlation between self-reported agreeableness and the ITP for agreeableness should be higher for tour guides than for tax collectors. Situational and job-related influences may thus moderate the association between traits and their consonant ITPs.

ITPs manifest in SJT performance through the response options individuals choose as most and least likely or effective. In order to measure ITPs, an SJT's response options must first be rated for the extent to which they express various personality traits. Motowidlo et al. (2006a) introduced a method for accomplishing this by adapting a brief measure of the Big Five (Gosling et al., 2003) and creating a bipolar, seven-point scale for each trait. For example, the anchors for the agreeableness scale ranged from 1 = very critical and quarrelsome to 7 = very warm and sympathetic. Student judges then rated the agreeableness, conscientiousness and extraversion of an SJT's response options (Motowidlo et al., 1990) on these scales. Mean trait scores for each response option approximated the extent to which it expressed each personality trait.

ITPs are calculated the same way SJT scores are calculated, but by using response options' trait scores instead of their effectiveness scores. For example, to calculate the ITP for conscientiousness, the mean conscientiousness ratings for the response options chosen as least effective/likely would be summed and subtracted from the sum of the mean conscientiousness ratings for the response options chosen as most effective/likely. This difference score represents individuals' ITPs for conscientiousness as it indicates the degree to which test-takers differentiate between effective and ineffective responses based upon the extent to which they are expressive of conscientiousness. If applicants ITPs heavily weigh conscientiousness when judging effectiveness, their difference scores

will be larger as they will differentiate more between very conscientious and less conscientious behaviors. When conscientious behaviors truly are more effective, people with ITPs stressing conscientiousness will be better able to discriminate between effective and ineffective behaviors. In this example, by guiding applicants to better recognize effective and ineffective workplace actions, the ITP for conscientiousness constitutes procedural knowledge, specifically general procedural knowledge (Campbell et al., 1996; McDaniel & Nguyen, 2001; Motowidlo & Beier, 2008). As SJTs measure procedural knowledge composed of both general and job-specific components, greater general procedural knowledge contributes to a higher SJT score. Since conscientious people tend to possess ITPs heavily weighing their own trait, there will be a positive correlation between individuals' self-reported conscientiousness scores and their SJT scores.

Findings support ITP theory as a plausible explanation for the association between SJT scores and personality traits. Although agreeableness and conscientiousness are positively correlated with procedural knowledge, when their respective ITPs are included in a regression analysis they contribute little to no incremental variance in SJT score (Motowidlo et al., 2006a; 2006b). These results provide evidence that ITPs fully mediate the association between personality and procedural knowledge.

ITP theory also has utility beyond its capacity to explain correlations between personality and SJT scores. ITPs are predictive of behavioral measures of their consonant traits and also hold promise as implicit measures of personality (Motowidlo et al., 2006a; 2006b). Compared to explicit measures of personality, implicit measures are less susceptible to faking (Bornstein, 2002; Fazio & Olson, 2003), concerns with which have

consistently plagued personality testing in personnel selection and other organizational domains (Hough, Eaton, Dunnette, Kamp, & McCloy, 1990; Ones, Reiss, & Viswesvaran, 1996). To assess the fakeability of measures of ITPs, Motowidlo et al. (2006a) developed an SJT to measure the ITP for agreeableness by writing response options specifically designed to express high or low levels of agreeableness. Students were asked to complete the SJT, along with a self-report measure of agreeableness, either honestly or as if they wanted to look their best (fake-good). The effect size between the honest and fake-good conditions was much smaller for the SJT measure of the ITP for agreeableness ( $d = .27$ ) than for the self-report measure of agreeableness ( $d = .79$ ). Although these findings imply measures of ITPs are more resistant to faking than conventional measures of personality, the effects of approval motivation, frequently associated with social desirability, on ITPs and SJTs in-general remains unexplored (Hooper et al., 2006).

#### *Approval Motivation*

Social desirability is "the tendency on the part of individuals to present themselves in a favourable light, regardless of their 'true feelings' about an issue or topic" (Moorman & Podsakoff, 1992, p. 132). Early measures of this tendency (Edwards, 1957) used items drawn from clinical inventories (e.g., the Minnesota Multiphasic Personality Inventory) and, consequently, were confounded with psychopathology. Individuals using these scales might deny having unfavorable attributes not because they were trying to present themselves in a favorable light, but because they legitimately do not possess features symptomatic of psychopathology. Crowne and Marlowe (1960) developed the MCSDS with the intent of creating a social desirability measure that was free of clinical overtones.

They assembled a list of 33 items representing behaviors and attitudes that are uncommon but the subject of social approval (e.g., “I never resent being asked to return a favor”) and behaviors and attitudes that are common but the subject of social disapproval (e.g., “I like to gossip at times”). Higher MCSDS scores result from answering “true” to desirable items and “false” to undesirable items. Higher scores are interpreted as evidence of responding biased by social desirability, as it is assumed that no one truly performs so many desirable behaviors and so few undesirable behaviors.

By aiming to assess social desirability, Crowne and Marlowe sought to measure a response set, a situational response bias on the part of questionnaire-takers to manage their impressions in order to appear in a more positive light (Edwards, 1957; Jackson & Messick, 1958; Paulhus, 2002). In this conception, social desirability solely equates with situation-specific, conscious faking (rather than cross-situational self-deception), as individuals purposefully answer untruthfully in order to achieve their goals. For example, if job applicants scoring high on social desirability are presented with a behavioral tendency SJT, they will likely attempt to choose response options based on how effective they believe they are, regardless of whether or not they would actually carry out the actions those items represent, as doing so should cause hiring staff to perceive them more favorably. Since social desirability is situation-specific, however, these same individuals might be less likely to respond in socially desirable ways in circumstances where the stakes are low and being perceived favorably does not carry important consequences (e.g., a friend’s psychology experiment).

Although the MCSDS was designed to measure social desirability, findings suggest that it actually measures a response style, a response bias that is consistent across time

and questionnaires and that is associated with a stable, trait-like tendency (Jackson & Messick, 1958). Crowne and Marlowe termed the response style the MCSDS assesses “need for social approval,” “approval-seeking,” or “approval motivation.” Need for approval is “the extent that an individual searches for the approval of others and tries to avoid their disapproval” (Leite & Beretvas, 2005). Since approval-seeking is rooted in individual differences in the need to attain the approval of others, rather than solely situation-specific goals, people scoring high on the MCSDS should exhibit biased responding across evaluative contexts. Where socially desirable people might only distort their responses in high-stakes testing situations, approval-seekers likely distort their responses in all or most testing situations, as they generally desire others' approval, regardless of the situation. Where people scoring high on social desirability should distort their responses on a behavioral SJT but not in a friend's psychology experiment, approval motivated people should distort their responses on the SJT *and* in their friend's experiment. The development of the MCSDS inaugurated nearly two decades of research that revealed approval-seeking is associated with a number of characteristic behaviors, all of which are aimed at gaining the favor of the relevant audience (Millham & Jacobson, 1978).

Approval-seeking individuals are especially sensitive to socially desirable behaviors. This sensitivity extends to situations where only subtle reinforcement is offered for desirable actions. Crowne and Marlowe (1964) gave no direction other than asking individuals to say all the words they could think of for 25 minutes without using sentences or phrases. In the positive reinforcement condition each time a participant produced a plural noun the experimenter sitting in the room nodded and in the negative

reinforcement condition each time a plural noun was uttered the experimenter said “uh-uh.” In both conditions only individuals with high MCSDS scores consistently altered their production of plural nouns in response to the experimenter's feedback. Crowne and Marlowe (1964) also showed that when approval motivated individuals observed an experimenter say “good” each time a confederate used “I” and “we” they tended to use these pronouns more frequently when asked to generate sentences.

Strickland and Crowne (1962) provided evidence of approval-seekers' tendency to conform. When presented with an Asch-like judgment paradigm, approval motivated individuals were more likely to be swayed by obviously incorrect confederate responses than those scoring lower on the MCSDS. Beyond conformity in specific experimental contexts, approval-seekers also root their behaviors in cultural norms. Horton, Crowne, and Marlowe (1963) presented college-age participants with two lists of words and asked them to link those words together in ways they thought most “popular” for their age group (the word lists had previously been normed with a large group of other college students). Approval motivated individuals produced word associations that strongly resembled those of the normative sample.

Higher MCSDS scorers specifically seek the approval of authority figures. Marlowe and Crowne (1961) presented participants with the Festinger and Carlsmith (1959) spool-stacking task. For half an hour individuals packed and unpacked spools while an experimenter who had been introduced as a psychologist furiously scribbled notes. At the end of the experiment participants were asked to indicate how much they enjoyed the task, how likely they would be to participate again, and the scientific

importance of the results. For all questions higher MCSDS scores were associated with more positive answers.

In their sensitivity to the reactions of others and concern with how others perceive them, approval motivated people are similar to high self-monitors, the behavior of which "may be highly responsive to social and interpersonal cues of situationally appropriate performances" (Gangestad & Snyder, 2000, p. 530). Like high self-monitors, approval-seeking individuals seem capable of inferring what behaviors will be positively regarded by others and adapting their self-expressions accordingly. Where high self-monitors and approval-seekers differ is the motivation underlying the control of their behavioral self-expressions. Approval-seeking people are explicitly motivated to obtain the approval of others. High self-monitors, on the other hand, engage in impression management in order to enhance their social status (Gangestad & Snyder, 2000). Whereas approval motivated people are merely concerned with being viewed positively, high self-monitors' behavior is aimed at effectively defining their status in the social worlds they inhabit (Gangestad & Snyder, 2000). Thus, while the behaviors of approval-seekers and high self-monitors are similar in that they are responsive to social norms and expectations, the reason for those behaviors differs.

Although they are capable of adapting their behaviors to meet social demands, approval-seekers generally act in ways that, on average, are considered socially desirable (e.g., congenial, polite; Paulhus, 1991). Evidence suggests approval motivated people truly possess the traits and characteristics they endorse. MCSDS scores positively correlate with self-ratings of desirable traits such as agreeableness and conscientiousness and negatively with the undesirable neuroticism (Mascaro & Rosen, 2005; Peterson,



Casillas, & Robins, 2006). McCrae and Costa (1983) demonstrated that MCSDS scores also correlate with knowledgeable peer ratings of personality traits, including extraversion and neuroticism. They also found that correcting for MCSDS score did little to increase correlations between self- and other ratings of personality. Thus, a person scoring high on the MCSDS and on agreeableness will actually tend to be agreeable, just as a person scoring high on the MCSDS and low on neuroticism will actually tend to be well-adjusted.

### *The Current Study*

The current study proposes a theory explaining how approval-seeking may be related to the procedural knowledge measured by SJTs. Recall that individuals wanting to appear in a favorable light will likely respond to an SJT with behavioral tendency instructions according to the effectiveness of the response alternatives rather than the likelihood they would carry out the behaviors they represent. While this reasoning offers a superficial explanation for the possibility of an association between MCSDS and SJT scores, it does not address how approval-seeking individuals are able to identify response alternatives according to their effectiveness. If approval-seeking individuals are able to select response options based on their effectiveness this implies the trait is somehow related to procedural knowledge. The association between approval motivation and procedural knowledge can be explained by ITP theory.

Approval motivated people are especially concerned with performing behaviors that others will view favorably. Personality can influence knowledge acquisition (Ackerman, 1996) by directing individuals to devote cognitive resources to learning about trait-relevant areas of knowledge. For example, individuals scoring high on

openness to experience may devote cognitive resources to learning about art while individuals scoring high on neuroticism may focus on learning emotional regulation strategies. As approval motivation is frequently described as a trait-like individual difference (Crowne & Marlowe, 1964; Paulhus, 2002), approval-seekers might devote cognitive resources to acquiring knowledge about the types of behaviors that are likely to win them favor. This preoccupation with the interpersonal consequences of behaviors may lead these individuals to become exceptional social learners. Evidence supports this claim, indicating that approval motivated people are sensitive to even subtle differences in behaviors that are more or less likely to receive positive reinforcement (Crowne & Marlowe, 1964; Marlowe & Crowne, 1961). As “experts” in the domain of general social knowledge, approval-seekers should be aware of characteristics differentiating effective, appropriate, and socially desirable behaviors from ineffective, inappropriate, and socially undesirable behaviors. ITP theory states that one of the major characteristics separating effective and ineffective behaviors is their personality expressions. Approval-seekers should possess a thorough knowledge of the costs and benefits of personality expressions that underlie behaviors likely to gain them favor. Accordingly, approval motivated individuals should hold ITPs heavily weighing traits that are commonly considered to be effective when expressed (Motowidlo & Beier, 2008; Motowidlo et al., 2006a). As ITPs constitute the general component of the procedural knowledge measured by SJTs, approval motivated people should be able to identify effective and ineffective response options based upon their personality expressions. That approval-seekers hold ITPs emphasizing traits that often truly are effective when expressed should explain the association between MCSDS and SJT scores.

Approval motivation may also provide an avenue for individuals to acquire trait-consistent ITPs in addition to dispositional fit. McCrae and Costa (1983) found that controlling for scores on the MCSDS did little to reduce agreement between self and others' ratings of socially desirable traits. This implies that approval-seeking individuals truly do possess the traits they endorse. Among the Big Five traits, agreeableness and conscientiousness have consistently shown to be the most strongly associated with approval motivation, Mascaro and Rosen (2005) recently finding correlations with approval motivation to be .23 for conscientiousness and .53 for agreeableness. This suggests that approval-seeking people truly are conscientious and agreeable. By extension, these correlations also imply conscientious and agreeable people have approval-seeking tendencies. These tendencies may manifest through characteristics associated with both traits.

In addition to being sympathetic and trusting, agreeable people also desire to form and maintain interpersonal bonds (Jensen-Campbell & Graziano, 2001). In order to become close to others, individuals must carry out behaviors that others approve of. Agreeable people will be concerned with learning about and carrying out these socially desirable behaviors in order to meet their interpersonal goals. Thus, agreeable people's approval-seeking tendencies may manifest in their desire to interpersonally bond with others. Conscientious people are disciplined and hard-working but are also dutiful and strive to be high-achievers (Digman, 1990). Conscientious people may desire the approval of others as a means of validating that they have successfully reached their goals. Social approval may also be a signal to conscientious people that they have fulfilled whatever obligations they feel they must fulfill. Thus, conscientious people's

approval-seeking tendencies may manifest through their striving for excellence and dutifulness.

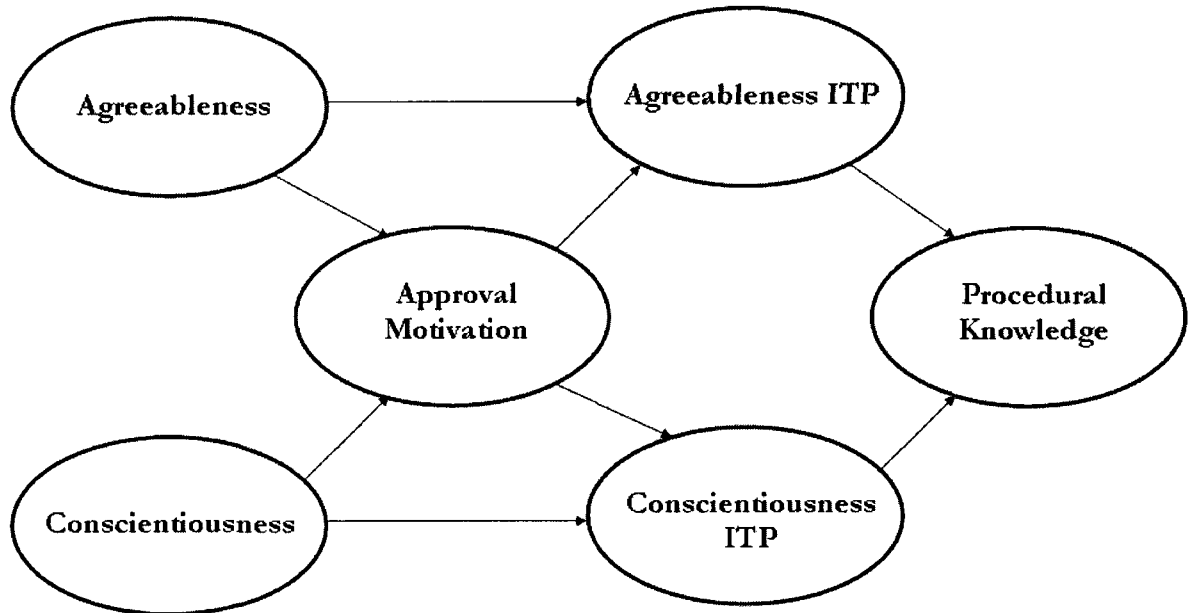
This conceptualization suggests that the extent to which people are approval-seeking is partially determined by their agreeableness and conscientiousness; agreeable people seek approval through their desire to form interpersonal bonds with others and conscientious people through their sense of obligation. Consequently, agreeableness and conscientiousness should exert causal influence on approval motivation and be a more distal predictor of outcomes than approval motivation. Further, the approval-seeking tendencies of agreeable and conscientious people may facilitate acquisition of their consonant ITPs. Agreeable and conscientious actions are generally regarded positively and ITPs stressing them have been linked to SJT scores (Digman, 1990; Motowidlo et al., 2006a). Agreeable and conscientious people, through their approval-seeking tendencies, should be aware that actions expressing their traits tend to be effective and are the subject of social approval. Consequently, approval motivation should provide an additional means for agreeable and conscientious people to acquire their consonant ITPs. Agreeable and conscientious people will value behavioral expressions of their traits not only because they inherently believe they are effective due to dispositional fit (Motowidlo, 2005), but also because their approval seeking tendencies attune them to the fact that behavioral expressions of their traits tend to be regarded favorably.

#### Research Purpose

The research reported here examined the associations among personality traits (agreeableness and conscientiousness), approval motivation, ITPs (for agreeableness and

conscientiousness), and procedural knowledge as measured by a behavioral tendency SJT. These associations are represented by the model presented in Figure 1.

Figure 1. Proposed model linking personality traits, approval motivation, ITPs, and procedural knowledge.



This model has the following features:

1. Agreeableness and conscientiousness exert causal influence on their respective ITPs.
2. Agreeableness and conscientiousness exert causal influence on approval motivation.
3. Approval motivation exerts causal influence on the ITPs for agreeableness and conscientiousness.
4. Approval motivation partially mediates the influence of agreeableness and conscientiousness on their respective ITPs.

5. The ITPs for agreeableness and conscientiousness are causally associated with procedural knowledge as measured by a behavioral tendency SJT.

## Method

### Participants and Procedure

One-hundred and fifty-seven undergraduates at a small, private, southwestern university completed the following measures for experimental course credit.

### Measures

#### 1. Big-Five 5 Broad Domains (Goldberg, 1999)

Participants' Big Five personality traits were assessed using the 50-item Big-Five 5 Broad Domains questionnaire derived from the International Personality Item Pool (IPIP). This questionnaire is a broad-bandwidth, public domain measure available on the Internet. This measure consists of a number of brief statements, with "I" added prior to each to aid ease of responding. Subjects were asked to rate how well each statement describes themselves using a five-point Likert-type scale, ranging from 1 (*very inaccurate*) to 5 (*very accurate*). When corrected for attenuation due to unreliability of both scales the correlation between the IPIP and Goldberg's (1992) 100 Big Five factor markers is .81 (Goldberg, 1999). Reliabilities were as follows: agreeableness (.76), conscientiousness (.78), extraversion (.90), adjustment (.86), and openness (.77).

#### 2. Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne & Marlowe, 1960, 1964)

The degree to which individuals exhibit need for approval was assessed using the MCSDS. The measure consists of 33 items, 18 of which are keyed true and 15 of which are keyed false. Items are either socially desirable but not true of most individuals (e.g.,

“Before voting I thoroughly investigate the qualifications of all the candidates”) or socially undesirable but true of most individuals (e.g., “I like to gossip at times”). Items are dichotomously scored and the number of true responses is calculated after reverse-scoring the negatively keyed items. A recent validity generalization study of the MCSDS indicates it has an overall reliability of .73 (Beretvas, Meyers, & Leite, 2002). The scale’s authors report a test-retest reliability of .89.

### 3. Managerial Situational Judgment Test (Motowidlo et al., 1990)

Participants completed a criterion-validated SJT designed to predict performance for entry-level management and administrative positions in the telecommunications industry. The SJT predicts interpersonal (leadership, sensitivity) and problem-solving (organization, resourcefulness) performance along with overall effectiveness. Validity for the test ranges from .24 to .43. The SJT contains 30 situational scenarios, each with five response options. A sample item is below:

You are meeting with someone at your manager's level in another department. You are meeting in his office. The telephone interrupts several times, and each time he takes the call instead of asking his secretary to hold it. You would...

- a) Wait patiently for him to finish with his telephone calls and do nothing about this.
- b) Tell him you are on a tight schedule and you will not be able to meet with him for very much longer.
- c) Ask him to have his secretary hold his calls until you finish your meeting.
- d) Glance at your watch and fidget impatiently to let him know the telephone calls are disruptive.
- e) Ask him if it would be better to meet another time when he is not so busy.

From the five response options for each scenario participants were asked to choose the behavior they would be most likely to carry out and the behavior they would be least likely to carry out.

Thirty-four managers previously served as subject matter experts and rated each response option for effectiveness. These managers were drawn from the companies that participated in the development and validation of the SJT. Each response alternative was assigned a behavioral effectiveness score that is the average of the effectiveness ratings given by these managers.

Response alternatives had also previously been rated (Motowidlo et al., 2006a) for agreeableness, conscientiousness, and extraversion by three doctoral students using scales adapted from Gosling et al. (2003). The results of Motowidlo and Beier (2008) support the convergent and discriminant validity of the agreeableness and conscientiousness, but not extraversion, ratings.

A sample of undergraduates rated the SJT's response options for effectiveness, along with completing self-report measures of agreeableness, conscientiousness, and extraversion. Undergraduates' self-reported scores for the three traits were correlated with their effectiveness ratings for each response option. If the personality scores for the response options were valid, the trait-effectiveness correlations should have increased as the response options' personality scores for the three traits increased. This approach assumed that students possessing the relevant trait would rate response options expressing that trait as more effective. For example, highly agreeable people presumably find agreeable behaviors more effective than do less agreeable people. Highly agreeable students' effectiveness ratings for response options expressive of agreeableness should



have been higher than less agreeable students' effectiveness ratings of those response options. In turn, this should have led to an increase in the agreeableness-effectiveness correlation as response options' expressions of agreeableness increased. This relationship would have been represented by a positive correlation between the agreeableness-effectiveness correlation and personality expression scores for agreeableness.

The correlations between trait-effectiveness correlations and response options' personality scores were .43 for agreeableness, .42 for conscientiousness, but only .12 for extraversion. Discriminant correlations for agreeableness and conscientiousness were also higher than their convergent correlations. For example, the correlation between agreeableness-effectiveness and personality expression scores was higher when items were scored for agreeableness than conscientiousness or extraversion. Extraversion did not demonstrate discriminant validity, however, as the extraversion-effectiveness correlation with personality ratings was higher when items were scored for agreeableness ( $r = .16$ ) and conscientiousness ( $r = .21$ ) than extraversion itself ( $r = .12$ ). Due to this, only personality expression ratings for agreeableness and conscientiousness were used in this study.

## Results

Mean completion time for the battery of measures was 31.28 minutes. Fifty-four students finished the assessment in less than 30 minutes. Previous administrations indicate it takes job incumbents 45 minutes to properly complete the SJT used in this study. Undergraduates at this institution have high mean SAT scores, suggesting they may be able to read more quickly than many job incumbents. As this SJT solely measures undergraduates' general procedural knowledge they may also have completed it faster

because they could not retrieve instances of previous job situations similar to those in the SJT. Instead, undergraduates could only respond according to the personality expressions of the response options, which may have taken less time and cognitive effort than the recall of prior job experiences.

Although these are compelling reasons for why some participants finished the questionnaires so quickly, the suspicion that some participants may have responded carelessly or randomly remains. This concern is lent some weight by the results. Time spent completing the SJT was correlated with knowledge score ( $r = .27, p < .01$ ), and mean SJT scores were significantly lower ( $t(150) = 2.11, p < .05$ ) for students who finished in under 30 minutes ( $M = .89, SD = .40$ ) than those who did not ( $M = 1.03, SD = .40$ ). Accordingly, two separate sets of analyses were performed. Analyses were first performed using the total sample ( $n = 157$ ). These analyses were then repeated with a reduced sample, where all participants who finished the measures in less than 30 minutes were excluded ( $n = 103$ ). Results for the full sample are reported first, followed by those for the reduced sample. This conservative approach likely excluded individuals who were not careless but simply finished the battery of measures quickly. Finding significant results using the reduced sample would provide strong evidence for meaningful effects, however, as this sample may have excluded some data points that supported the proposed model.

#### *Reliability Calculation*

In order to calculate the reliability of the SJT and ITP scores (see Tables 1 and 3), separate scores were first calculated for the odd and even items. For example, to calculate the reliability of the SJT score, the effectiveness ratings for the response options chosen

as least likely for the odd-numbered scenarios were summed and subtracted from the sum of the effectiveness ratings for the response options chosen as most likely for the odd-numbered items. The same approach was taken with the even-numbered items. Scores for both halves were then correlated to estimate the split-half reliability of the SJT score. This correlation was adjusted using the Spearman-Brown Formula to account for shortening the test by dividing it in two. The same approach was taken to calculate the reliabilities of the ITP for agreeableness and ITP for conscientiousness scores.

### *Full Sample*

Descriptive statistics and zero-order correlations among the variables for the full sample are reported in Table 1.

Table 1  
*Correlations Among Variables for Full Sample (n = 149 - 157)*

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Agreeableness	55.79	7.97	(.81)					
2. Conscientiousness	48.43	10.13	.16*	(.85)				
3. Approval Motivation	14.62	5.55	.31**	.29**	(.79)			
4. Agreeableness ITP	.80	.44	.35**	.17*	.15	(.70)		
5. Conscientiousness ITP	.68	.34	.26**	.30**	.26**	.59**	(.59)	
6. Procedural Knowledge	.98	.41	.26**	.22**	.20*	.63**	.84**	(.66)

*Note:* Reliabilities presented in parentheses.

\* $p < .05$ , two-tailed. \*\* $p < .01$ , two-tailed.

Agreeableness and conscientiousness are positively related to both approval-seeking and their respective ITPs, along with procedural knowledge. Unexpectedly, agreeableness is correlated .26 ( $p < .01$ ) with the ITP for conscientiousness and conscientiousness is correlated .17 ( $p < .05$ ) with the ITP for agreeableness. Approval-seeking is positively related to the ITP for conscientiousness ( $r = .26$ ,  $p < .01$ ) and procedural knowledge ( $r = .20$ ,  $p < .05$ ). The ITPs for agreeableness and

conscientiousness are substantially associated with procedural knowledge ( $r$ 's .63 and .84).

Path analysis was conducted to test the model presented in Figure 1 (Mplus version 5; Muthén & Muthén, 1998-2007). The comparative fit index (CFI) and root-mean-square error of approximation (RMSEA) were used to assess model fit. Models resulting in a CFI of .90 or greater are considered acceptable (Bagozzi & Yi, 1988), as are models resulting in an RMSEA less than .05 (Brown & Cudeck, 1993).

Standardized beta weights estimating path coefficients are presented in Table 2 and Figure 2.

Table 2

*Regression Analyses for Full Sample (n = 149 - 154)*

Variable and Statistic	Standardized Betas					$R^2$
	IITP A	IITP C	AM	Agreeableness	Conscientiousness	
Procedural Knowledge	.23(.20)**	.78(.72)**	--	--	--	.68(.72)**
Agreeableness IITP	--	--	.05(.08)	.33(.23)**	--	.12(.07)**
Conscientiousness IITP	--	--	.19(.22)*	--	.24(.18)**	.12(.10)**
Approval Motivation	--	--	--	.27(.27)**	.25(.25)**	.15(.15)**

*Note:* Values in parentheses are derived from the revised model.

IITP A = Agreeableness IITP.

IITP C = Conscientiousness IITP.

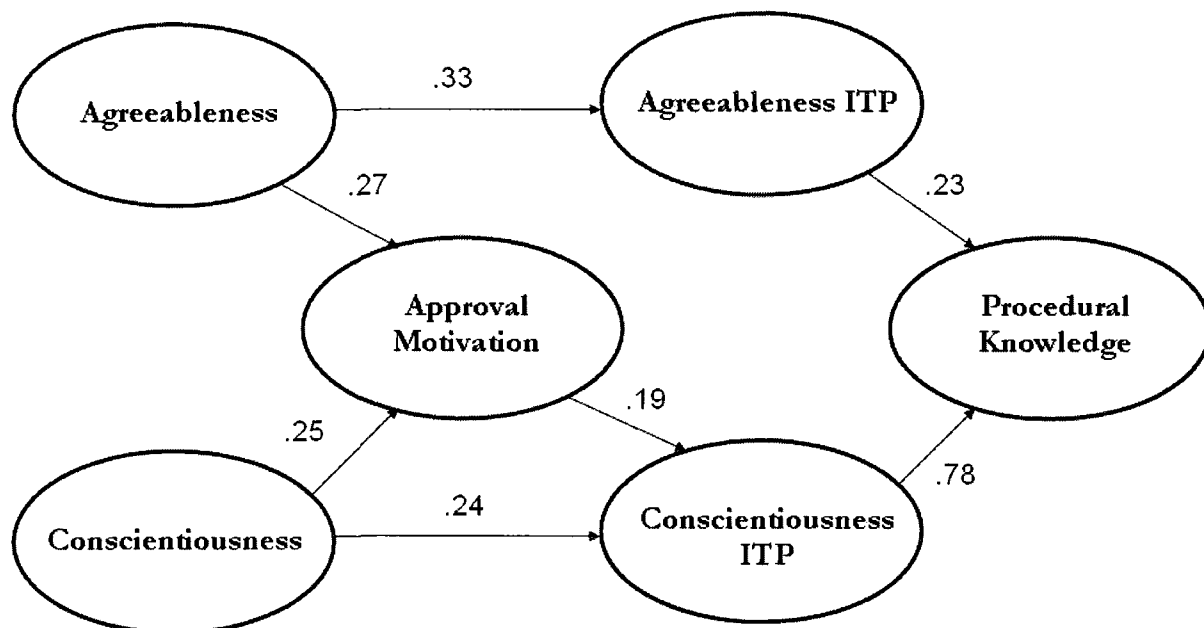
AM = Approval Motivation.

\*  $p < .05$ , two-tailed. \*\*  $p < .01$ , two-tailed.

As predicted, both agreeableness and conscientiousness account for variance in their respective IITPs. Agreeableness and conscientiousness also explain significant variance in approval-seeking ( $R^2 = .15$ ,  $p < .01$ ). The two IITPs account for a large part of the variance in procedural knowledge ( $R^2 = .68$ ,  $p < .01$ ). The path leading from approval-seeking to the IITP for conscientiousness is significant ( $\beta = .19$ ,  $p < .05$ ), but the path to

the ITP for agreeableness is not ( $\beta = .05$ , NS). The path leading from conscientiousness to the ITP for conscientiousness is .30 when approval motivation is not included in the model but drops to .24 when approval motivation is accounted for, indicating partial mediation.

Figure 2. Standardized path coefficients for full sample.



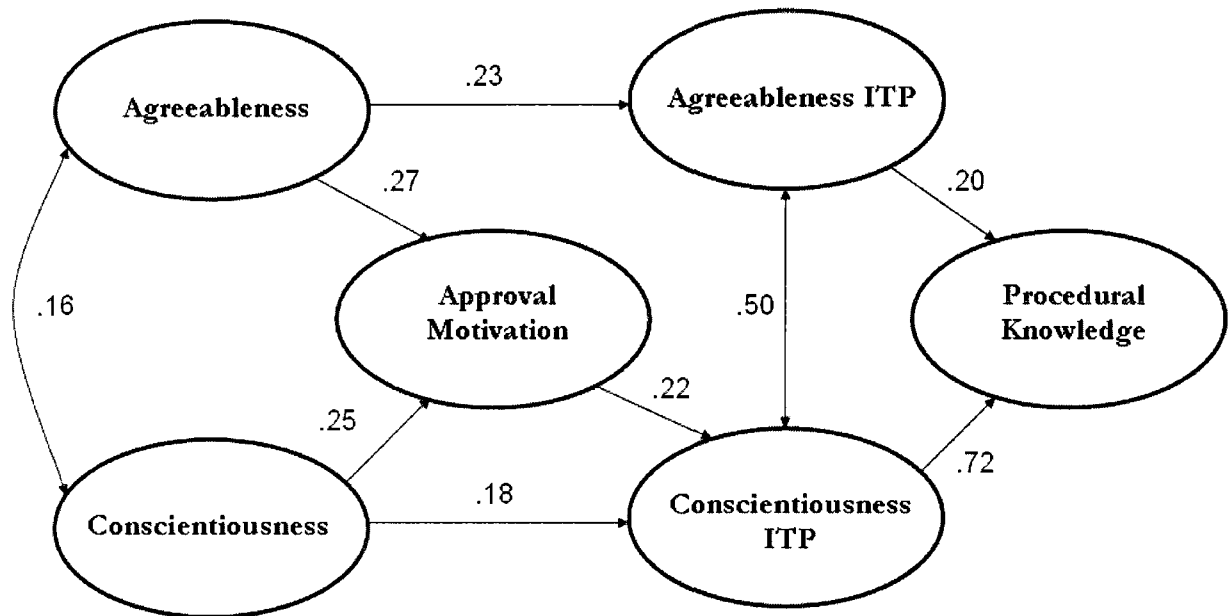
The test of the model resulted in a chi-square of  $\chi^2(6, N = 149) = 59.58, p < .01$ , indicating that the null hypothesis that the model fits the data must be rejected.

Accordingly, both the CFI (.82) and RMSEA (.25) values suggest poor model fit. In an attempt to obtain a better-fitting model, the covariances of agreeableness and conscientiousness ( $r = .16$ ) and the ITPs for these two traits ( $r = .59$ ) were added. Path coefficients for this revised model are presented in Table 2 and Figure 3.

The test of this revised model resulted in a chi-square of  $\chi^2(5, N = 149) = 8.01, p > .05$ . CFI (.99) and RMSEA (.06) values suggest the revised model better fits the data than the original model, although the RMSEA value still does not reach conventional

levels of acceptability.

Figure 3. Revised model for full sample.



### Reduced Sample

Zero-order correlations and descriptive statistics for the reduced sample are reported in Table 3.

Table 3

*Correlations Among Variables for Reduced Sample (n = 96 - 103)*

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Agreeableness	56.13	7.70	(.81)					
2. Conscientiousness	49.16	10.13	.19*	(.85)				
3. Approval Motivation	14.82	5.56	.26**	.34**	(.79)			
4. Agreeableness ITP	.81	.45	.26*	.15	.11	(.73)		
5. Conscientiousness ITP	.72	.32	.19	.35**	.21*	.57**	(.58)	
6. Procedural Knowledge	1.03	.40	.23*	.25**	.18	.61**	.84**	(.71)

*Note:* Reliabilities presented in parentheses.

\*  $p < .05$ , two-tailed. \*\*  $p < .01$ , two-tailed.

Correlations among the variables in the reduced sample are similar to those in the full sample, except the association between approval-seeking and procedural knowledge does not reach conventional levels of statistical significance ( $r = .18, p = .07$ ). Agreeableness is also not associated with the ITP for conscientiousness nor is conscientiousness associated with the ITP for agreeableness.

Path coefficients are presented in Table 4 and Figure 4.

Table 4

*Regression Analyses for Reduced Sample (n = 96 - 99)*

Variable and Statistic	Standardized Betas					$R^2$
	ITP A	ITP C	AM	Agreeableness	Conscientiousness	
Procedural Knowledge	.21(.19)**	.80(.73)**	--	--	--	.69(.73)**
Agreeableness ITP	--	--	.04(.06)	.25(.18)**	--	.07(.04)**
Conscientiousness ITP	--	--	.10(.12)	--	.31(.26)**	.13(.10)**
Approval Motivation	--	--	--	.21(.21)*	.30(.30)**	.16(.16)**

*Note:* Values in parentheses are derived from the revised model.

ITP A = Agreeableness ITP.

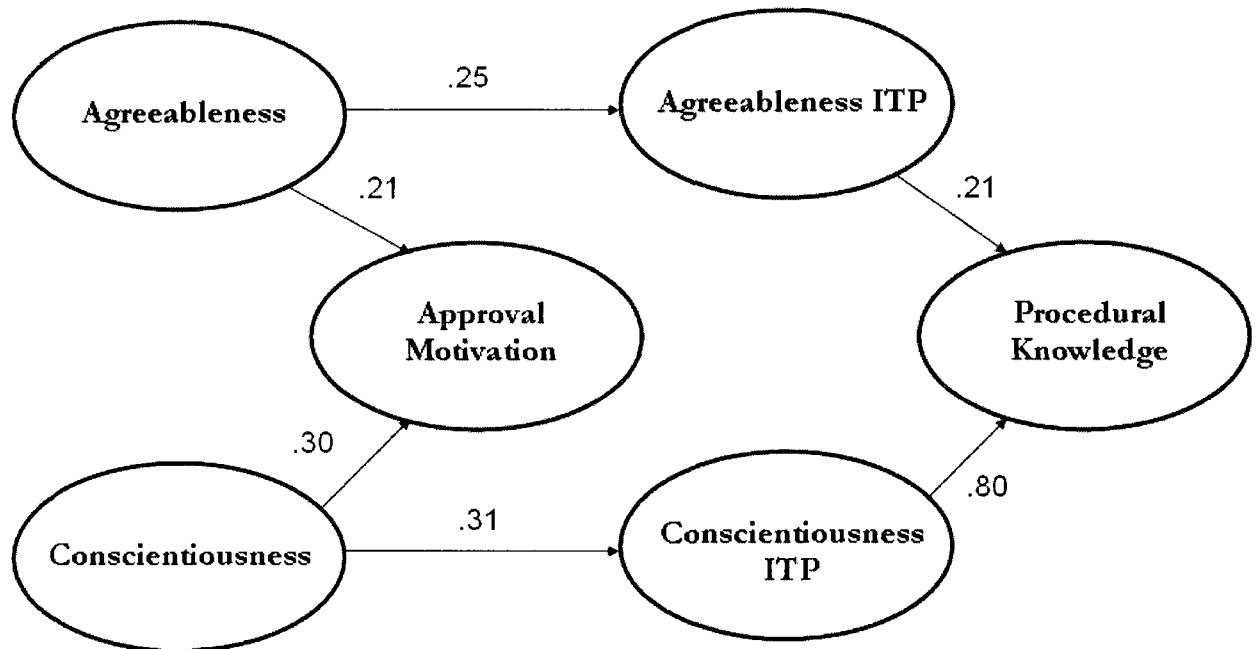
ITP C = Conscientiousness ITP.

AM = Approval Motivation.

\* $p < .05$ , two-tailed. \*\* $p < .01$ , two-tailed.

The test of the model resulted in a chi-square of  $\chi^2(6, N = 96) = 37.47, p < .01$ , indicating that the null hypothesis that the model fits the data must be rejected. Accordingly, both the CFI (.83) and RMSEA (.23) values suggest poor model fit. As before, covariances between agreeableness and conscientiousness ( $r = .19$ ) and the ITPs for the two traits ( $r = .57$ ) were added. Path coefficients for this revised model are presented in Table 4 and Figure 5. The test of this revised model resulted in a chi-square of  $\chi^2(5, N = 96) = 3.47, p > .05$ . CFI (1.00) and RMSEA (.00) values suggest it is a good fit for the data.

Figure 4. Standardized path coefficients for reduced sample.



### Discussion

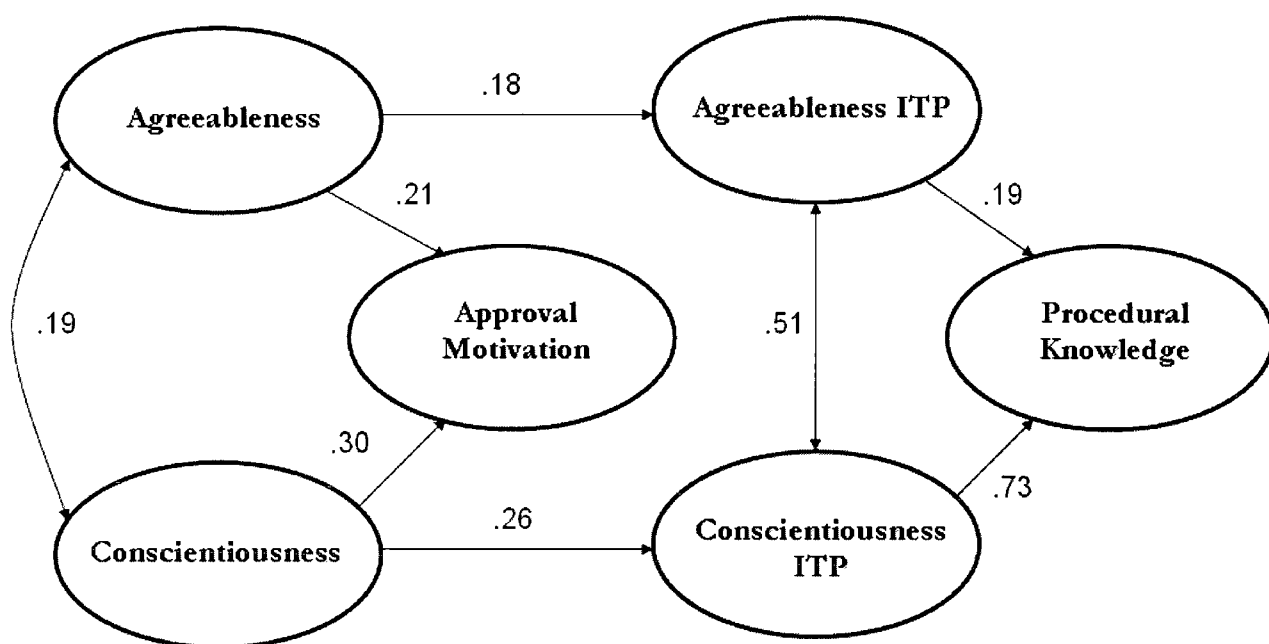
This investigation's results were ambivalent as to the relationship between approval motivation and procedural knowledge as measured by a behavioral tendency SJT. Approval-seeking was related to procedural knowledge at the zero-order level in the full sample but not significantly correlated with procedural knowledge in the reduced sample. Path analyses indicated that approval-seeking was causally related to procedural knowledge in the full sample through its influence on the ITP for conscientiousness, but was not causally related to procedural knowledge in the reduced sample. Approval motivation's zero-order association with knowledge in the full sample may have been a reflection of its link with conscientiousness and agreeableness, in addition to its influence on the ITP for conscientiousness.

The argument that the approval-seeking tendencies of agreeable and conscientious people are related to their ITP acquisition was partially supported in the full sample but



not in the reduced sample. Approval-seeking was not causally related to the ITP for agreeableness in either sample but was causally associated with the ITP for conscientiousness in the full sample. Approval motivation also partially mediated the relationship between conscientiousness and the ITP for conscientiousness in the full sample, the association between the two being reduced when approval motivation was accounted for.

Figure 5. Revised model for reduced sample.



Results further validate ITP theory, in addition to addressing the effects of approval motivation on SJT score. Consistent with past findings (Motowidlo et al., 2006a; 2006b), agreeableness and conscientiousness were correlated with their respective ITPs. In both samples the effects of conscientiousness and agreeableness on procedural knowledge were also fully mediated by their ITPs, replicating Motowidlo et al. (2006a). In the full sample agreeableness was correlated with the ITP for conscientiousness and conscientiousness was correlated with the ITP for agreeableness. These relationships

have not been found in previous ITP studies (Motowidlo et al., 2006a; 2006b). These associations could reflect the possibility that people are capable of recognizing the effectiveness of various trait expressions, even if they themselves do not score high on those traits (D. J. Beal, personal communication, May 2, 2008). This especially might be the case when individuals possessing one positively-regarded trait (e.g., agreeableness) are evaluating the effectiveness of another positively-regarded trait (e.g., conscientiousness). Conversely, these findings could also be artifacts unique to the full sample. The full sample was assumed to have contained a number of careless responses, due to the speed with which some students completed the questionnaires, the positive association between SJT score and time spent finishing the questionnaires, and lower mean SJT scores for students who finished the questionnaires in less than a half hour compared to students who finished the questionnaires in more than a half hour. These results could be a product of these potentially inaccurate responses and constitute a fallacious depiction of the associations between traits and ITPs.

The model proposed in Figure 1 did not fit the data in the full or reduced samples well. Improved model fit was only obtained when the covariances between agreeableness and conscientiousness and the ITPs for these two traits were added. Even with the addition of these covariances, the RMSEA value for the full sample model did not meet the criterion for adequate fit (.05; Brown & Cudeck, 1993). Nonetheless, the RMSEA value (.06) was not far from reaching this standard. This, combined with a high CFI value (.99) indicating good model fit, suggests that the revised model for the full sample may have adequately fit the data.

Both models indicated that conscientiousness and agreeableness exert a causal

influence on their concurrent ITPs. These results not only indicate that dispositional fit is important for ITP acquisition but also that factors other than traits are involved in learning about the costs and benefits of personality expressions. Traits accounted for less than 20% of the variance in their respective ITPs in both samples, suggesting that additional influences guide ITP acquisition in addition to personality. If, as Motowidlo and colleagues (Motowidlo et al. 2006a; 2006b; Motowidlo & Beier, 2008) suggest, ITPs are characteristic adaptations they should be affected by experience. Even though individuals are predisposed to consider the expression of their own traits as effective, over time, individuals should learn the expression of their traits is more effective in some situations but less effective in others. For example, conscientious people tend to judge behavioral expressions of their trait to be effective. Through experience, however, conscientious people should also learn that conscientious behavior is less effective in some situations (e.g., brainstorming new ideas) than others (e.g., finishing a report on time). Despite the influence of dispositional fit, experiences in situations where the expression of their trait is less effective should lead conscientious individuals to develop ITPs that weigh their trait less heavily when similar situations arise. Experience and environmental variables should thus account for variance in ITPs beyond personality traits.

Consistent with the literature (e.g., Mascaro & Rosen, 2005; Peterson et al., 2006), agreeableness and conscientiousness were also causally related to approval-seeking. This implies that individuals' approval-seeking tendencies may, to some degree, be accounted for by the extent to which they are agreeable and conscientious. Agreeable people's desire to form interpersonal bonds may cause them to seek the approval of

others, just as conscientious people's achievement-striving and need to fulfill obligations may also motivate them to seek the approval of others.

Both ITPs were causally associated with procedural knowledge. This provides additional support for the theory that a portion of the procedural knowledge measured by SJTs is shaped by knowledge about the costs and benefits of personality expressions (Motowidlo & Beier, 2008; Motowidlo et al., 2006a). That the study sample was composed of undergraduates explains the strong causal path leading from ITPs to procedural knowledge: the procedural knowledge assessed was largely comprised by ITPs as students completing the SJT had little to no experience with the managerial workplace situations described.

Approval-seeking was associated with the ITP for conscientiousness only in the full sample, partially mediating the relationship between the trait and its ITP. This relationship suggests that the approval-seeking tendencies of conscientious people facilitate the acquisition of their consonant ITP, in addition to dispositional fit. Conversely, this association could be the product of the potentially careless responding that may have occurred in the full sample, as discussed above. That the best-fitting model was obtained for the reduced sample, which presumably contained fewer inaccurate responses, and did not include a causal path leading from approval-seeking to the ITP for conscientiousness supports the possibility that approval motivation is *not* truly causally related to ITP acquisition.

In sum, both models indicate that the causal arrow leads from personality traits to ITPs to procedural knowledge. This indicates that personality is associated with SJT score through dispositional fit, which is partially responsible for ITP acquisition.

Approval-seeking may also facilitate acquisition of the ITP for conscientiousness, as suggested by the full sample model. Approval motivation's influence on the ITP for conscientiousness also linked it to procedural knowledge in the full sample. The zero-order correlation between knowledge and approval-seeking found in the full sample appears to reflect the association of approval-seeking with agreeableness and conscientiousness, in addition to its influence on the ITP for conscientiousness.

Future investigations should attempt to clarify the associations among approval-seeking, ITPs, and procedural knowledge. Although the best-fitting model produced by this study suggests approval motivation is causally unrelated to ITPs or SJT score, further study should confirm this. Future research should also take account of the significant covariance between the ITPs for agreeableness and conscientiousness, which could be a product of the two ITPs having been calculated using personality scores derived from the same response options. A future study could use different samples of an SJT's response alternatives to calculate these ITPs, lessening or eliminating this covariance. For example, agreeableness scores for an SJT's odd-numbered items could be used to calculate the ITP for agreeableness, while the conscientiousness scores for an SJT's even-numbered items could be used to calculate the ITP for conscientiousness.

Overall, these results suggest that approval motivation may not be problematic for SJT administration, mirroring prior conclusions about the effects of social desirability on the validity of personality tests (Hough et al., 1990; Ones et al., 1996). Any association between approval motivation and SJT score appears to reflect approval motivation's links with agreeableness, conscientiousness, and the ITP for conscientiousness, all of which have been shown to be meaningfully related to procedural knowledge (Motowidlo et al.,

2006a).

## References

- Ackerman, P. L. (1996). A theory of adult intellectual development: Process, personality, interests, and knowledge. *Intelligence, 22*, 227-257.
- Allport, G. W. (1955). *Becoming*. New Haven, CT: Yale University Press.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science, 16*, 74-94.
- Beretvas, S. N., Meyers, J. L., & Leite, W. L. (2002). A reliability generalization study of the Marlowe-Crowne Social Desirability Scale. *Educational and Psychological Measurement, 62*, 570-589.
- Bornstein, R. F. (2002). A process dissociation approach to objective-projective test score interrelationships. *Journal of Personality Assessment, 78*, 47-68.
- Brown, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.
- Byrne, D. (1971). *The attraction paradigm*. New York: Academic Press.
- Campbell, J. P., Gasser, M. B., & Oswald, F. L. (1996). The substantive nature of job performance variability. In K. R. Murphy (Ed.), *Individual differences and behavior in organizations* (pp. 258-299). San Francisco: Jossey-Bass.
- Côte, S., & Moskowitz, D. S. (1998) On the dynamic covariation between interpersonal behavior and affect: Prediction from neuroticism, extraversion, and agreeableness. *Journal of Personality and Social Psychology, 75*, 1032-1046.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*, 349-354.

- Crowne, D. P., & Marlowe, D. (1964). *The approval motive*. New York: Wiley.
- Edwards, A. L. (1957). *The social desirability variable in personality assessment and research*. New York: Holt, Rinehart, & Winston.
- Fazio, R. H., & Olson, M. A. (2003). Implicit measures in social cognition research: Their meaning and use. *Annual Review of Psychology, 54*, 297-327.
- Festinger, L., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance. *The Journal of Abnormal and Social Psychology, 58*, 203-210.
- Gangestad, S. W., & Snyder, M. (2000). Self-monitoring: Appraisal and reappraisal. *Psychological Bulletin, 126*, 530-555.
- Goldberg, L. R. (1992). The development of markers for the big-five factor structure. *Psychological Assessment, 4*, 26-42.
- Goldberg, L. R. (1999). A broad-bandwidth, public-domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. De Fruyt, F. Ostendorf (Eds.), *Personality psychology in Europe, vol. 7* (pp. 7-28). Tilburg, The Netherlands: Tilburg University Press.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality, 37*, 504-528.
- Hooper, A. C., Cullen, M. J., & Sackett, R. (2006). Operational threats to the use of SJTs: Faking, coaching, and retesting issues. In J.A. Weekley & R.E. Ployhart (Eds.), *Situational judgment tests* (pp. 205-230). Mahwah, NJ: Erlbaum.
- Horton, D. L., Marlowe, D. P., & Crowne, D. (1963). The effect of instructional set and need for social approval on commonality of work association responses. *Journal of Abnormal and Social Psychology, 66*, 67-72.



- Hough, L. M., Eaton, N. K., Dunnette, M. D., Kamp, J. D., & McCloy, R. A. (1990). Criterion-related validities of personality constructs and the effect of response distortion on those validities. *Journal of Applied Psychology, 75*, 581-595.
- Jackson, D. N., & Messick, S. (1958). Content and style in personality assessment. *Psychological Bulletin, 55*, 243-252.
- James, W. (1890). *The principles of psychology*. New York: Dover Publications.
- Jang, K. L., Livesley, W. J., & Vernon, P. A. (1996). Heritability of the big five personality dimensions and their facets: A twin study. *Journal of Personality, 64*, 577-591.
- Jensen-Campbell, L. A., & Graziano, W. G. (2001). Agreeableness as a moderator of interpersonal conflict. *Journal of Personality, 69*, 323-361.
- Klohnen, E. C., & Luo, S. (2003). Interpersonal attraction and personality: What is attractive-self similarity, ideal similarity, complementarity, or attachment security? *Journal of Personality and Social Psychology, 85*, 709-722.
- Leite, W. L., & Beretvas, S. N. (2005). Validation of scores on the Marlowe-Crowne Social Desirability Scale and the Balanced Inventory of Desirable Responding. *Educational and Psychological Measurement, 65*, 140-154.
- Marlowe, D., & Crowne, D. P. (1961). Social desirability and response to perceived situational demands. *Journal of Consulting Psychology, 25*, 109-115.
- Mascaro, N., & Rosen, D. H. (2005). Existential meaning's role in the enhancement of hope and prevention of depressive symptoms. *Journal of Personality, 73*, 985-1014.
- McCrae, R. R., & Costa, P. T. (1983). Social desirability scales: More substance than

- style. *Journal of Consulting and Clinical Psychology*, 51, 882-888.
- McCrae, R. R., & Costa, P. T. (1996). Toward a new generation of personality theories: Theoretical contexts for the Five-Factor Model. In J. S. Wiggins (Ed.), *The five-factor model personality* (pp. 51-80). New York: Guilford Press.
- McDaniel, M. A., Hartman, N. S., Whetzel, D. L., & Grubb, W. L. (2007). Situational judgment tests, response instructions, and validity: A meta-analysis. *Personnel Psychology*, 60, 63-91.
- McDaniel, M. A., Morgeson, F. P., Finnegan, E. B., Campion, M. A., & Braverman, E. P. (2001). Predicting job performance using situational judgment tests: clarification of the literature. *Journal of Applied Psychology*, 86, 730-740.
- McDaniel, M. A., & Nguyen, N. T. (2001). Situational judgment tests: A review of practice and constructs assessed. *International Journal of Selection and Assessment*, 9, 103-113.
- Millham, J., & Jacobson, L. I. (1978). The need for social approval. In H. London and J. E. Exner (Eds.), *Dimensions of personality* (pp. 365-390). New York: Wiley.
- Moorman, R. H., & Podsakoff, P. M. (1992). A meta-analytic review and empirical test of the potential confounding effects of social desirability response sets in organizational behaviour research. *Journal of Occupational and Organizational Psychology*, 65, 131-149.
- Moskowitz, D. S., & Côté, S. (1995). Do interpersonal traits predict affect? A comparison of three models. *Journal of Personality and Social Psychology*, 69, 915-924.
- Motowidlo, S. J. (2005). Job performance. In W. C. Borman, D. R. Ilgen, and R. J. Klimoski (Eds.), *Comprehensive handbook of psychology, vol. 12: Industrial and*

- organizational psychology* (pp. 39-53). New York: Wiley.
- Motowidlo, S. J., & Beier, M. E. (2008). *Effects of implicit trait policies and relevant job experience on scoring keys for a situational judgment test*. Manuscript under review.
- Motowidlo, S. J., Dunnette, M. D., & Carter, G. W. (1990). An alternative selection procedure: The low-fidelity simulation. *Journal of Applied Psychology, 75*, 640-647.
- Motowidlo, S. J., Hooper, A. C., & Jackson, H. L. (2006a). A theoretical basis for situational judgment tests. In J. A. Weekley & R. E. Ployhart (Eds.), *Situational judgment tests* (pp. 57-82). Mahwah, NJ: Erlbaum.
- Motowidlo, S. J., Hooper, A. C., & Jackson, H. L. (2006b). Implicit policies about relations between personality traits and behavioral effectiveness in situational judgment items. *Journal of Applied Psychology, 91*, 749-761.
- Muthén, L. K., & Muthén, B. O. (1998-2007). *Mplus User's Guide*. Fifth Edition. Los Angeles, CA: Muthén & Muthén.
- Ones, D. S., Viswesvaran, C., & Reiss, A. D. (1996). Role of social desirability in personality testing for personnel selection: The red herring. *Journal of Applied Psychology, 81*, 660-679.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17-59). New York: Academic Press.
- Paulhus, D. L. (2002). Socially desirable responding: The evolution of a construct. In H. I. Braun, D. N. Jackson, & D. E. Wiley (Eds.), *The role of constructs in*

*psychological and educational measurement* (pp. 49-69). Mahwah, NJ: Lawrence Erlbaum.

Peterson, C. H., Casillas, A., & Robbins, S. B. (2006). The student readiness inventory and the Big Five: Examining social desirability and college academic performance. *Personality and Individual Differences, 41*, 663-673.

Shamir, B. (1991). Meaning, self, and motivation. *Organization Studies, 12*, 405-424.

Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in experimental social psychology, vol. 21* (pp. 261-302). San Diego: Academic Press.

Strickland, B. R., & Crowne, D. P. (1962). Conformity under conditions of simulated group pressure as a function of the need for social approval. *Journal of Social Psychology, 58*, 171-175.