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## VIE-ing for the Position: An Examination of the Motivational Antecedents of Response Distortion

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VIE-ING FOR THE POSITION:  
AN EXAMINATION OF THE MOTIVATIONAL ANTECEDENTS OF RESPONSE  
DISTORTION

by

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## **ABSTRACT**

Faking on self-report personality tests is a widespread practice which degrades the construct validity of personality tests when they are used in personnel selection contexts and may lead to suboptimal hiring decisions (Donovan, Dwight, & Hurtz, 2003; Schmit & Ryan, 1993). While much is known about the factors which enable job applicants to successfully engage in faking (Tett, Freund, Christiansen, Fox, & Coaster, 2012), far less is known about how specific applicant perceptions throughout the hiring process influence their decision to engage in this practice. To this end, this study applied Vroom's (1964) expectancy theory to the study of applicant faking. Following the work of prior researchers (Peterson, Griffith, & Converse, 2009), this study incorporated an experimental paradigm in which participants were led to believe that they were completing a personality test as part of the hiring process.

Results of the study suggested that applicant faking on personality tests within personnel selection contexts is largely driven by valence (the extent to which applicants perceive the job to which they are applying as desirable) and expectancy judgments (an applicant's self-efficacy regarding their ability to successfully engage in faking). However, the three-way interaction between valence, instrumentality, and expectancy judgments which forms the crux of Vroom's (1964) theory did not demonstrate a significant impact on subsequent faking. A positive relationship between cognitive ability and faking was also found, suggesting that highly intelligent job applicants are more prone to engage in this behavior. In addition, applicant integrity demonstrated no relationship to faking behavior, suggesting that job applicants may not view the practice as being unethical. The potential implications of these findings in real-world selection contexts was discussed.

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## **CHAPTER ONE: INTRODUCTION**

The use of personality inventories for selection purposes is a nearly ubiquitous practice in modern human resource management (Oswald & Hough, 2011), and for good reason. Well-constructed personality inventories have been shown to be valid predictors of a wide variety of criteria including task performance, (Barrick & Mount, 1991; Ones, Viswesvaran, & Schmidt, 1993) leadership (Chan & Drasgow, 2001; Judge, Bono, Ilies, & Gerhardt, 2002), occupational attainment (Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007), in addition to contextual aspects of performance such as voice (Maynes & Podsakoff, 2013), organizational citizenship behavior (Borman, Penner, Allen, & Motowidlo, 2001), and deviance (Berry, Ones, & Sackett, 2007). Such inventories have also been shown to provide incremental validity beyond general mental ability for predicting task (Day & Silverman, 1989), contextual (Avis, Kudisch, & Fortunato, 2002) and adaptive performance (Colodro-Plaza, Garcés de los Fayos, López-Garcia, & Colondro-Conde, 2015). Not only are such inventories relatively inexpensive when compared with alternative tools such as assessment centers (König, Klehe, Berchtold, & Kleinmann, 2010), but they are also less likely to result in adverse impact relative to selectors such as cognitive ability (Ployhart & Holtz, 2008).

In spite of the objections of those who contend that such assessments are likely to be of little use in most applied settings (Davis-Blake & Pfeffer, 1989; Morgeson, Campion, Dipboye, Hollenbeck, Murphy, & Schmitt, 2007), it seems as if their use is unlikely to wane in the near future. However, the use of such assessments is predicated on the notion that individual applicants are responding to items truthfully when completing these inventories. Frankly, this notion is untenable due to the fact that for applicants, the selection context is an inherently high-stakes situation in which applicants seldom anticipate being held accountable for dishonest

responses. This is especially true when these inventories are administered online, as is now customary (Grieve & Elliott, 2013).

Faking on personality assessments, defined for the purposes of this study as the deliberate distortion of one's responses in order to present an inaccurate and socially desirable image of oneself, has been the focus of a tremendous volume of research literature within the organizational sciences, and for good reason. There has been a great deal of research into the individual differences, such as cognitive ability (Pauls & Crost, 2005) and job knowledge (Raymark & Tafero, 2009), which enable an applicant to engage in successful distortion. However, relatively little is known about the factors which may influence an applicant's decision to engage in faking.

Given the widespread prevalence of applicant faking on personality inventories within selection settings (Donovan, Dwight, & Hurtz, 2003; Donovan, Dwight, & Schneider, 2014), it seems as a large portion of the applicant population is motivated to engage in faking. However, little is known about how specific applicant perceptions of the hiring situation impact their motivation to engage in this behavior. While there has been some prior work in this area (McFarland & Ryan, 2006), this research has yet to examine the cumulative impact of multiple distinct applicant attitudes on faking behavior within an experimental setting. As such, this study seeks to begin filling this gap in the existing literature by applying Vroom's (1964) expectancy theory, a popular theoretical framework in the study of motivation, to the domain of applicant faking. Vroom's (1964) expectancy theory posits that the extent to which one is motivated to engage in a particular course of action is dictated by the multiplicative product of three distinct situational judgments pertaining to outcome desirability, task-specific self-efficacy, and the perceived correspondence between successful task performance and a desired outcome. In doing

so, this study aims to answer recent calls (Ellingson & McFarland, 2011) for the incorporation of this framework into the study of response distortion and other forms of deviant behavior and to further our understanding of the cognitive processes underlying responses to personality inventories within selection settings. It is my hope that this study will yield information that is useful to practitioners who are implementing real-world selection batteries and wish to craft an applicant experience which discourages them from engaging in willful deception.

In addition to examining the direct impact of the situational perceptions described in Vroom's (1964) expectancy theory on applicant faking behavior, this study is also going to examine the potential for traits such as cognitive ability and integrity to moderate these relationships. Prior research has suggested that deviant behavior may be influenced by interactions between perceptions of one's environment and stable individual differences (Burton, Mitchell, & Lee, 2005; Sulea, Fine, Fischmann, Sava, & Dumitru, 2013)<sup>1</sup>. As such, this research also hopes to further our understanding of the impacts that the interplay between situational and individual difference variables may have on self-serving deviant behavior.

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<sup>1</sup> For example, Sulea et al (2013) found that the effect of abusive supervision was associated with subsequent retaliatory behavior was stronger for employees lower in emotional stability.

## **CHAPTER TWO: LITERATURE REVIEW AND HYPOTHESES**

Unfortunately, the practice of faking on self-report personality inventories appears to be commonplace (Donovan et al., 2003), with individuals demonstrating elevated scores on socially desirable traits such as conscientiousness and emotional stability when completing personality assessments for selection purposes in real-world settings relative to when they complete such inventories for research purposes (Arthur, Glaze, Villado, & Taylor, 2010; Birkeland, Manson, Kisamore, Brannick, & Smith, 2006; Ellingson, Sackett, & Hough, 1999). As a whole, applicants appear to be fairly adept at accurately inferring which specific traits are considered desirable within a given occupational context and distorting their responses accordingly, going so far as to produce false personality profiles<sup>2</sup> with a remarkable degree of consistency across participants in experimental settings (Furnham, 1990; Tett, Freund, Christiansen, Fox, & Coaster, 2012). This is of great concern for organizations hoping to implement such assessments because it inhibits the ability to select individuals based on true indications of their typical behavioral tendencies. Unfortunately, faking likely results in instances in which those willing to engage in such deception are selected in favor of their similarly-qualified, albeit less deceptive, peers (Ellingson et al., 1999; Griffith, Chmielowski, & Yoshita, 2007; Peterson, Griffith, & Converse, 2009). This problem is exacerbated by low selection ratios (Rosse, Stecher, Miller, & Levin, 1998), suggesting that this is especially problematic in selection contexts where many applicants are competing for the same job.

In addition to compromising the quality of hiring decisions, deliberate faking on personality inventories has a deleterious effect on the construct validity of these inventories in

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<sup>2</sup> For example, participants in the Furnham (1990) study showed elevated scores on introversion and conscientiousness when told that they are applying for a position as a librarian.

operational settings. In order for a measure of a particular personality trait to possess construct validity, it must be relatively free of variance from sources other than the focal trait.

Unfortunately, prior research suggests that response distortion introduces large amounts of non-trait related variance into personality inventories. In a classic study in which Schmit and Ryan (1993) sought to examine the measurement equivalence of the NEO-FFI (Costa & McCrae, 1989) between applicant and nonapplicant populations, the inventory was administered to a sample of college students and a sample of job applicants for federal positions based in the Midwest. Not only did the authors find a lack of measurement equivalence between the two samples, but it was also revealed that a six-factor solution provided superior model fit relative to a five factor model in the applicant sample. This sixth factor was described by the authors as corresponding with response distortion due to strong factor loadings<sup>3</sup> for the majority of items corresponding with socially desirable traits, such as conscientiousness, agreeableness, and extraversion<sup>4</sup>. In another study in which military personnel completed a 10-factor personality inventory under both honest and “fake good” conditions, a principal components analysis revealed a unidimensional factor structure for response data among participants who were distorting their responses. This finding led the authors to suggest that responses among these participants were almost entirely dictated by their efforts at impression management (Ellingson et al., 1999). While some prior studies have suggested that the factor structure of personality measurements is unaffected by deliberate response distortion (Ellingson, Smith & Sackett, 2001; Marhsall, Fruyt, Rolland, & Bagby, 2005), these studies have typically incorporated social

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<sup>3</sup> In some cases the factor loadings for individual items on the “ideal employee factor” were even larger than those for the corresponding trait itself, please see Table 1 on pg. 970 of Schmit & Ryan (1993).

<sup>4</sup> Subsequent research has suggested that because the “correct” response on openness to experience items is less apparent to applicants relative to items corresponding to other FFM traits, the influence of the “ideal employee factor” on these items is mitigated to some degree (see Klehe et al., 2012).

desirability scales (i.e., scales containing bogus items designed to detect people who are engaging in impression management), the true utility of which for detecting fakers is questionable at best (Griffith & Peterson, 2008; Honkaniemi, Tolvanen, & Feldt, 2011).

Some prior research suggests that deliberate response distortion attenuates observed relationships between scores on self-report personality instruments and scores on other self or peer-report measures of psychological constructs (Holden, 2007; Holden & Passey, 2010) and supervisory ratings of contextual performance (O’Connell, Kung, & Tristan, 2011; Peterson, Griffith, Isaacson, O’Connell, & Mangos, 2011). However, response distortion does not appear to substantively attenuate observed relationships between scores on these inventories and task performance criteria (Hough, Eaton, Dunnette, Kamp, & McCloy, 1990; O’Connell et al., 2011). The ability to identify pertinent criteria on selection instruments and to respond accordingly is facilitated by cognitive ability (Christiansen, Burns, & Montgomery, 2005; Klehe et al., 2012; Tett et al., 2012), arguably the strongest predictor of task performance (Schmidt & Hunter, 2004). Furthermore, the ability to identify relevant criteria accounts for much of the criterion-related validity of selection instruments when predicting task performance (Jansen et al., 2013; Klehe et al., 2012). As such, the robustness of personality measures as predictors of task performance in spite of response distortion is altogether unsurprising. When taken as a whole, these findings suggest that qualitatively distinct cognitive processes may underlie honest and deceptive responses to personality inventories.

The process underlying item response under typical conditions is likely consistent with Thurstone’s (1928) notion that individuals respond affirmatively to items whose content matches their level of the latent trait in question (in this case, personality traits). However, responding to personality inventories during the application process constitutes a somewhat high-stakes

situation in which many applicants are incentivized to deliberately choose their responses based on perceived social desirability. This has been demonstrated by prior research incorporating a wide variety of methodologies (see van Hooft & Born, 2012), most notably in studies which have compared applicant and nonapplicant responses to a personality inventory using item response theory in order to examine relationships between latent traits and the probabilities of specific responses to items. Such studies have revealed differential item functioning<sup>5</sup> between applicant and nonapplicant samples, suggesting that there may be a distinction in the cognitive processes underlying item response between these two groups (Robie, Schmit, Ryan, & Zickar, 2000; Stark, Chernyshenko, Chan, Lee, & Drasgow, 2001). In addition, this research also revealed poorer model fit among job applicants, which the authors attributed to the heightened presence of non-personality-related variance in the response data (Robie et al., 2001). The generalized graded unfolding model is an item response model that was designed in accordance with Thurstone's (1928) ideas about the measurement of attitudes in addition to other non-ability constructs (Roberts, Donoghue, & Laughlin, 1998). This model is regarded by researchers as being one of the most appropriate models for measuring non-ability constructs such as personality (Stark, Chernyshenko, Drasgow, & Williams, 2006; Tay, Drasgow, Rounds, & Williams, 2009). However, a recent study demonstrated that this model demonstrated weaker model fit among a sample of participants who were instructed to engage in response distortion (Cao, Tay, Luo, & Drasgow, 2015). This finding provides further evidence that there may be differences in the underlying cognitive processes driving responses to personality inventories under typical and applicant conditions, potentially suggesting that applicants who engage in

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<sup>5</sup> Differential item functioning occurs when individuals from two different groups demonstrate significant differences in the relationship between the level of a latent trait (in this case, personality) and the probability of responding to an item in a specific way.

faking are responding to personality inventories as they would to an ability-based assessment.

As a field, the organizational sciences has produced a robust library of research pertaining to additional characteristics, such as verbal ability (Levashina, Morgeson, & Campion, 2012), job knowledge (Raymark & Tafero, 2009) and job experience (Mueller-Hanson, Heggstad, & Thornton, 2006) that bolster an applicant's ability to successfully distort their responses should they choose to do so. However, there has been scant investigation of the motivational antecedents which may influence an individual's decision to mobilize the self-regulatory resources necessary for effective response distortion. In addition, the potential moderating effects that both ability-related and noncognitive traits may have on these relationships remain unexamined.

Vroom's (1964) expectancy theory is a popular motivational theory which posits that the extent to which one is motivated to engage in a particular course of action is dictated by the multiplicative product of three distinct situational judgments pertaining to outcome desirability, task-specific self-efficacy, and the perceived correspondence between successful task performance and a desired outcome. As such, this study seeks to empirically examine the ability of the situational judgments described in Vroom's (1964) expectancy theory to predict applicant faking behavior. In addition, this study will also examine the potential roles of both cognitive ability and trait integrity as moderators of these relationships. By furthering our understanding of the motivational antecedents of applicant faking on self-report personality inventories, this study hopes to provide practitioners with information that can be used to discourage applicant faking.

### VIE-ing for an Interview

In 1964, Victor Vroom published his seminal book, *Work and Motivation*, in which he describes and advances his theory of motivation. According to Vroom's theory, there are three



primary types of judgments which influence the extent to which one is motivated to engage in a particular course of action: valence judgments, instrumentality judgments, and expectancy judgments. *Valence* judgments describe the extent to which a particular distal outcome is anticipated to result in a favorable affective response relative to all other possible outcomes (Vroom, 1964, pp. 17). *Instrumentality* judgments describe the extent to which a proximal outcome (typically conceptualized as the direct results of successful performance on a certain task) is seen as associated with the distal outcome of interest (Vroom, 1964, pp. 21). Finally, *expectancy* judgments are described as temporary and task-specific beliefs regarding the probability that a particular action will lead to a specific proximal outcome (Vroom, 1964, pp. 20). Within the context of the current study, valence judgments refer to the extent to which a job applicant views a job as being desirable, instrumentality judgments refer to the extent to which job attainment is seen as being contingent upon scores on a personality test, and expectancy judgments refer to the extent to which an applicant believes they can successfully fake their answers on a personality assessment.

Vroom theorized that valence, instrumentality, and expectancy influence one another multiplicatively in order to determine the total amount of motivational force present regarding a particular course of action, such that:

$$F_i = f_i \left[ \sum_{j=1}^n (E_{ij} V_j) \right] (i = n + 1 \dots m)$$

where  $F_i$  = the motivational force to perform act  $i$

$E_{ij}$  = the strength of the expectancy ( $0 \leq E_{ij} \leq 1$ ) that act  $i$  will be followed by outcome  $j$

$V_j$  = the valence of outcome  $j$ , whereby

$$V_j = f_j \left[ \sum_{k=1}^n (V_k I_{jk}) \right] (j = 1 \dots n)$$

where  $I_{jk}$  = the cognized instrumentality ( $-1 \leq I_{jk} \leq 1$ ) of outcome  $j$  for the attainment of outcome  $k$ .

Ultimately, Vroom contended that motivational force, defined as the cognitive force acting upon an individual to pursue a particular course of action, is the multiplicative product of valence, instrumentality, and expectancy judgments. It should also be noted that this process was theorized to occur for all plausible courses of action within a given situation, such that the course of action with the greatest motivational force would be perceived by the actor in question as being the most rational plan. For example, when determining whether or not to engage in deliberate faking on a personality assessment, an applicant's motivational force for either course of action is the product of the valence for multiple distal outcomes (the desirability of the job to which they are currently applying versus the desirability of other jobs that are potentially available to them), the level of instrumentality linking the proximal to the distal outcome (the extent to which job attainment is seen as being dependent on scores on the personality assessment versus other factors), and their perceived expectancy regarding their ability to attain the proximal outcome (their confidence that they will successfully be able to make themselves look like a good candidate via faking and improve their chances of being selected versus the extent to which they believe that attempts at faking will be unsuccessful). Ultimately, the option with the highest level of motivational force will be the most subjectively rational course of action in the eyes of the actor, and they will most likely elect to pursue this course of action.

Vroom (1964) is indeed clear that his theory pertains exclusively to the three way interaction between valence, instrumentality, and expectancy judgments such that a high level of any one of these three variables would strengthen the impact of the other two on subsequent

behavior. Nonetheless, I contend that due to prior evidence that all three components of Vroom's (1964) formula play an important role individually in determining effort and behavior (Bauer, Orvis, Ely, & Surface, 2015; Van Eerde & Thierry, 1996), an examination of linear effects in addition to the three-way interaction effect as specified by Vroom for predicting response distortion is justified.

There has been robust empirical support for Vroom's (1964) notion that valence perceptions (i.e., the perceived desirability of an outcome) impact motivation and ultimately, behavior. For example, in a series of large scale studies conducted among high school students, valence judgments regarding career outcomes (i.e., the extent to which students perceive having a prestigious and/or high paying job in the future as being desirable) were associated with subsequent measures of interest and motivation regarding academic development in addition to subsequent levels of academic achievement (Porfeli, Ferrari, & Nota, 2013<sup>6</sup>). These measures of work-related valence have also been found to be predictive of career-exploration behaviors (e.g., researching into potential career options or taking necessary steps towards the attainment of a chosen career) and self-report work motivation (Porfeli, Lee, & Weigold, 2012). Within occupational settings judgments regarding career outcomes (i.e., the perceived desirability of being promoted to a new position), have been shown to be positively related to attitudes regarding training programs and ultimately, the application of what was learned during training to on-the-job situations (Bauer, Orvis, Ely, & Surface, 2015). Finally, meta-analytic evidence suggests that outcome valence perceptions are predictive of subsequent task-related effort and performance (Van Eerde & Thierry, 1996).

Within the context of a selection procedure, valence judgments in all likelihood pertain to

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<sup>6</sup> Also see Malloch & Michael, 1981 for a similar study conducted among community college students.

the applicant's perception that the job for which they are applying will lead to greater personal satisfaction relative to other jobs that are potentially available to them (Ellingson & McFarland, 2011). It should be noted that valence judgments are inherently subjective (Vroom, 1964, pp.19) and that certain factors, such as the salary of the position in question, cannot be treated as a universally influencing the valence judgments among all members of the applicant pool. For example, a civil engineer with high levels of realistic interests (Holland, 1997) may hold lower levels of valence towards a project management position to which they are applying relative to other more conventional engineering jobs to which they may also be applying, even if the project management position comes with a heftier salary. While the relationship between perceived job desirability and response distortion has previously been theorized (Ellingson, 2011; McFarland & Ryan, 2000), this relationship remains unexamined empirically. However, prior research suggests that valence judgments regarding a specific job are broadly predictive of behaviors that are aimed at the attainment of a specific job, such as networking or the development of relevant skills (Bauer et al., 2015; Porfeli et al., 2012; Porfeli et al., 2013). Given that job applicants who engage in faking on personality inventories that are used within selection contexts are most likely doing so because they believe that this behavior will increase their chances of attaining the job to which they are applying, it stands to reason that valence judgments may be associated with faking on personality inventories. As such,

*Hypothesis 1: Valence judgments will be associated with greater subsequent response distortion.*

In addition to the impact of valence judgments, prior research has suggested that instrumentality judgments influence motivation and behavior. While prior theorists and researchers have operationalized instrumentality judgments concerning response distortion as the perception that faking is necessary in order to attain a job (Ellingson, 2011), this is inconsistent

with the manner in which Vroom (1964) himself describes instrumentality judgments. Specifically, Vroom (1964; see pages 17-21) describes instrumentality judgments not as being evaluations of the potential utility of a specific course of action, but rather as the perceived relationship between a proximal outcome (in this case, a favorable score on a personality inventory) and the ultimately desired distal outcome (in this case, receiving a job offer or being invited to the next stage in the selection process).

Within the organizational sciences, instrumentality judgments have been associated with training transfer (Bauer et al., 2015; Chiaburu & Lindsay, 2008), task performance, effort (Pritchard & Sanders, 1973; Van Eerde & Thierry, 1996), and scores on a pre-employment job knowledge test in a sample of applicants to a police academy (Sanchez, Truxillo, & Bauer, 2000). To date, no prior studies have operationalized instrumentality judgments as self-report perceptions of the relationship between personality inventory scores and ultimate selection decisions. However, examining results of previously conducted research among real-world applicant samples allows one to infer the influence of instrumentality judgments on faking behavior. For example, the tendency for applicants to exhibit greater distortion on measures of traits that are clearly job related (for example, conscientiousness and emotional stability) relative to measures of traits with more ambiguous relationships to job performance (such as openness to experience; Arthur et al., 2010; Birkeland et al., 2006) suggests that instrumentality judgments impact response distortion in real-world settings. These findings suggest that the perceived relationship between a score on a particular trait scale and advancement to the next stage of the selection battery will likely play a role in influencing the extent to which applicants are motivated to engage in response distortion. In short, applicants will likely be more motivated to

engage in faking on self-report personality inventories if they believe that their scores on these inventories impact their chances of being hired.

*Hypothesis 2: Instrumentality judgments will be associated with greater subsequent response distortion.*

Expectancy judgments within the context of response distortion pertain to an applicant's belief that they will be able to successfully fake their responses on a particular personality test. In real-world settings, expectancy judgments are likely high among the majority of job applicants due to the widespread presence of rumors and folk theories about how to "beat" a specific personality assessment (Landers, Sackett, & Tuzinski, 2011), and appear to be attenuated by warnings against faking (Burns, Filipowski, Morris, & Shoda, 2014; Dwight & Donovan, 2003; Fan, Gao, Carroll, Lopez, Tian, & Meng, 2012)<sup>7</sup>. Oddly, expectancy judgments regarding faking appear to be higher among applicant populations when the tests are administered online rather than on a paper-and-pencil format (Grieve & Elliot, 2013). This is possibly due to the ability of applicants to research "correct" answers to inventories while completing an online inventory<sup>8</sup>.

Unlike valence and instrumentality judgments, there already exists several studies in which the effect of expectancy judgments on subsequent response distortion has been examined. However, these studies have typically assessed expectancy judgments using a measure of generalized self-presentation self-efficacy<sup>9</sup> (McFarland & Ryan, 2006; Pauls & Crost, 2005) rather than explicit measures of one's confidence in their ability to successfully engage in

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<sup>7</sup> Readers should note that warnings against faking tend to result in the deflation of socially desirable traits, such as conscientiousness, leading some authors to suggest that the presence of warnings against faking may cause employees to "fake bad" in order to avoid being labeled as somebody who is distorting their responses.

<sup>8</sup> A quick visit to online message boards about the job application process will reveal a multitude of such discussions.

<sup>9</sup> The specific scale used in this study was the Fragebogen zur Wirksamkeit der Selbstdarstellung, with translated sample items including "In numerous situations I'm able to show myself at my best" and "In courses I'm able to appear in a way that others perceive me as a capable person"

response distortion. In addition, these prior studies also incorporated research paradigms in which participants were explicitly instructed to engage in faking on a personality test. As such, this relationship remains unexamined in a manner that is consistent with Vroom's (1964) writing. Given the fairly robust relationships between self-efficacy, motivation, and performance (Bandura, 1997), it's logical to expect that this relationship will be present in the domain of response distortion as well. As such,

*Hypothesis 3: Expectancy Judgments (operationalized as one's self efficacy regarding their ability to successfully distort their responses on a personality measure) will be associated with greater subsequent response distortion.*

It should be reiterated that, while individual components of Vroom's (1964) model have been incorporated into a wide variety of studies, few studies (and no published journal articles concerning applicant faking on personality inventories) have explicitly included the three-way interaction between valence, instrumentality, and expectancy judgments that forms the crux of Vroom's (1964) theory. This is fairly surprising, given the prevalence of Vroom's expectancy theory within the motivation literature and recent calls (Ellingson, 2011) for the incorporation of this framework into the study of response distortion and other forms of organizational deviance. It is clear that Vroom (1964) was speaking from a logically sound standpoint when he stated that all three types of judgments need to be present and favorable to some degree in order to allow for sufficient motivational force to compel action. For example, an individual would be less likely to muster the motivation necessary to fake a personality inventory if they did not believe that they could successfully distort their responses on the inventory (low expectancy judgment), even if they felt that the job itself was highly desirable (high valence judgment) and understood that favorable scores on the instrument are inextricably linked with their prospects of attaining it (high instrumentality judgments). In such a scenario, the individual impacts of valence and

instrumentality judgments on subsequent response distortion behavior, as well as that of the two-way interaction of said variables, would be mitigated. However, the impact of valence and instrumentality judgments on subsequent response distortion behavior should be strengthened if an individual possessed high levels of expectancy and believes that they can successfully distort their responses to make themselves appear to be a desirable candidate.

This study seeks in part to fill this gap in the literature by applying this classic and oft-cited theory, in a manner consistent with Vroom's (1964) original writing, to the area of response distortion on personality inventories in an attempt to gain a more thorough understanding of the motivational antecedents of this behavior. Doing so will afford us a greater understanding of the potential interplay between the multiple different types of situational perceptions that may govern not only response distortion, but all manners of deviant behavior. As such,

*Hypothesis 4: Motivational force, defined as the three way interaction between valence, instrumentality, and expectancy will be associated with greater response distortion and will account for unique variance in subsequent response distortion on a personality inventory beyond the direct effects of each individual variable.*

While Vroom (1964) does indeed specify a three-way interaction between valence, instrumentality, and expectancy judgments, all possible direct effects (and two-way interactions) of these variables on subsequent response distortion will be examined as an exploratory measure due to the existence of prior research which has found effects of this nature (see Van Eerde & Thierry, 1996).

#### Motivated, but Able?

While individuals likely differ regarding the valence, instrumentality, and expectancy judgments that they make regarding distorting their responses on a personality inventory, it is likely that the majority of applicants for positions will be motivated to distort their responses at



least to some degree. However, having sufficient motivation to *attempt* to complete an action and successfully completing said action are two different things. Making oneself appear to be a good candidate for a position regardless of one's actual standing on the latent traits used in a selection inventory is an effortful task requiring a fair amount of skill on the part of the respondent. Doing so requires determining which traits are considered desirable within a given position, examining item content to select the most appropriate response, and in many settings, detecting items measuring social desirability or items with "bogus" answers designed to detect fakers, and responding accordingly (Austin, 2002; Levashina, Morgeson, & Campion, 2009). As such, successfully engaging in faking on a personality inventory requires not only sufficient motivation, but sufficient ability as well.

A tremendous body of research suggests that general mental ability, defined for the purposes of this study as "the ability to deal with cognitive complexity, and in particular with complex information processing demands" (pp. 92, Gottfredson, 1997), is one of the most important individual differences for predicting task performance in a wide variety of domains (Schmidt & Hunter, 1998; Schmidt & Hunter, 2004). This is particularly true when the task in question requires complex information processing (Hunter, 1986). Researchers have long observed that there is a relationship between intelligence and the ability to successfully deceive others, with Charles Darwin (1877) observing that his children's ability to lie skillfully (that is, providing information that is seemingly plausible, albeit false) increased as their cognitive faculties became more sophisticated throughout childhood. Interestingly, modern child development researchers have even tied improvements in the ability to lie with milestones in cognitive development (Evans & Lee, 2011; Evans, Xu, & Lee, 2011).

In order for an applicant to successfully distort their responses, they must first be able to

identify the dimensions that are targeted by the selection tool in question. Prior research suggests that this skill is largely driven by general cognitive ability, with participants who are proficient at identifying pertinent criteria on structured interviews (Melchers, Klehe, Richter, Kleinmann, König, & Lievens, 2009) garnering far more favorable evaluations from interviewers relative to their less skillful counterparts. In another study which was conducted among recent university graduates in Switzerland, cognitive ability was found to be related to the ability to identify pertinent criteria on both a structured interview and among assessment center exercises, with this ability being highly related to performance ratings on both selection methods. In fact, prior research has shown that the relationships between scores on structured interview and assessment center exercises and supervisor-rated performance criteria are attenuated into nonsignificance once the ability to identify pertinent criteria is accounted for (Jansen et al., 2013; also see Ingold, Kleinmann, König, Melchers, & Van Iddekinge, 2015 and König, Melchers, Kleinmann, Richter, & Klehe, 2007). Within the domain of personality assessments, prior research has found that cognitive ability is associated with the ability to successfully distort responses on personality inventories in order to match the personality profiles deemed desirable by subject matter experts for candidates in a wide variety of positions (Tett, Freund, Christiansen, Fox, & Coaster, 2012). As such, it seems clear that the ability to successfully fake responses on selection instruments, personality measures included, is largely contingent upon general mental ability.

Ultimately, an applicant's tendency to successfully portray themselves in a desirable manner on selection inventories is likely due not only to their motivation distort their responses, but on their ability to do so as well. Prior research has supported the notion that successful task performance is contingent upon both ability-related and motivational factors (Cerasoli, 2015; Locke, 1965), and as an endeavor which is both cognitively taxing and likely driven by

motivational forces, successful response distortion will likely be the product of both the judgments posited in Vroom's (1964) work and general mental ability.

Prior research has suggested that valence judgments (i.e., job desirability) are associated with self-reported test-taking motivation and scores on a knowledge test used for selection purposes by a law enforcement organization (Sanchez et al., 2010). This is in line with prior research which suggests that job-related valence judgments can broadly be associated with behaviors aimed at increasing one's chances of job attainment (Bauer et al., 2015; Porfeli et al., 2012; Porfeli et al., 2013). As such, it stands to reason that valence judgments will also be associated with faking on self-report personality inventories. However, being able to deceptively respond to items in a personality inventory in a manner which substantively improves one's score is largely influenced by one's cognitive ability (Pauls & Crost, 2005; Tett et al., 2012). While it is likely that applicants who view the job to which they are applying as extremely desirable will be more likely to engage in a wide variety of behaviors, including faking, aimed at increasing their chances of being hired, they will be unsuccessful at substantively improving their scores via faking if they lack the requisite cognitive ability to do so. As such,

*Hypothesis 5: Cognitive ability will moderate the relationship between valence judgments and subsequent response distortion, such that the relationship between valence judgments and subsequent response distortion will become stronger as cognitive ability increases.*

Similarly, while few studies in the organizational sciences have examined interaction effects between instrumentality judgments and cognitive ability for predicting subsequent behavior, some prior research may allow us to infer the existence of such phenomena. In a study which administered both personality and cognitive ability inventories to applicants and job incumbents, significant positive correlations between scores on the personality inventories and scores on the cognitive ability inventories were found among the applicant population, but not

among job incumbents (Levashina, Weekly, Roulin, & Hauck, 2014). In this study, the applicant and incumbent samples are likely distinguishable largely due to the effects of their positions on instrumentality judgments regarding performance on the examination. While the applicant sample likely had sufficiently high instrumentality judgments to motivate response distortion, such instrumentality judgments were unlikely to be present among the incumbent sample. This is because A) as job incumbents, they had already attained the distal outcome associated with performance on the inventory and B) the inventory was being administered by an external firm who assured incumbents that their scores on these inventories would remain anonymous and were not to be shared with management. As such, I contend that while the perceived relationship between scores on a selection inventory and subsequent selection decisions likely motivates subsequent response distortion, these judgments will only manifest in successful distortion if the applicant possesses sufficient levels of cognitive ability.

*Hypothesis 6: Cognitive ability will moderate the relationship between instrumentality judgments and subsequent response distortion, such that the relationship between instrumentality judgments and subsequent response distortion will become stronger as cognitive ability increases.*

While favorable expectancy judgments regarding a specific task can generally be associated with high levels of motivation (Bandura, 1997), they are unlikely to be enough to engender successful response distortion. Recent research suggests that individuals who show ineptitude within a particular domain have difficulty accurately judging their performance in that area (Sheldon, Dunning, & Ames, 2014). As such, an individual's perception of their own ability to successfully engage in a certain activity may not necessarily be a good representation of their ability to successfully do so. While prior research has suggested that expectancy judgments regarding response distortion on self-report personality inventories are generally associated with higher levels of response distortion (McFarland & Ryan, 2006; Pauls & Crost, 2005), there are

likely many job applicants who are highly confident in their ability to engage in faking, yet lack the cognitive ability to do so effectively (Klehe et al., 2012; Tett et al., 2012). As such,

*Hypothesis 7: Cognitive ability will moderate the relationship between expectancy judgments and subsequent response distortion, such that the relationship between expectancy judgments and subsequent response distortion will become stronger as cognitive ability increases.*

### The Influence of Integrity

Another individual difference which may moderate the relationship between the factors discussed in Vroom's (1964) theory and subsequent response distortion is applicant integrity. Integrity is defined as a non-ability individual difference characterized by a proclivity towards sincerity, fairness, modesty, and the avoidance of greed (Lee & Ashton, 2004). Integrity tests were popularized as a selection instrument following public outrage regarding the use of polygraph tests for selection purposes (Sackett, Burris, & Callahan, 1989). Such tests can broadly be divided into overt integrity tests, which explicitly ask respondents about prior deviant behavior (e.g., theft or drug use) and personality-based measures, which typically include items pertaining to a sundry of individual differences including thrill seeking, honesty, hostility, and attitudes towards authority (Sackett, 1994). These personality-based measures of integrity have previously been shown to generally outperform both their overt counterparts and conventional big five inventories for predicting a wide variety of deviant behaviors, including theft and absenteeism among employees (Ones, Viswesvaran, & Schmidt, 1993; Ones, Viswesvaran, & Schmit, 2003; Van Iddekinge, Roth, Raymark, & Odle-Dusseau, 2012<sup>10</sup>) in addition to cheating among college students (Lucas & Friedrich, 2005). These findings provide some reassurance regarding the construct validity of such inventories (Mumford, Connelly, Helton, Strange, &

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<sup>10</sup> Ironically, these studies also found that the criterion-related validities of integrity tests are generally much higher when reported by the test publisher.

Osburn, 2001). Given that deliberate faking on personality inventories for selection purposes conforms to Robinson and Bennett's (1995) definition of organizational deviance<sup>11</sup>, it is unsurprising that prior research has linked scores on integrity tests with subsequent response distortion on personality inventories. Most notably, in a study in which a large sample of people were reapplying for a customer service position several months after an initial rejection, individuals who had high scores on a personality-based integrity test during their initial application were less likely to inflate their scores on socially desirable traits such as conscientiousness when reapplying to the position several months later (Hogan, Barrett, & Hogan, 2007).

Prior theorists have contended that an applicant's moral standing influences valence judgments regarding a particular position (Ellingson & McFarland, 2011) because individuals with high integrity will come to view the position with distaste if deception is required to attain it. However, this appears to be inconsistent with Vroom's (1964) description of valence judgments as pertaining to one's attitude towards a specific distal outcome rather than the means employed to attain said outcome. Furthermore, the findings of Hogan et al (2007) are unlikely to be explained by systematic differences in valence judgments between high-integrity and low-integrity applicants. All of the applicants included in this study found the customer service position sufficiently attractive to warrant reapplication following an initial rejection, regardless of their scores on a measure of integrity administered months before. Provided that there are not ethical issues inherent to the nature of the job itself, an individual's valence judgments regarding said job should be unlikely to be affected by their level of integrity. Rather, high levels of integrity will likely cause an applicant to a position to view the deception inherent to response

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<sup>11</sup> Robinson & Bennett (p. 556; 1995) define deviance as "voluntary behavior that violates significant organizational norms and in so doing threatens the well-being of an organization, its members, or both"

distortion as being unethical (Griffith, Malm, English, Yoshida, & Gujar, 2006), potentially reducing the extent to which applicants will succumb to the temptation to engage in ethically dubious responding (Day, Hudson, Dobies, & Waris, 2011).

High levels of integrity can potentially serve as a bulwark which can possibly reduce the extent to which high levels of valence, instrumentality, and expectancy judgments lead to subsequent response distortion. While once again, there seems to be a relative paucity of existing studies which examine the cumulative influence of integrity and the situational assessments described in Vroom's (1964) writing, we may still be able to infer the presence of such effects. For example, the sample of individuals in the Hogan et al., (2007) study who were reapplying to the customer service position several months after an initial rejection likely had universally high valence assessments regarding the position. The fact that these participants had a period of several months to search for (and potentially attain) alternative employment, suggesting that the position in question was viewed as highly desirable relative to alternatives that were available to participants in this sample. Nevertheless, those with higher scores on an integrity test were less likely to demonstrate substantive changes in their scores on socially desirable traits from one administration to the next. As such, even if an applicant views the job to which they are applying as being highly desirable relative to potential alternative positions, they will be unwilling to engage in voluntary response distortion if they have very high levels of integrity. As such,

*Hypothesis 8: Integrity will moderate the relationship between valence judgments and subsequent response distortion, such that the relationship will become weaker with increasing levels of applicant integrity.*

Similarly, while high levels of perceived instrumentality between scores on personality inventories and subsequent hiring decisions may potentially cause one to be motivated to engage in response distortion, individuals high on integrity will likely be unwilling to engage in behavior that compromises their values. It could be argued that many forms of deviant behavior in the

workplace, including response distortion, are driven by a desire to attain a desired outcome.<sup>12</sup> For example, employees who do not feel as if they are being compensated appropriately may engage in behaviors such as theft in an apparent effort to satisfy the goal of attaining sufficient compensation (Marcus & Schuler, 2004). However, individuals high on integrity may be less willing to engage in deviant behaviors relative to their peers, even if a desired outcome is on the line. As such,

*Hypothesis 9: Integrity will moderate the relationship between instrumentality judgments and subsequent response distortion, such that the relationship will become weaker with increasing levels of applicant integrity.*

In addition to valence assessments, high levels of applicant integrity may also attenuate the impact of high expectancy judgments regarding response distortion on subsequent behavior. In a large-scale study of college students, it was found that scores on a measure of academic integrity were associated with lower levels of self-reported cheating behavior even among those who reported that they would anticipate a low chance of being caught should they elect to cheat (Miller, Shoptaugh, & Wooldridge, 2011). Ultimately, I contend that while an individual may feel as if they are able to successfully distort their responses on a personality inventory that is being used for selection purposes, such behavior may stand in contradiction to the values of individuals who possess high levels of integrity (Pulfrey & Butera, 2015), ultimately reducing the extent to which such judgments impact subsequent response distortion behavior. As such,

*Hypothesis 10: Integrity will moderate the relationship between expectancy judgments and subsequent response distortion, such that the relationship will become weaker with increasing levels of applicant integrity.*

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<sup>12</sup> This is not to underscore the role that affect likely plays as well.



### **CHAPTER THREE: SCALE DEVELOPMENT STUDY**

A pilot study was conducted in order to develop the scales necessary for measuring participants' valence, instrumentality, and expectancy judgments regarding faking on self-report personality inventories within a selection context. I began by reviewing prior studies which have assessed valence, instrumentality, and expectancy judgments using self-report measures (e.g., Renko, Kroeck, & Bullough, 2012; Sanchez et al., 2000). At this point, I drafted sixteen items each pertaining to valence, instrumentality, and expectancy judgments. These items were then shown to nine doctoral students in industrial and organizational psychology who were asked to rate the extent to which each item corresponded with valence, instrumentality, and expectancy judgments on a five-point Likert scale. Only items who received average ratings of at least four for the targeted judgment type and average ratings of no more than two for the non-targeted judgment types were retained for further analysis. For example, the item "I can get a good score if I fake my answers on a personality test" was intended to measure participants' expectancy judgments and received average ratings of 4.67 for the extent to which it was representative of expectancy, 1.22 for the extent to which it represents valence, and a 2.22 for the extent to which it represents instrumentality. As such, this item was removed. Ultimately, this procedure resulted in the removal of four items from the pool of possible instrumentality items, and six items from the pool of possible expectancy items.

Following the initial content validation ratings, a sample of 562 participants was collected using Amazon's Mechanical Turk in order to investigate the psychometric properties of the proposed scales. Following Amazon's recommendations, I only allowed people with good records of performance (defined as having at least 98% of their prior work approved by Amazon

Mechanical Turk service requestors) to participate in the pilot study. In addition, the survey used contained two quality control items in order to detect inattentive respondents (Barger & Sinar, 2011). Following the removal of participants who failed at least one of the quality control items, 538 participants remained. This sample was 51% male with an average age of 34.28 years ( $SD = 10.70$ ).

Upon signing up for the study, participants completed a brief demographic questionnaire before being shown several items from the International Personality Item Pool and told that tests with similar items are oftentimes used for hiring purposes (please see page 73 in the Appendix for the specific text). At this point participants completed the remaining proposed expectancy items. Following this, participants were shown a job posting (please see page 74 in the Appendix) before being asked to complete the remaining proposed valence items. At this point, participants were asked to imagine that they were given a personality test while applying for the job in the aforementioned job posting before completing the remaining proposed instrumentality items. Participants were then informed of the purpose of the pilot study and compensated for their participation.

At this point, an exploratory factor analysis was conducted using data from one half ( $N = 269$ ) of the participants (factor loadings can be found starting on page 75 of the Appendix). Varimax rotation was used because I did not expect that the factors would be strongly intercorrelated. While the rotated pattern of factor loadings roughly corresponded with the intended constructs, certain items were removed from the scales either due to cross-loading onto multiple factors or loading primarily onto factors other than the one shared by the other items on the same scale. I selected items to be included on the final scales primarily based on the strength of their loadings onto the intended factors. However, due to a desire to make scales as concise as

possible, I also removed items if they were redundant with other items that had larger factor loadings<sup>13</sup> or if their inclusion did not meaningfully improve the internal consistency of the scale<sup>14</sup>.

Below are the three scales following the removal of these items.

*Valence ( $\alpha = .96$ )*

- 1. I would like having this job.*
- 2. This job is appealing to me.*
- 3. I want to be hired for this job.*
- 4. This job suits my needs.*
- 5. This job is appealing relative to other options that I have available.*
- 6. This job is a good fit for me.*

*Instrumentality ( $\alpha = .92$ )*

- 1. Having a good score on the personality test is necessary if you want to be hired.*
- 2. Whether or not you get hired depends on your scores on the personality test.*
- 3. Doing well on the personality test is critical if you want to be hired.*
- 4. Being hired largely depends on scores on the personality test.*
- 5. You must do well on the personality test in order to be hired.*
- 6. Scores on the personality test are a big part of the hiring decision.*

*Expectancy ( $\alpha = .88$ )*

- 1. I can figure out which answers will give me the best score on the personality test.*
- 2. I can figure out the answers that people are looking for when I take the personality test.*
- 3. I can get a good score on the personality test if I try to pick the “best” answers.*
- 4. Faking your answers on personality tests isn’t difficult.*

At this point, a confirmatory factor analysis was conducted using one half of the participants from the pilot study ( $N = 269$ )<sup>15</sup> using IBM AMOS 23 in order to examine model fit.

The results of the analysis suggests that the proposed model fit the data well ( $\chi^2 = 154.66$ ,  $df =$

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<sup>13</sup> For example, I removed the draft valence item “I would like to get this job” even though it had a strong factor loading ( $\lambda = .935$ ) because it was thematically redundant with the item “I would like to get this job”, which had a slightly higher factor loading ( $\lambda = .944$ ).

<sup>14</sup> For example, including the draft expectancy item “I can be deceptive when taking the personality test” only improves  $\alpha$  by .002 beyond the four-item scale.

<sup>15</sup> Note that these participants were not the ones whose data was used to conduct the aforementioned exploratory factor analysis.

101, TLI = .98, CFI = .98, RMSEA = .05, RMR = .05). The model that was examined, along with standardized parameter estimates, can be found below.

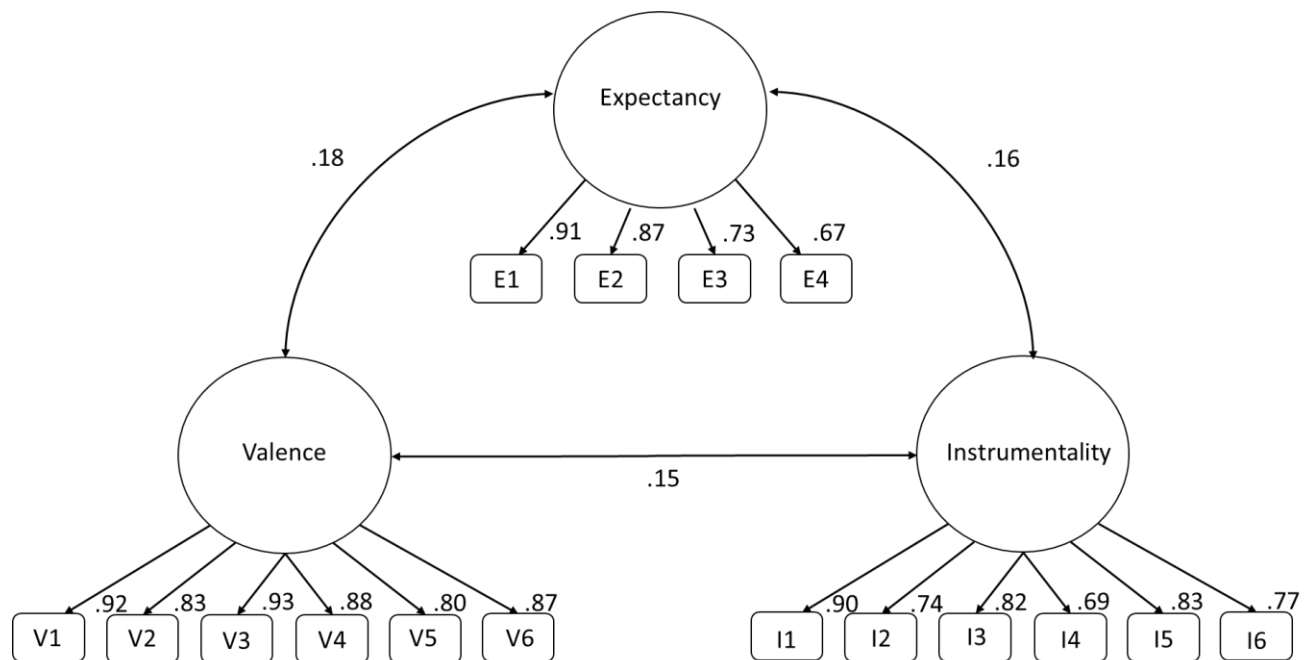


Figure 1: Standardized Parameter Estimates from Confirmatory Factor Analysis of Valence, Instrumentality, and Expectancy Scales in the Pilot Sample

## **CHAPTER FOUR: PRIMARY STUDY**

### **Participants**

Participants in this study were 755 undergraduate students at a large public university in the southeastern United States who participated in exchange for course credit. Participants were recruited using SONA systems, the university's research participant recruitment platform. This sample was 66% female with an average age of 19.64 years ( $SD = 4.37$ ). 63.2% of the sample identified as being non-Hispanic white.

### **Measures**

#### *Integrity*

Integrity was measured using the 16-item honesty/humility scale from the HEXACO-PI-R ( $\alpha = .73$ ). While it may initially seem odd to operationalize integrity in this manner, prior research has found convergent validity of both self and peer-ratings on the honesty-humility factor with both preexisting integrity tests and scores on an ethical business decision making task (Lee & Ashton, 2004; Lee, Ashton, Morrison, Cordery, & Dunlop, 2008).

#### *Cognitive Ability*

Cognitive ability was assessed using the Wonderlic Personnel Test (WPT-R), a well-known computerized adaptive test of cognitive ability which displays convergent validity with other tests of cognitive ability (Bell, Matthews, Lassister, & Leverett, 2002). Though this measure is not publically available, I was permitted to use it as part of my study as part of a research agreement with Wonderlic.

### *Five-Factor Personality*

Five-factor personality data was measured using the publicly available IPIP-Big Five Factor Markers inventory. This inventory consists of 100 items (twenty for each five-factor trait) and has previously demonstrated favorable psychometric properties (Goldberg, 1992). Scores are calculated by summing the responses for each of the twenty items for each five-factor trait, such that possible scores for each trait range from 20 to 100. Due to the highly problematic impact that missing data would have on scores on this measure, participants were required to complete all items before being permitted to continue with the experimental survey.

### *Valence, Instrumentality, and Expectancy Judgments*

Valence ( $\alpha = .93$ ), instrumentality ( $\alpha = .91$ ), and expectancy ( $\alpha = .87$ ) judgments were assessed using the aforementioned scales.

### Procedure

The majority of existing experimental studies focusing on applicant faking on self-report personality inventories have incorporated experimental paradigms in which participants are explicitly instructed to distort their responses on a measure (see Ellingson et al., 2001; Pauls & Crost, 2005; Stark et al., 2001; Tett et al., 2012). However, prior meta-analyses have shown that faking effect sizes in these instructed-faking studies are oftentimes far greater than those found in real-world settings (Birkeland et al., 2006; Viswesvaran & Ones, 1999). This has led some researchers to express concerns that the cognitive processes underlying faking in these directed-

faking studies are qualitatively distinct from those that drive faking in real-world scenarios (Ellingson & McFarland, 2011; Mueller-Hanson et al., 2006). For example, a real-world applicant who is engaging in response distortion may take steps to avoid selecting options that are “too good” due to concerns about being identified as somebody who is engaging in faking, whereas such pressures are absent in directed-faking studies. As such, the current study used an experimental paradigm similar to those used in studies by Ellingson, Heggstad, and Makarius (2011) and Peterson et al. (2009), in which deception is incorporated. In both of these studies, researchers told participants that they were collaborating with an external organization in order to develop a personality assessment that was going to be used for selection purposes, and that participants would be completing this assessment. In order to incentivize participants to engage in faking without explicitly instructing them to do so, participants in both studies were told that they would be contacted in order to interview for a desirable position<sup>16</sup> if their scores on the personality assessment were considered appropriate. As such, this study incorporated a similar experimental procedure in hopes of producing faking behavior that is analogous to that which is found in real-world settings.

Upon consenting to participate in the study, participants followed a link to the experimental website, which was hosted using Qualtrics. Participants then completed a brief demographic questionnaire before completing the HEXACO PI-R Honesty/Humility measure. Next, participants had to complete the Wonderlic PI-R, which was hosted on Wonderlic’s online platform. In order to link the data from Wonderlic’s platform with that from the rest of the experimental data, participants were asked to enter a unique personal identifier on both the Wonderlic and Qualtrics platforms.

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<sup>16</sup> In the Ellingson et al. (2012) study, this was a position in a fictional corporation’s leadership development program, whereas in the Peterson et al. (2009) study, this was a customer service position with a consulting firm.

Following the completion of the Wonderlic PI-R, participants completed two different expectancy measures. In order to avoid inadvertently divulging the purpose of the study to participants, participants completed expectancy measures pertaining to both personality and integrity measures<sup>17</sup>. Prior to each expectancy measure, participants read a brief description about how these measures are used for selection purposes. Participants were then shown several examples of items from publically-available personality and integrity assessments before completing expectancy measures that referenced both integrity and personality, respectively (see page 77-78 of the Appendix).

At this point, participants were shown a job posting for a position as an account manager within a healthcare technology firm (see page 80 of the Appendix) before being asked to complete the valence measure. The position described was intended to be a realistic first job for a recent graduate with a bachelor's degree in the social sciences or business. Because many real-world job postings contain descriptions of the desired personal characteristics of an applicant, the posting also contained hints about what personality characteristics would be viewed favorably<sup>18</sup>.

After participants viewed the job description, they read a short block of text in which they were told that I was collaborating with a company in order to A) develop a personality test that was going to be used to select candidates for the account management position that was just described to them B) learn more about how selection tests are perceived by job applicants. Participants were then told that that they will be contacted by the company in the future in order to interview for an account manager position if their scores on the personality assessment were

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<sup>17</sup> I would like to thank the committee member who raised this issue during my dissertation proposal.

<sup>18</sup> The hints were "comfortable engaging people in professional settings", "able to get along with others", "detail-oriented", "remain calm under pressure" and "open to a wide variety of experiences and duties". These were intended to imply that high levels of extraversion, agreeableness, conscientiousness, emotional stability, and openness were considered desirable.



compatible with the demands of the position and if they consented to have their data shared with the company. Next, participants were told that the final selection battery used was going to include personality, integrity, and cognitive ability assessments in addition to several interviews before completing four separate instrumentality measures that referenced personality, integrity, and cognitive ability assessments, respectively. Participants then had to indicate whether or not they consented to be contacted by the company regarding an interview, should their scores on the personality test prove to be compatible with the demands of the job. In order to enhance realism, participants were also given the option of uploading a resume.<sup>19</sup> Participants were then told that they were going to take the current version of the personality assessment that was being developed before completing the IPIP Big Five Factor Markers inventory.

At this point, the experimental deception was revealed to participants. Participants were told that I was not in fact collaborating with an external organization in order to develop a test for selection purposes and were then told that they would be completing the personality inventory for a second time without any possible social pressure to respond to items in a particular way. Participants then completed the IPIP Big Five Factor Markers Inventory for a second time before being debriefed.

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<sup>19</sup> Though only 47 of the 755 participants uploaded a resume at this point.

## **CHAPTER FIVE: ANALYSES**

### **Quality Control**

Due to concerns about the potential for inattentive respondents, two quality control items (Barger & Sinar, 2011) were embedded within the experimental survey in order to identify inattentive respondents. Out of the 755 participants in the initial dataset, 233 failed at least one of these quality control items. The data from these participants was removed from the dataset before I proceeded with further analysis. In order to ensure that the participants in the final sample were as similar as possible to real-world job applicants, the data from participants who had indicated that they were not interested in being contacted regarding an interview by the fictional external organization was also removed from the sample before I proceeded with further analysis. This resulted in the removal of an additional 299 participants from the dataset, resulting in a final sample size of 223 participants.

A second confirmatory factor analysis was conducted in order to ensure that the proposed factor structure for valence, instrumentality, and expectancy judgments was upheld in the primary study as well. The results of the analysis suggests that the proposed model fit the data fairly well ( $\chi^2 = 204.18$ ,  $df = 101$ ,  $TLI = .95$ ,  $CFI = .96$ ,  $RMSEA = .07$ ,  $RMR = .06$ ). Standardized parameter estimates can be found below.

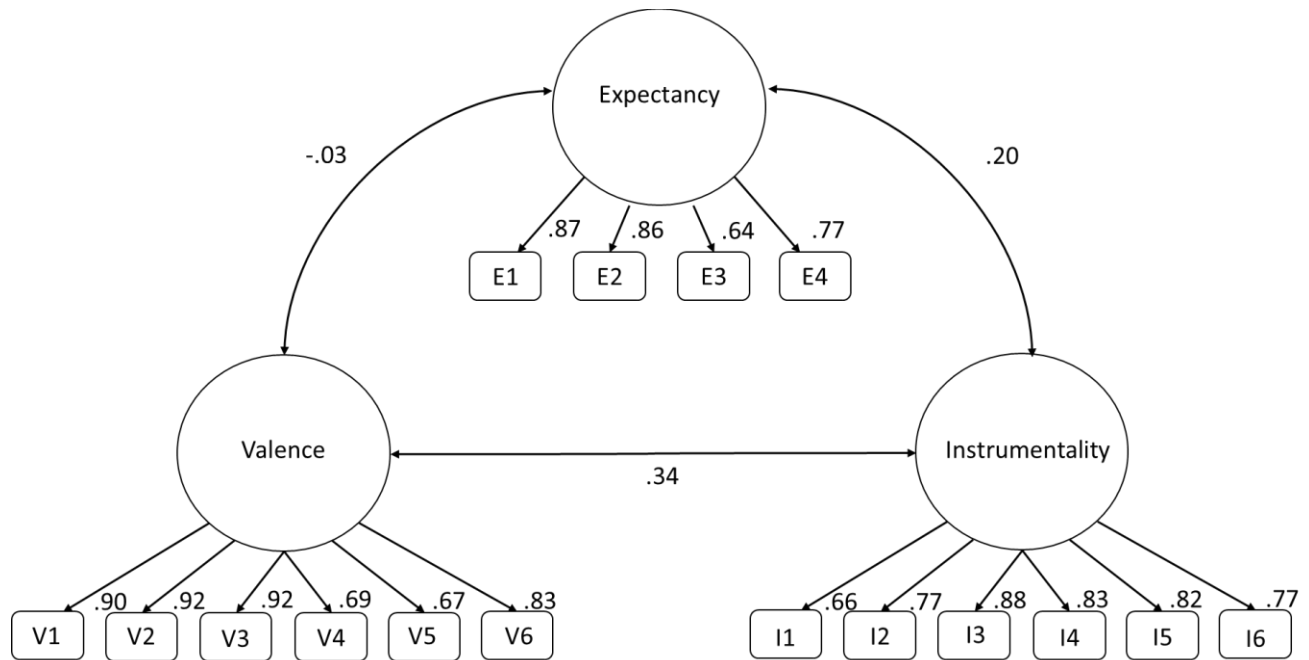


Figure 2: Standardized Parameter Estimates from Confirmatory Factor Analysis of Valence, Instrumentality, and Expectancy Scales in the Primary Sample.

It should be noted that while satisfactory model fit was attained, multiple parameter estimates changed dramatically from the pilot study to the primary sample. Most notably, the correlation between valence and expectancy dropped substantially from the pilot study ( $r = .18$ ,  $p < .05$ ) to the primary study ( $r = -.03$ ,  $n.s.$ ).

### Manipulation Check

Within subjects difference scores were examined in order to verify that the experimental manipulation induced participants to engage in response distortion. Scores for extraversion ( $t(222) = 4.18$ ,  $p < .01$ ,  $d = .17$ ), agreeableness ( $t(222) = 4.02$ ,  $p < .01$ ,  $d = .14$ ), conscientiousness ( $t(222) = 4.18$ ,  $p < .01$ ,  $d = .17$ ), emotional stability ( $t(222) = 3.53$ ,  $p < .01$ ,  $d = .15$ ), and openness ( $t(222) = 3.07$ ,  $p < .01$ ,  $d = .12$ ), were significantly higher in the applicant condition administration of the IPIP Big Five Factor Markers Inventory than they were on the

second administration of the inventory, after the experimental manipulation had been revealed to participants. It should be noted that the average within-subjects difference scores were generally small across all five traits (extraversion:  $M = 2.36$ ,  $SD = 8.44$ ; agreeableness:  $M = 1.60$ ,  $SD = 8.44$ ; conscientiousness:  $M = 2.18$ ,  $SD = 7.80$ ; emotional stability:  $M = 2.29$ ,  $SD = 9.68$ ; openness:  $M = 1.29$ ,  $SD = 6.29$ ) because many participants simply did not engage in faking on the personality inventory.

Prior studies in which multiple administrations of a personality assessment were given to real-world job applicants has suggested that a relatively small percentage of applicants actually engage in substantive amounts of response distortion on a given trait in real-world settings (Arthur et al., 2010; Griffith et al., 2007; Hogan et al., 2007). In order to identify participants who had engaged in response distortion based on the size of the discrepancy in scores between the two administrations of the personality inventory, I incorporated a slightly modified version of a metric introduced by Arthur et al. (2010), the standard error of measurement of difference scores, as a cutoff:

$$SEM_d = 1.65s_d\sqrt{1 - r_{x1x2}}$$

$s_d$  = standard deviation of the raw difference between time 1 and time 2 scores

$r_{x1x2}$  = correlation between time 1 and time 2 scores

Because I felt that Arthur et al.'s (2010) original metric was slightly too liberal, I chose to multiply these values by 1.65<sup>20</sup>. The resulting  $SEM_d$  values were 4.55 for extraversion, 3.46 for agreeableness, 4.29 for conscientiousness, 5.53 for emotional stability, and 3.53 for openness.

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<sup>20</sup> This value was chosen because it is the z value associated with a one-tailed 90% confidence interval on the t-distribution.

Because all possible scores on the IPIP Big Five Factor Markers Inventory are whole numbers, in practice this meant that in order to be identified as having engaged in faking on a particular trait, participants had to have applicant condition scores that were 5 points greater than non-applicant condition scores for extraversion, 4 points greater for agreeableness, 5 points greater for conscientiousness, 6 points greater for emotional stability, and 4 points greater for openness. Based on these criteria, 39 participants (17.5%) were flagged as having engaged in faking on extraversion, 48 (21.5%) on agreeableness, 41 (18.4%) on conscientiousness, 38 (17%) on emotional stability, and 41 (18.4%) on openness<sup>21</sup>. In total, 105 (47.1%) of participants were flagged as having engaged in faking on at least one trait.

Prior researchers have noted that raw within-subject difference scores can demonstrate spurious relationships with other experimental variables, (Christiansen, Burns, & Montgomery, 2005), such that variables that are positively correlated with participant's scores in an "honest" condition will be negatively correlated with the raw difference score, even though they may in fact have no substantive relationship with changes in scores between honest and faking conditions. Due to this issue, I followed the recommendations of Burns and Christiansen (2011) and used regression-adjusted difference scores in lieu of raw difference scores as the dependent variable in all tests of hypotheses. Regression-adjusted difference scores are computed by regressing scores from the faking condition onto scores from the honest condition and saving the unstandardized residual. As such, regression-adjusted difference scores are interpreted as the part of the scores from the faking condition that cannot be explained by scores in the honest

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<sup>21</sup> These figures are somewhat lower than those found in Arthur et al.'s (2010) field sample, who found that between 14% and 36% of applicants engaged in faking of individual traits, though it should be noted that the cutoff implemented in this study was more conservative.

condition. While the majority of commonly used statistical software programs provide methods of saving these scores, they can also be computed manually using the following formula:

$$Y_{F,H} = X_F - [X_H b_{F,H} + a]$$

$b_{F,H}$  = the unstandardized regression coefficient

$a$  = the intercept of the formula generated by regressing scores from the faking condition onto scores from the honest condition

## **CHAPTER SIX: RESULTS**

As shown in Table 1, Hypothesis 1 was partially supported. Scores on the valence measure were significantly correlated with the regression-adjusted difference scores for extraversion ( $r(221) = .13, p < .05$ ), agreeableness ( $r(221) = .17, p < .05$ ), and conscientiousness ( $r(221) = .17, p < .05$ ). However, scores on the valence measure were not significantly associated with regression-adjusted difference scores on the emotional stability ( $r(221) = .11, n.s.$ ) and openness ( $r(221) = .07, n.s.$ ) measures.

Hypothesis 2 was partially supported. Scores on the instrumentality measure were positively associated with the regression-adjusted difference scores for conscientiousness ( $r(221) = .13, p < .05$ ). However, scores on the instrumentality measure were not significantly correlated with regression-adjusted difference scores on the extraversion ( $r(221) = -.02, n.s.$ ), agreeableness ( $r(221) = .12, n.s.$ ), emotional stability ( $r(221) = .10, n.s.$ ), and openness ( $r(221) = -.02, n.s.$ ).

Hypothesis 3 was also partially supported. Scores on the expectancy measure were positively associated with the regression-adjusted difference scores for agreeableness ( $r(221) = .19, p < .01$ ), emotional stability ( $r(221) = .18, p < .01$ ), and openness ( $r(221) = .14, p < .05$ ). However, scores on the expectancy measure were not significantly correlated with the regression-adjusted difference scores for extraversion ( $r(221) = .11, n.s.$ ) or conscientiousness ( $r(221) = .09, n.s.$ ).

Table 1 Descriptive statistics and correlations between study variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Valence	3.11	1.02	.93						
2. Instrumentality	3.27	0.79	.30	.91					
3. Expectancy	3.60	0.88	-.06	.17	.87				
4. HEXACO PI-R Honesty Humility	3.17	0.53	.12	.04	-.31	.73			
5. Wonderlic PI-R	24.36	5.04	-.16	-.08	.11	-.10	--		
6. Extraversion Honest Condition	68.44	14.65	.16	.10	-.14	-.01	-.10	.93	
7. Extraversion Faking Condition	70.81	13.04	.21	.07	-.05	-.04	-.01	.82	.91
8. Extraversion Regression Adjusted Difference Score	0.00	7.46	.13	-.02	.11	-.06	.12	.00	.57
9. Agreeableness Honest Condition	81.33	12.09	.17	.18	-.06	.33	-.06	.35	.29
10. Agreeableness Faking Condition	82.93	10.69	.23	.21	.04	.28	-.01	.27	.35
11. Agreeableness Regression Adjusted Difference Score	0.00	5.26	.17	.12	.19	-.02	.07	-.05	.20
12. Conscientiousness Honest Condition	78.61	13.50	.16	.08	-.07	.22	.01	.35	.23
13. Conscientiousness Faking Condition	80.79	11.46	.23	.14	.00	.18	.08	.22	.31
14. Conscientiousness Regression Adjusted Difference Score	0.00	6.60	.17	.13	.09	.01	.13	-.12	.21
15. Emotional Stability Honest Condition	69.97	15.05	.16	.01	-.18	.21	.12	.49	.44
16. Emotional Stability Faking Condition	72.26	14.51	.20	.07	-.03	.11	.25	.26	.44
17. Emotional Stability Regression Adjusted Difference Score	0.00	8.97	.11	.10	.18	-.10	.25	-.20	.15
18. Openness Honest Condition	78.23	10.90	.15	.11	-.05	.18	.04	.44	.38
19. Openness Faking Condition	79.52	9.86	.16	.08	.04	.10	.16	.29	.42
20. Openness Regression Adjusted Difference Score	0.00	5.63	.07	-.02	.14	-.09	.23	-.12	.19

Note: Correlations above .12 are significant at  $p < .05$ , correlations above .17 are significant at  $p < .01$

$N = 223$ ,  $N = 194$  for coefficients involving the Wonderlic PI-R



	8	9	10	11	12	13	14	15	16	17	18	19	20
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.	--												
9.	0.01	.92											
10.	0.22	0.87	.91										
11.	0.43	0.00	0.49	--									
12.	-0.10	0.40	0.29	-0.11	.93								
13.	0.23	0.38	0.43	0.20	0.82	.91							
14.	0.54	0.09	0.33	0.51	0.00	0.58	--						
15.	0.07	0.28	0.24	0.01	0.45	0.39	0.03	.93					
16.	0.39	0.21	0.33	0.29	0.26	0.45	0.41	0.79	.93				
17.	0.55	-0.01	0.22	0.46	-0.16	0.23	0.63	0.00	0.62	--			
18.	0.04	0.49	0.39	-0.06	0.50	0.44	0.06	0.35	0.25	-0.04	.90		
19.	0.33	0.37	0.46	0.28	0.31	0.45	0.35	0.27	0.37	0.26	0.82	.88	
20.	0.51	-0.06	0.24	0.59	-0.18	0.17	0.54	-0.03	0.29	0.51	0.00	0.57	--

Note: Correlations above .12 are significant at  $p < .05$ , correlations above .17 are significant at  $p < .01$

$N = 223$ ,  $N = 194$  for coefficients involving the Wonderlic PI-R

Table 2: Hierarchical Regression Analyses Predicting Regression-Adjusted Difference Scores for Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness From Valence, Instrumentality, and Expectancy

	Trait									
	Extraversion		Agreeableness		Conscientiousness		Emotional Stability		Openness	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
<b>Step 1</b>	.04*		.07**		.04*		.05*		.03	
<b>Valence</b>		.17**		.17**		.15**		.12		.10
<b>Instrumentality</b>		-.10		.04		.07		-.02		-.07
<b>Expectancy</b>		.14*		.20**		.09		.18**		.16*
<b>Step 2</b>	.01		.01		.01		.01		.01	
<b>Valence</b>		.16*		.17*		.16*		.13		.12
<b>Instrumentality</b>		-.09		.05		.08		.02		-.08
<b>Expectancy</b>		.13		.19**		.08		.19**		.16*
<b>Valence x Instrumentality</b>		.00		-.06		-.08		-.01		.01
<b>Instrumentality x Expectancy</b>		.00		.07		.01		.05		.07
<b>Valence x Expectancy</b>		-.10		.05		.07		-.11		-.06
<b>Step 3</b>	.00		.01		.02*		.01		.00	
<b>Valence</b>		.17*		.19*		.19**		.16*		.11
<b>Instrumentality</b>		-.09		.06		.08		.02		-.09
<b>Expectancy</b>		.15*		.22**		.13		.23**		.15*
<b>Valence x Instrumentality</b>		-.00		-.06		-.09		-.01		.01
<b>Instrumentality x Expectancy</b>		.01		.07		.01		.01		.09
<b>Valence x Expectancy</b>		-.12		.02		.02		-.10		-.07
<b>Valence x Instrumentality x Expectancy</b>		-.06		-.09		-.16*		-.12		.05
<b>Total R<sup>2</sup></b>	.05*		.09**		.07*		.07*		.04	

\*  $p < .05$ , \*\* $p < .01$ ,  $n = 223$

Hierarchical regression analyses were conducted in order to test Hypothesis 4. In order to test this hypothesis, the regression-adjusted difference score for each trait was regressed onto scores on the valence, instrumentality, and expectancy measures in the first step. In the second

step, all possible two-way interaction terms between valence, instrumentality, and expectancy were added to the model. In the third and final step, the three-way interaction between valence, instrumentality, and expectancy was added to the model.

Hypothesis 4 was not supported, with the three-way interaction between valence, instrumentality, and expectancy failing to significantly predict regression adjusted difference scores for extraversion ( $\beta = -.06$ ;  $t(222) = -.79$ , *n.s.*), agreeableness ( $\beta = -.09$ ;  $t(222) = -1.19$ , *n.s.*), emotional stability ( $\beta = -.12$ ;  $t(222) = -1.55$ , *n.s.*), and openness ( $\beta = .05$ ;  $t(222) = .61$ , *n.s.*). Curiously, while the three way interaction between valence, instrumentality, and expectancy significantly predicted regression-adjusted difference scores in conscientiousness ( $\beta = -.16$ ;  $t(222) = -2.10$ ,  $p < .05$ ), the coefficient was negative.

Table 3: Hierarchical Regression Analyses Predicting Regression-Adjusted Difference Scores for Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness From Cognitive Ability, Valence, Instrumentality, and Expectancy

Predictor	Trait									
	Extraversion		Agreeableness		Conscientiousness		Emotional Stability		Openness	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
<b>Step 1</b>	.06*		.07**		.07**		.13**		.07**	
Valence		.19*		.11		.18**		.11		.10
Instrumentality		-.07		.07		.08		.04		-.05
Expectancy		.14		.20**		.10		.21**		.13
Wonderlic PI-R		.13		.07		.15*		.25**		.23**
<b>Step 2</b>	.02		.01		.01		.00		.01	
Valence		.19*		.10		.18*		.12		.09
Instrumentality		-.07		.08		.08		.04		-.05
Expectancy		.13		.21**		.10		.20**		.13
Wonderlic PI-R		.12		.07		.14*		.25**		.22**
Valence x Wonderlic PI-R		.01		.06		-.02		-.03		.00
Instrumentality x Wonderlic PI-R		-.06		-.07		-.03		-.00		-.05
Expectancy x Wonderlic PI-R		.15*		-.01		.00		.09		.00
<b>Total R<sup>2</sup></b>	.08*		.08*		.09*		.13**		.08*	

\*  $p < .05$ , \*\* $p < .01$ ,  $n = 194$

Hypothesis 5 was not supported, with cognitive ability failing to moderate the relationship between valence and regression-adjusted difference scores for extraversion ( $\beta = .01$ ;  $t(193) = .12$ , *n.s.*), agreeableness ( $\beta = .06$ ;  $t(193) = .73$ , *n.s.*), conscientiousness ( $\beta = -.02$ ;  $t(193) = -.20$ , *n.s.*), emotional stability ( $\beta = -.03$ ;  $t(193) = -.37$ , *n.s.*), and openness ( $\beta = .00$ ;  $t(193) = .03$ , *n.s.*).

Hypothesis 6 was also not supported, with cognitive ability failing to moderate the relationship between instrumentality and regression-adjusted difference scores for extraversion ( $\beta = -.06$ ;  $t(193) = -.62$ , *n.s.*), agreeableness ( $\beta = -.07$ ;  $t(193) = -.70$ , *n.s.*), conscientiousness ( $\beta = -.03$ ;  $t(193) = -.28$ , *n.s.*), emotional stability ( $\beta = -.01$ ;  $t(193) = -.10$ , *n.s.*), and openness ( $\beta = .-$

.05;  $t(193) = -.54, n.s.$ ).

Hypothesis 7 was partially supported, with cognitive ability moderating the relationship between expectancy and regression-adjusted difference scores for extraversion ( $\beta = .15$ ;  $t(193) = 2.04, p < .05$ ). As shown in figure 1, this interaction effect was such that the relationship between valence and subsequent response distortion became stronger as cognitive ability increased. However, this interaction did not operate in the manner in which I had originally expected. Interestingly, it seems that many participants with high levels of cognitive ability and relatively low levels of expectancy actually tended to demonstrate lower scores on extraversion when the personality inventory was completed in the faking condition relative to when they inventory was completed in the honest condition.

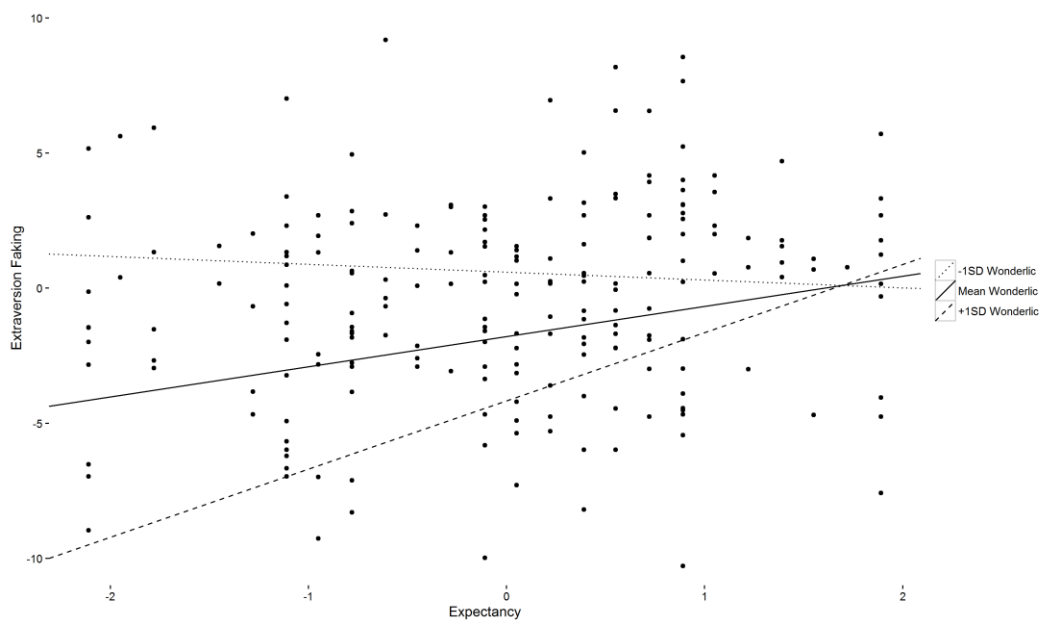


Figure 3: Cognitive ability moderating the relationship between expectancy and regression adjusted difference scores for extraversion

Table 4: Hierarchical Regression Analyses Predicting Regression-Adjusted Difference Scores for Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness From Integrity, Valence, Instrumentality, and Expectancy

Predictor	Trait									
	Extraversion		Agreeableness		Conscientiousness		Emotional Stability		Openness	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
<b>Step 1</b>	.04		.07**		.04*		.05*		.03	
Valence		.17*		.17*		.15*		.12		.11
Instrumentality		-.09		.04		.07		.04		-.07
Expectancy		.12		.21**		.09		.16*		.14
Honesty-Humility		-.03		.03		.01		-.07		-.06
<b>Step 2</b>	.03		.03*		.01		.04*		.02	
Valence		.18*		.15*		.15*		.12		.11
Instrumentality		-.09		.03		.07		.03		-.07
Expectancy		.15*		.20**		.09		.20**		.16*
Honesty-Humility		-.00		.01		.01		-.02		-.03
Valence x Honesty-Humility		.04		-.16*		-.05		.10		-.01
Instrumentality x Honesty-Humility		.13		-.04		.05		.00		.11
Expectancy x Honesty-Humility		-.09		-.02		-.02		-.13		-.10
<b>Total R<sup>2</sup></b>	.07		.10**		.05		.09**		.05	

\*  $p < .05$ , \*\* $p < .01$ ,  $n = 223$

However, cognitive ability did not moderate the relationship between expectancy and regression-adjusted difference scores for agreeableness ( $\beta = .06$ ;  $t(193) = .73$ , *n.s.*), conscientiousness ( $\beta = -.02$ ;  $t(193) = -.28$ , *n.s.*), emotional stability ( $\beta = .09$ ;  $t(193) = 1.23$ , *n.s.*), and openness ( $\beta = .00$ ;  $t(193) = .03$ , *n.s.*)

Hypothesis 8 was partially supported, with integrity moderating the relationship between valence and regression-adjusted difference scores for agreeableness ( $\beta = -.16$ ;  $t(222) = -2.12$ ,  $p < .05$ ). As shown in figure 2, this effect was such that the relationship between valence and subsequent response distortion on the agreeableness scale became weaker as integrity increased.

As such, people who perceived the job in question as being highly desirable were less likely to engage in response distortion on the agreeableness scale if they also possessed high levels of integrity.

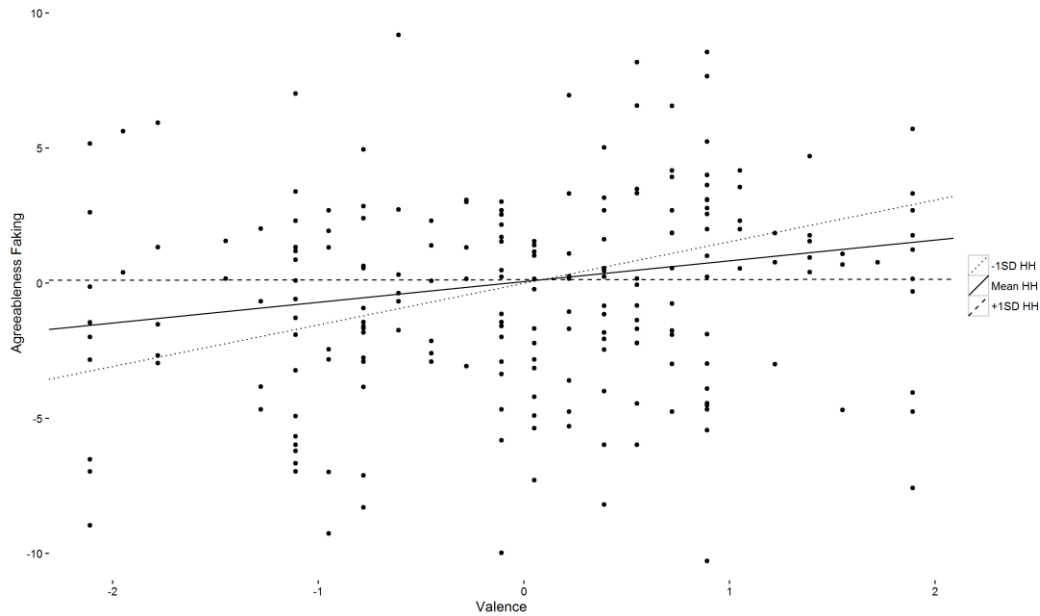


Figure 4: Integrity moderating the relationship between valence and regression adjusted difference scores for agreeableness. Please note that the variables depicted in this chart have been centered.

However, integrity did not moderate the relationship between valence and regression-adjusted difference scores for extraversion ( $\beta = .04$ ;  $t(222) = .51$ , *n.s.*), conscientiousness ( $\beta = -.05$ ;  $t(222) = -.65$ , *n.s.*), emotional stability ( $\beta = .10$ ;  $t(222) = 1.40$ , *n.s.*), and openness ( $\beta = .01$ ;  $t(222) = .10$ , *n.s.*).

Hypothesis 9 was also unsupported, with integrity failing to moderate the relationship between instrumentality and regression-adjusted difference scores for extraversion ( $\beta = .13$ ;  $t(222) = 1.74$ , *n.s.*), agreeableness ( $\beta = -.04$ ;  $t(222) = -.55$ , *n.s.*), conscientiousness ( $\beta = -.05$ ;  $t(222) = .62$ , *n.s.*), emotional stability ( $\beta = .00$ ;  $t(222) = .04$ , *n.s.*), and openness ( $\beta = .11$ ;  $t(222) = 1.50$ , *n.s.*).

Hypothesis 10 was not supported, with integrity failing to moderate the relationship between expectancy and regression-adjusted difference scores for extraversion ( $\beta = -.09$ ;  $t(222) = -1.27$ , *n.s.*), agreeableness ( $\beta = -.02$ ;  $t(222) = -.31$ , *n.s.*), conscientiousness ( $\beta = -.02$ ;  $t(222) = -.21$ , *n.s.*), emotional stability ( $\beta = -.13$ ;  $t(222) = -1.81$ , *n.s.*), and openness ( $\beta = -.10$ ;  $t(222) = -1.30$ , *n.s.*).

To summarize, response distortion appeared to be largely driven by valence and expectancy judgments. Participants with higher valence judgments (i.e., those who viewed the job as being more desirable) tended to engage in higher levels of faking on the scales corresponding to extraversion, agreeableness, and conscientiousness. Participants with higher instrumentality judgments (i.e., those who tended to perceive scores on the personality inventory as having a large impact on hiring decisions) tended to engage in higher levels of faking on the conscientiousness scale. Participants with higher expectancy judgments (i.e., those with higher levels of self-efficacy regarding their ability to successfully engage in faking) tended to engage in higher levels of faking on the scales corresponding to agreeableness, openness, and emotional stability. The three-way interaction term between valence, instrumentality, and expectancy that Vroom (1964) described in his original theory was not positively related to faking on any of the five trait scales.<sup>22</sup>

By and large, integrity and cognitive ability did not demonstrate the anticipated moderating effects on valence, instrumentality, and expectancy. While cognitive ability did moderate the relationship between expectancy judgments and subsequent faking on the extraversion scale, the exact nature of the relationship was surprising because individuals with high levels of cognitive ability and lower levels of expectancy actually tended to show deflated

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<sup>22</sup> In the case of conscientiousness, it was actually negatively related to response distortion.



scores on extraversion when the scale was completed under a quasi-selection situation. The exact reasons for this are not known at this time, though it is possible that these participants either A) believed that lower scores on extraversion would be viewed as desirable for the position<sup>23</sup> or that B) they were highly concerned about the potential of being “caught” faking their answers on the personality inventory at later stages of the selection process (i.e., these participants felt that unrealistically high scores on extraversion might arouse suspicion if their behavior during a possible interview doesn’t suggest high levels of extraversion). Given that prior research has suggested that extraversion is the most readily observable of all of the five factor traits (John & Robins, 1993; Macan, 2009), I view the latter explanation as being more likely.

Integrity was found to have moderated the relationship between valence judgments (i.e., perceived desirability of the job) and response distortion on agreeableness. This relationship was such that the relationship between valence judgments and subsequent response distortion in agreeableness grew weaker as integrity increased. However, integrity did not moderate any of the other relationships between the situational judgments described in Vroom’s (1964) theory and subsequent response distortion on any trait.

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<sup>23</sup> Which seems unlikely, given that the job posting was for a customer-facing position.

## **CHAPTER SEVEN: DISCUSSION**

### **Implications for Research and Practice**

The results of the study pose some interesting questions to researchers and practitioners hoping to A) gain a better understanding of the antecedents of applicant faking on self-report personality inventories and B) discourage applicants from engaging in this behavior or otherwise mitigate the impact of this phenomenon on hiring decisions made in real-world selection systems.

The impact of valence judgments (i.e. perceived job desirability) on applicant faking poses a thorny issue for practitioners hoping to limit faking on self-report personality inventories. Actions taken to reduce the perceived desirability of a job within selection contexts may very well have the outcome of reducing the number of applicants to a particular position. In addition, such practices may potentially reduce the overall quality of the applicant pool because highly qualified applicants may simply elect to seek employment elsewhere. Prior research has shown that implementing realistic job previews during the selection process may result in lowered perceptions of job desirability among applicants (Buckley, Mobbs, Mendoza, Novicevic, Carraher, & Beu, 2002; Phillips, 1998). However, such procedures may fail to mitigate the impact of valence judgments on response distortion because the applicants who elect to continue with the application process after being exposed to the information contained in the realistic job preview likely still perceive the job in question as being desirable relative to other options that they may have available. As such, while the results of the current study suggest that high valence judgments may induce applicants to engage in response distortion, interventions aimed at reducing faking by impacting applicant perceptions of job desirability are unlikely to have the intended effect.

One must keep in mind that valence judgments regarding job attainment are inherently subjective and are likely influenced by the life circumstances of a particular candidate. That is, candidates with few options available to them may have higher valence judgments regarding a particular job relative to candidates who are confident in their ability to secure employment (Ellingson, 2011). As such, macroeconomic factors such as unemployment and/or underemployment rates may impact the extent to which a particular job is viewed as desirable by the applicant pool, potentially impacting the prevalence of applicant faking. Admittedly, little can be done in selection settings to directly address this issue. However, in the event of adverse economic conditions, practitioners may wish to consider altering the content of operational selection batteries to place less emphasis on self-report personality inventories and increased emphasis on ability and/or skill-based tests that are less vulnerable to applicant faking (Lievens, Peeters, & Schollaert, 2008), such as cognitive ability tests, work samples, and situational judgment tests. Nevertheless, further research is needed to examine the potential impact of macroeconomic factors on the prevalence of applicant faking.

Higher instrumentality judgments were associated with higher levels of faking on conscientiousness. While instrumentality judgments didn't demonstrate relationships with faking on as many traits as valence or expectancy judgments, results of the current study still suggest that under some circumstances the perception that hiring decisions are largely contingent upon personality test scores may be associated with subsequent faking. A simple way of addressing this issue is to inform applicants that scores on the personality inventory are merely one of many criteria that are being considered as part of the selection process. Given that many practitioners shy away from using multiple hurdles due to the legal issues associated with this approach (Ployhary & Holtz, 2008), doing so is merely being honest.

The finding that high expectancy judgments (i.e., high self-efficacy regarding one's ability to successfully fake) were associated with higher levels of response distortion on several traits was altogether unsurprising given some of the prior literature on this subject (McFarland & Ryan, 2006; Pauls & Crost, 2005). It may seem like this issue could easily be resolved by simply warning applicants not to engage in faking or that a social desirability scale has been included in the personality measure, a practice which has been shown in the past to reduce both the prevalence and magnitude of faking on personality measures (Dwight & Donovan, 2002; Fan et al., 2012; McFarland, 2000). However, doing so may in and of itself impact the cognitive processes underlying responses to personality items. In a laboratory study conducted by Burns et al. (2014), warning participants not to engage in faking on a self-report personality inventory actually caused participants to “fake down” their scores on traits such as conscientiousness, demonstrating lower scores on socially desirable traits relative to those collected during a baseline measurement. As such, overtly warning applicants not to engage in faking itself induce response distortion, though in such a way that biases applicants towards socially-undesirable responses. Such warnings may in fact lead to situations in which applicants with relatively high scores on a particular trait are simply those who chose not to heed warnings not to engage in faking. In any case, the use of overt warnings intended to discourage faking are unlikely to prevent the construct validity of personality measurements from being compromised in a selection situation.

Additional research is needed to impact other means of reducing applicant perceptions of test fakability, and of the impact of item format on applicant perceptions of test fakability. The use of forced-choice measures represents a promising means of addressing this issue, and have

been shown to be less easily faked<sup>24</sup> relative to Likert-scale based measures (Christiansen et al., 2005).

Surprisingly, scores on the Wonderlic PI-R cognitive ability assessment were related to response distortion on conscientiousness, openness to experience, and emotional stability. While prior experimental studies have found relationships between cognitive ability and faking on personality measures (Pauls & Crost, 2005; Tett et al., 2012), these were both studies in which participants were explicitly directed to engage in faking. As such, these findings are novel in that they suggest that applicants with higher levels of cognitive ability may be more likely to engage in response distortion relative to applicants with lower levels of cognitive ability, even when they are not instructed to do so and regardless of the motivational factors measured in the current study.

Prior research has suggested that individuals with high levels cognitive ability are adept at identifying the individual differences that are being measured in a wide variety of selection tools, including personality assessments, (Klehe et al., 2011; Melchers et al., 2009), and that this ability accounts for much of the criterion-related validity of these measurements when predicting job performance criteria (Jansen et al., 2013; Ingold et al., 2015 and König et al., 2007). It seems like many participants in the current study treated the personality assessment that was ostensibly administered in a selection situation much as they would treat an assessment center exercise or a situational judgment test: they attempted to identify the criteria that were being measured and respond in a way that they felt would be viewed favorably. Those with higher levels of cognitive ability were either more effective at doing so, which would come as no surprise in light of prior research in this area, or were more likely to perceive the personality assessment itself as a

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<sup>24</sup> It should be noted that Christiansen et al. (2005) found that forced-choice measures can still be effectively faked by applicants with high levels of cognitive ability.

performance-driven scenario.

Not only did participants' scores on the Wonderlic PI-R demonstrate relationships with response distortion on the traits of conscientiousness, emotional stability, and openness, but these scores also demonstrated significant correlations with scores on the traits of emotional stability ( $r = .25$ ) and openness ( $r = .16$ ) when these scales were administered in the "faking" condition<sup>25</sup>. This echoes some prior research (Klehe et al., 2012) and provides further evidence that the construct validity of personality assessments may be compromised in selection settings due to contamination by cognitive ability and related constructs. While this may be somewhat troubling from a measurement standpoint, this contamination is unlikely to substantially impact the ability of personality inventories to effectively predict job performance in typical-performance situations (see Sackett, Zedeck, & Fogli, 1988) because cognitive ability has previously been shown to be predictive of performance in typical-performance situations as well (Klehe & Latham, 2008). However, the possibility that personality measures in applied selection settings may be contaminated by cognitive ability raises some concerns regarding the potential for these measures to demonstrate higher levels of adverse impact than conventional wisdom would suggest (Ployhart & Holtz, 2008; Risavy & Hausdorf, 2011).

Integrity, as measured using the Honesty-Humility scale from the HEXACO PI-R, was not directly related to faking on any one of the five personality scales. Furthermore, integrity failed to moderate the vast majority of relationships between the situational judgments described in Vroom's (1964) theory and subsequent faking (the relationship between valence and faking on the agreeableness scale being the sole exception). As such, it appears that applicants have few

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<sup>25</sup> Note that scores on the Wonderlic PI-R were not significantly correlated with scores on any of the IPIP Five Factor Markers scales in the honest condition. However, some prior research has found relationships between cognitive ability and Big Five personality traits when the personality measures were administered during non-selection situations (Rammstedt, Danner, & Martin, 2016).

ethical reservations about engaging in faking on personality assessments when they are used for selection purposes. While these findings were unexpected, one must remember that personality inventories are generally viewed poorly by job applicants relative to other personnel selection methods, such as interviews and work sample tests (Hausknecht, Day, & Thomas, 2004).

Job applicants likely have negative attitudes regarding personality inventories when they are used in selection settings because they are perceived as being less job-related relative to others measures, such as work simulations, interviews, and knowledge-based tests (Smither, Reilly, Millsap, & Pearlman, 1993). Prior research has demonstrated that fairness perceptions regarding a selection systems are largely influenced by the perceived job-relatedness of the selection tools that are used (Hausknecht et al., 2004; Truxillo, Bauer, Paronto, & Campion, 2002; Vianen, Taris, Scholten, & Schinkel, 2004). As such, it is likely that the use of personality inventories within selection contexts is seen by many job applicants as being unethical. If this is indeed the case, it stands to reason that job applicants may not view faking on personality tests within selection contexts as being an inherently unethical activity (contradicting to the assertions of prior theorists, Griffith et al., 2006). This is a difficult problem to address. Prior research has suggested that providing applicants with information about the processes used to develop a selection tool and the relationship between scores on the tool and job performance may enhance applicant perceptions of fairness (Truxillo et al., 2002). While this may in fact cause some job applicants to view faking on personality measures as problematic, it is unlikely to dissuade applicants with low levels of integrity from engaging in this practice.

The finding that integrity moderated the relationship between valence and response distortion on the agreeableness scale, and only the agreeableness scale, is difficult to explain. It may be possible that the impact of applicant integrity on faking varies depending on the

perceived ethical characteristics of the items themselves. For example, items relating to agreeableness may be viewed as reflecting ethical aspects of one's character more so than items relating to conscientiousness or other traits. Applicants may simply view response distortion on items related to traits such as conscientiousness as putting one's best foot forward, and may feel encouraged to do so if they view the job to which they are applying as highly desirable.

However, items relating to agreeableness (e.g. "I am not interested in other people's problems") may be perceived as having an ethical connotations, and as such would be less likely to be faked by people high on integrity. Admittedly, this is pure speculation as there is little in the existing literature to suggest the existence of such a phenomenon.

One should also note that scores on the integrity measure were positively correlated with honest condition scores on the agreeableness measure. As such, this moderating effect of integrity on the valence-agreeableness faking relationship may simply be due to a ceiling effect: participants with high scores on the integrity measure also tended to have higher honest condition scores on the agreeableness measure, and as such had less opportunity to engage in faking.

### Study Limitations

The use of a student sample represents one of the largest limitations of the current study. While this study did indeed differ from the vast majority of laboratory-based experimental studies on applicant faking in that I did not explicitly instruct applicants to engage in faking, it is unlikely that the participants in my study were completely analogous to real-world job applicants. For one, real-world job applicants voluntarily seek out and apply for specific positions, whereas the participants in my study were compelled to ostensibly apply for a job in exchange for course credit. In one case, having good scores on a personality test may be



necessary to secure employment and remain financially solvent. In the other case, having good scores on the personality test may merely enable the participant to attain a secondary benefit (i.e., receiving a job offer) from research participation, an activity in which they would otherwise still engage. As such, it is unlikely that the applicants in my study experienced psychological pressure to engage in response distortion that is fully analogous to that experienced by real-world job applicants.

The relatively small sample size in this study limited the current study's theoretical scope. Given that my hypotheses posited a three-way interaction effect between valence, instrumentality, and expectancy judgments, and that all of the individual impact of these three judgments were all hypothesized to be moderated by both cognitive ability and integrity, it would have been prudent to also examine potential four-way and five-way interactions between these variables. Sadly, this was not possible due to the limited sample size in the current study. The lack of a counterbalanced condition represents another limitation of the current study. All of the participants in my study first completed a personality measure while they were purportedly in a selection scenario before being debriefed and completing the same personality measure a second time in an "honest" condition. As such, practice effects and/or participant fatigue may have had an impact on scores in the honest condition. A prior study that used a similar experimental paradigm (Peterson et al., 2009) was able to incorporate a counterbalanced condition. However, the experimenters in that study were able to do so because they were able to collect honest-condition scores from participants by having them complete a personality inventory as part of a class project several weeks prior to participation in the experimental study<sup>26</sup>. Sadly, this was not feasible in the current environment.

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<sup>26</sup> Peterson et al. (2009) were able to compel these same undergraduate classes to purportedly apply for a position as part of their study.

The use of the IPIP Big Five Factor Markers Inventory represents another potential issue. While the scales contained within the IPIP Big Five Factor Markers Inventory appeared to demonstrate favorable levels of internal consistency in the current study, these scales are still publically available. As such, it is possible that some participants had viewed these scales before, potentially as part of a class project or while participating in other research studies. If this was the case for some participants, these participants likely didn't believe the experimental manipulation.

### Conclusion and Agenda for Future Research

This study sought to apply expectancy theory (Vroom, 1964) in order to gain a better understanding of the factors impacting applicants' motivation to engage in deliberate faking on self-report personality inventories that are administered as part of the selection process. Results of the study suggest that out of the factors outlines in Vroom's (1964) theory, valence judgments and expectancy judgments tend to play the largest role in impacting applicant faking. That is, job applicants who perceive the job in question as being more desirable, and those who are confident in their ability to successfully engage fake their answers on a personality inventory, tend to engage in greater levels of faking. The three way interaction between valence, instrumentality, and expectancy judgments that Vroom described in his famous 1964 book was not positively related to faking on any one of the personality scales used in this study. As such, while several factors that Vroom described were shown to impact faking behavior in this study, his theory ultimately did not account for faking behavior in the manner in which he had intended.

Results of the current study also show a direct association between cognitive ability and faking on three different personality traits. This suggests that many applicants may treat personality inventories as they would many other selection tools: as an obstacle to be overcome

in order to secure a job offer. Applicants appear to have little qualms about doing so, given that scores on an integrity measure showed no relationship with faking on subsequent personality measures and for the most part failed to nullify the effects that valence and expectancy judgments had on faking.

After reflecting on the results of this study, one may find themselves tempted to conclude that faking on self-report personality inventories simply isn't an issue, given that those most likely to engage in faking tend to also have high levels of cognitive ability and perceive the job to which they are applying as highly desirable. After all, who in their right mind wouldn't want to select highly intelligent applicants who really want the job? The issue is that this phenomenon ultimately results in situations in which positions are filled by people with personalities that are ill-suited for the particular role. While these individuals are able to engage in successful response distortion on personality tests (and successful impression management during interviews and other steps of the selection process), they will still be a poor match to the demands of the position. These people will likely spend much of their working life actively engaging in impression management, forcing them to divert cognitive energy away from the task-related aspects of their job. This not only results in lower performance relative to hires who did not engage in faking on a personality measure (Donovan, Dwight, & Schneider, 2014), but it may also result in higher levels of burnout (Tong, Wang, & Peng, 2015) and voluntary turnover (Arthur, Bell, Villado, & Doverspike, 2006). Ultimately, by ignoring this issue we not only do a disservice to ourselves and organizations making hiring decisions, but also to the supposed beneficiaries of applicant faking.

Unfortunately, the results of this study provide little information regarding specific interventions that can be used to reduce the prevalence and magnitude of applicant faking. While

valence judgments are associated with increased faking, it seems as if little can be done to effectively reduce faking via reducing job valence. However, practitioners should consider the possibility that macroeconomic factors (i.e., unemployment rates) may impact the extent to which any available job is perceived as desirable to applicants – potentially leading to a greater prevalence of faking on personality measures – and act accordingly.

Over the past several decades, globalization and rapid technological advances have decimated the working class in developed economies around the world, leaving many of these people desperate for work. It is completely understandable people in the “new economy” would do almost anything to attain steady employment. I’ve made an effort to speak with job-seeking family members and acquaintances over the past several months in order to see if I can learn more about how the selection systems for which we are fierce advocates are perceived by the average job applicant. It seems as if practicing I/O psychologists who work in the selection space are oftentimes perceived by the general public<sup>27</sup> to be dispassionate and detached from the ultimate impact of the decisions that we make. After all, getting a job can radically change the course of somebody’s life, and as far as they are concerned we are making these decisions in a manner that seems entirely arbitrary. Many applicants simply do not view “picking the right answers” on personality inventories as an ethical issue. Many of them in fact view selection practitioners as being in the wrong for, in their eyes, placing additional barriers between them and a much-needed paycheck.

We must never forget that the decisions we make have the potential to alter the lives of many people. Perhaps transparency and mutual respect is the best way to discourage applicants from attempting to engage in faking. Perhaps by informing applicants about the negative impact

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<sup>27</sup> Or at the very least, the very small sliver of the general public who is aware of our work.

that being dishonest on personality assessments in selection settings may ultimately have on them. That is, that by being hired for a job for which they are dispositionally unsuited they will find themselves burned out, unhappy, and paying the myriad other costs that come with devoting much of one's waking hours to work that is unsatisfying.

## **APPENDIX A: MATERIALS FROM STUDY 1**

### *A.1: TEXT GIVEN PRIOR TO ADMINISTRATION OF EXPECTANCY ITEMS*

As you may know, personality tests are sometimes used as part of the hiring process. These personality tests oftentimes ask people to agree or disagree with statements such as the following:

- I am afraid of many things.
- I avoid imposing my will on others.
- I want every detail taken care of.
- I see myself as a good leader.
- I seldom notice the emotional aspects of paintings and pictures.
- I formulate ideas clearly.
- I am not a very enthusiastic person.
- I postpone decisions.
- I love a good fight.
- I keep my emotions under control.

How do you feel about tests that use questions like this?

### *A.2: JOB POSTING SHOWN PRIOR TO ADMINISTRATION OF VALENCE ITEMS*

Please read the following job description.

#### **OPENING:** Technical Account Manager

Summit Healthcare Technologies is searching for a Technical Account Manager for our Mt.Dora, FL location. Primary duties for this position center include maintaining existing relationships between Summit Healthcare Technologies and our client healthcare providers in the central Florida region in addition to prospecting for potential new clients in the region. It will also be critical for technical account managers to be knowledgeable regarding developments within healthcare technology sector in order to deliver the best possible solutions to client providers.

#### **REQUIREMENTS:**

A bachelor's degree, preferably in an area such as Biology, Psychology, or Business.

Willingness to travel regionally on a routine basis.

Proficient working knowledge of the Microsoft Office suite, including Excel, Word, and Powerpoint.

Qualified applicants will be comfortable engaging people in professional settings, will be able to get along with others, will be detail-oriented, will remain calm under pressure, and will be open to a wide variety of experiences and duties.

**COMPENSATION:** \$50,000 in addition to merit-based bonuses.

Summit Healthcare Technologies offers a competitive benefits package including health and dental

insurance in addition to 401K matching.

**How do you feel about this job posting?**

*A.3: TEXT GIVEN PRIOR TO ADMINISTRATION OF INSTRUMENTALITY ITEMS*

Imagine that you have applied for a job as a Technical Account Manager (the job in the description shown above). As part of the application process, you have to complete a personality test that has questions like:

I don't mind being the center of attention.

I am not interested in other people's problems.

I find it difficult to get down to work.

I am not easily bothered by things.

I can handle a lot of information.

In addition to the personality test, you also participate in an in-person interview with somebody from the company. The interview is about 45 minutes long and focuses on your past experience and your qualifications for the job.

**How would you feel after taking the personality test and completing the in-person interview?**

*A.4: FACTOR LOADINGS FOR EXPLORATORY FACTOR ANALYSIS OF DRAFT VALENCE, INSTRUMENTALITY, AND EXPECTANCY ITEMS WITH VARIMAX ROTATION*

**Factor**



Item Text	1	2	3	4
<i>I would like having this job.</i>	.944			
I would like to get this job.	.935			
I would enjoy this position.	.928			
I would like this job.	.916			
I would enjoy having this job.	.909			
<i>This job is appealing to me.</i>	.907			
<i>I want to be hired for this job.</i>	.893			
<i>This job suits my needs.</i>	.882			
<i>This job is a good fit for me.</i>	.879			
<i>This job is appealing relative to the other options I have available.</i>	.871			
This job would make me happy.	.858			
I would be satisfied with this job.	.817			
Having this job would bring me personal satisfaction.	.811			
This is a good job.	.579			.527
This seems like a good job.	.574			.574
<i>I can figure out which answers will give me the best score on the personality test.</i>		.833		
<i>I can figure out the answers that people are looking for when I take a personality test.</i>		.831		
<i>I can get a good score on the personality test if I try to pick the "best" answers.</i>		.816		
I can easily pick the "right" answers when taking a personality test.		.806		
Figuring out the "best" answers on a personality test is easy.		.795	.206	
<i>Faking your answers on a personality test isn't difficult.</i>		.789		
I can tell people what they want to hear when taking the personality test.		.783		

Item Text	Factor			
	1	2	3	4
I can make myself look good by faking my answers.		.762		
I can fake my answers on the personality test if I try.		.754		
I can be deceptive when taking a personality test.		.743		
<i>Doing well on the personality test is critical if you want to get hired.</i>			.876	
<i>Having a good score on the personality test is critical if you want to be hired.</i>			.876	
<i>You must do well on the personality test in order to be hired.</i>			.805	
<i>Scores on the personality test are a big part of the hiring decision.</i>			.776	
<i>Being hired largely depends on scores on the personality test.</i>			.772	
<i>Whether or not you get hired depends on your scores on the personality test.</i>			.754	
If you do well on the personality test, you will be hired.			.689	
You will be hired if you have a good score on the personality test.			.654	.230
Having a good score on the personality test is important if you want to get interviewed or hired.			.601	.270
The personality test is used to determine who gets hired.			.595	
The personality test is used to see if candidates are a good fit for the job.			.368	.283

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*Note: Italicized items were retained in the final scales. Factor loadings below .20 are not displayed.*

## **APPENDIX B: MATERIALS FROM PRIMARY STUDY**

### *B.1: HEXACO PI-R HONESTY-HUMILITY MEASURE*

*(All items on this scale are answered on a five point Likert scale, with anchors of “strongly disagree” and “strongly agree”)*

If I want something from a person I dislike, I will act very nicely toward that person in order to get it.  
I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.  
If I want something from someone, I will laugh at that person's worst jokes.  
I wouldn't pretend to like someone just to get that person to do favors for me.  
If I knew that I could never get caught, I would be willing to steal a million dollars.  
I would be tempted to buy stolen property if I were financially tight.  
I would never accept a bribe, even if it were very large.  
I'd be tempted to use counterfeit money, if I were sure I could get away with it.  
Having a lot of money is not especially important to me.  
I would like to live in a very expensive, high-class neighborhood.  
I would like to be seen driving around in a very expensive car.  
I would get a lot of pleasure from owning expensive luxury goods.  
I am an ordinary person who is no better than others.  
I wouldn't want people to treat me as though I were superior to them.  
I think that I am entitled to more respect than the average person is.  
I want people to know that I am an important person of high status.

### *B.2: TEXT SHOWN TO PARTICIPANTS BEFORE THEY FOLLOWED THE LINK TO THE WONDERLIC WEBSITE*

Next we are going to have you take a brief test of cognitive ability. This test is hosted on another website and will be linked to the data hosted on the UCF website via a unique Participant Identification Number that you will create now.

Your Participant Identification Number can be any combination of alphanumeric characters that you want to use.

**Please enter your Participant Identification Number below.**

**Please write down your Participant Identification Number on a sheet on scratch paper because you will have to enter it several more times throughout the study.**

At the bottom of this page you will find the link to the Wonderlic Online testing website where you will take a test of cognitive ability. Upon following the link below, you will be asked to input your Participant Identification Number. Please input the same Participant Identification Number that you did on the previous page. The test should take approximately 20-30 minutes to complete. Following the test, you will return to this page where you can continue with the remaining sections of the study.

**Do not close this tab.**

**Do not move onto the next page until you have completed the test on the Wonderlic Online testing website.**

Here is the link to the Wonderlic Online testing website.

[https://rnd-testing.wonderliconline.com/WebPages/Links.aspx?lid=UCF\\_Mihm](https://rnd-testing.wonderliconline.com/WebPages/Links.aspx?lid=UCF_Mihm)

After you have finished completing the Wonderlic test, please continue to the next page.

### ***B.3: TEXT TO INTRODUCE EXPECTANCY MEASURES FOR INTEGRITY TESTS:***

As you may know, integrity tests are sometimes used as part of the hiring process. These tests oftentimes ask people to agree or disagree with statements such as the following:

I lie to get myself out of trouble.

I believe that honesty is the basis for trust.

I like to exaggerate my troubles.

How do you feel about tests that use questions like this?

*(All items on this scale are answered on a five point Likert scale, with anchors of “strongly disagree” and “strongly agree”)*

- 1. I can figure out which answers will give me the best score on the integrity test.*
- 2. I can figure out the answers that people are looking for when I take the integrity test.*
- 3. I can get a good score on the integrity test if I try to pick the “best” answers.*
- 4. Faking your answers on integrity tests isn’t difficult.*

### ***B.4: TEXT TO INTRODUCE EXPECTANCY MEASURES FOR PERSONALITY TESTS:***

As you may know, personality tests are sometimes used as part of the hiring process. These personality tests oftentimes ask people to agree or disagree with statements such as the following:

I am afraid of many things.

I avoid imposing my will on others.

I want every detail taken care of.

I see myself as a good leader.

I seldom notice the emotional aspects of paintings and pictures.

I formulate ideas clearly.

I am not a very enthusiastic person.

I postpone decisions.

I love a good fight.

I keep my emotions under control.

How do you feel about tests that use questions like this?

*(All items on this scale are answered on a five point Likert scale, with anchors of “strongly disagree” and “strongly agree”)*

- 1. I can figure out which answers will give me the best score on the personality test.*
- 2. I can figure out the answers that people are looking for when I take the personality test.*
- 3. I can get a good score on the personality test if I try to pick the “best” answers.*
- 4. Faking your answers on personality tests isn’t difficult.*

### ***B.5: JOB POSTING***

Please read the following job description:

#### **Opening: Technical Account Manager**

Summit Healthcare Technologies is searching for a Technical Account Manager for our Mt.Dora, FL location. Primary duties for this position center include:

Maintaining existing relationships between Summit Healthcare Technologies and our client healthcare providers in the central Florida region.

Prospecting for potential new clients in the region.

Staying current regarding developments within healthcare technology sector in order to deliver the best possible solutions to client providers.

Handling multiple priorities in a fast-paced environment while delivering high quality customer service.

#### **REQUIREMENTS**

A bachelor's degree, preferably in an area such as Biology, Psychology, or Business.

Willingness to travel regionally on a routine basis.

Proficient working knowledge of the Microsoft Office suite, including Excel, Word, and Powerpoint.

Qualified applicants will be comfortable engaging people in professional settings, will be able to get along with others, will be detail-oriented, will remain calm under pressure, and will be open to a wide variety of experiences and duties.

#### **COMPENSATION**

\$50,000-\$59,999 annually in addition to merit-based bonuses.

Summit Healthcare Technologies offers a competitive benefits package including health and dental insurance in addition to 401K matching.

### ***B.5: TEXT TO INTRODUCE VALENCE MEASURE***

How do you feel about this job?

*(All items on this scale are answered on a five point Likert scale, with anchors of “strongly disagree” and “strongly agree”)*

- 1. I would like having this job.*
- 2. This job is appealing to me.*

3. *I want to be hired for this job.*
4. *This job suits my needs.*
5. *This job is appealing relative to other options that I have available.*
6. *This job is a good fit for me.*

#### ***B.6: TEXT TO INTRODUCE EXPERIMENTAL MANIPULATION***

Several graduate students within the industrial/organizational psychology have begun working on a research project with a Fortune 500 company that is expanding into the Central Florida area. The purpose of this study is to develop a hiring system, which will include integrity, intelligence, and personality tests. These tests are going to be used by the company as part of the hiring process for the technical account manager position (the job that you saw on the last page), which is usually a job filled by recent college graduates who come from a wide variety of academic backgrounds.

It's important to us that these tests are not only be a good predictor of job performance, but is also perceived favorably by applicants, which is why we have been asking you questions about these tests.

On the next page, you will be taking the current version of a personality test that is currently under development. While this test is still in development, you will be contacted in the future to interview for a technical account manager position if you consent to be contacted and your personality profile is compatible with the demands of the job. Remember, while a candidate's personality profile matters, it is just one of many things that are considered during the hiring process.

Please note that only your answers to the personality test on the next page and your resume (if you choose to include it) will be sent to the company, all of your responses to the other questions will only be viewed by researchers here at UCF. Before you take the personality test, please answer the following questions.

- ☐ I consent to be contacted in the future regarding an interview.
- ☐ I do not consent to be contacted in the future regarding an interview.

#### ***B.7: TEXT TO INTRODUCE INSTRUMENTALITY MEASURES***

Before you take the personality test, please answer the following questions.

*(All items on this scale are answered on a five point Likert scale, with anchors of "strongly disagree" and "strongly agree")*

- Having a good score on the personality test is critical if you want to be hired.*
- Having a good score on the integrity test is critical if you want to be hired.*
- Having a good score on the personality test is critical if you want to be hired.*
- Having a good score on the intelligence test is critical if you want to be hired.*
- Having a good score on the integrity test is critical if you want to be hired.*
- Having a good score on the interview is critical if you want to be hired.*
- Whether or not you get hired depends on your scores on the personality test.*
- Whether or not you get hired depends on your scores on the integrity test.*

*Whether or not you get hired depends on your scores on the intelligence test.*  
*Whether or not you get hired depends on your scores on the interview.*  
*Doing well on the personality test is necessary if you want to get hired.*  
*Doing well on the integrity test is necessary if you want to get hired.*  
*Doing well on the intelligence test is necessary if you want to get hired.*  
*Doing well on the interview is necessary if you want to get hired.*  
*Being hired largely depends on scores on the personality test.*  
*Being hired largely depends on scores on the integrity test.*  
*Being hired largely depends on scores on the intelligence test.*  
*Being hired largely depends on scores on the interview.*  
*You must do well on the personality test in order to be hired.*  
*You must do well on the integrity test in order to be hired.*  
*You must do well on the intelligence test in order to be hired.*  
*You must do well on the interview in order to be hired.*  
*Scores on the personality test are a big part of the hiring decision.*  
*Scores on the integrity test are a big part of the hiring decision.*  
*Scores on the intelligence test are a big part of the hiring decision.*  
*Scores on the interview are a big part of the hiring decision.*

#### *B.8: TEXT TO INTRODUCE PERSONALITY MEASURE*

If you would like to have your resume sent to the company that is funding this study along with your scores on the personality test, please attach it below.

You will now be taking the personality test that is currently being developed by researchers here at UCF. Please carefully read and respond to each statement.

How accurately does each one of the following statements describe you?

#### *B.9: IPIP BIG FIVE FACTOR MARKERS INVENTORY*

##### **Factor 1: Extraversion**

###### **Positively Keyed**

*I am the life of the party.*  
*I feel comfortable around people.*  
*I start conversations.*  
*I talk to a lot of different people at parties.*  
*I don't mind being the center of attention.*  
*I make friends easily.*  
*I take charge.*  
*I know how to captivate people.*  
*I feel at ease with people.*  
*I am skilled in handling social situations.*

###### **Negatively Keyed**

*I don't talk a lot.*  
*I keep in the background.*



*I have little to say.  
I don't like to draw attention to myself.  
I am quiet around strangers.  
I find it difficult to approach others.  
I often feel uncomfortable around others.  
I bottle up my feelings.  
I am a very private person.  
I wait for others to lead the way.*

## **Factor 2: Agreeableness**

### **Positively Keyed**

*I am interested in people.  
I sympathize with others' feelings.  
I have a soft heart.  
I take time out for others.  
I feel others' emotions.  
I make people feel at ease.  
I inquire about others' well-being.  
I know how to comfort others.  
I love children.  
I am on good terms with nearly everyone.  
I have a good word for everyone.  
I show my gratitude.  
I think of others first.  
I love to help others.*

### **Negatively Keyed**

*I insult people.  
I am not interested in other people's problems.  
I feel little concern for others.  
I am not really interested in others.  
I am hard to get to know.  
I am indifferent to the feelings of others.*

## **Factor 3: Conscientiousness**

### **Positively Keyed**

*I am always prepared.  
I pay attention to details.  
I get chores done right away.  
I like order.  
I follow a schedule.  
I am exacting in my work.  
I do things according to a plan.  
I continue until everything is perfect.  
I make plans and stick to them.  
I love order and regularity.*

*I like to tidy up.*

**Negatively Keyed**

*I leave my belongings around.*

*I make a mess of things.*

*I often forget to put things back in their proper place.*

*I shirk my duties.*

*I neglect my duties.*

*I waste my time.*

*I do things in a half-way manner.*

*I find it difficult to get down to work.*

*I leave a mess in my room.*

**Factor 4: Emotional Stability**

**Positively Keyed**

*I am relaxed most of the time.*

*I seldom feel blue.*

*I am not easily bothered by things.*

*I rarely get irritated.*

*I seldom get mad.*

**Negatively Keyed**

*I get stressed out easily.*

*I worry about things.*

*I am easily disturbed.*

*I get upset easily.*

*I change my mood a lot.*

*I have frequent mood swings.*

*I get irritated easily.*

*I often feel blue.*

*I get angry easily.*

*I panic easily.*

*I feel threatened easily.*

*I get overwhelmed by emotions.*

*I take offense easily.*

*I get caught up in my problems.*

*I grumble about things.*

**Factor 5: Intellect/Openness to Experience**

**Positively Keyed**

*I have a rich vocabulary.*

*I have a vivid imagination.*

*I have excellent ideas.*

*I am quick to understand things.*

*I use difficult words.*

*I spend time reflecting on things.*

*I am full of ideas.*  
*I carry the conversation to a higher level.*  
*I catch on to things quickly.*  
*I can handle a lot of information.*  
*I love to think up new ways of doing things.*  
*I love to read challenging material.*  
*I am good at many things.*

**Negatively Keyed**

*I have difficulty understanding abstract ideas.*  
*I am not interested in abstract ideas.*  
*I do not have a good imagination.*  
*I try to avoid complex people.*  
*I have difficulty imagining things.*  
*I avoid difficult reading material.*  
*I will not probe deeply into a subject*

***B.10: TEXT TO REVEAL DECEPTION.***

The purpose of this study is to look at how people respond to questions on personality tests in a socially desirable way (i.e., “faking”) when these personality tests are used as part of the hiring process. Specifically, we wanted to examine how a person’s perception of the situation impacts faking. In order to create social pressure that might cause people to fake their answers on the tests that we administered earlier, we used deception. The principal investigator of this study is not working with a company in order to develop a personality inventory, and your scores will not be sent to any company for review. That was a fabrication used in order to create social pressure within the experimental setting. If you feel upset, distressed, or uncomfortable, please do not hesitate to contact David Mihm, the study’s principal investigator, ([dmihmucf@knights.ucf.edu](mailto:dmihmucf@knights.ucf.edu)) to voice your concerns.

After this page, you will be taking the personality test a second time, this time without any social pressure to inflate your score. Note that I am not accusing you of inflating your scores or lying on the personality test that you took earlier, because it is very possible that you did not do this.

Please relax and simply respond to the questions on the personality test on the next page in the way that feels most natural to you.

Thank you for taking the time to participate in my study.

**APPENDIX C: RESEARCH AGREEMENT FROM WONDERLIC INC.**

## Research Agreement for Wonderlic Assessments

### Terms and Conditions

Wonderlic, Inc. encourages independent research into the relationships that exist among Wonderlic test instruments, performance measures and other meaningful individual assessments. To assist in such research, test materials are provided at no charge to qualified individuals and organizations where it is agreed as follows:

1. By donating test materials, Wonderlic makes no endorsement of the project's design, implementation, analysis or conclusions.
2. The test materials and test scores obtained will be used for the project as described in the attached Research Project Description, and no individual test score will be used for individual assessment outside of the project. Test results may not be used to serve business purposes, including, but not limited to, the development of any test to be offered commercially. Tests are provided to qualified individuals and organizations whose primary intention is to communicate study findings in an academic journal or at an academic conference.
3. No reproduction of the test in whole or in part is allowed. At the completion of the project, all test materials including test books, answer sheets, and scoring keys are to be returned to:

Wonderlic, Inc.  
ATTN: Matt Brown (Research and Development)  
400 Lakeview Parkway  
Suite 200  
Vernon Hills, IL 60061


4. Wonderlic may use data from the returned test materials and test scores for inclusion in normative and item analysis research. Wonderlic will maintain the individual scores, their source, and the names of tested individuals in strict confidence.
5. One copy of the report of the project's results, analyses, and conclusions must be submitted to Wonderlic at the address provided above. The original raw data file containing individual-level predictor and criterion measures must also be submitted to Wonderlic. If the report, data, and test materials are not submitted, the Academic Advisor will be billed for all assessments used. Bill amount will be determined by the market rate as of the date this agreement is signed. Researchers must submit completed report, data, and all test materials within one month of the project completion date.
6. The Project Administrator and Academic Advisor agree to administer additional Wonderlic content as described on the next page. If additional Wonderlic content is not administered and returned to Wonderlic, the Academic Advisor will be billed for all assessments used. Bill amount will be determined by the market rate as of the date this agreement is signed.
7. The Project Administrator and Academic Advisor accept responsibility for the ethical use, score confidentiality of all test materials, test security and copyright protection. Additionally, no copyrighted material may be placed (or be forwarded to any parties that store content) in an electronic database that is potentially accessible to the public (e.g., Dissertation Abstracts International).
8. The Project Administrator and Academic Advisor are acting as representatives of their sponsoring organization and in that capacity agree to all conditions provided herein.

Project Administrator

Academic Advisor

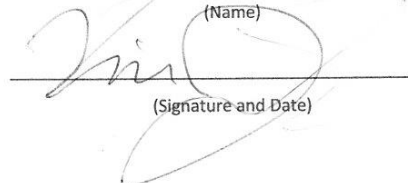
David Mihm

(Name)

 3/20/2016  
(Signature and Date)

Kimberly Smith-Jentsch

(Name)

  
(Signature and Date)

## Research Agreement for Wonderlic Assessments

### Administration of Additional Wonderlic Content Options

The table below provides an overview of the various Wonderlic Assessments that can be used as part of the Research Donation Program.

Wonderlic Assessment	Administration Mode	Proctor Required	Time (minutes)	Questions	Language	Description
Wonderlic Classic Cognitive Ability Test (WPT)	Online Paper	Yes	12	50	English Spanish French Chinese Swedish German	Widely accepted and highly regarded indicator of general intelligence. Measures an individual's ability to learn, adapt, solve problems and understand instructions.
Wonderlic Contemporary Cognitive Ability Test (WPT-R)	Online Paper	Yes	12	50	English Spanish French	
Wonderlic Cognitive Ability Pretest (WPT-Q)	Online	No	8	30	English Spanish French	
Wonderlic Behavioral Risk Profile (WPI)	Online Paper	No	15-20	90	English Spanish	Predicts a candidate's likelihood of counterproductive behavior.
Wonderlic Five-Factor Personality Profile (PCI)	Online Paper	No	25-30	150	English Spanish French	Uses the Big Five personality model, and helps measure workplace personality traits that are predictive of job performance.
Wonderlic Seven-Factor Personality Profile (CPP)	Online Paper	No	15-20	88	English Spanish French	Measures seven primary and ten secondary traits that are vital components of success for employees in client-facing positions.
Wonderlic Entrepreneurial Profile (EQ)	Online	No	20-30	100	English	Places employees in key management and leadership positions by comparing an individual's personality traits to those of successful entrepreneurs and corporate executives.

1. Please indicate which Wonderlic Assessment(s) you wish to use for your research (e.g., WPT-Q and PCI):

WPT-R

2. As part of Wonderlic's Research Donation Program, I agree to administer the assessments I selected above as well as a 12-minute cognitive ability test for test development purposes.

Project Administrator Initials: DM

Academic Advisor Initials: KJ

**APPENDIX D: UCF IRB OUTCOME LETTER**

University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

## Approval of Human Research

From: **UCF Institutional Review Board #1 FWA00000351, IRB00001138**

To: **David C. Mihm**

Date: **June 07, 2016**

Dear Researcher:

On 06/07/2016, the IRB approved the following human participant research until 06/06/2017 inclusive

Type of review: UCF Initial Review Submission Form  
Project Title: Cognitive Keys to Sales Success  
Investigator: David C Mihm  
IRB Number: SBE-16-12292  
Funding Agency:  
Grant Title:  
Research I/D: N/A

The scientific merit of the research was considered during the IRB review. The Continuing Review Application must be submitted 30days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <https://iris.research.ucf.edu> .

If continuing review approval is not granted before the expiration date of 06/06/2017, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a copy of the consent form(s).

All data, including signed consent forms if applicable, must be retained and secured per protocol for a minimum of five years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained and secured per protocol. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:



A handwritten signature in black ink that reads "Joanne Muratori". The signature is written in a cursive style with a small dot above the 'i' in Muratori.

Signature applied by Joanne Muratori on 06/07/2016 09:45:04 AM EDT  
IRB Manager

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