IMPLICIT BELIEFS ABOUT THE STABILITY OF WORK ETHIC: RELATION WITH ATTITUDES ABOUT CONSCIENTIOUSNESS TESTS

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ABSTRACT

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Research in industrial and organizational psychology has demonstrated a reluctance by practitioners to use standardized selection methods. The present study examines the perceived usefulness of one such method – conscientiousness tests. Implicit beliefs of work ethic were hypothesized to predict attitudes such that people who perceive work ethic to be malleable would view conscientiousness tests as less useful. Potential moderators were also explored. Analyses were conducted using a sample of 472 participants with selection experience recruited using Amazon’s Mechanical Turk. Results indicate that implicit beliefs do not predict the perceived usefulness of conscientiousness tests. There were no significant moderating effects. Potential reasons for the lack of a significant effect are discussed.
Dedicated to Komet, Muffin, and Lucky.
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INTRODUCTION

Employment testing in the United States dates back at least to 1883, when civil service testing began (Hale, 1982). Employment testing gained increased importance with the construction of the Alpha and Beta tests for the Army during World War I (Kavruck, 1956; Borow, 1944). Since then, the use of tests to aid in the decision-making process has waxed and waned in public acceptance (Anastasi, 1968; Dennis, 1982). However, selection tests lag behind interviews in popularity for making hiring decisions.

Interviews remain a common assessment method for selecting job applicants across the globe, with human resource managers showing a preference for unstructured interviews (Ryan, McFarland, Baron, & Page, 1999; van der Zee, Bakker, & Bakker, 2002). Highhouse (2008) observed a “stubborn reliance” on subjective methods for assessing who will succeed on the job. Indeed, research has shown that human resource executives perceive the unstructured interview to be more effective than a specific aptitude test, personality test, and test of general mental ability (Terpstra, 1996).

Selection tests can be useful for helping employers assess a candidate’s personality, including conscientiousness. Conscientiousness is defined as individual differences in the propensity to follow socially prescribed norms for impulse control, to be goal-directed, planful, able to delay gratification, and to follow norms and rules (Roberts, Jackson, Fayard, Edmonds, & Meints, 2009). Conscientiousness has been found to be the best predictor of supervisor-rated general job performance (Sitser, van der Linden, & Born, 2013; Barrick & Mount, 1991). Well-developed conscientiousness measures have been shown to predict a wide range of work-relevant outcomes, such as counterproductive work behavior, organizational citizenship behaviors, and overall job performance (Hough & Oswald, 2008; Judge, Klinger, Simon, & Yang, 2008; Berry,
Ones, & Sackett, 2007; Borman, Penner, Allen, & Motowidlo, 2001; Dudley, Orvis, Lebiecki, & Cortina, 2006; Barrick, Stewart, & Pietrowski, 2002). In addition, they are a particularly valuable source of incremental validity above tests of general mental ability (Schmidt & Hunter, 1998). However, despite their utility, conscientiousness tests are used infrequently. A recent survey of the Society for Human Resources Management (SHRM, 2012) showed that only 18% of human resource professionals reported using personality tests in any capacity. With regard to global usage, studies show personality tests being used by less than a third of employers (König, Klehe, & Berchtold, 2010; Diekmann & König, in press; Di Milia, 2004; Furnham, 2008; Scholarios & Lockyer, 1999).

In order to gain increased acceptance for the use of conscientiousness tests, it may be necessary to look at if employers believe performance is determined by dispositional or situational factors. For instance, some believe that natural talent is necessary for success. This is reflected in maxims such as “surround yourself with the best people” or “focus on assembling a great team” (Kapadia, 2012; Hambrick & Meinz, 2014). Others, however, believe that anyone can be successful with the right leadership or incentives. This view is reflected in maxims such as “get the most from your existing talent” or “create an environment where everyone can succeed” (Schawbel & Murphy, 2012; Sanku, 2014). These differing viewpoints may result in different opinions of who can be successful.

People may differ in their beliefs about if a strong work ethic is natural and inherent or if it is a product of the environment. Although some people may believe an employee’s work ethic is consistent and predictable, others may view it to be more inconsistent and subject to extrinsic motivational forces. For those who believe that a person’s work ethic is a consistent aspect of their personality it may be viewed as essential to hire employees who possess a natural drive for
success. Others will be less concerned about identifying employees’ work ethic, believing that with the proper incentives work ethic can be manipulated to get the most out of employees.

Beliefs about the importance of a natural propensity to work hard may affect whether or not conscientiousness tests are viewed as capable of predicting performance. As I detail below, if hiring managers believe that work ethic is highly malleable and not inherent to the worker, they may not be expected to believe that conscientiousness tests will be useful for predicting job performance. However, if work ethic is viewed as stable and predictable, then conscientiousness tests may be seen as informative and useful for selection.

The purpose of the current study was to examine implicit beliefs about the stability of work ethic, and its relationship with attitudes about standardized tests of conscientiousness. Specifically, I will examine whether belief in science and perceived job relatedness interact with implicit beliefs about work ethic in predicting these attitudes. By discovering the individual beliefs associated with positive attitudes toward selection tests it may be possible to more successfully promote acceptance of valid selection tests and increase their use in practice.

**Background**

Although there are many costs associated with the validation and implementation of selection tests, it is impossible to deny their utility for assisting hiring managers in making informed decisions (Haire, 1950; Schmidt & Hunter, 1998). One of the most consistently valid and cost-effective tests for aiding in employee selection is the conscientiousness test, showing a meta-analytic validity of .31 (Schmidt & Hunter, 1998), making it a better predictor of job performance than reference checks, job experience, or years of education. In a meta-analysis conducted by Barrick & Mount (1991) conscientiousness was found to be a valid predictor of performance for all occupations. Although cognitive ability has been found to be a potent
predictor of job performance (Schmidt & Hunter, 1998), conscientiousness provides unique information as conscientiousness tests have been found to be uncorrelated with cognitive ability tests (Mount, Barrick, & Strauss, 1999; Bobko, Roth, & Potosky, 1999). Conscientiousness tests are also particularly useful because they show much lower levels of adverse impact than other selection devices such as cognitive ability tests and the unstructured interview (Bobko et al., 1999). Conscientiousness tests have been found to have similar validities for predicting performance whether administered in a proctored setting or an unproctored (e.g., internet) setting (Beaty et al., 2011). Thus, conscientiousness testing may serve as an inexpensive method to assess employees remotely.

Conscientiousness shows conceptual overlap with work ethic, the measure of how hard-working someone is. For example, both conscientiousness and work ethic examine a person’s ability to adhere to a schedule and desire to be productive (Miller et al., 2002). One subfacet of conscientiousness in particular, industriousness, seems closely related to work ethic. Jackson et al. (2009) describe industriousness as the propensity to work hard versus being lazy, which is extremely similar to work ethic. Indeed, Raymark, Schmit, and Guion (1997) conceptualized adherence to a work ethic as a subdimension of conscientiousness. People who score highly on a conscientiousness test should have a strong work ethic because conscientiousness tests contain items measuring a propensity to work hard and show a strong dedication to work.

There is empirical evidence for the relation between conscientiousness and work ethic as well. Lounsbury, Sundstrom, and Loveland (2003) found students’ conscientiousness to be correlated .53 with work drive. For employees, conscientiousness affects work ethic because it interacts with the job situation to determine workers’ motivation (Barrick, Mount, & Li, 2013). That is, conscientiousness is integral in determining how hard-working an employee will be.
People high in industriousness have been found to have more achievement-oriented personal goals (Emmons & McAdams, 1991) and to display higher commitment to their goals (Barrick, Mount, & Strauss, 1993). Scores on conscientiousness tests have also been found to be correlated to behavioral indicators of avoiding work, industriousness, and laziness at .4 or higher (Jackson et al., 2010), demonstrating the ability of conscientiousness tests to discriminate on work ethic. People who score highly on a conscientiousness test demonstrate the hard work and perseverance necessary to complete job tasks, which supervisors perceive as evidence of a strong work ethic.

Evidence suggests that lay people tend to view conscientiousness as roughly synonymous with work ethic (Christopher, Zabel, & Jones, 2008; Miller, Woehr, & Hudspeth, 2002). For example, Christopher et al. (2008) found that overall conscientiousness correlated .65 with work ethic ideology. Also, achievement striving orientation was correlated at .48 or higher with three dimensions of work ethic ideology – hard work, centrality of work, and delay of gratification (Christopher et al., 2008). Those who score highly on a conscientiousness test should then be seen as both hard-working and dedicated to their work.

Although managers may not be familiar with conscientiousness, they are likely to desire that their employees have a strong work ethic. Conscientiousness and work ethic are closely related and as previously stated, laypeople are likely to view work ethic as synonymous to conscientiousness. When shown example items from a conscientiousness test people should be able to recognize that the results will inform them of the work ethic of the test-taker. Employers seem to understand that highly conscientious employees will have a strong work ethic and decrease monitoring after screening applicants on conscientiousness (Huang & Capelli, 2010). This indicates that employers believe workers high in conscientiousness can be trusted to work hard even when unsupervised. Because conscientiousness is responsible for workplace behaviors
related to working hard, employers should view conscientiousness tests as a tool to help assess if applicants have a strong work ethic. Thus, attitudes about the usefulness of conscientiousness tests will be tied to beliefs about work ethic.

To predict support for conscientiousness tests it is necessary to examine beliefs about the nature of a person’s work ethic because laypeople are unlikely to know which methods are the best (Rynes and Connerly, 1993) and may be doubtful of the efficacy of personality tests, viewing them as less face valid than many other common assessment techniques including interviews, cognitive ability tests, and biodata (Anderson, Salgado, & Hülsheger, 2010). One potential reason for this is that people may be skeptical that work ethic is consistent and capable of being measured. As mentioned previously, support for conscientiousness tests may be moderated by the perceived permeability of a person’s work ethic, with conscientiousness tests only perceived as useful if work ethic is believed to be stable. One individual difference examining this is implicit beliefs.

Implicit Beliefs

Dweck and colleagues (Dweck & Leggett, 1988; Chiu, Hong, & Dweck, 1997; Dweck, Chiu, & Hong, 1995; etc.) introduced implicit beliefs as a way to measure the perceived stability of attributes. These implicit beliefs can be held about any number of personal characteristics including, but not limited to, intelligence and personality. The research literature has typically discussed peoples’ implicit beliefs in dichotomous terms, as either entity or incremental. However, actual implicit beliefs can be viewed as existing on a continuum.

On one end of the continuum is an entity belief. People with a strong entity belief view personal attributes as fixed and stable. A person who holds an entity belief believes that people are unlikely to change over time and that improvement cannot be achieved through effort and
practice. In contrast, those with an *incremental belief* view attributes, such as intelligence to be transient and susceptible to change. For example, someone holding an entity belief of intelligence will believe it is impossible to raise one’s scores on a cognitive ability test, but a person with an incremental belief will believe that hard work can lead to an improvement in intelligence.

Entity and incremental beliefs have been shown to affect people’s decision-making processes (Hong, Chiu, Dweck, & Sacks, 1997; McConnell, 2000). People with strong entity beliefs make stronger evaluative judgments, forming impressions of others based on test scores (Hong, et al., 1997; McConnell, 2000). People with incremental beliefs are more likely to be concerned with contextual factors that might explain differences in behavior. For instance, people with a predominantly incremental belief were found to use memories of previous behavior to make judgments, risking illusory correlations (McConnell, 2000).

Implicit beliefs are also capable of predicting behavior. Because they believe that behavior can change depending on the context, those with a predominantly incremental belief are more willing to provide help to others. For instance, managers’ implicit beliefs predict the extent of employee coaching (Heslin, VandeWalle, & Latham, 2006) with entity theorists being less inclined to invest in training. This demonstrates that having an entity belief is related to viewing it as futile to attempt to help employees improve. Although an entity belief emphasizes the importance of natural aptitude, those with an incremental belief are more likely to believe that training is capable of making up for initial deficits.

Because those with an entity belief view work ethic as stable, they should view conscientiousness tests to be more useful for predicting performance than those with an incremental belief. To them, a person’s work ethic cannot be changed so it is important to select
employees who are highly conscientious. On the other hand, people with an incremental belief are inclined to believe that training or leadership can be used to instill a strong work ethic in new employees.

Hypothesis 1: Entity beliefs will be positively related to the perceived usefulness of conscientiousness tests.

With that said, it is unlikely that even those with an entity belief will be receptive to employment testing if they do not believe in the science behind the tests or if they do not see the tests as relevant to the job in question.

**Moderators**

**Belief in Science**

Recently there has been a rise in scientism, the belief that science, rather than religion, is the supreme source of knowledge (Haught, 2005; Peterson, 1994). This belief in science reflects the belief that science is capable of answering questions and providing existential meaning and has demonstrated the ability to comfort people primed to consider their own mortality. (Farias, Newheiser, Kahane, and de Toledo, 2013). Those with a high belief in science view science as a superior source of knowledge and understanding to other sources, including religion. Thus, scoring highly in belief in science should indicate a preference for methods that have been scientifically tested.

Those with a high belief in science should view tests as more capable of predicting behavior than is possible by mere intuition. As such, those with a high belief in science should view conscientiousness tests as more useful than do people with a low belief in science. That is, in order for someone to perceive conscientiousness tests as useful for predicting job
performance, he must have a strong belief in science’s ability to provide explanations scientific, such as predicting future job performance.

Belief in science should affect perceptions of the usefulness of conscientiousness tests by impacting their perceived efficacy in measurement. There will exist a moderating relationship such that the relationship between entity implicit beliefs and perceived usefulness of conscientiousness tests is weakened by a lack of faith in the test to measure conscientiousness more accurately than would be possible without the test. As such, I expect that people who (a) believe that work ethic is stable (i.e., hold an entity belief of work ethic), and (b) display a strong belief in science should most strongly believe that conscientiousness tests can assist in making decisions about who to hire.

Hypothesis 2: The relation of implicit beliefs about work ethic and perceived usefulness of conscientiousness tests will be moderated by belief in science such that increased belief in science strengthens the relation between entity beliefs and the perceived usefulness of conscientiousness tests.

Job Relatedness

Even if a selection test provides a completely accurate measure of its intended construct, the test may not be viewed positively if the construct itself is not seen as relevant to job performance (Hausknecht, Day, & Thomas, 2004). For instance, a cognitive ability test might not be viewed as relevant for selecting a janitor if intelligence is not seen as related to janitorial performance. Similarly, if a hiring manager believes that personality does not affect job performance for a computer programmer a test measuring personality would not be considered beneficial for deciding which programmer to hire. If people believe a selection test measures constructs related to job performance, their implicit beliefs should predict their attitude toward
the test. However, if the construct being measured is seen as unrelated to the job it will not be perceived as useful for predicting performance, and implicit beliefs will not have as strong of an effect on attitudes toward the test.

If people do not believe that conscientiousness is job-related, then the results of a conscientiousness test will not be considered relevant for predicting future job performance. This will lead to a weakened relationship between entity beliefs and the perceived usefulness of conscientiousness tests, demonstrated in perceived job relatedness moderating the relation between entity beliefs and the perceived usefulness of conscientiousness tests. As such, I expect that people who (a) believe that work ethic is stable (i.e., hold an entity belief of work ethic), and (b) believe that conscientiousness is related to job performance will believe that conscientiousness tests can assist in making decisions about who to hire.

*Hypothesis 3*: The relation of implicit beliefs about work ethic and perceived usefulness of conscientiousness tests will be moderated by the perceived job-relatedness of conscientiousness such that increased perceived job-relatedness of conscientiousness strengthens the relationship between entity beliefs and the perceived usefulness of conscientiousness tests.

**Belief in Psychology**

Another potential moderator is the participant’s belief in psychology. Belief in psychology refers to perceptions of psychology as scientific and valid. Because belief in psychology (as opposed to belief in science *writ large*) may interact with entity beliefs in explaining the perceived usefulness of conscientiousness tests, it was included as an exploratory construct.
METHOD

Participants

Amazon’s Mechanical Turk (MTurk) was used to recruit five-hundred American participants. MTurk is an online database in which workers can be recruited and paid for their participation in online surveys and has been found to be an inexpensive method for retrieving reliable data from a diverse sample (Buhrmester, Kwang, & Gosling, 2011; Goodman, Cryder, & Cheema, 2012). To help ensure quality, only MTurk workers with an approval rate of at least 90% were shown the task. Those who wished to participate were given a link to the survey on Qualtrics. All participants who completed the survey were given a code, which could be entered on MTurk to confirm participation and all workers who entered a valid code were paid $0.50. Responses were collected on a Saturday, allowing employees with a typical Monday-Friday work schedule to complete the survey while off work.

Because the desired sample population was people with input into selection decisions, the first page of the survey included questions related to their work experience (see Appendix A). Participants who did not indicate that they have had input into selection decisions were screened out and were not shown the remainder of the survey or given a code. To prevent people from attempting the screening page multiple times Qualtrics was set to allow each person to take the survey only once. Seven-hundred and ninety-five participants completed the first page of the survey and of these five-hundred and fifty-four (69.7%) indicated that they have had input into selection decisions. Of those who indicated having previous input into selection decisions, five-hundred and thirteen (92.6%) completed the survey. Because of the threat of inattention, an “attention check” question was included within the scale measuring how useful participants believed conscientiousness tests to be, asking participants to leave the question blank. Seventeen
participants responded to the item, indicating that they were either rushing through the survey or answering questions randomly, and had their responses removed from the analyses. Furthermore, a manipulation check item required participants to state if they had been considering a situational judgment test, critical thinking test, conscientiousness test, or emotional stability test. Nineteen participants did not correctly indicate that they had been considering a conscientiousness test and had their data removed from analyses. Finally, six participants were removed after indicating in a question on the final page of the survey that they had not had the final say on selection decisions, participated in a selection/search committee, met with potential candidates, or conducted selection interviews. Participants had the opportunity to indicate other selection experience, but those who only selected this option either did not specify their experience, stated they have not had selection experience, or indicated minimal levels of experience (e.g. referred people). As such, they were not considered to have selection experience and were not included in the analyses. This resulted in a final sample of 472, a rate of 92% of all completed surveys.

The sample had a relatively even gender split, with 48.7% male, 50.4% female, and .8% unspecified. The sample was 82% White. The average participant was 38 years old (SD = 12 years). Three-hundred and two (64%) worked full time and four-hundred and seven (86%) spent at least 20 hours per week in paid work. The majority of participants (55%) have conducted a selection interview and about a third of participants (36%) have had the final say on a selection decision.

**Procedure**

Participants who were not screened out were shown items measuring their implicit beliefs of work ethic and belief in science. These scales were placed at the beginning of the survey
because their scores should be independent of job situation and uncontaminated by contextual factors. Participants were then introduced to the job with the following instructions:

In the first part of this task, we will be asking you to consider a hiring procedure and its appropriateness for use in assessing candidates for the job of [   ]. Below is a description of the tasks required of a [   ]. Please read through the description before proceeding to the next page.

Each participant was shown a list of job tasks for either a stock clerk or a sales manager. These positions were selected to provide participants with varying levels of job complexity in a similar work environment. Stock clerks are listed on O*Net as being in job zone one, requiring “little or no preparation” and the sales manager position is in job zone four, with “considerable preparation needed” (National Center for O*NET Development). The complete list of job tasks is shown in Appendix E. Previous research has not found job complexity to affect perceptions of the importance of conscientiousness for predicting job performance (Ohme & Zacher, 2015), but exploratory analyses were conducted to see if differences exist between the two jobs.

After reading the job description participants were informed that “conscientiousness is the personality trait of being thorough, careful, or vigilant. A conscientious person desires to do a task well.” They were then measured on their beliefs about how related they perceived conscientiousness to be to the job they had been shown. Participants were then shown sample conscientiousness items from the International Personality Item Pool (IPIP; Goldberg, 1999) and asked to consider the usefulness of conscientiousness tests in selecting employees for the job they were shown previously.

Finally, manipulation check items were included that asked participants what test they evaluated and what they thought the job level of the position being examined was. Participants
were also asked to indicate their age, race, and gender. In addition to these basic demographic questions participants also responded to items asking what kinds of selection experience they possessed and how many selection interviews they had conducted. The manipulation check items and demographic questions are included in Appendix H.

**Measures**

*Implicit theory of work ethic* was measured using four items assessing one’s implicit theory of work-ethic malleability. These items are adapted from the measure of implicit theories used by Chiu et al. (1997). The Chiu et al. measure contained three items assessing one’s nature (e.g., “Everyone is a certain kind of person and there is not much that can be done to really change that”). The work-ethic version contains four items – “A person’s work ethic is something very basic about them and it can’t be changed much,” “Everyone is a certain kind of worker, and there is not much that can be done to really change that,” “Employees do not suddenly become dependable overnight,” and “A good work ethic develops early and doesn’t change much.” Participants indicated their level of agreement with each statement on a six-point Likert-type scale. Statements supporting an incremental belief are not included because even people with strong entity beliefs endorse items supporting an incremental belief (Boyum, 1988; Leggett, 1985). That is, incremental belief statements are attractive enough to generate support from everyone. This scale displayed good internal consistency (α = .82). See Appendix B.

Participants’ *belief in science* was measured using the scale developed by Farias et al. (2013) (see Appendix C). This scale contains ten items, each of which requires the participant to indicate level of agreement with a statement using a six-point Likert-type scale (e.g. “we can only rationally believe in what is scientifically provable,” “science is the most efficient means of
attaining truth”). This scale has displayed high levels of internal consistency, and had a Cronbach’s alpha of .94 in the present sample.

Participants’ belief in psychology was assessed using a scale developed specifically for use in this study. See Appendix D for the complete scale. This scale contained four items looking at if participants viewed psychology as scientific and useful for explaining behavior (e.g. “Psychology is capable of explaining human behavior”, “psychologists make useful contributions to our knowledge of the world”). Agreement with each of the items was measured using a five-point Likert-type scale. The scale displayed good internal consistency ($\alpha = .84$). Complete scale information is provided in Table 1.

Perceived job relatedness of conscientiousness was measured using three items assessing whether participants believe conscientiousness to be related to job performance (e.g. “How important do you believe conscientiousness is for performing well on this specific job?”) Responses were given on a five-point Likert-type scale. This scale was created for the current study and displayed adequate internal consistency ($\alpha = .73$). See Appendix F. Complete scale information is provided in Table 2.

Perceived usefulness of the test was measured using five items assessing whether participants believe the test would be effective for selecting new employees. Participants were asked to indicate their agreement with five statements (e.g. “This test should help assess a person’s ability to handle the job,” “Assessing personal qualities with a test like this is an effective way to help evaluate a job candidate’s suitability”) using a five-point Likert-type scale with possible choices of “Strongly Disagree,” “Disagree,” “Neither Agree nor Disagree,” “Agree,” and “Strongly Disagree.” Support for the test was calculated by scoring people’s responses on a five-point scale, (1 = strongly disagree; 5 = strongly agree). One item, “I am
skeptical of using a test like this during the hiring practice” was reverse-scored. The scale
displayed high levels of internal consistency (α = .92). See Appendix G.
RESULTS

Analyses

Preliminary analyses were run to see if job level had a significant effect on perceived job relevance of conscientiousness and perceived usefulness of conscientiousness tests. An independent samples t-test did not find a significant difference between the stock clerk ($M = 4.30, SD = 0.54$) and the sales manager ($M = 4.38, SD = 0.52$) positions on perceived job relatedness of a conscientiousness test, $t(462) = 0.56, p > .05$. The perceived usefulness of conscientiousness tests for selecting a stock clerk ($M = 3.47, SD = .79$) did not significantly differ from the perceived usefulness for selecting a sales manager ($M = 3.51, SD = 0.85$), $t(470) = 1.58, p > .05$. Because of the lack of a significant effect of job level, the data was collapsed and all analyses were conducted independent of job level.

Means, standard deviations, and correlations for the dependent, independent, and moderator variables are provided in Table 3. People showed moderate entity beliefs toward work ethic ($M = 3.82, SD = 0.89$), consistent with previous research on implicit beliefs (e.g. Chiu et al., 1997). There was strong support for conscientiousness as job related ($M = 4.34, SD = 0.53$) but less agreement that a conscientiousness test would be useful for selecting an applicant ($M = 3.49, SD = 0.82$). I hypothesized that entity beliefs would be positively related with the perceived usefulness of a conscientiousness test. In contrast, implicit beliefs did not predict the perceived usefulness of a conscientiousness test, $r = -.01, p > .05$, failing to support Hypothesis 1.

To control for collinearity, scores on belief in science, perceived job relatedness of conscientiousness, and perceived usefulness of conscientiousness tests were mean-centered. Interaction terms were created by multiplying the mean centered scores of the predictor variables. Hierarchical regression was conducted in three steps. In the first step, implicit beliefs,
job relatedness, and belief in science included. In the second step, two-way interaction terms were introduced to the model. In the final step the three-way interaction of implicit beliefs, job relatedness, and belief in science was added. Complete regression results are presented in Table 4. The model significantly predicted perceived usefulness of conscientiousness tests, $F(7, 433) = 3.50, p < .01$. However, the only significant predictor of the perceived usefulness of conscientiousness tests was job relatedness, $t(464) = 4.28, p < .01$. None of the interaction terms were statistically significant. Hypotheses 2 and 3 predicted that belief in science and job relatedness would moderate the effect of implicit beliefs. These hypotheses were not supported.

Because belief in psychology may provide a more direct estimate of attitudes toward psychological tests than belief in science, regression analyses were conducted examining belief in psychology in place of belief in science. Regression results are presented in Table 5. Multiple regression analyses found the model to be statistically significant, $F(7, 433) = 6.10, p < .01$. As before, job relatedness predicted the perceived usefulness of conscientiousness tests, $t(464) = 3.90, p < .01$. Belief in psychology also had a significant effect, $t(464) = 4.25, p < .01$. None of the interaction terms were statistically significant. Thus, although belief in psychology was predictive of attitudes toward conscientiousness tests, it did not moderate implicit beliefs.
DISCUSSION

Overall, participants considered conscientiousness tests to be generally useful for predicting job performance in employee selection. Conscientiousness tests were viewed as particularly useful by people who had a high belief in psychology and perceived conscientiousness to be job related. However, contrary to my hypotheses, implicit beliefs were not related to the perceived usefulness of conscientiousness tests and perceived job relatedness of conscientiousness and belief in science both failed to moderate the relationship between implicit beliefs and perceived usefulness.

The results of this study failed to support any of the proposed relationships linking peoples’ implicit beliefs to their attitudes about the usefulness of conscientiousness tests for predicting job performance. This indicates that implicit beliefs about work ethic may not shed light on why practitioners are reluctant to use conscientiousness tests as part of an employee selection protocol. However, there are many limitations to the present study that may have obscured the relationship.

One possible reason that participants’ implicit beliefs were not related to their attitudes about the test is that there was not a perfect alignment of constructs under examination. That is, participants were asked their opinion about a test of conscientiousness, but implicit beliefs were assessed by asking about the permeability of a strong work ethic. Although work ethic and conscientiousness are closely related, participants may believe that work ethic is unstable and conscientiousness is stable, or vice versa. Implicit beliefs toward work ethic and conscientiousness are likely to be extremely similar, but a lack of complete overlap may make it more difficult to find an effect on use intentions.
One possible explanation for the lack of a moderating effect of job relatedness is the low level of variability exhibited. Measured on a five-point scale, 88% of participants rated the job relatedness of conscientiousness as four or higher, indicating near-universal agreement to the importance of conscientiousness. Because of the high agreement that conscientiousness is related to job performance, it is difficult to detect a significant effect of the perceived job relatedness of conscientiousness. The low variability of job relatedness allows its relation with attitudes of the usefulness of conscientiousness tests to be masked by error. Given the low variance, it is noteworthy that job relatedness displayed a significant main effect on perceived usefulness. If a different personality trait that is more ambiguous in its relation to job performance had been used it is possible that there would be a stronger moderating effect for implicit beliefs.

One possible reason that belief in science failed to predict the perceived usefulness of conscientiousness tests is the scale's focus on the efficacy of science in comparison to other methods. Because the scale asks for judgments on science as the supreme source of knowledge, it examines not only participants’ belief in science, but also their belief in other methods, such as religion. As such, a low score on belief in science does not necessarily indicate that the individual does not have faith in the scientific method, but may instead indicate a high level of religiosity. The belief in psychology scale, which did not require participants to make religious judgments and was more directly relevant to opinions towards conscientiousness tests, displayed a significant positive correlation with the perceived usefulness of conscientiousness tests ($r = .20, p < .01$).

Another reason that participants’ implicit beliefs did not predict the perceived usefulness of conscientiousness tests may be concern over whether or not they can trust job applicants to answer the questions honestly. People may believe that conscientiousness tests are valid, but that
in a selection setting applicants will tempted to fake good, causing the results to not be useful. If the test is viewed as easily fakeable, regardless of the science behind it and the job relatedness of conscientiousness, it will be viewed as unable to discriminate between good and bad candidates. Perceived likelihood of effective faking likely moderates opinions on the perceived usefulness of conscientiousness tests. Future research should explore the attitudes about the fakeability of different selection methods, including conscientiousness.

Despite the present study’s limitations, it provides a unique look at the beliefs of those making selection decisions. This study is the first to examine the role of implicit beliefs in an employee selection scenario and does so using a diverse sample of participants who have experience helping to make hiring decisions. The results of this study should be viewed as indicative of the beliefs of the average person who is making hiring decisions.

This study also makes the contribution of introducing the belief in psychology scale. Belief in psychology displayed strong internal consistency and significantly predicted participants’ beliefs about the usefulness of conscientiousness tests. This scale shows potential to help understand resistance to psychological tests in favor of less scientific methods.

Given the common agreement that conscientiousness is an important trait for high job performance, future should continue to focus on perceptions of the efficacy of different assessment methods. Laypeople have displayed a preference for holistic methods of measurement (Diab, Pui, Yankelevich, & Highhouse, 2011; Dietvorst, Simmons, & Massey, 2014; Nolan & Highhouse, 2014). For instance, people believe that they can intuitively predict performance (Kleinmuntz, 1990; Lodato, Highhouse, & Brooks, 2011; Lievens, Highhouse, & De Corte, 2005). There is a preference for interviews despite the literature showing that mechanical methods outperform clinical evaluations and that interviewers do not differ in ability
(Kuncel, Klieger, Connelly, & Ones, 2013; Pulakos, Schmitt, Whitney, & Smith 1996). Although interviews show moderate predictive validity, recent research suggests that the subjective evaluations can hurt predictions when used in conjunction with higher quality predictors (Dana, Dawes, & Peterson, 2013; Dilchert & Ones, 2009). This finding is perhaps not surprising given previous research showing that increasing the amount of information could decrease clinician accuracy (Ægisdóttir et. al, 2006).

**Conclusion**

From the results found in a large number of participants with selection experience, there is no evidence that implicit beliefs factor into opinions of conscientiousness tests. Belief in science, belief in psychology, and perceived job relatedness of conscientiousness all failed to moderate the role of implicit beliefs. However, conscientiousness was found to be highly job-relevant, indicating a potential for conscientiousness tests to be viewed as an effective methods of selecting new employees. Participants’ perceived job relatedness of conscientiousness and belief in psychology were both positively related to attitudes toward conscientiousness tests. Future research should examine ways to increase peoples’ belief in psychology as a way to improve attitudes toward conscientiousness tests.
REFERENCES

Ægisdóttir, S., White, M. J., Spengler, P. M., Maugherman, A. S., Anderson, L. A., Cook, R. S., ...


Sitser, T., van der Linden, D., & Born, M.P. (2013). Predicting sales performance criteria with personality measures: The use of the general factor of personality, the Big Five and narrow traits. *Human Performance, 26*(2), 126-149.


Table 1. *Belief in Psychology Scale Reliability*

<table>
<thead>
<tr>
<th>Item</th>
<th>Corrected Item-Total</th>
<th>Cronbach’s α if item removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology is capable of explaining human behavior.</td>
<td>.67</td>
<td>.80</td>
</tr>
<tr>
<td>I believe that psychology is a science.</td>
<td>.70</td>
<td>.79</td>
</tr>
<tr>
<td>Results of psychology studies are credible.</td>
<td>.68</td>
<td>.80</td>
</tr>
<tr>
<td>Psychologists make useful contributions to our knowledge of the world.</td>
<td>.67</td>
<td>.80</td>
</tr>
<tr>
<td>Item</td>
<td>Corrected Item-Total</td>
<td>Cronbach’s α if item removed</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>How important do you believe conscientiousness is for performing well on this job?</td>
<td>.59</td>
<td>.62</td>
</tr>
<tr>
<td>Conscientiousness is necessary to be successful in this job.</td>
<td>.65</td>
<td>.53</td>
</tr>
<tr>
<td>Someone lacking in conscientiousness would not make a good employee.</td>
<td>.46</td>
<td>.79</td>
</tr>
</tbody>
</table>
Table 3. Means, Standard Deviations, and Correlations for Predictor and Outcome Variables

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implicit Beliefs</td>
<td>470</td>
<td>3.82</td>
<td>0.89</td>
<td></td>
<td></td>
<td></td>
<td>0.82</td>
</tr>
<tr>
<td>2</td>
<td>Belief in Science</td>
<td>451</td>
<td>3.87</td>
<td>1.11</td>
<td>0.09*</td>
<td></td>
<td></td>
<td>0.94</td>
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<tr>
<td>3</td>
<td>Belief in Psychology</td>
<td>472</td>
<td>3.95</td>
<td>0.60</td>
<td>0.08</td>
<td>0.24*</td>
<td></td>
<td>0.84</td>
</tr>
<tr>
<td>4</td>
<td>Job Relatedness</td>
<td>472</td>
<td>4.34</td>
<td>0.53</td>
<td>0.04</td>
<td>-0.08</td>
<td>0.10*</td>
<td>0.73</td>
</tr>
<tr>
<td>5</td>
<td>Perceived Usefulness</td>
<td>464</td>
<td>3.49</td>
<td>0.82</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.20**</td>
<td>0.21**</td>
</tr>
</tbody>
</table>

* p < .05. ** p < .01.
Table 4. Effects of Implicit Beliefs, Belief in Science, and Job Relatedness on Perceived Usefulness of Conscientiousness Tests

| Predictor | Model 1 | | Model 2 | | Model 3 | |  
|-----------|---------|---|---------|---|---------|---|---------|---|  
|           | B       | SE B | β       | B | SE B | β | B | SE B | β |  
| Implicit Beliefs | -.03 | .04 | -.03 | -.03 | .04 | -.03 | -.01 | .05 | -.02 |  
| Belief in Science | .00 | .04 | .01 | .00 | .04 | .00 | .00 | .04 | .00 |  
| Job Relatedness | .32 | .07 | .21** | .31 | .07 | .21** | .31 | .07 | .21** |  
| Implicit Beliefs x Belief in Science | -0.02 | .04 | -.03 | -.03 | .04 | -.04 | | | |  
| Implicit Beliefs x Job Relatedness | -0.00 | .08 | .00 | -.05 | .08 | -.03 | | | |  
| Belief in Science x Job Relatedness | .04 | .07 | .03 | .06 | .07 | .04 | | | |  
| Implicit Beliefs x Belief in Science x Job Relatedness | | | | | | | | | | .12 | .06 | .09 |  

| R² | .05 | .05 | .05 |  
| ΔR² | .00 | .00 |  

F for ΔR² | .21 | 3.42  

**p < .01
Table 5. Effects of Implicit Beliefs, Job Relatedness, and Belief in Psychology on Perceived Usefulness of Conscientiousness Tests

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>$SE_B$</td>
<td>$\beta$</td>
</tr>
<tr>
<td>Implicit Beliefs</td>
<td>-.03</td>
<td>.04</td>
<td>-.03</td>
</tr>
<tr>
<td>Job Relatedness</td>
<td>.29</td>
<td>.07</td>
<td>.19**</td>
</tr>
<tr>
<td>Belief in Psychology</td>
<td>.25</td>
<td>.06</td>
<td>.18*</td>
</tr>
<tr>
<td>Implicit Beliefs x Job Relatedness</td>
<td>.03</td>
<td>.07</td>
<td>.02</td>
</tr>
<tr>
<td>Implicit Beliefs x Belief in Psychology</td>
<td>-.10</td>
<td>.06</td>
<td>-.08</td>
</tr>
<tr>
<td>Job Relatedness x Belief in Psychology</td>
<td>-.07</td>
<td>.11</td>
<td>-.03</td>
</tr>
<tr>
<td>Implicit Beliefs x Job Relatedness x Belief in Psychology</td>
<td>-.17</td>
<td>.11</td>
<td>-.07</td>
</tr>
</tbody>
</table>

$R^2$ | .07 | .08 | .09  
$\Delta R^2$ | .01 | .00 |  
$F$ for $\Delta R^2$ | 1.19 | 2.17 |

** $p < .05$
APPENDIX A: INITIAL DEMOGRAPHIC AND SCREENING ITEMS

Do you work outside of the home?

- Yes
- No

How many people work in your organization?

- 0 - 10 employees.
- 10 - 50 employees.
- 50 - 200 employees.
- Over 200 employees.
- Not applicable.

How much time per week do you spend in paid work?

- Zero
- 1 - 19 hours
- 20 - 39 hours
- 40 - 50 hours
- More than 50 hours

Have you ever had the authority to hire or fire someone?

- Yes
- No

Have you ever had input into hiring decisions?

- Yes
- No
APPENDIX B: IMPLICIT BELIEFS OF WORK ETHIC SCALE

For each of the following items, please indicate your level of agreement.

A person's work ethic is something very basic about them and it can't be changed much.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
</table>

Everyone is a certain kind of worker, and there is not much that can be done to change that.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
</table>

Employees do not suddenly become dependable overnight.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
</table>

A good work ethic develops early and doesn't change much.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
</table>
APPENDIX C: BELIEF IN SCIENCE SCALE

For each of the following items, please indicate your level of agreement.

Science provides us with a better understanding of the universe than does religion.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<tr>
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</tbody>
</table>

"In a demon-haunted world, science is a candle in the dark." (Carl Sagan)

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<tbody>
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</tbody>
</table>

We can only rationally believe in what is scientifically provable.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<td></td>
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</table>

Science tells us everything there is to know about what reality consists of.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</table>

All the tasks human beings face are solvable by science.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</tbody>
</table>

The scientific method is the only reliable path to knowledge.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</tbody>
</table>

The only real kind of knowledge we can have is academic knowledge.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</tbody>
</table>

Science is the most valuable part of human culture.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
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</tbody>
</table>

Science is the most efficient means of attaining truth.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Mostly Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>
APPENDIX D: BELIEF IN PSYCHOLOGY SCALE

For each of the following items, please indicate your level of agreement:

Psychology is capable of explaining human behavior.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

I believe that psychology is a science.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
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<td></td>
<td>○</td>
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</tr>
</tbody>
</table>

Results of psychology studies are credible.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Psychologists make useful contributions to our knowledge of the world.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
APPENDIX E: INTRODUCTION TO JOB AND JOB TASKS

In the first part of this task, we will be asking you to consider a hiring procedure and its usefulness in assessing candidates for the job of store clerk. Below is a description of the tasks required of a store clerk. Please read through the description before proceeding to the next page.

**Stock Clerk**
- Answer customers' questions about merchandise and advise customers on merchandise selection.
- Itemize and total customer merchandise selection at checkout counter, using cash register, and accept cash or charge card for purchases.
- Take inventory or examine merchandise to identify items to be reordered or replenished.
- Pack customer purchases in bags or cartons.
- Stock shelves, racks, cases, bins, and tables with new or transferred merchandise.
- Receive, open, unpack and issue sales floor merchandise.
- Maintain display cases, shelves, and aisles.
- Compare merchandise invoices to items actually received to ensure that shipments are correct.
- Requisition merchandise from supplier based on available space, merchandise on hand, customer demand, or advertised specials.

On the next pages, you will be asked about your opinion on an employment test, and its usefulness for hiring people for the position just described.

In the first part of this task, we will be asking you to consider a hiring procedure and its usefulness in assessing candidates for the job of sales manager. Below is a description of the tasks required of a sales manager. Please read through the description before proceeding to the next page.

**Sales Manager**
- Resolve customer complaints regarding sales and service.
- Oversee, regional and local sales managers and their staffs.
- Plan and direct staffing, training, and performance evaluations to develop and control sales and service programs.
- Determine price schedules and discount rates.
- Review operational records and reports to project sales and determine profitability.
- Monitor customer preferences to determine focus of sales efforts.
- Prepare budgets and approve budget expenditures.
- Confer or consult with department heads to plan advertising services and to secure information on equipment and customer specifications.
- Direct and coordinate activities involving sales of manufactured products, services, commodities, real estate or other subjects of sale.
- Confer with potential customers regarding equipment needs and advise customers on types of equipment to purchase.

On the next pages, you will be asked about your opinion on an employment test, and its usefulness for hiring people for the position just described.
Conscientiousness is the personality trait of being thorough, careful, or vigilant. A conscientious person desires to do a task well.

How important do you believe conscientiousness is for performing well on this specific job?

<table>
<thead>
<tr>
<th>Extremely Important</th>
<th>Somewhat Important</th>
<th>Neither Important nor Unimportant</th>
<th>Somewhat Unimportant</th>
<th>Not at all Important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

Conscientiousness is necessary to be successful in this job.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

Someone lacking in conscientiousness would not make a good employee.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
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</table>
APPENDIX G: PERCEIVED USEFULNESS OF CONSCIENTIOUSNESS SCALE

In a conscientiousness test, people are asked to indicate how well a variety of phrases describe them, on a scale ranging from "strongly disagree" to "strongly agree." Below are some examples of phrases from a commonly used test assessing conscientiousness:

Am always prepared
Pay attention to details
Get chores done right away
Follow a schedule
Like order
Am exacting in my work

Consider the job position shown earlier when evaluating the effectiveness of a test of conscientiousness for making hiring decisions.

This type of test should help assess a person's ability to handle the job.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

Assessing personal qualities with a test like this is an effective way to help evaluate a job candidate's suitability.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
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</tbody>
</table>

This type of test can assist you in determining if someone is going to be a good employee.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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I am skeptical of using a test like this during the hiring process.

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<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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I feel that a test like this will help you pick the right person for the job.

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<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
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APPENDIX H: DEMOGRAPHIC AND MANIPULATION CHECK ITEMS

Considering the job zones below, which did the job description you read fall into?
- Job Zone 1 - occupations that need little or no preparation (e.g., taxi driver, waiter, construction labor)
- Job Zone 2 - occupations that need some preparation (e.g., customer service, sales, bank teller)
- Job Zone 3 - occupations that need medium preparation (e.g., insurance agent, electrician)
- Job Zone 4 - occupations that need considerable preparation (e.g., teacher, accountant)
- Job Zone 5 - occupations that need extensive preparation (e.g., lawyer, biologist)

What test were you evaluating?
- Situational Judgment Test
- Critical Thinking Test
- Conscientiousness Test
- Emotional Stability Test

What is your age?

What is your race?
- White/Caucasian
- African American
- Hispanic
- Asian
- Native American
- Pacific Islander
- Other

What is your gender?
- Female
- Male

Which of the following describe your selection experience? (Check all that apply)
- Final say on selection decisions
- Participated in selection/search committee
- Met with potential candidates
- Conducted selection interviews
- Other

How many selection interviews have you conducted?
- 0 - 4
- 5 - 19
- 20 or more
APPENDIX I: HSRB FORM

DATE: July 10, 2015
TO: Christopher Arnold
FROM: Bowling Green State University Human Subjects Review Board
PROJECT TITLE: [747337-2] Arnold Thesis
SUBMISSION TYPE: Revision
ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: July 9, 2015
REVIEW CATEGORY: Exemption category #2

Thank you for your submission of Revision materials for this project. The Bowling Green State University Human Subjects Review Board has determined this project is exempt from IRB review according to federal regulations AND that the proposed research has met the principles outlined in the Belmont Report. You may now begin the research activities.

Note that an amendment may not be made to exempt research because of the possibility that proposed changes may change the research in such a way that it is no longer meets the criteria for exemption. A new application must be submitted and reviewed prior to modifying the research activity, unless the researcher believes that the change must be made to prevent harm to participants. In these cases, the Office of Research Compliance must be notified as soon as practicable.

We will retain a copy of this correspondence within our records.

If you have any questions, please contact Kristin Hagemyer at 419-372-7716 or khagemy@bgsu.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Bowling Green State University Human Subjects Review Board's records.