Running Head: TRAITS and METHODS

Influences of Traits and Assessment Methods on Human Resource Practitioners' Evaluations of Job Applicants

David J. Topor

Stephen M. Colarelli

Kyunghee Han

Central Michigan University

Abstract

We examined human resource (HR) practitioners' subjective evaluations of job applicants as a function of specific traits and the assessment methods used to measure those traits. HR practitioners (N = 277) rated the hirability of a hypothetical job applicant who was described according to one trait (intelligence, conscientiousness, or agreeableness) assessed by one method (interview, paper-and-pencil test, or assessment center). We found main effects for trait and method as well as an interaction. HR practitioners gave highest hirability ratings to job applicants described as conscientious and to those assessed by an interview. Job applicants evaluated on conscientiousness assessed by an interview were rated more highly than all other combinations of trait and method.

Key Words: Assessment Methods; Traits; Selection and Assessment; Interaction of Traits and Assessment Methods; Hirability

Influences of Traits and Assessment Methods on Human Resource Practitioners' Evaluations of Job Applicants

Research on personnel selection over the past century has focused on the effectiveness of traits and assessment methods for predicting job performance (Guion & Gottier, 1965; Schmidt & Hunter, 1998). It is now well established that cognitive ability and some personality traits correlate with job performance and other outcomes across a variety of occupations (Barrick & Mount, 1991; Gottfredson, 1997). Similarly, some assessment methods can reliably measure traits and skills (e.g., job sample tests), whereas other methods are less reliable (e.g., unstructured interviews; Gatewood & Field, 1998). Yet, despite a century of research on psychological traits and selection methods, few studies have examined how they actually influence practitioners' hiring decisions. Understanding how practitioners think about traits and methods is important because they often make hiring decisions as well as recommendations about which assessment methods organizations should use.

Harris, Dworkin, and Park (1990) report that HR practitioners prefer – and thus probably give more weight to – practices that applicants are comfortable with (e.g., the interview) and avoid those that applicants may find offensive (e.g., paper and pencil tests). Terpstra and Rozell (1997) found that practitioners avoid using hiring practices when they are uncertain about their usefulness. Practitioners, for example, believed that the interview was useful, while they were less certain about cognitive ability tests. Unfortunately, neither of these studies distinguished between traits and assessment methods. They both asked about hiring *practices*, such as employment interviews or cognitive ability tests. However, hiring practices are combinations of *methods and traits*. For example, the employment interview is a method of assessment (a face-to-face question-and-answer session) during which the interviewer assesses traits (e.g., verbal

fluency and social skills). Practitioners' decisions about job applicants may be guided less by their beliefs about hiring practices per se than by beliefs about particular traits or assessment methods. For example, practitioners may prefer the interview because it utilizes a face-to-face method. The purpose of the paper is to examine the relative influence of different traits and methods on human resource (HR) practitioners' hiring decisions. We focus on three traits and three assessment methods that are commonly discussed in the HR literature. The three traits are cognitive ability,[1] conscientiousness, and agreeableness; the three methods are the interview, paper-and-pencil tests, and the assessment center.

Psychological Traits

To negotiate effectively within a social world, it is necessary for people to share common *meanings* of important psychological traits (Buss, 1996). Sternberg, Conway, Ketron, and Bernstein (1981) found that people share common core beliefs about the meaning of intelligence—that it involves problem-solving ability, verbal ability, and social competence. People also share similar meanings of common personality traits. The traits that people notice and talk about become encoded into in natural language as trait terms people use to describe others—for example, *shy, gregarious, domineering, anxious, and conscientious*. This probably accounts for the robustness of the Big Five personality traits (Goldberg, 1990; Norman, 1963), which have been found in many populations and represent terms that are widely used in ordinary discourse (Goldberg, 1990).

To negotiate effectively within a social world also requires that people share a common understanding of the *relevance* of traits to social life. Laypersons use implicit theories of intelligence in evaluations of themselves and others, and their implicit theories about intelligence and behavior are almost identical to those of experts (Sternberg et al., 1981). People

also believe that personality traits are useful in evaluating others and in making predictions about behavior. For example, personality traits are important criteria in evaluating and selecting potential marriage partners and employees. Both women and men rank "kindness and understanding" as the most important traits desired in a mate and "exciting personality" within the top five (Buss, 1998). Two of the Big-Five factors, agreeableness and conscientiousness, are among the most useful in personnel selection (Barrick & Mount, 1991; Tett, Jackson, & Rothstein, 1991), and, indeed, managers prefer job applicants who are conscientious and agreeable (Dunn, Mount, Barrick, & Ones, 1995).

The “figure-ground” context of traits in the applicant pool is likely to influence relative importance that practitioners give to different traits. Figure-ground here refers to the salience of focal traits (figure) over other traits (ground) that are taken for granted. For example, in university admissions, differences in intelligence and talent are normally salient, while the personalities of applicants are less important and blend into the background (Klitgaard, 1985). In occupational settings, the situation is typically the reverse. Because educational institutions channel people into occupations commensurate with their cognitive ability, and because people gravitate towards occupations that are compatible with their abilities (Wilk, Desmarais, & Sackett, 1995), variation in cognitive ability within applicant pools for many jobs is small compared to personality (Lancaster, Colarelli, King, & Beehr, 1994). The greater variability of personality layered over a more uniform distribution in intelligence is likely to increase the salience of personality to people making hiring decisions. In addition, the personality of a job applicant can be more relevant than cognitive ability to the self-interest of a person making a hiring decision, except perhaps when job applicants differ dramatically in intelligence. An applicant's personality (broadly defined) can indicate whether an individual is a potential friend

or enemy, trustworthy or untrustworthy, aggressive or friendly, deferent or defiant, or a willing sexual partner (Buss, 1998).

In the present research, we examine how HR practitioners make hirability ratings for an applicant for a management position. We expect that personality will have a stronger influence than cognitive ability. However, the relevance of any particular personality trait is more a function of the nature of the job and thus of person-job fit. For the present study, which involves a management job, we expect that conscientiousness will be deemed more important than other personality traits.

Assessment Methods

Despite advances in psychological assessment theory and methodology over the past 50 years, laypersons, managers, and HR practitioners continue to rely heavily on folk methods of assessment, such as the employment interview and letters of recommendation.[2] The employment interview and letters of recommendation are the most widely used assessment methods, and they have a significant impact on hiring decisions; paper-and-pencil tests, on the other hand, are less widely used, particularly in the private sector (American Management Association, 1986; Bureau of National Affairs, 1988; Colarelli, 1996; Friedman & Williams, 1982; Levy-Leboyer, 1994). One explanation is that folk methods are more compatible with people's evolved preferences for gathering information about people (Colarelli, 2003; Geary, 2002). Unlike modern psychometrically-based methods, folk methods require little specialized knowledge. While most psychologists are schooled in statistics and psychometrics, this is less so with HR practitioners; they tend to find the technical jargon and statistics in selection research unnecessary and confusing (Terpstra & Rozell, 1997).

In addition, folk methods probably work reasonably well in some contexts. Although they have a reputation for being problematic, those that have withstood the test of time may have done so because they are useful in some ways (Campbell, 1975; Colarelli, Alampay, & Canali, 2002). Some folk methods can assess traits and predict behavior as accurately as psychometric methods. Colarelli (2003) categorized nine selection methods and their validities from Schmidt and Hunter's (1998) meta-analysis as analytical (e.g., paper-and-pencil cognitive ability tests) and eight as traditional (i.e., folk) methods (e.g., interviews, letters of recommendation, job tryouts). He then calculated the average validity correlation for each category. The average correlation for analytical methods was .35; the average correlation for traditional methods was .36. Indeed, people's ability to assess others through observation is remarkably accurate. Ambady and Rosenthal (1993) found that students' ratings of college professors based on a *10-second* video clip were similar to ratings made by students who were enrolled in professors' classes for a full semester. Therefore, we expect a main effect for assessment method, favoring face-to-face interaction. However, it is also likely that some methods and traits will interact. In particular, because multiple cues about personality are typically available from face-to-face interaction, we expect an interaction between the interview and personality. People are more likely to attend to cues related to personality traits when using an interview.

In our study, we test three specific hypotheses: (1a) Personality will have a stronger effect than cognitive ability on hirability ratings, regardless of the assessment method used; (1b) conscientious job applicants, regardless of the specific assessment measure used, will have higher hirability rating than agreeable job applicants; (2) interviews will have a stronger effect on hirability ratings than paper-and-pencil tests and assessment centers; (3) there will be a significant interaction between trait and assessment method: job applicants assessed on

conscientiousness by an interview will be rated more favorably than applicants assessed on other trait-method combinations.

Method

Participants

Participants were 277 HR practitioners (158 men and 119 women).[3] They were selected because, as part of their regular job responsibilities, they screened and evaluated job applicants or were otherwise involved in hiring procedures. Most participants (69.0%) were between the ages of 26 and 45 years. In addition, 67.9% of the participants were Caucasian, 8.7% were Asian or Pacific Islanders, 7.6% were African-American, and 5.4% were Hispanic. Most of the participants held a college degree, with 41.9% having a bachelor's degree, 38.3% a master's degree, and 7.9% a doctorate or professional degree. They had an average of 8.1 years of HR experience (SD = 6.36), with an average tenure in their current position of 5.6 years (SD = 4.00). Fifty-three percent worked in organizations employing 400 or more people; 13.6 % indicated that they worked in companies with 3,000 or more.

Procedure and Materials

A total of 331 HR practitioners were contacted by phone and asked to participate; 315 agree to participate. Stimulus materials were distributed to those who expressed interest in participating; 277 usable questionnaires were returned (88% response rate). Each packet of stimulus materials included a cover letter, a generic job description for the position of *Plant Manager* at a fictitious firm (*Betatech Corporation*), a narrative profile of a single job applicant, and descriptions of the construct and assessment method used to assess the applicant. Participants were randomly assigned to one of nine experimental conditions, resulting from a 3 x 3 between-subjects factorial design; the first factor was *trait* (cognitive ability,

conscientiousness, or agreeableness) and the second was *assessment method* (paper-and-pencil test, interview, or assessment center). Each participant received only one of the three possible narrative profiles, which were exactly the same across assessment methods. As participants returned their questionnaire packets, they were provided with a thorough debriefing as to the true nature of their participation.

Cover letter and job description. To ensure a common frame of reference, the cover letter indicated that the firm was in the process of conducting an internal audit of its human resources department and needed the assistance of experienced HR professionals. Participants were instructed that, for the purposes of this audit, they were to assume that the job applicant met minimum education and experience requirements, which had been verified through an evaluation of the applicant's resume and job application. In addition, information related to age, race, or gender had been collected separately, and participants should not make any assumptions or inferences about demographic characteristics. The job description provided a general summary of the job, a description of the duties involved with the position of Plant Manager, and qualifications needed to perform the job successfully (job descriptions were identical across all experimental conditions). We chose the job of plant manager because it is an important job, hiring decisions for this type of job require careful deliberation, and it is common in many industries.

Traits. Participants were presented with a narrative evaluation a job applicant's performance on one of three possible constructs (cognitive ability, conscientiousness, or agreeableness). Cognitive ability was described in terms of facility with language, mathematics, short-term memory, abstract reasoning, and spatial visualization. Conscientiousness was described as a predisposition to behave in a way characterized by competence, order, dutifulness,

achievement-striving, self-discipline, and deliberation. Agreeableness was described as a predisposition to behave in a manner characterized by trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness. To insure that there were no differences in the perceived amount (i.e., elevation) of each construct, we asked 155 undergraduate psychology students to rate a description of the job candidate on one of the three constructs. After reading a description, they were requested to answer the following question: "If you were asked to evaluate this person on his or her [name of construct], what would you conclude?" Responses could range from 1 (extremely low) to 7 (extremely high). All of descriptions were rated as reasonably high (the means were 5.71 for cognitive ability, 5.46 for conscientiousness, and 5.50 for agreeableness). The ratings were not significantly different, $F(2, 152) = 1.017$, $p = .364$.

Assessment method. Participants were also provided a detailed description of one of three assessment methods (paper-and-pencil test, interview, or assessment center). Specific information regarding the manner in which the assessment method was administered, scored, and interpreted was also provided, along with examples of relevant items, questions, and/or exercises from each. Many of these descriptions and sample items were derived from a variety of popularly-used measures, as well as various examples provided throughout Gatewood and Feild's (1998) *Human Resource Selection* (4th ed.).

The description of the paper-and-pencil measure indicated that it was commonly used for personnel assessment. Participants were informed that it consisted of 240 items. Examples of various test items were then provided (items matched the construct paired with the test). The interview was described as a commonly used method for personnel assessment, being semi-structured in format. Examples were provided of interview questions, including those about work experience, future goals, and job expectations. The assessment center was described the

measure that was commonly used for personnel assessment, consisting of a variety of behavioral exercises. Examples of the exercises included case analyses, in-basket exercises, and leaderless group discussions.

To verify the accuracy of the descriptions of these assessment methods, we asked 94 HR professionals, who were not involved in the primary study, to rate a description of a cognitive-based paper-and-pencil test, a personality-based paper-and-pencil test, an interview, or an assessment center. After reading a description of one of these methods, they answered the following question: "Based upon your knowledge and professional experience of [name of assessment method], how closely does this describe and/or resemble the typical [name of assessment method]?" Responses ranged from 1 (no resemblance at all) to 7 (perfect resemblance). All descriptions were rated as accurate (the means were 4.88 for the assessment center, 4.71 for the personality-based paper-and-pencil test, 4.69 for the cognitive-based paper-and-pencil test, and 4.55 for the interview). The ratings were not significantly different, $F(3, 90) = .224$, $p = .879$.

Dependent variables. Our primary dependent variable was *hirability*—the degree to which a job applicant possesses the knowledge, skills, abilities, and other relevant criteria needed to successfully perform a given job. The scale consists of seven items. The first four statements were identical to those used by Dunn et al. (1995). Two of these statements assessed participants' overall endorsement of the job applicant; the other two pertained to interactions with others. We added three items to address the specific knowledge, skills, and abilities needed to perform the job. They were: "I believe that this person has the knowledge, skills, and abilities needed to perform their job successfully;" "It would be accurate to say that there is a good 'fit' between this job applicant's qualifications and the tasks that would be required of him or her on

the job;" and "This person has the potential to be a good employee." Participants responded to the items using a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The scale was highly reliable (alpha = .93).

For exploratory purposes, we included three questions to assess participants' beliefs about the perceived relationship between the constructs and assessment methods. The first question gave participants the choice of assessing job applicants on a different construct, so long as it was assessed with the same method described earlier in the stimulus materials. The second item gave participants the choice of assessing job applicants using a different assessment method, as long as it was used to measure the same construct described earlier in the stimulus materials. The third question gave participants the choice of assessing job applicants through use of any one construct-method pairing, regardless of the construct and method presented to them in the study.

Results

Participants' evaluations of job applicants' *hirability* as a function of construct (Hypothesis 1), assessment method (Hypothesis 2), and construct/method pairing (Hypothesis 3) are reported, followed by exploratory analyses designed to further examine HR practitioners' perceptions of hiring practices.

A 3 (construct) x 3 (assessment method) between-subjects ANOVA was performed on hirability ratings. Table 1 presents the means and standard deviations of hirability ratings of each of the three constructs (collapsed across the three assessment methods). There was a significant main effect for construct, $F(2, 268) = 15.128$, $p < .001$, resulting in a moderate effect size ($\eta^2 = .101$). A planned comparison revealed a significant difference between cognitive ability and the average of the two personality constructs, $t(274) = 3.06$, $p < .01$ and between

conscientiousness and agreeableness, $t(274) = 4.24$, $p < .001$, providing support for our first hypothesis. The mean hirability rating of conscientiousness is higher than that of cognitive ability ($d = .68$) and that of agreeableness ($d = .68$).

Mean hirability ratings of each of the three assessment methods (collapsed across the three constructs) are also provided in Table 1. There was a significant main effect for assessment method, $F(2, 268) = 3.478$, $p < .05$, resulting in a small effect size ($\eta^2 = .025$). A planned comparison revealed a significant statistical difference between the use of interviews and the average of the other two assessment methods, $t(274) = 2.33$, $p < .05$, providing support for our second hypothesis. A priori comparisons also showed that mean hirability ratings between paper-and-pencil test and an assessment center were not significantly different, $t(274) = .48$, $p > .05$. The mean hirability of interviews is higher than that of paper-pencil test and that of assessment center, but the differences were very small ($d = .25$; $d = .35$, respectively).

Mean hirability ratings of each of the nine possible construct-method pairings are presented in Table 2. Also as expected, there was a significant interaction between construct and assessment method, $F(4, 268) = 6.339$, $p < .001$, resulting in a moderate effect size ($\eta^2 = .086$). A planned comparison revealed a significant difference between the conscientiousness-interview pairing and the average of the other eight construct-method pairings, $t(275) = 4.820$, $p < .001$, providing support for our third hypothesis. When the conscientiousness-interview pairing was compared with each of construct-method parings, it showed no significant difference with the other two conscientiousness-method pairings, with the cognitive ability-paper-and-pencil test pairing, and with the agreeableness and assessment pairing. These nonsignificant results are probably due to small sample size per comparison (e.g. $N = 30$) because magnitude of mean differences was substantial ("medium effect," Cohen 1988). Tukey tests show several

homogeneous subsets among the construct-method pairings. Conscientiousness paired with the three methods, cognitive ability paired with a paper-and-pencil test, and agreeableness paired with an assessment center received the highest ratings. On the other hand, cognitive ability paired with the interview or an assessment center and agreeableness paired with a paper and pencil test received the lowest ratings.

Table 3 presents the results when participants were asked to select *any* one construct of their choice measured by the assessment method they were assigned. HR practitioners preferred measuring certain constructs by particular assessment methods, $\chi^2(4, N = 269) = 90.97, p < .001$. Of the HR practitioners required to use a paper-and-pencil test, most preferred to assess job applicants' cognitive ability (64%). Of those required to use an interview, most preferred to use that measure to assess conscientiousness (66%). Those required to use an assessment center were split between assessing agreeableness (47%) and conscientiousness (40%).

When participants were asked to select *any* one assessment method under the condition that the construct assigned to them in the study be used (see Table 3), they also indicated a preference for using certain methods with certain constructs, $\chi^2(4, N = 274) = 88.34, p < .001$. Of the HR practitioners required to use cognitive ability, most preferred to use a paper-and-pencil test to assess it (52%). Of those required to use conscientiousness, most preferred to use an interview (69%), and practitioners required to use agreeableness were split between using either an interview (53%) or an assessment center (45%).

When, participants were asked to select *any* construct-method pair of their choice (see Table 3), again, a clear preference for matching certain constructs with certain methods emerged, $\chi^2(7, N = 236) = 173.22, p < .001$. The two strongest associations were between

conscientiousness and the interview (31%) and between cognitive ability and paper-pencil tests (29%).

Discussion

The bulk of research in personnel selection has focused on psychometric properties, applications, or outcomes of traits and assessment methods; more recently, a smaller number of studies have investigated the reactions of job applicants to selection procedures. However, few studies have examined HR practitioners' preferences for traits and assessment methods in hiring decisions. This study examined the influence of traits and assessment methods on HR practitioners' ratings of hirability. Our hypotheses were based on two assumptions: (a) lay persons and HR practitioners can perceive differences in personality traits more readily than differences in cognitive ability, and (b) they prefer assessment methods based on face-to-face interaction over paper-and-pencil tests.

The results generally supported our hypotheses. HR practitioners were more likely hire applicants assessed on the trait of conscientiousness than cognitive ability, and they were more likely to select applicants assessed by an interview than by a paper-and-pencil test or an assessment center. HR practitioners gave the highest hirability ratings to applicants described as conscientious and to those assessed by an interview. Applicants described as intelligent and assessed by a paper-and-pencil test or as described as agreeable and assessed by an assessment center also received reasonably high ratings. HR practitioners gave the lowest ratings to applicants described as intelligent who were assessed by an interview or an assessment center and those described as agreeable who were assessed by a paper-and-pencil test. When given the opportunity to choose pairs of traits and methods, the same tendency emerged to match face-to-

face and observational methods with personality and to match cognitive ability with paper-and-pencil tests.

Why was conscientiousness rated the most favorably? One plausible explanation is that the attributes of conscientiousness – organized, reliable, punctual, ambitious, self-disciplined, and obedient – are associated with efficient task completion. Another explanation involves the relationships among hierarchy, obedience, and self-interest. Given that organizations are hierarchical and that conscientious employees are prone to follow orders, hiring a conscientiousness applicant would be in the self-interest of anyone in authority or to anyone beholding to organizational authorities, such as HR practitioners. A bright applicant who is not conscientious may be regarded as a potential troublemaker.

That conscientious applicants received higher ratings than those described as intelligent may be due to differences in perceived negative consequences associated with each trait. Hiring decisions involve uncertainty, and when faced with uncertain alternatives, people are more comfortable taking a risk to avoid a loss than to pursue a gain (Kahneman & Tversky, 1981).[4] Practitioners may, therefore, base hiring decisions, in part, on a calculus that gives more emphasis to risks associated with loss than risks associated with gain. In considering candidates for the position of a plant manager, practitioners may believe that more could be lost by hiring candidates who do not fully meet standards of conscientiousness than by hiring those who do not fully meet the standards of cognitive ability. Irresponsible behavior by intelligent people can be disastrous to the viability of an organization (Gladwell, 2002).

It was interesting that practitioners preferred paper-and-pencil tests to assess cognitive ability. This is compatible with our argument that it is difficult to detect small differences in intelligence through face-to-face interaction. People in post-industrial societies have a general

understanding that scientific instruments aid in the assessment of phenomena that are not easily observable. Just as people would favor using a thermometer (which is not affected by wind speed and humidity) over subjective impressions to accurately guage temperature, they seem to prefer a paper-and-pencil test over interaction for assessing intelligence.

That HR practitioners' evaluations of job applicants were influenced by assessment methods is an important result. It highlights the need to take assessment methods into account when evaluating the effects of traits on practitioners' hiring decisions.[5] The relation between traits and methods appears to be important for understanding practitioners' beliefs about and reactions to selection procedures. These beliefs may help to explain some of the discrepancies between the empirical literature and actual hiring practices. The widespread use of the employment interview may be due to beliefs about the value of face-to-face interaction for assessing particular types of traits. Our results also suggest a correspondence between practitioner and applicant reactions to hiring practices. Just as we found with HR practitioners, applicants typically rate the interview method most favorably (Steiner & Gilliland, 1996). It may be that similar beliefs are involved in practitioner and applicant reactions.

Limitations

Our use of paper people was a limitation. People may react somewhat differently to paper than actual people, and of course the stakes are much lower for decisions made in an experiment than on the job. A second limitation is that study participants may have inferred that conscientiousness also implies intelligence because "competency" is a facet of conscientiousness. However, the term competence was included in a list of six other terms describing conscientiousness, and therefore was not a particularly salient feature of the description; nevertheless, it may have had some effect on hirability ratings. Finally, we presented

participants with one measure to assess one construct. As a result, participants may have been somewhat skeptical as to the true nature of their efforts, and consequently, their evaluations may have again been influenced accordingly. However, using a more nuanced hiring scenario, including the evaluation of multiple job applicants across multiple constructs and/or assessment methods, would have created other complications. For example, a policy-capturing study with multiple methods and traits would have required an unrealistically large set of scenarios for participants to evaluate. A large number of traits and methods across many different types of jobs would have also added considerable "noise" into the analyses, making it more difficult to accurately assess HR practitioners' decision-making processes.

Implications

The selection procedures adopted by organizations reflect any number of preferences and biases on the part of those involved with hiring systems. The degree to which scientific results can be accepted and put into practice are influenced by how well those findings mesh with the preferences, beliefs, values, and self-interest calculations of those who design and administer the system. Therefore, even when research has found that a particular trait or assessment method is psychometrically sound, such evidence is of little consequence if HR practitioners do not believe the information or if they value other traits and methods. The evolved preference for information about people acquired by face-to-face interaction is likely to have a strong influence on HR practitioners' preference for assessment methods. Adaptive preferences are difficult to change (Colarelli, 2003; Garcia, McGowan, Ervin, & Koelling, 1968; Pinker, 2003).

Self-interest makes the implementation of social technologies, particularly those involving personnel decisions, problematic. When people are confronted with strangers, their first concern is what effect newcomers will have on their personal well-being. People make

personnel decisions, and people are prone to behave in ways that are in their self-interest. Individual interests rarely, if ever, fully mesh with organizational goals (Colarelli, 2003; Scott, 1998). Therefore, people are likely to prefer assessment methods and traits that they believe will best serve their interests. Although empirical research may indicate that the organizational goal of productivity is most likely to be enhanced by using psychometrically sound paper-and-pencil tests of cognitive ability, self-interest considerations suggest that people want more information about job applicants than IQ scores. From this perspective, it is not surprising to find congruence among the results of the present study, studies documenting the frequency with which organizations use different hiring practices, and studies on applicant preferences for hiring practices. They all find that people generally prefer methods that permit face-to-face interaction and methods that allow people to observe and assess many traits at one time. Such methods probably are more effective for making inferences about people's background and values and their degree of fit with workgroups and organizations.

References

Ambady, N., & Rosenthal, R. (1993). Half a minute: Predicting teacher evaluations from thin slices of nonverbal behavior and physical attractiveness. *Journal of Personality & Social Psychology, 64,* 431-441.

American Management Association (1986). *Hiring costs and strategies.* New York: AMACOM American Management Association.

Barrick, M.R., & Mount, M.K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44,* 1-26.

Bureau of National Affairs (1988). *Recruiting and selection procedures* (Personnel Policies Forum, Survey No. 146). Washington, DC.: Author.

Buss, D.M. (1996). Social adaptation and five major factors of personality. In J. S. Wiggins (Ed.). *The five-factor model of personality: Theoretical perspectives* (pp. 180-207). New York: Guilford.

Buss, D. M. (1998). The psychology of human mate selection: Exploring the complexity of the strategic repertoire. In C. Crawford and D. L. Krebbs (Eds.), *Handbook of evolutionary psychology: Issues, ideas, and applications* (pp. 405-429). Mahwah, NJ: Lawrence Erlbaum Associates.

Campbell, D. T. (1975). On the conflicts between biological and social evolution and between psychology and moral tradition. *American Psychologist, 30,* 1103-1126.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.

Colarelli, S.M. (1996). Establishment and job context influences on the use of hiring practices. *Applied Psychology: An International Review, 45,* 153-176.

Colarelli, S.M. (2003). *No best way: An evolutionary perspective on human resource*

management. Westport, CT: Greenwood Publishing Group.

Colarelli, S. M., Alampay, M. R., & Canali, K. G. (2002). Letters of recommendation: An evolutionary perspective. *Human Relations, 55,* 315-344.

Dunn, W.S., Mount, M.K., Barrick, M.R., & Ones, D.S. (1995). Relative importance of personality and general mental ability in managers' judgments of applicant qualifications. *Journal of Applied Psychology, 80,* 500-509.

Friedman, T., & Williams, E. (1982). Current use of tests for employment. In A.K. Wigdor and W.R. Garner (Eds.), *Ability testing: Uses, consequences and controversies* (pp. 99-169). Washington, D.C.: National Academy Press.

Garcia, J., McGowan., B. K., Ervin, F. R., & Koelling, R. A. (1968). Cues: Their relative effectiveness as a function of the reinforcer. *Science, 160*, 794-795.

Gatewood, R. D., & Field, H. S. (1998). *Human resource selection* (4th ed.). New York: Dryden.

Geary, D. C., (2002). Principles of evolutionary educational psychology. *Learning and Individual Differences, 12*, 1-29.

Gladwell, M. (2002, July 22). The talent myth: Are smart people overrated? *New Yorker*, 28-33.

Goldberg, L. R. (1990). An alternative "description of personality": The Big-Five factor structure. *Journal of Personality and Social Psychology, 59*, 1216-1229

Gottfredson, L. S. (1997). Why *g* matters: The complexity of everyday life. *Intelligence, 24*, 79-132.

Guion, R.M., & Gottier, R.F. (1965). Validity of personality measures in personnel selection. *Personnel Psychology, 18,* 135-164.

Harris, M. M., Dworkin, J. B., & Park J. (1990). Preemployment screening procedures: How

human resource managers perceive them. *Journal of Business & Psychology,* 4, 279-292.

Kahneman, D. & Tversky, A. (1981, January). The psychology of preferences. *Scientific American, 246,* 160-173.

Klitgaard, R. (1985). *Choosing elites*. New York. Basic Books.

Lancaster, S. L., Colarelli, S. M., King, D. W., & Beehr, T. A. (1994). Job applicant similarity on cognitive ability, vocational interests, and personality characteristics: Do similar persons choose similar jobs? *Educational and Psychological Measurement, 54,* 299-316.

Levy-Leboyer, C. (1994). Selection and assessment in Europe. In H. C. Triandis M. D. Dunnette, and L. M. Hough (Eds*.). Handbook of Industrial and Organizational Psychology* (2nd ed., Vol. 4) (pp. 173-190). Palo Alto, CA: Consulting Psychologists.

Moore, R.F. (1996). Caring for identified versus statistical lives: An evolutionary view of medical distributive justice. *Ethology and Sociobiology, 17,* 379-401.

Norman, W. T (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *Journal of Abnormal & Social Psychology* 66, 574-583.

Pinker, S. (2003). *The blank slate: The modern denial of human nature*. New York: Viking.

Schmidt F. L., & Hunter J. E (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychological Bulletin,* 124, 262-274

Scott, W. R. (1998). *Organizations* (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Sternberg, R.J., Conway, B.E., Ketron, J.L., & Bernstein, M. (1981). People's conceptions of intelligence. *Journal of Personality and Social Psychology, 41,* 37-55.

Steiner, D. D., & Gilliland, S. W. (1996). Fairness reactions to personnel selection techniques in

France and the United States. *Journal of Applied Psychology, 81,* 134-141.

Terpstra, D.E., & Rozell, E.J. (1997). Why some potentially effective staffing practices are seldom used. *Public Personnel Management, 26,* 483-495.

Tett, R.P., Jackson, D.N., & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. *Personnel Psychology, 44,* 703-742.

Wilk, S. L., Desmarais, L. B., & Sackett, P. R. (1995). Gravitation to jobs commensurate with ability: Longitudinal and cross-sectional tests. *Journal of Applied Psychology, 80*, 79-85.

York, K. M., & Cranny, C.J. (1989). Job hunting and applicant recruiting: Expectations in the interview process and suggestions for improvement. *The Industrial Organizational Psychologist, 26,* 19-23.

Author Notes

David Topor is now at the Leadership Institute, Continuing and Professional Education, Corporate College, Westlake, OH. Stephen M. Colarelli, and Kyunghee Han, Department of Psychology, Central Michigan University.

This article is based on a doctoral dissertation by the first author submitted to the Central Michigan University in partial fulfillment of the requirements for a doctoral degree in psychology. Correspondence concerning this article should be addressed to Stephen M. Colarelli, Department of Psychology, Central Michigan University, Mt. Pleasant, MI 48859. Electronic mail may be sent to colar1sm@cmich.edu.

Footnotes

[1]The terms *cognitive ability* and *intelligence* are synonymous.

[2]The use of letters of recommendation and interviews are widespread even in industrial/organizational psychology and human resource management programs when hiring faculty (York & Cranny, 1989).

[3]For the purpose of this study, we define an HR practitioner as an individual who is primarily involved in personnel functions.

[4]Moore (1996) argues that this preference evolved because losses in subsistence economies – the conditions under which humans evolved – had a higher probability of severely impairing reproductive potential than missing a potential opportunity.

[5]For example, Dunn et al. (1995) found that managers preferred certain traits when making hypothetical decisions, with cognitive ability being most important in evaluating hirability followed by conscientiousness. Yet their stimulus materials contained trait scores obtained by only one assessment method (paper-and-pencil tests); their results may have differed if they had used the same traits presented by other methods.

Table 1

Descriptive Statistics for Hirability Evaluations by Construct and Method

Construct								
Conscientiousness (n = 91)		Agreeableness (n = 93)		Cognitive Ability (n = 93)				
M	*SD*	*M*	*SD*	*M*	*SD*	d_1	d_2	d_3
34.87	7.32	29.84[b]	7.50	29.23[b]	9.16	.68	.68	.07

Method								
Interview (n = 91)		Paper-and-Pencil Test (n = 94)		Assessment Center (n = 92)				
M	*SD*	*M*	*SD*	*M*	*SD*	d_4	d_5	d_6
32.96[a]	8.71	30.76[a,b]	8.86	30.17[b]	7.38	.25	.35	.07

Note. The same superscripts denote means that are not significantly different from each other at $p < .05$. d_1 = Conscientiousness vs. Agreeableness; d_2 = Conscientiousness vs. Cognitive Ability; d_3 = Agreeableness vs. Cognitive Ability; d_4 = Interview vs. Paper-and-Pencil Test; d_5 = Interview vs. Assessment Center; d_6 = Paper-and-Pencil Test vs. Assessment Center.

Table 2

Descriptive Statistics for Hirability Evaluations by Construct-Method Pairing

Construct-Method Pairing	*M*	*SD*	*d*
Conscientiousness / Interview (*n* = 30)	38.00 [a]	8.90	
Conscientiousness / Paper-and-Pencil Test (*n* = 30)	33.63 [a,b]	5.51	.60
Conscientiousness / Assessment Center (*n* = 31)	33.03 [a,b]	6.31	.66
Cognitive Ability / Paper-and-Pencil Test (*n* = 32)	32.53 [a,b]	10.19	.58
Agreeableness / Assessment Center (*n* = 31)	32.06 [a,b,c]	7.18	.75
Agreeableness / Interview (*n* = 30)	31.33 [b,c,d]	5.94	.90
Cognitive Ability / Interview (*n* = 31)	29.65 [b,c,d]	9.24	.94
Agreeableness / Paper-and-Pencil Test (*n* = 32)	26.28 [c,d]	7.98	1.41
Cognitive Ability / Assessment Center (*n* = 30)	25.27 [d]	6.23	1.69

Note. The same superscripts denote means that are not significantly different from each other at $p < .05$. *d* = Standardized mean difference between the conscientiousness-interview pairing and each of the other construct-method pairings.

Table 3

Construct Preferences by Required Assigned Assessment Method (n=269), Assessment Method Preferences by Required Assigned Construct (n = 274), and Construct / Method Preferences (n = 236)

	Indicated a preference to measure		
If required to use	Cognitive Ability	Conscientiousness	Agreeableness
A paper-pencil test	64%	23%	11%
(*n* = 89)	(*n* = 57)	(*n* = 22)	(*n* = 10)
An interview	15%	66%	19%
(*n* = 88)	(*n* = 13)	(*n* = 58)	(*n* = 17)
An assessment center	13%	40%	47%
(*n* = 92)	(*n* = 12)	(*n* = 37)	(*n* = 43)

	Indicated a preference to use		
If required to measure	A paper-pencil test	An interview	An assessment center
Cognitive Ability	52%	26%	23%
(*n* = 93)	(*n* = 48)	(*n* = 24)	(*n* = 21)
Conscientiousness	15%	69%	17%
(*n* = 89)	(*n* = 13)	(*n* = 61)	(*n* = 15)
Agreeableness	1%	53%	45%
(*n* = 92)	(*n* =11)	(*n* = 49)	(*n* = 42)

	Indicated a Preference to Measure…		
When choosing to use	Cognitive Ability	Conscientiousness	Agreeableness

A paper-pencil test	29%	4%	0%
	(*n* = 68)	(*n* = 9)	(*n* = 0)
An interview	2%	31%	14%
	(*n* = 4)	(*n* = 74)	(*n* = 32)
An assessment center	5%	7%	9%
	(*n* = 11)	(*n* = 17)	(*n* = 21)

Note: "Other" categories in construct or assessment method preferences were not included in the analyses due to small frequencies. The number of cases excluded was 6 for construct preferences, 1 for assessment method preferences, and 5 for construct/method preferences. Some row totals may not add up to 100% due to rounding.