



WHITE PAPER

A Comparison Between **The Birkman Method®** and The Hogan Personality Inventory®

Table of Contents

I.	Introduction	2
II.	Development	2
III.	Measurement	4
IV.	Reliability	6
V.	Validity	7
	A. Construct Validity (Factor Structure)	7
	B. Content / Face Validity	7
	C. Criterion-Related Validity	8
VI.	Norms	8
VII.	Applications	9
VIII.	Behavioral Insights	9
IX.	Supporting Research	10
X.	Adherence to Professional Standards	10
XI.	Summary	11
XII.	Conclusion	12
XIII.	References	13

Introduction

The Birkman Method[®] and the Hogan Personality Inventory[®] are both self-report online assessments. Both are available directly, through a consultant, or through a company. As with the other comparisons in this Birkman white paper series, the purpose of this paper is to provide the reader with information about the similarities and differences between the two assessments. Note that these similarities and differences can be found in comparing Birkman International's (hereinafter "BI") technical manuals and white papers (Birkman, 1961; Birkman, Elizondo, Lee, Wadlington, & Zamzow, 2008; Larkey, 2002; Mefferd, 1972; Sadler & Mefferd, 1971), publicly released advertisement materials, public website, and published articles to Hogan Assessment Systems' (HAS) technical manuals (Hogan & Hogan, 1995, 2007), publicly released advertisement materials, public website, and published articles.

Development

The Birkman Method[®]

The Birkman Method[®] (hereinafter "TBM") was developed by organizational psychologist Roger Birkman and statistician Roy Mefferd. They based the personality aspect of the instrument on the clusters discovered by Cattell (1943). The development of TBM took place within the workplace context and was conducted with psychometric rigor (i.e., reliability, validity). The history, development, reliability, and validity of TBM are publically available within the technical documentations and technical manual from Birkman International, Inc. (Birkman et al., 2008; Larkey, 2002; Mefferd, 1972).

TBM was created from research conducted in the late 1940s and early 1950s. Hundreds of structured employee interviews at the individual and dyad level across various levels of work responsibility were conducted. Development was based on a variety of theoretical approaches, including personality (e.g., Cattell, 1946), interests (e.g., Mosier & Kuder, 1949), and social perception (e.g., Ames, 1951; Birkman, 1961; Lehner, 1949). Since its original development, Birkman's research has continued to focus on understanding and improving interpersonal and organizational dynamics. As a result, TBM continues to address the complexities of the workplace and the individuals who work within them.

BI views an individual's social perceptions, while starting with one's genetic disposition as a child, to be most heavily influenced by the data synthesis and adaptation of one's cognitive scheme resulting from continuous experiences within one's environment, as opposed to being primarily ruled by one's "hard-wired" genetic make-up. This position has been demonstrated in recent developmental, cognitive, and neurological psychological research (de Schonen, 2002; Gopnik & Meltzoff, 1997; Tommasi, Peterson, & Nadel, 2009). The old "evolutionary psychology" picture was that genes were directly responsible for some particular patterns of behavior. In fact, more and more evidence, supported via the neoconstructivistic approach to developmental and cognitive psychology, demonstrates that genes are just the first step in complex developmental sequences, cascades of interactions between person and environment, and that those developmental processes shape the brain; thereby, shaping our perceptions and resulting behaviors (Harnad, 1982; Johnson,

2010; Platek, Keenan, Shackelford, 2007). BI thinks this line of thinking is the underlying argument for why using TBM to help develop individuals is so applicable.

Birkman's unique contribution to assessment was to integrate "dual perceptions" into one assessment – perception of others and perception of self. Through this unique integration, Birkman was able to describe key aspects of the interactions between individuals and groups. Continued research revealed behaviors that could be organized in such a way that prescriptive actions could be determined. The resulting output can be applied for coaching, team building, selection, leadership, and career management (Birkman et al., 2008).

Hogan Personality Inventory®

The Hogan Personality Inventory® (hereinafter “HPI”) originated in the late 1970s from a project conducted by a group of students in a graduate class taught by Robert Hogan (Hogan & Hogan, 2007). He had students write items for each of several “reputation” dimensions. Further refinements occurred in 1984 and 1992, based on large normative sample sizes and archival criterion-related data which resulted in today’s current HPI form. The history, development, reliability, and validity of the HPI are publically available within the technical manual from HAS (Hogan & Hogan, 2007).

The HPI is based on socioanalytic theory, which maintains that the core of personality is based on evolutionary adaptations (Hogan, 1982; Hogan & Roberts, 2000). Under this theory, individuals always live in groups and groups always demonstrate status hierarchies. This in turn leads to two further generalizations: people are motivated to get along with other group members but also to get ahead. The theory postulates two universal human motives (needs for social acceptance and status), distinguishes between the actor’s view and the observer’s view of personality, and suggests that, because the researcher only sees an actor’s behavior, his/her measurement efforts should focus on reputation. HAS believes that when people respond to items on a personality inventory, they provide self-presentations rather than self-reports. Self-presentations produce or cause reputations. Scoring keys allow one to aggregate aspects of self-presentations that are associated with dimensions of reputations. HAS views personality inventories as revealing an individual’s reputation, but not an individual’s internal personality traits. HAS believes these profiles can only be used to evaluate the manner in which a person is perceived by others. HAS maintains that the manner in which a person is perceived has important consequences for his or her social acceptance and career success.

Distinct Differences

As described above, the fundamental theoretical underlying and developmental approach of the two assessments are starkly different. TBM was developed based on the “dustbowl” empiricism of observed workplace behaviors where items were designed to predict a person’s usual behavior in good times and a person’s stress behaviors in bad times, depending on his/her psychosocial needs/expectations within a workplace context. Additionally, the theoretical underlying of TBM states that to predict workplace outcomes, an assessment must measure stable personality traits that have empirically demonstrated construct and criterion-related validity. Lastly, the theoretical underlying of TBM implies that behaviors can be coached or developed.

In contrast, the HPI was developed based on socioanalytic theory, and its items were designed to predict how a person will positively represent themselves regardless of the situation (Hogan, 2009). Additionally, the publisher of the HPI views that “trait theory has been a major disaster for personality psychology” (Hogan & Hogan, 2007, pg. 14) and states that criterion-related validity alone is sufficient (Hogan, Barrett, & Hogan, 2007). Lastly, the theoretical underlying of the HPI implies individuals are “hard-wired” and motivated to behavior toward two general motivations resulting from evolutionary adaptations.

Measurement

Technically, controlling for the reliability of an assessment, the amount of ‘variance accounted for’ within the criterion concurrently by an assessment determines the potential strength of that assessment to predict and understand that criterion (Guion, 1998). Plainly speaking, the more an assessment measures, the more predictive it is and the greater the level of the understanding. The literature (e.g., Colbert, Mount, Harter, Witt, & Barrick, 2004; Terborg, Richardson, & Pritchard, 1980; Tett & Burnett, 2003; Zaccaro, 2007) strongly demonstrates that three distinct factors account for the large majority of variance in job performance, job satisfaction, and other workplace criteria: (a) characteristics of the individual, (b) characteristics of the situation, and (c) interaction of the individual and the situation.

The Birkman Method[®]

TBM measures an individual’s personality, social perceptions, and occupational interests. Through empirical comparison studies, BI has established the convergent and divergent validity of TBM. In lay terms, this means TBM measures what it states it can measure. TBM’s personality scales are highly correlated with other assessments’ measure of the Big Five Factor Model of Personality (FFM; e.g., NEO-R; Costa & McCrae, 1992) as well as non-Big Five measures of personality (e.g., 16PF; Conn & Rieke, 1994), and TBM’s interest scales are highly correlated with the scales of other occupational interest assessments (e.g., Self-Directed Search; Holland, 1994). TBM’s scales measuring the social perception of others are not directly comparable to similar assessments, because no such measure is found within other assessments.

Hogan Personality Inventory[®]

The HPI measures an individual’s ‘reputation’ or self-presentation in the same framework of the FFM of personality (Hogan, Hogan, & Roberts, 1996). Through empirical comparison studies, HAS has established the convergent and divergent construct validity of the HPI. The HPI’s self-presentation scales are highly correlated with other personality assessments’ measure of the FFM (e.g., Big-Five factor markers; Goldberg, 1992) as well as non-Big Five measures of personality (e.g., 16PF; Conn & Rieke, 1994).

Distinct Differences

Social desirability is defined as ‘a tendency to create a good impression or to respond, either deliberately or unintentionally, in a socially desirable manner’ (Messick, 1960). The literature (e.g., Arthur, Glaze, Villado, & Taylor, 2010; Block, 1990; Converse, Peterson, & Griffith, 2009;

Peterson, Griffith, & Converse, 2009; Peterson, Griffith, Isaacson, O'Connell, & Mangos, 2011; Landers, Sackett, & Tuzinski, 2011; Walsh, 1990) strongly demonstrates that social desirability exists and is a factor that influences how employees complete personnel assessments. It also shows that 'Faking/Integrity' scales provide very little help in filtering out or correcting for social desirability (Ellingson, Sackett, & Hough, 1999).

TBM not only acknowledges the existence and influence of social desirability, but also takes its influence into account as useful variance for prediction and validation (Birkman, 1961; Birkman et al., 2008; Larkey 2002; Mefferd, 1972). Through its unique questionnaire structure, TBM approaches the measure of personality from two distinct perspectives resulting in their difference accounting for social desirability as well as distortions in social perceptions. This additional information provides deep insights into how a person interacts with others and what expectations which he or she expects in the workplace. These expectations are instrumental in understanding how a team or a manager and his subordinates interact (Birkman et al., 2008).

A comparison of TBM technical documentation (Birkman et al., 2008; Larkey, 2002; Mefferd, 1972) and HPI technical documentation (Hogan, 1995, 2007) demonstrates that TBM scales are less negatively skewed than the HPI scales. In the case of high potential executives, this is very important because these individuals are quite capable of manipulating their scores one or two raw score points in the most socially desirable direction. If they raise their scores one or two points, the variance associated with each of the Birkman scales remains in the range of scores, thereby, allowing descriptive and predictive results to remain intact.

The HPI does not account for social desirability. The publisher states that any faking that occurs does not hinder their ability to interpret HPI results (Hogan, Barrett, and Hogan, 2007; Hogan & Nicholson, 1988; Nicholson & Hogan, 1990). This approach to social desirability is incorrect and detrimental to the employee and the organization, according to empirical findings in organizational psychology (Burns, & Christiansen, 2011; Griffith, Chmielowski, & Yoshita, 2007; Heggstad, Morrison, Reeve, & McCloy, 2006; Mueller-Hanson, Heggstad, & Thornton, 2003; Tett & Christiansen, 2007; Tett & Simonet, 2011; Zickar, & Gibby, 2006; Ziegler, Schmidt-Atzert, Bühner, & Krumm, 2007).

If respondents raise their scores one or two points, several of the HPI scales have a "ceiling effect" which results in little to no variance in scores. This phenomenon means, for a large portion of respondents, several scales are not able to provide accurate descriptive or predictive results.

The publisher of the HPI ignores social desirability and explains it as non-consequential; yet, literature strongly supports the fact that social desirability makes a substantial impact on any self-report instrument (Burns & Christiansen, 2011; Hartman & Grubb, 2011; Heggstad, et al., 2006; Morgeson, Campion, Dipboye, Hollenbeck, Murphy, & Schmitt, 2007; Tett, Freund, Christiansen, Fox, & Coaster, 2012). In Hogan, Barrett, and Hogan (2007), by testing two large groups of applicants twice applying for the same job, the authors state that because these individuals' scores do not significantly change from time 1 to time 2, that even if they were trying to fake the second time, their attempts were futile. In this study, the authors used a 95% confidence interval (CI) to define what was a significant difference between the individuals' scores. In the calculation of CIs, the standard error of measurement is used. The HPI scales have large standard errors of measurement (e.g., 2, 3) resulting in huge 95% confidence intervals (e.g., 7, 8) that easily encompass both scores of most individuals within the study. In contrast, TBM utilizes the variance

accounted for by social desirability as one component of the differences between self and other perceptions (Birkman et al., 2008).

While the HPI only measures the characteristics of an individual (Hogan, 2009), TBM measures the characteristics of an individual, his/her situation, and their interaction in detail; thereby, maximizing its potential for predicting and understanding job performance, job satisfaction, and other workplace criteria (Birkman, 1961; Birkman et al., 2008; Larkey 2002; Mefferd, 1972).

Reliability

The Birkman Method[®]

TBM has industry accepted internal consistency and test-rest reliabilities across all their respective scales throughout the constructs' continuums (+/- three standard deviations) (Birkman et al., 2008). TBM demonstrates its overall static reliability through Cronbach's alphas and inter-item correlations; yet, more importantly, its variable reliability statistics are high across each construct's continuum via IRT test information functions and standard error functions.

Hogan Personality Inventory[®]

The HPI has industry accepted internal consistency and test-rest reliabilities across all their respective scales based on Cronbach's alphas and means of inter-item correlations by respective homogenous item composite (HIC). This is problematic because: (a) inter-item correlations are required to be reported at the item level; hence, the statistic's namesake, and (b) these measures of reliability are static and do not reveal how reliability may vary across the continuum of each scale. In the case of the HPI scales, several are extremely negatively skewed (e.g., Adjustment, Ambition, Interpersonal Sensitivity). In the case of most occupations, especially professional ones, this is very important because these individuals are quite capable of manipulating their scores one or two raw score points in the most socially desirable direction. If they do so on the HPI scales, a "ceiling effect" occurs meaning no variance in scores; thus, resulting in little to no descriptive and predictive results. This phenomenon substantially hinders the HPI as far as its utility for the applications of development or selection in the mid-high to high range of particular 'reputation' continuums.

For example, the HPI's Interpersonal Sensitivity scale contains 22 items and 60 percent of the US examinees receive a score of 21 or 22 (Hogan & Hogan, 2007). In fact, greatly due to its skewness, the scale falsely appears to have excellent internal reliability based solely on the static Cronbach's alpha.

Additionally, an inconsistency from a methodological approach exists with the HPI. The HPI technical manual reports estimated 'true' scores which are only applicable for scales theoretically based on underlying constructs/traits which is contrary to Hogan's thinking (Hogan & Hogan, 2007).

Validity

A. Construct Validity (Factor Structure)

The Birkman Method[®]

The FFM, commonly known as the “Big Five,” is the most widely accepted personality factor structure among personality psychologists (John, Naumann, & Soto, 2008; McCrae & Costa, 2008). TBM’s personality scales align strongly with the personality concept of the Big Five. BI has empirically demonstrated TBM’s theoretical alignment through item response test theory (IRT) analyses, classical test theory (CTT) analyses, and cross-validated exploratory and confirmatory factor analyses at the item level. TBM also empirically aligns with factors of the Big Five. Further, TBM directly measures occupational interests and links these to career choices along with management and leadership styles. Empirically, research from Birkman demonstrates TBM’s link to occupational interest constructs through correlational studies with stand-alone occupational interest instruments (e.g., Self-Directed Search; Holland, 1994).

Hogan Personality Inventory[®]

As noted prior, via empirical comparisons, the HPI has been aligned with the FFM. However, no item level analyses (e.g., confirmatory factor analysis) have been published to date, to support the HPI’s underlying factor structure. An item level analysis is vital to empirically establishing support for a factor structure (Brown, 2006; Child, 2006). However, HAS has been able to conduct a factor structure analysis around the HICs of the HPI with some success.

B. Content/Face Validity

The Birkman Method[®]

TBM has content and face validity because the items used in the assessment appear as measures of personality, social perception, and occupational interests.

In a survey of consultants, when asked about the accuracy of TBM, 92% of respondents answered “Moderately Accurate,” “Very Accurate”, or “Extremely Accurate” across all related questions. The survey included related questions such as “How accurate do you find your Birkman interpretation to be?” and “Overall, how accurate of a measure of personality is TBM?” Also when asked the about the “content” of TBM, 96% of respondents answered “Moderately,” “Greatly,” or “Extremely Accurate” across all questions. The survey included related questions including questions such as “To what extent do the questions of TBM appear to measure personality?” and “To what extent does the TBM questions’ content resemble content related to aspects of personality?”

Hogan Personality Inventory[®]

The HPI has content and face validity because the items used in the assessment appear as measures of personality and/or “reputation”.

C. Criterion-Related Validity

The Birkman Method[®]

Until 2005, BI did not place an emphasis on having documented localized criterion-related validity studies due to the risk of exposing its intellectual property. The lack of a large archive of criterion-related validity studies prevents BI from conducting validity generalization or alternative validation strategies across multiple occupations. Since 2005, BI has released multiple localized criterion-related validity studies each year. The findings from these studies are favorable and available to the public through BI.

Hogan Personality Inventory[®]

HAS has an archive with hundreds of quality criterion-related validity studies. HAS uses this archive to primarily conduct validity generalization studies and alternative validation strategies in lieu of localized criterion-related studies. Additionally, HAS continues to conduct localized criterion-related studies and uses archival data for other meta-analytic studies.

HAS advertises that the estimated true validity coefficients of the HPI scales with job performance are between the mid .30s to low.40s (Hogan & Holland, 2003). These high validity coefficients are very suspect when compared to the consistently lower validity coefficients, ranging from low .10s to upper .20s, reported by all other meta-analytic studies of personality and job performance (e.g., Barrick & Mount, 1991; Barrick & Ryan, 2003; Hough, 1992; Hurtz & Donovan, 2000; Mount & Barrick, 1995; Mount, Barrick, & Stewart, 1998; Penney, David, & Witt, 2011; Salgado, 1997, 2003; Tett, Jackson, & Rothstein, 1991; Vinchur, Schippmann, Switzer, & Roth, 1998). HAS bases these findings on a meta-analysis that was conducted in-house (Hogan & Holland, 2003). In conducting a meta-analysis, Hunter and Schmidt (1990) state a researcher is to use all studies available unless one is deemed not appropriate. And if one or two are not appropriate, the reason for exclusion should be well documented. HAS had conducted over 100 HPI localized criterion-related validity studies within its archive, but only used 43 of these studies for their meta-analysis. In the article, HAS never mentions that they started with over 100 studies; but rather only that the study was conducted with 43 studies. However, HAS marketing materials state that it has over twice as many individual studies in their archive. According to Hunter & Schmidt's (1990) widely accepted meta-analytic procedure, the systematic or 'vested interest' bias selection of individual studies for meta-analytic study is a serious violation of protocol. It allows for the bias inclusion of those studies that overly support a particular hypothesis thereby making any generalizations from the respective meta-analytic study problematic.

Norms

The Birkman Method[®]

BI has up-to-date (2007) US norms stratified by age, gender, ethnicity, and occupation. Additionally, Birkman currently has country norms for 10 non-US nations. Specific normative studies are available to the public from BI (e.g., Birkman et al., 2008).

Hogan Personality Inventory[®]

The HPI has up-to-date (2005) US norms stratified by age, gender, ethnicity, and occupation. The HPI also has non-US norms and global norms which are available to the public from HAS (Hogan & Hogan, 2007).

Applications

The Birkman Method[®]

Since the early 1950's, TBM has been widely used as a diagnostic tool for in-depth descriptive and prescriptive insights into employee behavior. The most extensive use of TBM has been within the workplace for coaching, leadership development, team building, career management, conflict resolution, and selection (Birkman et al., 2008). As a cautionary note, BI recommends that TBM be used for selection in coordination with a localized job-specific criterion-related validity study. Using any assessment for selection without a respective job-specific criterion-related study will, at best, produce modest outcomes and, at worst, result in costly litigation (Biddle, 2010; James & McIntyre, 2010; McPhail, 2007).

Hogan Personality Inventory[®]

Since the early 1980s, the HPI has been used primarily for the screening of applicants for occupations via profiles developed from localized job-specific criterion-related validity studies. Since the late 1990s, HAS has conducted validity generalization studies and alternative validation strategies in lieu of specific criterion-related validity studies. While providing substantially less concrete evidence in support of a selection profile as well as legal defensibility when compared with a localized criterion-related validity studies, these other approaches are much less costly to the client and may provide sufficient results for lower level jobs (Biddle, 2010; James & McIntyre, 2010; McPhail, 2007). Additionally, HAS markets the HPI for developmental purposes focusing in the leadership arena. In the area of leadership, Robert Hogan promotes the HPI through speaking and publishing opinion pieces on a regular basis.

Behavioral Insights

The Birkman Method[®]

TBM provides in-depth insight into individuals' personality, social perceptions, and interests as well as interpersonal and team insights. Not only do these insights provide deep, accurate description of the situation at hand; they also provide extensive diagnostic measures and prescriptive courses of action (Birkman et al., 2008).

Hogan Personality Inventory[®]

The HPI provides reputation insights into individual's personality or 'self-presentation' regardless of situational characteristics. These surface insights along with the strength of the HPI's impressive archive of criteria studies provide substantial return on investment (ROI) in the pre-screening of employees for lower level occupations. Unfortunately, the skewness of several HPI scales substantially reduces its utility for managerial development and high-level selection purposes.

Supporting Research

The Birkman Method[®]

With Birkman's emphasis on research and development over its 60+ year history, the organization has been meticulous about saving item level data through the years. The active database has over one million records available which allows for extensive item level analysis in a variety of research areas (e.g., work satisfaction, job performance, organizational fit) at different organizational levels (e.g., individual, dyad, team, department, country). To demonstrate transparency and accuracy, Birkman collaborates with outside researchers/institutions, has an open-data research policy, and provides scale-level data to clients upon request and utilizes API technology to facilitate the data exchange.

Hogan Personality Inventory[®]

Robert Hogan is a proficient writer and has published over 300 articles, white papers, and book chapters, many of which concern research conducted with the HPI. Additionally, as noted prior, the HPI has one of the largest archives of personality criterion-related studies. However, until recent years, HAS has only stored scale-level data; thereby, making the study of their archival studies somewhat limited in utility from a psychometric standpoint (e.g., factor analysis).

Adherence to Professional Standards

The Birkman Method[®] / *Hogan Personality Inventory*[®]

BI and HAS documentation provides detailed information describing statistics for TBM and the HPI, respectively, in regards to age, gender, ethnicity, occupational category, country, and language. These statistics demonstrate the legal adherence to the *Uniform Guidelines on Employee Selection Procedures* [Equal Employment Opportunity Commission (EEOC), 1978], workplace good practices of the *Principles for the Validation and Use of Personnel Selection Procedures* [Society for Industrial and Organizational Psychology (SIOP), 2003], and educational good practices of the *Standards for Educational and Psychological Testing* [American Educational Research Association (AERA), American Psychological Association (APA), National Council on Measurement in Education (NCME), 1999]. Additionally, any selection application of TBM or the HPI is supplemented with documentation that provides adverse impact information (Birkman et al., 2008; Hogan & Hogan, 2007).

Summary

From a theoretical perspective, it comes back to the distinct origins of each assessment. TBM was developed by organizational psychologist Roger Birkman and statistician Roy Mefferd. The development of TBM was created to capture the interaction of the employee and his/her psychosocial work environment. The BI creators developed their assessment via a "dustbowl empiricism" approach of interviewing hundreds of actual employees; thus, TBM does not function in a vacuum but rather in the complex reality of the workplace. In contrast, the HPI was created by personality psychologist Robert Hogan. Hogan developed his assessment via a theory-driven approach having his graduate students write items to "reputation" dimensions. The development of the HPI was created to capture the "reputation" of an individual, regardless of the particular work environment. Additionally, TBM was based on social, personality, and organizational theories and recognized the importance of trait theory; while, the HPI was based on socioanalytic theory and finds trait theory flawed and unnecessary.

From a reliability standpoint, TBM provides sufficient reliability evidence across the continuum of each scale. In contrast, the HPI does not provide sufficient reliability evidence for the mid-to-high portion of the continuum for several of its scales; a fact which is not evident from reporting solely the static statistic of Cronbach's coefficient alpha. However, the HPI has sufficient reliability evidence at the low-to-moderate low portion of the continuum for all its scales based on both static and variable reliability statistics.

From a validity standpoint, TBM empirically demonstrated its construct validity and its factor structure via item response theory analyses, classical theory analyses, and cross-validated exploratory & confirmatory factor analyses at the item level as well via comparison studies. In comparison, the HPI provides evidence for its construct validity and its factor structure via classical theory analyses and exploratory & confirmatory factor analyses at the scale or HIC level solely as well as via comparison studies. On another note, TBM has a substantially smaller archive of criterion-related validity studies in comparison to those conducted with the HPI. Both TBM and the HPI demonstrate face and content validity via item content and examinee feedback.

From an application/utility/ROI perspective, TBM provides in-depth insights into an individual, his/her workplace environment, and their interaction. Not only do these insights lend themselves to deep, accurate description of the situation at hand; but provide extremely useful diagnostic measures and prescriptive courses of action. The HPI provides limited insights into an individual without the context of the situation. However, the HPI has been proven extensively to be an excellent pre-hiring tool for entry-level occupations.

Conclusion

In conclusion, both TBM and the HPI have strengths and limitations.

TBM provides deep insights for a variety of applications including development and selection. However, TBM lacks:

- a large archive of criterion-related validity studies,
- validity generalization studies and alternative validation strategies, and
- several peer-reviewed publications in organizational psychology journals.

The HPI provides strong utility for the application of screening non-professional employees for lower level occupations.

However, the HPI lacks:

- the ability to take into account the workplace situation or context,
- an item-level empirically supported factor structure,
- the ability to take the variance associated with social desirability into account,
- the ability to measure social perceptions or occupational interests, and
- the ability to measure examinees with mid-to-high continuum scores on several of its scales.

References

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (1999). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.
- Ames, A. (1951). Visual perception and the rotating trapezoidal window. *Psychological Monographs: General and Applied*, 65(7), 1-32.
- Arthur, W., Glaze, R. M., Villado, A. J., & Taylor, J. E. (2010). The magnitude and extent of cheating and response distortion effects on unproctored internet-based tests of cognitive ability and personality. *International Journal of Selection and Assessment*, 18(1), 1-16.
- Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44, 1-26.
- Barrick, M. R., & Ryan, A. M. (2003). *Personality and work: Reconsidering the role of personality in organizations*. San Francisco: Jossey-Bass.
- Biddle, D. A. (2010). Should employers rely on local validation studies or validity generalization (VG) to support the use of employment tests in Title VII situations? *Public Personnel Management*, 39(4), 307-326.
- Birkman, R. W. (1961). *Development of a personality test using social and self-perception* (Unpublished doctoral dissertation). University of Texas, Austin, TX.
- Birkman, R. W., Elizondo, F., Lee, L. G., Wadlington, P. L., & Zamzow, M. W. (2008). *The Birkman Method manual*. Houston, TX: Birkman International, Inc.
- Block, J. (1990). More remarks on social desirability. *American Psychologist*, 45(9), 1076-1077.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York, NY: Guilford.
- Burns, G. N., & Christiansen, N. D. (2011). Methods of measuring faking behavior. *Human Performance*, 24(4), 358-372.
- Cattell, R. B. (1943). The description of personality: Basic traits resolved into clusters. *Journal of Abnormal and Social Psychology*, 38(4), 476-506.
- Cattell, R. B. (1946). *Description and measurement of personality*. New York, NY: World Book.
- Child, D. (2006). *The essentials of factor analysis*. New York, NY: Continuum.
- Colbert, A. E., Mount, M. K., Harter, J. K., Witt, L. A., & Barrick, M. R. (2004). Interactive effects of personality and perceptions of the work situation on workplace deviance. *Journal of Applied Psychology*, 89(4), 599-609.

- Conn, S. R., & Rieke, M. L. (1994). *The 16PF fifth edition technical manual*. Champaign, IL: Institute for Personality and Ability Testing.
- Converse, P. D., Peterson, M. H., & Griffith, R. L. (2009). Faking on personality measures: Implications for selection involving multiple predictors. *International Journal of Selection and Assessment*, 17(1), 47-60.
- Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-R)*. Odessa, FL: Psychological Assessment Resources, Inc.
- de Schonen, S. (2002). Epigenesis of the cognitive brain: A task for the 21st century. In L. Backman & C. von Hofsten (Eds.), *Psychology at the turn of the millennium, Vol. I: Cognitive, biological, and health perspectives* (pp. 55-88). Hove, UK: Psychology Press.
- Ellingson, J. E., Sackett, P. R., & Hough, L. M. (1999). Social desirability corrections in personality measurement: Issues of applicant comparison and construct validity. *Journal of Applied Psychology*, 84(2), 155-166.
- Equal Employment Opportunity Commission (1978). Uniform guidelines on employee selection procedures. *Federal Register*, 43, 38, 290-38, 315.
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, 4(1), 26-42.
- Gopnik, A., & Meltzoff, A. (1997). *Words, thoughts, and theories*. Cambridge, MA: The MIT Press.
- Griffith, R. L., Chmielowski, T., & Yoshita, Y. (2007). Do applicants fake? An examination of the frequency of applicant faking behavior. *Personnel Review*, 36(3), 341-355.
- Guion, R. M. (1998). *Assessment, measurement, and prediction for personnel decisions*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Harnad, S. (1982). Neoconstructivism: A unifying theme for the cognitive sciences. In T. Simon & R. Scholes (Eds.), *Language, mind and brain* (pp. 1-11). Hillsdale, NJ: Erlbaum.
- Hartman, N. S., & Grubb, W. L. (2011). Deliberate faking on personality and emotional intelligence measures. *Psychological Reports*, 108(1), 120-138.
- Heggestad, E. D., Morrison, M., Reeve, C. L., & McCloy, R. A. (2006). Forced-choice assessments of personality for selection: Evaluating issues of normative assessment and faking resistance. *Journal of Applied Psychology*, 91(1), 9-24.
- Hogan, J., Barrett, P., & Hogan, R. (2007). Personality measurement, faking, and employment selection. *Journal of Applied Psychology*, 92(5), 1270-1285.
- Hogan, J., & Holland, B. (2003). Using theory to evaluate personality and job-performance relations: A socioanalytic perspective. *Journal of Applied Psychology*, 88(1), 100-112.

- Hogan, R. (1982). *A socioanalytic theory of personality*. Nebraska Symposium on Motivation, 1982, 55-89.
- Hogan, R. (2009). Much ado about nothing: The person-situation debate. *Journal of Research in Personality*, 43(2), 249.
- Hogan, R., & Hogan, J. (1995). *Hogan Personality Inventory manual*. Tulsa, OK: Hogan Assessment Systems.
- Hogan, R., & Hogan, J. (2007). *Hogan Personality Inventory manual*. Tulsa, OK: Hogan Assessment Systems.
- Hogan, R., & Hogan, J., & Roberts, B. W. (1996) Personality measurement and employment decisions: Questions and answers. *American Psychologist*, 51(5), 469-477.
- Hogan, R., & Nicholson, R. A. (1988). The meaning of personality test scores. *American Psychologist*, 43(8), 621-626.
- Hogan, R., & Roberts, B. W. (2000). A socioanalytic perspective on person–environment interaction. In B. W. Walsh, K. H. Craik, & R. H. Price (Eds.), *Person–environment psychology: New directions and perspectives* (pp. 1-23). Mahwah, NJ: Lawrence Erlbaum Associates.
- Holland, J. L. (1994). *Self-Directed Search*. Odessa, FL: Psychological Assessment Resources, Inc.
- Hough, L. M. (1992). The “Big Five” personality variables - construct confusion: Description versus prediction. *Human Performance*, 5(1-2), 139–155.
- Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of Applied Psychology*, 85(6), 869–879.
- Hunter, J. E., & Schmidt, F. L. (1990). *Methods of meta-analysis: Correcting error and bias in research findings*. Thousand Oaks, CA: SAGE.
- James, L. R., & McIntyre, H. H. (2010). Situational specificity and validity generalization. In J. L. Farr & N. T. Tippins (Eds.), *Handbook of employee selection* (pp. 909-920). New York, NY: Routledge/Taylor & Francis Group.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114-158). New York, NY: Guilford.
- Johnson, S. P. (2010). *Neoconstructivism: The new science of cognitive development*. New York, NY: Oxford University Press.

- Landers, R. N., Sackett, P. R., & Tuzinski, K. A. (2011). Retesting after initial failure, coaching rumors, and warnings against faking in online personality measures for selection. *Journal of Applied Psychology, 96*(1), 202-210.
- Larkey, F. R. (2002). *The Birkman Method® developmental heritage: Reliability and validity*. Houston, TX: Birkman International, Inc.
- Lehner, G. F. (1949). Some relationships between scores for self and projected “average” scores on a personality test. *American Psychologist, 4*, 390.
- McCrae, R. R., & Costa, P. T. (2008). Empirical and theoretical status of the five-factor model of personality traits. In G. J. Boyle, G. Matthews, & D. H. Sakloske (Eds.), *The SAGE handbook of personality theory and assessment. Vol. I. Personality theories and models* (pp. 273-294). Thousand Oaks: SAGE.
- McPhail, S. M. (2007). *Alternative validation strategies: Developing new and leveraging existing validity evidence*. Hoboken, NJ: John Wiley & Sons Inc.
- Mefferd, R. B. (1972). *The Birkman Method® for manpower selection, classification, assessment, motivation counseling, and training: Its reliabilities and validities*. Houston, TX: Birkman International, Inc.
- Messick, S. (1960). Dimensions of social desirability. *Journal of Consulting Psychology, 24*(4), 279-287.
- Morgeson, F. P., Campion, M. A., Dipboye, R. L., Hollenbeck, J. R, Murphy, K., & Schmitt, N. (2007). Are we getting fooled again? Coming to terms with limitations in the use of personality tests for personnel selection. *Personnel Psychology, 60*(4), 1029-1049.
- Mosier, M. F., & Kuder, G. F. (1949). Personal preference differences among occupational groups. *Journal of Applied Psychology, 33*(3), 231-239.
- Mount, M. K, & Barrick M. R. (1995). The Big Five personality dimensions: Implications for research and practice in human resources management. *Research in Personnel and Human Resources Management, 13*, 153-200.
- Mount, M. K., Barrick, M. R., & Stewart, G. L. (1998). Five-factor model of personality and performance in jobs involving interpersonal interactions. *Human Performance, 11*(2-3), 145–165.
- Mueller-Hanson, R., Heggstad, E. D., & Thornton, G. C. (2003). Faking and selection: Considering the use of personality from a select-in and a select-out perspective. *Journal of Applied Psychology, 88*(2), 348–355.
- Nicholson, R. A., & Hogan, R. (1990). The construct validity of social desirability. *American Psychologist, 45*(2), 290-292.

- Penney, L. M., David, E., & Witt, L. A. (2011). A review of personality and performance: Identifying boundaries, contingencies, and future research directions. *Human Resource Management Review*, 21(4), 297-310.
- Peterson, M. H., Griffith, R. L., & Converse, P. D. (2009). Examining the role of applicant faking in hiring decisions: Percentage of fakers hired and hiring discrepancies in single- and multiple-predictor selection. *Journal of Business and Psychology*, 24(4), 373-386.
- Peterson, M. H., Griffith, R. L., Isaacson, J. A., O'Connell, M. S., & Mangos, P. M. (2011). Applicant faking, social desirability, and the prediction of counterproductive work behaviors. *Human Performance*, 24(3), 270-290.
- Platek, S., Keenan, J., & Shackelford, T. (2007). *Evolutionary cognitive neuroscience*. Cambridge, MA: The MIT Press.
- Sadler, T. G., & Mefferd, R. B. (1971). The interaction of extraversion and neuroticism in human operant behavior. *Journal of Experimental Research in Personality*, 5(4), 278-285.
- Salgado, J. F. (1997). The five factor model of personality and job performance in the European community. *Journal of Applied Psychology*, 82(1), 30-43.
- Salgado, J. F. (2003). Predicting job performance using FFM and non-FFM personality measures. *Journal of Occupational and Organizational Psychology*, 76(3), 323-346.
- Society for Industrial and Organizational Psychology (2003). *Principles for the validation and use of personnel selection procedures*. 4th ed., Bowling Green, OH.
- Terborg, J. R., Richardson, P., & Pritchard, R. D. (1980). Person-situation effects in the prediction of performance: An investigation of ability, self-esteem, and reward contingencies. *Journal of Applied Psychology*, 65(5), 574-583.
- Tett, R. P., & Burnett, D. D. (2003). A personality trait-based interactionist model of job performance. *Journal of Applied Psychology*, 88(3), 500-517.
- Tett, R. P., & Christiansen, N. D. (2007). Personality tests at the crossroads: A response to Morgeson, Campion, Dipboye, Hollenbeck, Murphy, and Schmitt (2007). *Personnel Psychology*, 60(4), 967-993.
- Tett, R. P., Freund, K. A., Christiansen, N. D., Fox, K. E., & Coaster, J. (2012). Faking on self-report emotional intelligence and personality tests: Effects of faking opportunity, cognitive ability, and job type. *Personality and Individual Differences*, 52(2), 195-201.
- Tett, R. P., Jackson, D. N., & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. *Personnel Psychology*, 44(4), 703-742.
- Tett, R. P., & Simonet, D. V. (2011). Faking in personality assessment: A "multisaturation" perspective on faking as performance. *Human Performance*, 24(4), 302-321.

- Tommasi, L., Peterson, M. A., & Nadel, L. (2009). *Cognitive biology: Evolutionary and developmental perspectives on mind, brain, and behavior*. Cambridge, MA: The MIT Press.
- Vinchur, A. J., Schippmann, J. S., Switzer, F. S., & Roth, P. L. (1998). A meta-analytic review of predictors of job performance for salespeople. *Journal of Applied Psychology*, 83(4), 586–597.
- Walsh, J. A. (1990). Comment on social desirability. *American Psychologist*, 45(2), 289-290.
- Zaccaro, S. J. (2007). Trait-based perspectives of leadership. *American Psychologist*, 62(1), 6-16.
- Zickar, M. J., & Gibby, R. E. (2006). A history of faking and socially desirable responding on personality tests. In R. L. Griffith & M. H. Peterson (Eds.), *A closer examination of applicant faking behavior* (pp. 21-42). Greenwich, CT: Information Age Publishing.
- Ziegler, M., Schmidt-Atzert, L., Bühner, M., & Krumm, S. (2007). Fakability of different measurement methods for achievement motivation: Questionnaire, semi-projective, and objective. *Psychology Science*, 49(4), 291-307.



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