AUTOBIOGRAPHICAL DATA AND STANDARDIZED TESTING IN PERSONNEL SELECTION

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ABSTRACT
In an industry of globalization, increased competition and advanced technologies, companies can distinguish themselves from other companies through their employees, or their intellectual capital. “In the age of information, the employees are the ones who hold the company together, retain customers, and help the company grow with their creativity. Therefore, personnel selection is more critical than ever in today’s business world” (Ramsay, 2002:1). Organizations need to choose their methods for personnel selection judiciously, as expensive and complicated methods that prove to be ineffective are disadvantageous to any organization. This paper will deal with the above issues and correlate autobiographical data and standardized testing in respect to personnel selection. The paper does not pretend to capture every subtle nuance that permeates personnel selection in terms of standardized testing, but adds to the composite body knowledge of personnel selection.

Key Words: Autobiographical, Data, Standardization, Testing, Personnel, Selection, Instrument.

INTRODUCTION
The usage of background data or biodata in personnel selection can be traced to 1894, when a Colonel Thomas L. Peters reported using biodata for selecting employees in an insurance company. Reports of using biodata followed in 1922 and 1932, with several instruments being developed by the 1940s. In 1947 it was shown in Air Force pilot training that a scored biodata form correlated with success at levels of 0.35 to 0.40. (Berry, 2003). There is a great deal of research available on biodata (Breaugh and Dosset, 1989). Biodata forms are made up of a range of topics, but typically include: socio-demographic data, family background, education, work experience, medical record, hobbies, leisure interests, social clubs, and reading habits (Price, 2004).

SYNTHESIS AND DISCUSSION
There are three assumptions of biodata (Ramsay, 2002). Smith, Gregg and Andrews (in Price, 2004: 402) state that biodata is based on the belief that “either our characteristics are formed by the experiences we are subjected to in the course of our lives or our abilities cause us to select or become involved in certain types of life event… [Thus] if we can accurately assess the events of a person’s life, we can deduce something about their skills and abilities.” Biodata therefore relies on the “consistency” principle: that a person’s past behavior, choices and accomplishments are the
best predictor of their future performance (Hough and Oswald, 2000; Gregory, 2007). The second assumption, according to Ramsay (2002), is that people are more willing to discuss objective facts about their life over subjective explanations for reasons behind their actions, which leads to more valid answers, and makes it less prone to faking. The final assumption is that the systematic measuring of a person’s past behavior can indirectly measure the motives and reasons behind their behavior (Ramsay, 2002).

Tests for the purposes of personnel selection include: cognitive ability tests, personality tests, integrity or honesty tests, physical and dexterity tests, and work sample and situational tests (Gregory, 2007). For the purpose of this essay, I will be focusing on the two main types, that is, cognitive ability and personality tests. The landmark in employment testing was in the early 1900s, during World War I, when an intelligence test was developed for classification into the army. It was called the Army Alpha (and the Army Beta for non-English speakers) and was designed for work-related purposes. Due to the widely publicized success of this test, the use of testing in education and personnel selection escalated soon after. (Berry, 2003). However, Ghiselli (1973) states that Munsterberg’s experiment with motormen in 1910 is believed to have started the research on the usage of tests in personnel selection.

Cognitive ability tests can refer to intelligence in general (Gregory, 2007) or, in particular, to verbal abilities, quantitative abilities, problem solving, learning abilities, inductive reasoning, deductive reasons, and spatial abilities (Dale, 2003). Types of cognitive ability tests used in personnel selection include: general ability tests, such as the Wonderlic Personnel Test (WPT); mechanical aptitude tests, such as the Bennet Mechanical Comprehension Tests (BMCT); clerical tests such as the Minnesota Clerical Test (MCT); motor ability tests, and test batteries (Gregory, 2007).

Personality tests have been in use for over 80 years, with Raymond B Cattel’s (considered to be the father of personality testing) factor analysis that led to the development of the 16 PF (Personality Factor) Questionnaire, generally considered as being the pioneering research (Oakes, Ferris, Martocchio, Buckley and Broach, 2001). “Personality or temperament tests probe into behavioristic tendencies of the individual… That personality has deep implications for behavior, whether on the job or off is indisputable” (Albright, Glennon and Smith, 1963:124). The use of personality tests are much more controversial than the use of cognitive ability tests, since it is believed that personality tests lack validity, can be easily faked and are inappropriate for personnel screening (Scroggins, Thomas and Morris, 2008).

“The choice of selection method should reflect the level, context and content of the post in question, and have some demonstrable reason for being used” (Dale, 2003), and therefore validity is a major factor that has to be taken into consideration when deciding which method to use in personnel selection. A brief outline on the types of validity will form a basis for discussion on the validity of the selection methods.

Gregory (2007) states that validity can be grouped into three categories: content validity, criterion-related validity, and construct validity. Content validity can be described as the degree to which the content of a test is representative of and relevant to the behavior it was designed to test; criterion-related validity as the effectiveness of a method in estimating the person’s performance on an outcome measure, that is, it measures what it has set out to measure (Gregory, 2007); and construct validity as demonstrating that a ‘construct’, such as leadership or introversion, relate in some way to performance on a test (Albright et al. 1963). The chance of a method predicting future levels of
performance is called predictive validity and it generally asks how well a method predicts the suitability of a candidate (Price, 2004). Predictive validity is a type of criterion-related validity.

There have been many studies conducted on the validity of biodata, with generally positive outcomes. Gregory (2007) cites Cascio who used a simple biodata instrument of 10 items to predict turnover, and came up with cross-validated correlations of 0.58 (minorities) and 0.56 (non-minorities). An extensive study by Reilly and Chao (1982) found mean validities for biodata to be between 0.32 (job tenure) and 0.46 (productivity); Hunter and Hunter’s (1984) meta-analysis re-analyzed Reilly and Chao’s results and found biodata to be superior to other alternatives with a mean validity of 0.38, while Schmitt et al’s (1984) meta-analysis yielded a validity of 0.32 (as cited in Herriot, 1989). These early studies found that “biodata are among the best, if not the best, predictors of turnover” (Herriot, 1989: 242). Further studies by Reilly and Chao found validities of 0.32 to 0.43, while Hunter and Hunter found validities of 0.26 to 0.37 using tenure, productivity and performance as criterion (Ramsay, 2002). Later studies seem to confirm these results. For example, Salgado’s (1999) study concluded that biodata has substantial and generalizable criterion validity and well-established construct validity; and Bliesener’s (1996) authoritative meta-analysis showed a validity of 0.30, with this figure being altered by other factors – concurrent validity showed 0.35, studies using training criteria found a validity of 0.36, and studies of objective criteria 0.33 (cited in Robertson and Smith, 2001).

Leaving validity aside, studies on the reliability of biodata had strong estimates, ranging from 0.56 to 0.85 (Berry, L. 2003). Reliability is the extent to which an instrument is consistent in its measures, with biodata being known to have high test-retest reliability, particularly with verifiable information (Noe, Hollenbeck, Gerhart and Wright, 2006). These studies were re-administered to new samples and underwent test-retest studies after a long period of time (from 19 months to five years) with values not markedly decreasing; and, it was also found that objective items, such as those found in biodata, are unlikely to change over a long period of time (when compared to subjective information). The generalizability of biodata items are also important because if items are not generalizable, they have to be re-standardized each time they are used, incurring extra costs for organizations. Robertson and Smith (2001:461) point this out, stating that, beside other studies a meta-analysis “clearly demonstrated that a biodata key, created in a single organization, generalized across organizations and industries.” Ramsay (2002) discusses several more benefits of biodata. First, it is less costly and obtains information quickly. Second, it improves selection decisions and has been found to be more effective than the interview in predicting performance. Third, it is beneficial and useful for some jobs over others. Finally, when an organization is confronted with a large number of applicants, biodata is useful in reducing these numbers, thereby acting as a prescreening technique.

However, biodata instruments are not without its’ problems. Although biodata has proven validity and utility for the prediction of performance, the use of it as a selection method is being restricted because of legality, that is, charges of discrimination, and intrusion on or invasion of privacy. As a result, employers eliminate these instruments from the selection process, due to fear of litigation (Baehr, Jones, Baydoun and Behrens, 1994). Furthermore, many organizations are not familiar with biodata as a selection technique or with its benefits, when compared with other methods, and are concerned about “generalizability, validity, adverse impact, faking of answers, the invasiveness of questions… or the rationale behind the construction of the items” (Ramsay, 2002:11). Berry (2003) also points out that validity of biodata items are predisposed to decline over time; the differences in response patterns from different age, gender, and ethnic groups are problematic; and, instruments are prone to distortions in response, including faking, memory problems and carelessness.
Cognitive ability tests are the most common and most popular selection method; they are inexpensive, quick, easy to administer and easy to interpret. With regard to validity, cognitive ability tests have a 0.53 coefficient of predictive validity, much more superior than personality tests’ 0.41 and biodata’s 0.38, according to a widely quoted and accepted meta-analysis by Smith, Gregg and Andrews (Dale, 2003). During the 1980s, a number of meta-analytic studies yielded convincing findings on the validity of cognitive ability: it provides criterion-related validity that can be generalized across most occupations, and it has conclusive differential validity, that is, it is not unfair to different race groups (Robertson and Smith, 2001). The authors also mention that cognitive ability is one of the only two personnel selection methods (the other being personality testing) that is directly associated with specific constructs.

Hunter and Hunter’s 1984 meta-analysis took into account hundreds of validation studies, including other meta-analyses, and is therefore a high point in validity studies on cognitive ability. The results of the study found that there was a mean validity for success in skill acquisition of 0.55, a correlation coefficient of 0.48 between cognitive ability and job performance (Oakes et al., 2001), and that “no predictor exceeded the validity of ability tests which showed a mean validity coefficient of 0.54” (Gregory, 2007, p.501). This is, however, for entry-level jobs, and there is a concern that ability tests may result in adverse impact on minority groups (Gregory, 2007). Despite this, Schmidt and Hunter in 1998 (as cited in Oakes et al, 2001: 526) believe that the firmest conclusion they could draw from the 1984 meta-analysis is that “cognitive ability is the most valid predictor of job learning and performance.”

With regard to specific cognitive ability tests, the WPT, BMCT and MCT, all have high reliabilities, ranging from 0.80 to 0.90, with the WPT and the BMCT having impressive correlations (with other intelligence tests) of 0.91 and 0.80 respectively (Gregory, 2007). Conversely, Gregory (2007) says that the WPT manual’s interpretive guidelines are arbitrary and restrictive, and it is a speeded test that does not account for non-English speakers; the BMCT needs to be modernized as some of it’s’ items are outdated or offensive to minorities and can bias the results; and in the MCT, there are doubts about validity and norms. These are only three examples of tests from the hundreds that are available. Borman, Hanson and Hedge (1997:306) provide an interesting argument against the use of cognitive ability tests, stating that the understanding of the cognitive processes that underlies a person’s intelligence and the rationale behind why some are more able than others is very limited. The authors therefore propose that “an understanding of the processes by which abilities affect performance… is needed to advance the science of personnel selection.”

In 1965, Guion and Gottier stated, in their 12-year research summary on personality testing, the following: “It is difficult in the face of this summary to advocate, with a clear conscience, the use of personality measures in most situations as a basis for making employment decisions about people” (Morgeson, Campion, Dipboye, Hollenbeck, Murphy & Schmitt, 2007a: 84). Oakes et al. (2001) argue that the results of some of the above studies can however be ascribed to the trial-and-error approach that was often used. Nevertheless, Guion and Gottier’s view held for over twenty-five years, until the publication of two meta-analyses on the validity of personality tests that revived its’ usage when it showed estimates of validity to be meaningful and proposed that they be used again in selection (Morgeson et al, 2007a).

There are heated debates surrounding the increasing interest in the use of personality tests in personnel selection, a major concern in this area being faking or impression management. It is believed that the ‘right’ or positive answer may be obvious, and only honesty or lack of insight (neither of which should be taken for granted in such a situation) prevents a candidate from
providing this answer (Morgeson et al, 2007a). While this does occur in selection settings, many studies confirm that faking has a negligible impact and does not affect validity (Borman et al., 2007; Morgeson et al, 2007a). Although faking is not always bad, it is suggested that the use of bogus items can identify fakers or that personality tests be used in conjunction with cognitive ability tests (Morgeson, Campion, Dipboye, Hollenbeck, Murphy & Schmitt, 2007b).

Morgeson et al. (2007b) made many conclusions in their study on the use of personality tests in personnel selection. These are as follows. For the sole purpose of personnel selection, personality measures show very low levels of validity, are inadequate predictors of job performance and are not easy to justify; the observed validities of personality tests in relation to job performance are low and this has not changed much over time; while corrections applied to validity has resulted in optimism in the field, many organizations do not correct scores, or corrections are only appropriate with certain criteria; and, the relationship between personality and important job performance criteria do not support the usage of personality tests (Morgeson et al., 2007b).

On the basis of all of the above, it can be concluded that tests, or rather, cognitive ability tests in particular, provide a superior method for and plays a significant role in personnel selection (Gregory, 2007). There is also a greater reliance on these tests by personnel psychologists (Zysberg and Nevo, 2004). Yet they are not without their downfalls, as was also acknowledged, and can be risky when used alone. Munchus (1989) puts this argument across succinctly: “Tests may do what they purport to do and do it better than any other device – but only when they are properly constructed, validated and evaluated, and only when they are used for the right purposes” (1989:20).

CONCLUSION

It is obvious in terms of the discussion and synthesis undertaken in this article that, despite the certainty that tests are superior to other methods in the personnel selection process, selection decisions should never be made on the basis of a single selection method; they should be used in conjunction with other selection methods in order to provide the company with the best performers, and the most productive and successful personnel. “Having more available sources of information will support a better informed and valid recommendation” (Zysberg and Nevo, 2004:122). Therefore, although I would place greater reliance on tests, and cognitive ability tests specifically, for all the reasons outlined above, I agree with Gregory (2007), who states that cognitive tests would provide “maximum benefit (and minimum adverse impact) when combined with other approaches such as biodata” (2007:501).

References:


