

RESPONSE

Facts Are Stubborn Things

SCOTT HIGHHOUSE

Bowling Green State University

In 1985, the U.S. Army commissioned prominent psychologists to investigate the possibility of extending human capabilities using parapsychological techniques (Swets & Bjork, 1990). Influential members of the army were frustrated by the slow pace of advancements in human performance and believed that large gains could be made using methods outside of the mainstream. They believed that things like mental concentration and guided imagery could allow soldiers to walk through walls, view things remotely, and even kill adversaries by staring at them (Ronson, 2005). Not surprisingly, the panel of psychologists concluded that these ideas were without merit. In reviewing the psychologists' work, Morrison (1988) observed, "Among the most difficult lessons in science is how not to deceive yourself" (p. 109).

I recount the story above to show that optimism and hope can cause sophisticated organizational decision makers to believe things clearly at odds with evidence. Equally lacking in empirical evidence are the beliefs many people hold about employee selection. Mullins and Rogers (2008) noted that even psychologists who know better believe that they have the ability to make inferences about future "fit" based on brief conversations during on-site visits. Martin (2008) and Thayer (2008) observed—during a com-

bined 63 years of human resources (HR) consulting—that managers generally believe that it is theoretically possible to make infallible hiring decisions. My article was a call-to arms for industrial and organizational (I–O) psychologists to debunk the widely held belief that people can holistically intuit a person's future success on the job with a high level of accuracy and with a higher level of accuracy than can be obtained using the selection technology of our field. I primarily focused on cognitive factors that contribute to a frustrating resistance to adopt our selection decision aids. The contributors to this issue correctly point out that there are also a number of emotional/motivational factors that explain the psychology of user resistance (Colarelli & Thompson, 2008; Fisher, 2008; O'Brien, 2008; Phillips & Gully, 2008), as well as contextual ones (Choragwicka & Janta, 2008; Klimoski & Jones, 2008; Mullins & Rogers, 2008).

Some Distinctions

On reflection, I think that it is worthwhile to make a distinction between first-order and second-order assessment for selection. First-order assessment occurs when one is directly responsible for assessing a job candidate. The person engaged in first-order assessment decides whether to rely on one's own intuition and experience or on standardized evidence-based procedures. This decision can be influenced by, among other things, overconfidence (Phillips &

Correspondence concerning this article should be addressed to Scott Highhouse. E-mail: shighho@bgsu.edu

Address: Department of Psychology, Bowling Green State University, Bowling Green, OH 43403
Scott Highhouse, Bowling Green State University.

Gully, 2008), hindsight bias (Fisher, 2008), personal political objectives (Colarelli & Thompson, 2008), or desire to look like an expert. In contrast, second-order assessment involves the use of others' first-order assessments in deciding whom to hire. Examples of second-order assessment include (a) the vice president for HR who is deciding whether or not to implement a selection technology to replace or supplement the current informal procedures or (b) the executive who hires a consultant to screen and psychologically evaluate prospective executive hires. My proposed reasons for the reticence to adopt evidence-based practice (failure to view selection as probabilistic and belief in expertise) are relevant to both first-order and second-order assessment. Empirical research on the psychology of user resistance, however, might do well to distinguish between these types of assessment. Understanding why someone persists in using his or her own unaided intuition may require different theories and constructs than understanding why someone believes in relying on the advice of unaided "experts" (see Bonaccio & Dalal, 2006).

Kuncel (2008) points out that it is also useful to distinguish between preference for method of assessment versus preference for method of combining cues. I recently presented results of an experimental study on a cross-section of working adults ($n = 418$), showing that (second-order) interviews were perceived to be more useful, comprehensive, professional, and congenial than tests assessing the same attributes (Highhouse, 2008).¹ Similarly, a holistic method of combining cues was perceived to be more useful, comprehensive, professional, and congenial than a mechanical one. I suspect that similar cognitive biases underlie both preferences for subjective devices and for holistic combination of ratings, but the motivational and contextual drivers may differ.

The Verdict Is In

O'Brien (2008) suggests that the jury is still out on the question of whether intuition improves with experience in the domain of performance prediction. According to O'Brien, better and more immediate feedback could improve intuition in a selection context. I believe that the author confuses the issues of prediction *accuracy* with prediction *calibration*. People who forecast the weather have been found to be amazingly well calibrated—in that their confidence matches their accuracy. But weather forecasters are notoriously poor predictors of future weather—even with the aid of sophisticated models (Sherden, 1998). Their excellent calibration is thought to be a product of the immediate feedback they receive (i.e., it either rains or does not). This same feedback, however, does not improve their ability to predict.² Calibration is important, but it should not be confused with accuracy.

O'Brien (2008) also notes that the use of structured approaches is perceived by managers to restrict creativity and use of managerial skills. I agree. This is a continuance of early postwar reactions to the application of industrial psychology to employee selection, exemplified by Harrington (1959) in his book *Life in the Crystal Palace*:

[Prior to industrial psychologists' tests] employer and applicant made an intuitive connection. By intuition I mean perception through unconscious logic. We tried to see into each other, beyond the things we said, behind the polite formalities . . . In an intuitive situation, *you* do the work. In a scientific milieu, you feed data into machines and formulas, and *they* do the work. This is all very well for computing the trajectories of missiles—but a man is not yet a guided missile (pp. 61–62).

1. Colarelli and Thompson (2008), however, point to some research showing that HR professionals prefer to have cognitive ability assessed via paper-and-pencil tests (but preferred conscientiousness assessed via interview).

2. As Fisher (2008) aptly pointed out, lack of feedback and misremembrance of the past probably have a lot to do with the overconfidence managers have in their unaided intuition.

People have continued to be concerned about substituting experience and intuition with scores and formulas. Troubling is the fact that resistance to structured, mechanical approaches remains even among members of the Society for Industrial and Organizational Psychology. The holistic approach, associated with psychologist Henry Murray, suggests that everything is influenced by everything else and that each person must be diagnosed according to his or her own unique history. This holistic process of integration and interpretation has been called a "hallmark of the individual assessment practice" (Prien, Schippmann, & Prien, 2003, p. 123). As Kuncel (2008) noted, however, there are few questions in our field with more evidence pointing in the same (discouraging) direction. The arguments in favor of holistic assessment, nevertheless, sometimes take on a faith-based quality and fail to acknowledge the preponderance of the evidence. Error is a necessary part of the selection process that is not remedied by using holistic approaches. We must first believe this ourselves before we can expect others to believe it.

Professional Values

Klimoski and Jones (2008) recommend that the multiple needs of stakeholders be considered in understanding user resistance to selection technology. Although I agree that multiple values can be balanced in a scientific way (see Hammond & Adelman, 1976), Klimoski and Jones seem to give short shrift to values outside those of the shareholders. Along with Colarelli and Thompson (2008), Klimoski and Jones advocate for a greater understanding of the practical and political pressures on the decision maker, suggesting that using intuition is often a "good enough" solution. If we do not vigorously advocate for our own innovations, who will?

People on the receiving end of selection decisions deserve the best our technology has to offer. The woman who keeps knocking her head against the executive glass ceiling does not want a selection solution that is "good enough." What about the 55-year-old

outplaced executive whose prospects for employment are dependent upon the whims of an assessor who believes he can simultaneously and holistically consider all the factors that constitute fit within the organization? Nearly 85 years ago, Freyd (1926) argued "... by allowing selection to be influenced by personal interpretation with their unavoidable prejudices instead of relying upon objective measures gives even less consideration to the well-being and interest of the individual worker" (p. 354). Besides, the less we rely on intuition, the more we optimize human talent for organizational objectives (Chorągwicka & Janta, 2008). I believe that I-O psychologists must advocate for the use of the most scientifically responsible selection procedures. This is the *only* way to maximize benefits to all relevant constituencies.³

Concluding Thoughts

I agree with what most of the commentators have suggested. And I sincerely appreciate the thoughtful reflections, even when I have disagreed with a point or two.

We must take advantage of the current zeitgeist of evidence-based practice and let the business world know that we have the technologies to replace gut feelings and seasoned expertise. Fisher (2008) and Phillips and Gully (2008) suggested that managers may simply not know that prediction could be done demonstrably better. Rynes, Giluk, and Brown (2007) observed that the HR practitioner journals rarely mention what scholars perceive to be the most significant findings in the domain of employee selection. If managers do not even know that cognitive ability tests predict job performance, then it is highly unlikely that they know I-O psychologists can assess practical judgment using situational dilemmas (Weekley & Ployhart, 2006) or reduce turnover by

3. This does not necessarily mean using the most valid instruments at the expense of disparate impact, but it does mean using mechanical (rather than intuitive) methods for ameliorating that impact (McGaghie & Kreiter, 2005).

assessing the likelihood of future job discomfort (Bernardin, 1987). We need to do a better job educating and influencing our relevant constituencies.

Managers are correct in assuming that there is much more to success than what our analytical procedures can measure. But they are incorrect in assuming that unaided intuition can improve the situation. "Facts are stubborn things; and whatever may be our wishes, our inclinations, or the dictates of our passion, they cannot alter the state of facts and evidence"—John Adams (1735–1826).

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