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Exploring how response distortion of personality measures affects individuals

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ABSTRACT

We use a within-person research design to compare response distortion on personality test scores obtained in a simulated selection context with scores obtained in a condition without motivation to distort. Even after accounting for measurement error, rank order changes result in a significant number of individuals being selected based on their selection context scores who would not be selected based on their nonmotivated scores. Yet, many individuals who distort do not elevate their scores enough to move to the top of the distribution, which alleviates some concern about combining personality measures with top-down selection procedures that adopt a low selection ratio. Common correction methods failed to accurately detect individuals who distort, and the correction practice of partialling lie scale scores from personality traits inaccurately eliminated individuals who did not truly distort.

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Despite evidence supporting the validity of personality measures for predicting performance (e.g., Barrick & Mount, 1991; Hurtz & Donovan, 2000), researchers and practitioners remain concerned about response distortion (e.g., Ellingson, Sackett, & Hough, 1999; Mueller-Hanson, Heggstad, & Thornton, 2003). Research into distortion, which occurs when job applicants inflate self-report personality scores, has provided clear answers to some questions. For instance, people can inflate their personality scores when instructed to do so (Hogan, 1991; Viswesvaran & Ones, 1999). Even so, the criterion-related validity of personality measures remains intact (Barrick, Mount, & Judge, 2001), and using social desirability scales to correct for response distortion has minimal effect on validity (Ones, Viswesvaran, & Reiss, 1996; Schmitt & Oswald, 2006).

Answers to other questions are less clear. In particular, research has not examined the effect of response distortion on the same individual in a selection setting and a nonmotivated setting. Distortion by some applicants may result in decisions that exclude qualified individuals who do not elevate their own scores (Zickar & Robie, 1999). Such injustice for individuals is harmful from ethical and societal perspectives. The reputation of a firm, including

ability to attract and retain employees, is also negatively influenced when applicants perceive unjust treatment (Hausknecht, Day, & Thomas, 2004). Our study thus shifts the emphasis from the organization's view on validity to the individual's view of just treatment (Arvey & Faley, 1988).

At the heart of our inquiry is the question of whether people who distort their responses have a greater chance of being selected at the expense of those who do not distort. The lack of a clear answer to this question can be traced to prior research designs. One typical design instructs people to elevate their scores (Ellingson et al., 1999; Schmit, Ryan, Stierwalt, & Powell, 1995). This design precludes exploring the consequences of naturally occurring variation in distortion. Another common study design compares responses from a group of individuals in a selection setting with responses from a different group in a non-motivated setting (Mueller-Hanson et al., 2003; Rossé, Stecher, Miller, & Levin, 1998). This approach precludes comparison of a single individual's responses under different demand conditions.

In this study we extend previous research by obtaining two personality responses from each person: one response in a simulated selection setting with motivation to distort and one response in a setting without motivation to distort. We explicitly examine how decisions about individuals are affected by distortion that occurs in a simulated selection context. We further investigate how two "correction" methods proposed to mitigate the impact of response distortion affect decisions about individuals.

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1. Does response distortion harm some individuals?

With top-down selection procedures, distortion harms individuals when it alters the rank order of applicants. People who do not distort are harmed if those who do distort move ahead of them in the rank order. Although researchers have not directly examined rank order changes between selection and nonmotivated contexts, studies have shown that statistically correcting for response distortion results in substantial changes in rank order (Christiansen, Goffin, Johnston, & Rothstein, 1994; Rosse et al., 1998). Mueller-Hanson et al. (2003) also found that people who provided scores in a selection context had a higher rank order in a pooled distribution than others who provided scores in a nonmotivated context. Our within-person research design extends these findings by allowing a clear comparison of the rank order of individuals based on their scores in a condition simulating a selection context with the rank order of the same individuals based on their scores in a setting without motivation to distort.

Our study design provides insight beyond the work of Hogan, Barrett, and Hogan (2007) who also explored within-person response distortion. They used a research design examining elevation in a personality score when individuals took a test a second time as a job applicant knowing that they “failed” a battery of tests in an earlier attempt. Given that selection consequences existed in both conditions, their design could not compare scores in a selection setting with scores from the same person in a setting without an incentive to distort. Their results thus seem likely to underestimate occurrences of response distortion.

Nevertheless, as pointed out by Hogan et al., scores taken at different times can also vary due to measurement error. In this study we ensure that differences in scores exceed the threshold of measurement error. Thus, only applicants who raise their score in the simulated selection setting above the 95% confidence interval for their own nonmotivated score are identified as intentionally distorting. Given prior evidence of differential distortion, we expect meaningful changes in rank order that exceed measurement error, which leads to our first hypothesis.

Hypothesis 1: A significant number of individuals selected on the basis of their simulated selection scores would not be selected on the basis of their nonmotivated scores, even after accounting for measurement error inherent in their individual scores.

Previous studies have also demonstrated that changes in rank order are most problematic when only a few applicants are selected (Christiansen et al., 1994; Hough, 1998; Mueller-Hanson et al., 2003; Rosse et al., 1998; Ellingson et al., 1999). The common explanation is that personality measures obtained for selection purposes are skewed, with individuals who distort clustering near the top of the distribution. Such clustering, combined with a top-down selection strategy and a low selection ratio, results in selecting a large proportion of people who distort.

Yet this assumption—that scores for people who distort cluster at the top of the distribution—has not been tested. Raising a score to the top of the distribution seems likely with instructed faking, as there is no fear that extreme distortion might be identified and penalized. However, integrity testing research suggests that people who distort in more realistic settings may not have scores that are uniformly at the top of the distribution. Specifically, Cunningham, Wong, and Barbee (1994) suggest that dishonest individuals rationalize their behavior by convincing themselves that all people are somewhat dishonest. Such respondents choose a response below the top of the scale in order to appear more “realistically” honest. These arguments lead to our next hypothesis.

Hypothesis 2: Individuals who distort personality scores often elevate their scores to the middle rather than top of the score distribution.

2. How do corrections for response distortion affect individuals?

One common correction method uses regression to partial the effect of response distortion out of personality scores (Christiansen et al., 1994; Ellingson et al., 1999). As expected, this procedure alters the rank order of applicants, such that different individuals are selected after the correction (Christiansen et al., 1994; Rosse et al., 1998). In a within-person design (where participants were directed to fake), Ellingson et al. (1999) found that partialling response distortion from personality scores did not create scores similar to scores obtained without instructions to distort. This provides important insight, but the use of instructed faking leaves questions about the effect of partialling response distortion from scores obtained in an applicant setting without explicit directions to distort.

A second commonly used correction method eliminates candidates with extreme lie scale scores (Hough, 1998; Rosse et al., 1998). Rosse et al. (1998) label scores as extreme when the applicant score is three standard deviation units above the incumbent mean score. Hough (1998) labeled scores as extreme when they are in the top 5% of the distribution. Both Rosse et al. (1998) and Hough (1998) demonstrate that removing people with extreme lie scale scores results in different individuals being selected, but the extent to which the correction accurately identifies individuals who inflate their actual personality scores is unknown.

A potential problem with using correction procedures is a non-trivial relationship between lie scale scores and substantive personality traits (Mueller-Hanson et al., 2003; Ones et al., 1996). Excluding individuals based on lie scale responses may have the unintended effect of removing people high on the correlated substantive trait, even though they do not distort.

The problem of misidentifying excellent performers as distorting may be exacerbated when respondents are concerned that distortion may be detected. Individuals who distort may be concerned with elevating their scores to the point of detection, particularly on transparent responses such as lie scale items. Conversely, individuals with high levels of substantive traits may report high scores on the correlated lie scale, even though they are not distorting. In such a case, corrections based on high lie scale responses may negatively impact honest responders. This leads to our next prediction.

Hypothesis 3: Selection decisions based on corrected scores result in (a) a significant portion of people who actually distort being misclassified as honest responders and (b) a significant portion of individuals who do not truly distort being misclassified as fakers.

3. Method

3.1. Participants and research design

Participants were 171 undergraduates (81% were seniors) in an elective career management class. Participants completed the nonmotivated assessment as part of the class with no selection consequences; however, students were instructed to respond to questions in terms of their personality traits in a work context. Responses in the motivated condition were separately obtained outside class as part of an invitation to apply for a work opportunity. Some participants ($N = 77$) provided scores in the nonmotivated context first, while others ($N = 94$) provided scores in the opposite order. The two administrations occurred approximately 5 weeks apart. ANOVA revealed no order effects in either the nonmotivated (conscientiousness $F(1, 169) = .01, ns$; emotional stability $F(1, 169) = .30, ns$) or simulated selection context ($F(1, 169) = .09$ and $F(1, 169) = .07$, both ns).

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