Vocabulary overclaiming — A complete approach: Ability, personality, self-concept correlates, and gender differences

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ABSTRACT

Extant measures that purport to assess overclaiming of an individual's knowledge provide checklists of real and bogus items, and typically assess overclaiming on the basis of the number of bogus items endorsed by the respondents. Such measures have two salient shortcomings. First, the procedure for selecting foils (e.g., that may sound familiar to respondents) may influence the likelihood of endorsement — such as the use of 'attractive distractors.' Second, real items endorsed by the respondents are not necessarily 'true' indicators of the individual's knowledge, but confound knowledge with self-enhancement, because there is no assessment of the individual's actual knowledge. We present a study of overclaiming of vocabulary knowledge that provides a signal detection theory assessment, including self-claimed knowledge and an objective test of knowledge. Ability, personality, self-concept and other predictors were assessed, along with gender. Self-claimed vocabulary knowledge was highly correlated with objectively assessed knowledge. In contrast to investigations without explicit checks on actual knowledge, current results indicated that higher ability individuals evidenced slightly greater overclaiming than lower ability individuals.

1. Introduction

Since the introduction of modern intelligence tests, organizations (e.g., educational institutions, corporations, and government entities) have come to make extensive use of such instruments for applications of selection and classification. To a lesser degree, these tests are used for guiding individuals toward instructional or training programs and careers. Individuals, however, are often at a disadvantage in comparison to organizations. Often, they have limited information on their intellectual abilities (perhaps an IQ score or a profile of ability scores from school testing, or entrance exam scores, such as the SAT or ACT), and the individuals may have incomplete knowledge or skills in how to interpret their scores, in the context of norms, reliability and validity indices, and so on. With limited or incomplete direct test information (and sometimes

despite having such information), individuals must make educational, occupational and career decisions, when confronted with the task of 'self-selection' — that is, determining what schools or jobs to apply to, or what careers to pursue. Even more basic decisions about what elective courses to enroll in at the high school or post-secondary level, may be partly informed by the individual's assessment of his/her own knowledge, skills, and abilities (e.g., see Ackerman, Kanfer, & Beier, 2013). However, a lack of accuracy (or the presence of bias) in self-assessment of intellectual abilities may have important consequences in determining the direction and level of intellectual investment during adolescence and early adulthood.

The first investigations of the accuracy and bias of self-estimates of intelligence were performed nearly 100 years ago (e.g., see Cogan, Conklin, & Hollingworth, 1915). Since then, a variety of theoretical and empirical investigations have been directed toward issues related to the accuracy and bias of self-assessments of intelligence, abilities, and knowledge, in addition to the determinants of individual differences in these measures.

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The research crosses disciplinary lines, from social psychology to cognitive and educational psychology. On one hand, there is an extensive literature from the cognitive/educational psychology domain that focuses on evaluating the validity of self-assessments of ability and knowledge (e.g., Mabe & West, 1982; Marsh, 1990; see also Ackerman & Wolman, 2007 for a review). On the other hand, there is a less extensive, but noteworthy body of research in social psychology that has focused on the underlying characteristics of self-enhancement (e.g., Regan, Gosselink, Hubsch, & Ulsh, 1975) and the "better-than-average" theory (e.g., Kruger, 1999), or on claims that lower ability individuals tend to overestimate their capabilities, compared to higher ability individuals — based on the 'finding' that self-estimates of abilities, when regressed on objective measures, resulted in lower ability estimates being associated with relatively higher objective assessments, and higher ability estimates being associated with relatively lower objective assessments (e.g., Kruger & Dunning, 1999). As noted by Ackerman, Beier, and Bowen (2002) and by Krueger and Mueller (2002), such patterns are explained by the statistical effects of regression-to-the-mean, when two measures are imperfectly correlated, making the psychological interpretation unwarranted. Unfortunately, these mischaracterizations have substantial persistence in the literature (e.g., see Anderson, Brion, Moore, & Kennedy, 2012).

There are also specific measures designed to assess an individual's tendency toward "overclaiming" (e.g., Paulhus, Harms, Bruce, & Lysy, 2003; Ziegler, Kemper, & Rammstedt, 2013). In addition, there have been assertions made that, on average, men tend to overestimate their abilities, and women tend to underestimate their abilities — a phenomenon referred to as "male hubris/female humility" (e.g., see Furnham, Hosoe, & Tang, 2002).

Individual differences in claimed knowledge and over-claiming constructs have been explored with checklist formats (see Stanovich, West, & Harrison, 1995), where lists of target items are coupled with foils (e.g., non-words for a vocabulary checklist, real and bogus magazine titles for a print exposure checklist). Such measures have intuitive value, in that a participant who indicates knowledge of a foil item is presumed to be overclaiming his/her knowledge. As a result, these kinds of measures have been endorsed as providing an accurate representation of an individual's propensity toward self-enhancement (e.g., see Paulhus et al., 2003; Ziegler et al., 2013). Such measures have also been used to address patterns of the accuracy of subjective judgments of ability, and to assess gender differences in hubris/humility regarding self-reported abilities (for a discussion of this concept, see Furnham et al., 2002). However, two central problems confound the interpretation of such scales. First, endorsement of foils likely depends on how *obvious* such items are to the respondent. Foils that are designed to be highly similar to real items may be 'seductive' distractors. Second, and possibly more pernicious, real items endorsed by the respondents are not necessarily 'true' indicators of the individual's knowledge, but confound knowledge with self-enhancement, *because there is no assessment of the individual's actual knowledge.*

It is also possible to integrate the issues of overclaiming (which is a question of 'bias') with those regarding the *accuracy* of self-estimates of abilities. That is, there has been significant discussion in various literatures about the degree to which individuals can correctly assess their own abilities. In a review of the literature, Mabe and West (1982) suggested that the extant literature indicated relatively poor correlations between self-estimates of abilities and objective measures of abilities. However, they noted that there were several factors which, if present, tended to result in higher correlations between self-assessed abilities and objective abilities, specifically: expectation that the assessment will be compared with criterion measures, emphasis on comparison with others, experience with self-assessments of abilities, and assurance of anonymity. In a more recent study, Ackerman and Wolman (2007) administered a set of self-assessments of abilities that accounted for most of these factors and determined that for many domains, substantial correlations between self-assessed abilities and objective abilities could be obtained. It should be noted, though, that there was marked variation across individual tests and aggregated ability factors. Generally, self-estimates for math and spatial abilities tended to be more highly correlated with objective math and spatial ability measures (e.g., $r = .48$ and .34, respectively) than self-estimated and objectively measured verbal abilities ($r = .25$). A specific vocabulary test self-estimate, however, was found to correlate $r = .45$ with an objective vocabulary test score.

One problem with most 'macro'[1] self-estimates of ability measures, however, is that they tend to be either qualitative assessments (e.g., "very low", "low", "average", "high", "very high"), or quantitative assessments that are given in reference to a specific reference population (e.g., a percentile rank compared with "other college students" or "the population of 18-year-olds"). Such assessments may be inaccurate partly as a result of the individual respondents not having an accurate representation of their own ability levels, not having an accurate assessment of the indicated population for comparison, or some unknown combination of the two.

In order to provide a more complete assessment of both the accuracy of self-estimates of ability and a measure of the tendency toward overclaiming/underclaiming, what is needed is a method of assessment that does not require reference to an unknown norming group and that provides a comprehensive indicator of both accurate and inaccurate claims of knowledge (i.e., one that does not assume, as the checklist procedures described earlier do, that non-foil items that are checked do indeed represent knowledge possessed by the respondent). One means to accomplish this goal comes from a technique of early ability research created by Kirkpatrick (1905), and later modified by Whipple (1908).[2]

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[1] There have been several 'micro' investigations of confidence for correctly answering individual questions on a test (e.g., see Fischhoff, Slovic, & Lichtenstein, 1977; Stankov & Crawford, 1996). Such studies have often indicated a moderate level of correspondence (e.g., $r = .40$ to .60) between such self-assessments and objective measures (for a review, see Stankov, Lee, Luo, & Hogan, 2012).

[2] An anonymous reviewer noted that a similar approach has also been used more recently in a series of studies by Tobias and Everson aimed at assessing metacognitive knowledge monitoring (e.g., Tobias & Everson, 2002). The main difference between Kirkpatrick's method and the Tobias and Everson approach is that Kirkpatrick required recall of definitions (open-ended response) and Tobias and Everson only require recognition of word definitions (multiple-choice format). Tobias and Everson have used their procedure for assessing individual differences in metacognitive knowledge, but not for investigations specifically related to overclaiming or underclaiming of knowledge.