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Arthur R. Jensen
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What is This?
Test Validity: g Versus “Tacit Knowledge”
Arthur R. Jensen

Sternberg and Wagner (this issue) argue that the well-established empirical evidence for the practical predictive validity of psychometric g (such as claimed by Ree and Earle5) is somehow “wrong.” On the contrary, it is Sternberg and Wagner who are wrong. They are also wrong to identify g merely as “academic intelligence,” as if it were something highly specialized and elitist. There is much more to g than the fact that it is a better predictor of academic performance than any other known ability factor or combination of factors independent of g.2 There is no longer any question that g is a large component of virtually every measure that validly predicts training outcomes and proficiency on the job in a wide variety of occupations. Other ability factors independent of g usually contribute, but seldom more than g, to the predictive validity for specific jobs.

Given that g and the other ability factors all together typically account for considerably less than half of the criterion variance, the problem now is to discover other variables that will appreciably enhance prediction of training and job performance. In view of the past vast efforts based on tests of ability factors alone, I suspect that if any such additional variables are found, they will be found not in the abilities domain, but in the domain of personality, motivation, interests, and values. The proclivity to acquire tacit knowledge could turn out to be one such variable.

At present, however, tacit knowledge seems an exceedingly mysterious variable, theoretically and empirically. We are told that it behaves like a personality factor (predicting “adjustment” in college), and that it also predicts scholastic performance. But then we are told that it is virtually uncorrelated with personality, or with IQ or g, or with almost anything else we know something about (cognitive style, interpersonal orientation). Obviously, we will need to know much more empirically about the nature of tacit knowledge for it to become a theoretically coherent and convincing psychological construct.

I would like to see measures of tacit knowledge factor analyzed among a standard battery of ability tests. (I would bet that tacit-knowledge tests are about as highly g-loaded as most other cognitive
tests, when corrected for attenuation.) On the practical side, the first order of business is a large-scale validity study. Measures of tacit knowledge should be entered into a stepwise multiple regression after entering $g$ factor scores derived from a conventional test battery, to see how much tacit knowledge increases the multiple correlation over and above the simple $g$-score validity coefficient.

Although Ree and Earles$^1$ presented massive evidence for the validity of $g$, one might question (a) the narrowness of their test batteries in terms of the variety of ability factors included and (b) the relative homogeneity of their subject samples. However, support for their conclusion can be found in a broader study$^3$ using the same types of analysis with the more diverse General Aptitude Test Battery (GATB), which comprises 11 subtests. Figure 1 shows the results for subject samples in over 400 occupations, ranging from unskilled manual laborers to Ph.D. mathematicians. The median $G$-score validity coefficient was +.27; the median multiple-predictors validity coefficient, based on an optimally weighted composite of GATB subtests for each occupation, was +.36. Although unique, optimally weighted composites of other ability factors (independent of $g$) added slightly but significantly to the predictive validity for various occupations, $g$ per se contributed overall by far the most to validity.

What does not show up in Figure 1 (and also is not mentioned by Ree and Earles) is that $g$ acts as a threshold variable for entry into many higher-level occupations. Hence, an analysis of variance of the GATB data indicates that about half of the total $g$ variance is associated with mean differences between occupations.

### Notes


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