# I–O Psychologists and Intelligence Research: Active, Aware, and Applied

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Scherbaum, Goldstein, Yusko, Ryan, and Hanges (2012) have challenged industrial–organizational (I–O) psychologists to ''launch a new research agenda'' on intelligence. Although we enthusiastically support the authors' call for more intelligence research, we believe that several of their claims depict the current state of affairs as more dire than is actually the case. We argue that I–O psychologists are more active in the area of intelligence research than the authors present, maintain that many I–O psychologists are aware of intelligence research published in non-I–O outlets, and contend that a primary focus on applied research is desirable.

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## I–O Psychologists Are Conducting Intelligence Research

Scherbaum et al. maintain that I–O psychology's contribution to intelligence research has been decreasing over time. On the basis of their cursory analysis of *Journal of Applied Psychology* (*JAP*) and *Personnel Psychology* (*PPsych*), the authors estimate that 2–3% of content in these journals is related to intelligence. We sought to determine the extent to which I–O psychologists are publishing intelligence-related research in other outlets.

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First, we replicated Scherbaum et al.'s search. We then adapted their search by altering the term *general cognitive ability* (less commonly used) to *cognitive ability* (more widely used). This small change more than doubled the number of relevant articles returned. Whereas the authors located 35 intelligence-related articles published in *JAP* and *PPsych* from 2000 to 2011, our revised search revealed 81 articles. Likewise, the authors found five articles published in *JAP* during 2010 (Volume 95). They estimated the percent of intelligence research as 1%, based on a reported 430 articles in total (5/430 = 1.1%). However, we noted that there were only 85 articles (excluding editorial material) published in *JAP* in 2010. This suggests that approximately 5.9%, rather than 1%, of articles in that volume were concerned with intelligence.

We also examined a sample of I–O psychology, general, and social psychology journals from 2000 to 2011. Our results indicate that I–O psychologists are investigating intelligence to a greater degree than Scherbaum et al. suggest. Much of this research appears in journals with an I–O psychology focus. For example, I–O psychologists authored 13.9% (58/416) of articles in *International Journal of Selection and Assessment* and 18% (44/244) of articles in *Human Performance* that examined intelligence to some degree. In comparison, the percentages for *JAP* and *PPsych* were 4.6% (57/1,246) and 8% (24/300), respectively.

I–O psychologists are also publishing intelligence research in other outlets. We sampled 5 years (2000–2002 and 2010–2011) of the journal *Intelligence* and found 9.1% (17/187) of articles had at least one I–O psychologist author. Interestingly, with the exception of *Intelligence*, general and social psychology journals (e.g., *Journal of Experimental Psychology: Applied*, *Journal of Personality and Social Psychology*, and *Psychological Bulletin*) had considerably lower percentages (1.8–2.3% from 2000 to 2011, considering both I–O and non-I–O authors) of articles examining general intelligence than did I–O psychology journals. Thus, I–O psychologists are doing research on general intelligence, and I–O journals are publishing it to a greater extent than non-I–O journals. Alternatively, other journals may be publishing research on cognitive processes; however, this research (e.g., working memory) is not being captured by the keywords intelligence, general mental ability, or cognitive ability.

We acknowledge, as did Scherbaum et al., that our search process was rudimentary. However, we believe our results present a more optimistic assessment of the attention that I–O psychologists are paying to the construct of intelligence. Nevertheless, we agree with the authors that the field of I–O psychology would benefit from a renewed interest in the construct.

## I–O Psychologists Are Aware of Research in Non-I–O Outlets

Scherbaum et al. comment that I–O psychologists doing intelligence research tend to publish in ''journals that the typical I–O psychologist does not read,'' implying that other I–O psychologists are unaware of this research. To assess this possibility, we examined the reference lists of the 81 intelligence-related articles in *JAP* and *PPsych* from 2000 to 2011 for citations to three journals: *Journal of Experimental Psychology: General*, *Journal of Experimental Psychology: Applied*, and *Intelligence*. We found that 42% (34/81) of articles cited at least one of these journals. Of these, the average number of citations is 2.59 ($SD = 2.26$, range = 1–13). These numbers are likely an underestimate; the reviewed articles frequently cited other sources on intelligence (e.g., other specialist journals and book chapters).

Our results indicate that although I–O psychologists may not regularly read non-I–O journals, they are aware of research published in these outlets and reference it when relevant. Given the large number of journals, it would be difficult for the typical I–O psychologist to regularly read

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all those containing research in their field. The ease of electronic searching makes it less essential for I–O psychologists to read a particular journal than to comprehensively search across journals to remain abreast of developments in their area of expertise.

## I–O Psychology Is an Applied Science

Scherbaum et al. argue that I–O psychologists need to broaden their ''narrow focus'' on applied research and increase research on the nature of the intelligence construct. We contend that a primary focus on application is appropriate; the fact that others (e.g., cognitive psychologists and neuropsychologists) may take the lead on basic research, whereas I–O psychologists have a more applied focus, is not as problematic as the authors assert.

I–O psychologists are scientist-practitioners (Society for Industrial and Organizational Psychology [SIOP], 2011a); I–O psychology is a field in which ''rigor and methods of psychology are applied to issues of critical relevance to business'' (SIOP, 2011b). Thus, by definition, the primary focus is application. We agree that basic research on the construct, nature, and measurement of intelligence is important. There is value in I–O psychologists contributing to this effort. However, a shift in focus *toward* basic research means a shift in focus *away from* applied research and the very definition of I–O psychology.

In addition, psychologists who focus on basic research rely on I–O psychologists to investigate the applications of their research to the workplace. We assert that researchers are most effectively leveraged doing the type of research for which their training, skill sets, and resources best position them. Most I–O psychologists are trained in the scientist-practitioner model and have an understanding of the work context that non-I–O psychologists lack. They also have resources required for applied research (e.g., access to work samples) that others may not; conversely, cognitive psychologists have access to resources for basic research (e.g., functional magnetic resonance imaging) that I–O psychologists lack. This offers opportunities for collaboration; nevertheless, the typical I–O psychologist is better positioned for applied research.

Moreover, Scherbaum et al. appear to present applied and basic research as mutually exclusive. We argue that applied research can contribute to knowledge about the nature of intelligence. For example, one of our current projects has an applied focus in that it examines the relationship between fluid and crystallized intelligence and multiple performance criteria; however, the results will also have theoretical implications about the nature of intelligence.

In conclusion, we believe Scherbaum et al. have highlighted important considerations regarding the role of I–O psychologists in intelligence research. However, we argue that I–O psychologists are making more robust contributions than the authors suggest. Nevertheless, we echo Scherbaum et al.'s call to increase research efforts on this critical construct.

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