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If Robust Science Is Relevant Science, Then Make I-O Psychology Research More Relevant: Thoughts From a Practitioner Point of View

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As a practitioner with 25 years of experience applying industrial and organizational (I-O) psychology concepts to address business challenges, I want to

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expand upon the point that “robust science is relevant” (Grand et al., 2018, p. 10)—specifically, that making two changes in the field’s research direction could greatly increase the impact, value, and credibility of I-O psychology in the broader world of work.

When it comes to making science relevant, I-O psychology has an advantage in its extensive network of I-O psychologists who work as practitioners—people who have devoted their careers to applying psychological science to improve the world of work. I do not know of any formally agreed upon definition of “I-O practitioner,” but I suspect most practitioners would accept the following as a reasonable depiction of what this job entails. I-O practitioners strive to help organizations leverage evidence-based psychological theories and methods to increase individual and organizational performance. We are primarily employed to do two things. First, practitioners use psychological theories and methods to help people and companies *understand* the nature of themselves, their work, and their workforces so they can better achieve their goals. Second, practitioners help people and companies leverage psychological theories and methods to develop and *change* themselves and their workforces to achieve their goals.

The more I-O psychology research enables practitioners to help people and organizations understand and change themselves, the more relevant this research will be to the world of work. Following the logic of Grand et al. (2018), the more robust our field will be overall. But not all research is equal when it comes to being helpful for applied work. From a practitioner perspective, I-O psychology research studies tend to fall into four general categories:

1. Explanatory research focused on creating and testing theories that explain relationships among employee attributes, job characteristics, and organizational variables
2. Methodological research focused on creating statistical and measurement methods that support our ability to collect and analyze data relevant to topics studied by I-O psychologists
3. Descriptive research reporting patterns in data about relationships and trends that exist in the world of work (These studies focus on empirically demonstrating patterns in data, but these studies do not necessarily provide extensive theoretical explanations about why these patterns exist.)
4. Application research focused on understanding how to effectively apply psychological knowledge and methods to address issues relevant to the world of work (The focus of this research is not on developing new theories or methods. The focus is on understanding how companies and

employees can most effectively leverage existing psychological knowledge and methods to achieve their goals.)

To illustrate these categories, consider how these four kinds of studies might apply to the topic of employee engagement. An explanatory study might study relationships among employee engagement levels, job commitment, and turnover decisions to test a theory explaining how engagement influences retention. A methodological study might develop a new statistical technique to measure relationships between engagement and turnover over time. A descriptive study might report how relationships between employee engagement and turnover change based on different labor market conditions. An application study might look at factors that impact company efforts to increase retention by increasing engagement.

Based on years reading the I-O literature and serving as a reviewer on various editorial boards, my sense is I-O psychology places far greater emphasis on explanatory and methodological studies than descriptive and application studies. We might even suffer from a surplus of explanatory and methodological studies. I suspect a relatively small percentage of published psychological theories and methodologies are ever used by practitioners to understand and change organizations. If we want to increase the relevance of I-O psychology as a science, I believe an important step is to shift our focus toward more descriptive and application research.

We Need More “Descriptive Research” to Understand the World as It Is

There are two basic ways practitioners can develop an understanding of a company’s workforce. The more labor-intensive approach involves empirical research. For example, if a company was seeking to decrease on-the-job accidents, a practitioner might conduct a study to measure multiple job and employee characteristics known to influence accidents and then statistically compared these characteristics to accident data. Drawing on existing explanatory and methodical research studies is highly valuable when taking this approach. But even equipped with scores of relevant prior studies, this sort of approach typically takes months to complete.

The less labor-intensive approach involves pattern recognition. The practitioner looks for key indicators in the company that match things they know about the world of work. For example, if previous descriptive research found a strong relationship between certain shift schedule characteristics and accidents, the practitioner could ask about the company’s shift schedule and see if it matches the shift patterns identified in previous descriptive research studies. If the patterns match, the practitioner can offer an educated diagnosis of what is likely to be causing accidents in the company. This sort of intervention often takes less than 60 minutes.

Clients usually prefer the second approach over the first one. It is faster, cheaper, and easier. Most business leaders do not want to conduct psychological research studies; they just want to know what is going on in their companies.

The challenge to the pattern recognition approach is it is limited by our access to research showing what patterns are well-established. If we do not have a lot of descriptive research studies to draw upon, we run the risk of encountering situations where we have no relevant descriptive data to compare it to or we run the risk of assuming that descriptive studies collected in one setting will generalize to another. This is a challenge practitioners encounter all the time. Clients regularly ask highly specific descriptive questions like “Are there studies that describe how the size and frequency of spot bonuses affects productivity of part-time hourly retail employees?,” “What is the relationship between promotion and turnover in India versus the United States?,” or “What types of experience best predict success in software sales jobs?” If our I-O journals had more of these sorts of descriptive studies, I am confident it would significantly increase the relevance of our field to the world of work.

Companies are sitting on a wealth of data that could be used to publish these sorts descriptive studies. For example, over the course of my career I’ve worked with data sets showing meaningful patterns between manager span of control and employee performance, workforce diversity and store profitability, employee personality traits and sales performance, job design characteristics and turnover, and many other interesting observations about the world of work. These data are usually limited to certain specific settings and are often less than perfect in terms of measurement characteristics. But these data are also collected in the field from actual employees and may show reliable patterns based on thousands of cases. These data may have some methodological limitations, but they also encompass a wealth of real world relevance.

Unfortunately, our current publication process seems to provide no effective means for sharing these sorts of descriptive data. We need a forum where I-O psychologists can submit descriptive studies that will be evaluated based on a different set of criteria from those used to evaluate explanatory or methodological research. Grand et al. (2018) note that “whether one identified a meaningful relationship after (faithfully) hypothesizing a finding *a priori* or it was identified *post hoc* does not change the fact that the observed relationship was present in the data. The natural world could not care less whether the scientist made an accurate prediction beforehand or not” (p. 20). Our field would benefit from publishing more studies that simply describe the natural world as it is. The criteria for evaluating these descriptive studies should not be based on theory building. It should be based on

whether the study provides useful insight about the nature of the working world we did not know before and whether the data in the study possess strong “real world” validity such as being collected from employees in an actual work setting.

We Need More “Application Research” to Change the World for the Better

Grand et al. (2018) state “the emphasis on exciting but untested theory that posits discontinuous change in current thinking is contributing to scientific bloat, whereas efforts to test and build upon existing explanations in ways that gradually refine current thinking languish in obscurity” (p. 12). I believe this concern about “scientific bloat” is valid. But I do not think the best answer is to just shift focus to theory refinement. That approach can create “scientific myopia,” where researchers test ever more specific hypotheses within the same general theoretical framework. This ultimately leads to science that is only of interest to the people doing the research.

What we need is more “application research” studying why organizations do not take advantage of well-established, evidence-based practices found in the I-O psychology literature. For example, it is well-established that effective use of goals substantially increases employee performance. Given the clear value of goals, why do so many companies fail to set effective goals? A study addressing that question will be far more relevant to businesses than a study seeking to further refine some obscure area of goal-setting theory.

There is no shortage of things companies “should do” based on well-established and tested psychological theories. What we desperately need is more research to understand how to help organizations, managers, and employees do these things. I-O psychology takes pride in referring to itself as “applied psychology.” Yet, we conduct very little research focused on studying the factors that influence the actual application of psychological principles to work.

How Can We Get Organizations to Support More Applied Research?

A complaint I sometimes hear from academic I-O psychologists is “we’d like to do more applied research but companies are not interested in supporting our research studies.” On one hand, it can be very challenging to get business organizations to provide the time, resources, and data needed to conduct psychological research studies. On the other hand, many of the topics studied by I-O psychologists do not have widespread interest in the business community. Rather than just looking for companies who are interested in supporting our research topics, we should also look for research topics that are interesting to companies. This requires spending time with business leaders and human resource professionals, and learning about the challenges they are facing. I believe our field would be better served if

I-O psychology graduate students and faculty more actively participated in applied human resource societies and completed internships or other collaborative work with companies that put them in contact with the business communities we are ultimately seeking to support through psychological research. More emphasis should also be placed on teaching I-O psychologists how to discuss our science using language that business leaders understand. For examples of books that do an effective job translating I-O psychology research into engaging business language without sacrificing scientific rigor, I recommend Sutton (2007), Lawler (2008), Boudreau and Ramstad (2007), Fleming and Asplund (2007), and, at the risk of self-promotion Hunt (2014).

Knowledge Is Not Useful Until Someone Uses It

The relevance of I-O psychology will not increase if our research is only read and used by other I-O psychologists. Relevance will only come through doing more research that supports the needs and interests of people outside of our field—research that enables us to better help business leaders and employees understand and change their world for the better. This will require shifting the focus of our research toward more descriptive and application studies. Perhaps in addition to the *Journal of Applied Psychology* it is time to create the *Journal of the Application of Psychology*.

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