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## Evidence-Based I/O Psychology Part 1

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### The target article:

Briner, R.B., & Rousseau, D.M. (2011) [Evidence-based I-O psychology: Not there yet](#). *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 4, 1, 3-22.

### and commentaries:

[Cassell](#): Evidence-Based I–O Psychology: What Do We Lose on the Way?

[Bartlett](#): The Neglect of the Political: An Alternative Evidence-Based Practice for I–O Psychology.

[Thayer et al](#): I–O Psychology: We Have the Evidence; We Just Don't Use It (or Care To).

[Burke](#): Is There a Fly in the "Systematic Review" Ointment?

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[Catano](#): Evidence-Based I–O Psychology: Lessons From Clinical Psychology.

[Hodgkinson](#): Why Evidence-Based Practice in I–O Psychology Is Not There Yet: Going Beyond Systematic Reviews.

[Potworowski & Green](#): Assessing the Uptake of Evidence-Based Management: A Systems Approach.

[Cronin & Klimoski](#): Broadening the View of What Constitutes "Evidence".

[Baughman et al](#): Putting Evidence in Its Place: A Means Not an End.

[Guzzo](#): The Universe of Evidence-Based I–O Psychology Is Expanding.

[Boatman & Sinar](#): The Path Forward to Meaningful Evidence.

[Bartunek](#): Evidence-Based Approaches in I–O Psychology Should Address Worse Grumbles.

### Response

[Briner & Rousseau](#): Evidence-Based I–O Psychology: Not There Yet but Now a Little Nearer?

## The Target Article

Briner, R.B., Rousseau, D.M. (2011) **Evidence-based I-O psychology: Not there yet.** *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 4, 1, 3-22.

### Abstract

Evidence-based practice is now well established in several fields including medicine, nursing, and social policy. This article seeks to promote discussion of whether the practice of industrial–organizational (I–O) psychologists is evidence based and what is needed to make I–O psychology an evidence-based discipline. It first reviews the emergence of the concept of evidence-based practice. Second, it considers the definitions and features of evidence-based practice, including evidence-based management. It then assesses whether I–O psychology is itself an evidence-based discipline by identifying key characteristics of evidence-based practice and judging the extent these characterize I–O psychology. Fourth, some key strategies for promoting the use of evidence in I–O psychology are considered: practice-oriented research and systematic reviews. Fifth, barriers to practicing evidence-based I–O psychology are identified along with suggestions for overcoming them. Last is a look to the future of an evidence-based I–O psychology that plays an important role in helping consultants, in-house I–O psychologists, managers, and organizations become more evidence based.

## **The Target Article:** Four sources of information and evidence which comprise Evidence-Based Practice.

- ① Practitioner expertise and judgement
- ② Critical Evaluation of best research evidence
- ③ Evidence from the local context
- ④ Perspectives of those who may be affected by an intervention decision.

### **Practitioner expertise and judgment – relevant to dealing with Absenteeism Problem.**

- Have I seen this before?
- What happened?
- What are my beliefs about the causes of absence?
- What's worked in the past and why?
- What are my hunches?
- What do I think are the causes and possible solutions?
- Is this situation occurring elsewhere?
- How relevant and applicable is my experience?

### **Critical evaluation of best available research evidence**

- What are the average rates of absence in my sector and location—Is the absence rate here “high”?
- What does systematically reviewed research evidence suggest to be the major causes of absence?
- How relevant and applicable is that evidence here?
- What does research evidence from systematic reviews suggest as effective interventions?
- How well might the interventions the research describes work here?

### **Evidence from the local context**

- What actually is the absence rate?
- What type of absences and where?
- What are local explanations for absence?
- Internal research (e.g., surveys)
- What absence management is currently in place, and is it working?
- What do managers think is going on?
- What are the possible costs and benefits of interventions? Is it worth intervening here?
- What is happening or what is going to happen in the organization or outside it that might be affecting absence?

### **Perspectives of those who may be affected by the intervention decision**

- How do employees feel about the proposed interventions?
- Do they see downsides or unintended negative consequences?
- How do managers feel about these interventions?
- How practical or workable do those responsible for implementing the interventions feel?
- What alternative explanations and proposed solutions do others have?

## **The Target Article:** Key characteristics of Evidence-Based Practice, and how I/O is rated **[in red]**

- ➡ The term “evidence-based” is used or well-known **[to a very limited extent]**
- ➡ The latest research findings and research summaries are accessible **[to a very limited extent]**
- ➡ Articles reporting primary and traditional literature reviews **[to some extent]**
- ➡ “Cutting Edge” practices, panaceas, and fashionable new ideas are treated with health skepticism **[to some extent]**

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1. **The term “evidence based” is used or known.** Although the general notion of using evidence is well established, the specific term “evidence-based” and what it entails is not widely used or well known. It is rare to find the term “evidence based” paired with I–O psychology or organizational psychology.
2. **Systematic reviews are produced and made accessible.** Although we have plenty of traditional reviews and meta-analyses, there are very few systematic reviews in I–O psychology. SIOP is currently developing its Science You Can Use series, which will contain reviews that are not systematic as such but will go some of the way to summarizing research findings that I–O practitioners can use.
3. **Articles reporting primary research and traditional literature reviews are accessible to practitioners.** We have found that this is a difficulty for many I–O psychology practitioners unless they are still attached in some way to a university. Although abstracts are easily accessible, purchasing single articles from publishers can be costly. In addition, to build up even limited knowledge of the evidence in a particular area can require access to dozens of articles, which may be prohibitively expensive. It also appears to be the case that not all I–O psychology practitioners, depending somewhat on where they trained, are highly skilled in reading and digesting (sometimes rather indigestible) journal articles.
4. **“Cutting-edge” practices, panaceas, and fashionable “new” ideas are treated with healthy skepticism.** As a consequence of our training as psychologists, we should be inclined to be quite skeptical or at least are inclined to ask about evidence and empirical support. At the same time, however, we are also somewhat drawn to what might be called management fads and fashions. Some of the recent focal articles in this journal demonstrate that we are sometimes inclined to pick up and run with the Next Big Thing even where evidence does not yet exist or is questionable. In addition, next time you attend the SIOP annual conference, check out the products and services for sale in the exhibit hall. In our experience, many of these feel more like fads than evidence-based interventions (and often no supporting evidence is presented). One reason we pay attention to fads is that clients often demand the latest thing, and if we don’t deliver it, then someone else will.



## The Target Article: Key characteristics of Evidence-Based Practice, and how I/O is rated [in red]

- ➡ There is a demand for evidence-based practice from clients and customers [to some extent]
- ➡ Practice decisions are integrative and draw on the four sources of information and evidence [to some extent]
- ➡ Initial training and continuing professional development (CPD) adopt evidence-based approaches [to a very limited extent]

5. **There is a demand for evidence-based practice from clients and customers.** Many of our major clients are those working at mid to senior levels in HRM. HRM is not a field that has embraced the notion of evidence based practice in any significant way. Although, of course, managers do not actively seek to purchase ineffective I–O psychology products or services, they are under pressure to meet certain shorter term goals. They may therefore come to depend on a general impression that particular products or techniques “work” rather than whether they will work in their specific context given the problem they are trying to solve. HRM departments may also lean on benchmarking or mimicry by adopting the same I–O psychology practices already used by their more successful competitors. The authors have also heard many times from I–O psychologists who say they wish to practice in an evidence-based way but that clients have often already decided what they want (e.g., assessment centers, training programs, and employee attitude surveys) and are asking the I–O psychologist as a technical specialist to deliver it. This situation suggests that our clients are not demanding an evidence-based approach in the sense discussed here, although they are of course interested in adopting practices they believe to be effective.

6. **Practice decisions are integrative and draw on the four sources of information and evidence described above.** This is the most difficult characteristic of evidence-based practice to assess without access to numerous observations of what practicing I–O psychologists actually do. In addition, it may be that as discussed above, we are not the decision makers; instead, we play an advisory role, providing information and interpretations to the decision makers... We are likely to look for and use evidence from the local context and attempt some initial assessment of the problem or situation and seek out organizational data that might help with problem diagnosis. The use of practitioner experience and judgment seems highly likely, particularly if the problem or technique is one we have encountered frequently before.

7. **Initial training and continuing professional development (CPD) in evidence-based approaches.** Training in I–O psychology master’s degrees and doctorates tends to be of the fairly traditional academic variety where students are expected in a relatively passive way to learn and retain information. We note that in both the United States and Britain, the majority of practicing I–O psychologists have terminal master’s degrees. The typical master’s program in the field has no required supervised internships and does not train its students to conduct literature searches on practice topics let alone systematic reviews. The forms of CPD used by SIOP and other I–O psychology professional bodies also tend to be fairly traditional. In fact, some of these forms of CPD reverse the approach adopted by evidence-based practice in that they present participants with recent research findings, evidence, or new techniques and then discuss how they might be used in practice rather than starting with practice problems and then searching for and evaluating the evidence that may help solve the problem.

**The Target Article:** Promoting evidence-based practice in I/O psychology.

➡ **Practice-Oriented Evidence:** Most research published in I–O psychology’s premier journals, including *Journal of Applied Psychology* (JAP ), *Personnel Psychology*, and *Journal of Occupational and Organizational Psychology* is theory-oriented investigations authored by academy-based I–O psychologists answering questions of interests to other academics.

Anderson et al. (2001) noted that between 1949 and 1965, practitioners authored a full 36% of JAP articles (31% by practitioners alone). From 1990 to 2000 (the terminal year of their survey), practitioners authored only 4% of JAP articles (1% by practitioners alone). The other I–O journals manifest a similar decline. Many factors may account for this decline in practitioner research publication in our field’s journals, including a shift in journal focus to more academic topics of rigor, greater corporate concern for protecting intellectual property, as well as ramped-up global competition and its accompanying time and resource crunch, which in turn limited practitioner opportunity for research let alone publication. One conclusion is apparent: I–O psychology’s academics and practitioners are not mingling with each other in our journals. Regardless of the underlying reasons, there is one serious consequence of the decline in practitioner conducted research publication: Academics are the ones asking the research questions and interpreting the answers.

## **The Target Article:** Promoting evidence-based practice in I/O psychology.

**Systematic Reviews:** Systematic reviews are literature reviews that adhere closely to a set of scientific methods that explicitly aim to limit systematic error (bias), mainly by attempting to identify, appraise and synthesize all relevant studies (of whatever design) in order to answer a particular question (or set of questions). In carrying out this task they set out their methods in advance, and in detail, as one would for any piece of social research.

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Systematic reviews are, essentially, a way of analyzing existing research using explicit and replicable methods, allowing conclusions to be drawn about what is known and what is not known in relation to the review question (and within the limitations of the method). Similar, but not identical to the traditional meta-analysis, systematic reviews are studies of studies. Meta-analyses are a type of systematic review but one that uses only quantitative data and statistical synthesis and focuses on a question repeatedly addressed in the same way by researchers rather than a practice question or problem. As with meta-analyses, systematic reviews are conducted out of recognition that single empirical studies, although useful and sometimes informative, should not be emphasized because their biases and limitations cannot be fully accounted for. Looking at all relevant studies, systematically gathered, constitutes more reliable evidence.

Thus, in the context of evidence-based practice, neither traditional literature reviews nor meta-analyses are especially useful. First, traditional literature reviews are open to many forms of bias. For example, reviewers do not make clear how they have selected the studies they have included, do not critically appraise them in an explicit or systematic way, and do not usually pull them together or synthesize findings across studies. Second, traditional reviews do not usually focus on a specific research, practice question, or problem. It is this latter point that also differentiates a systematic review from the quantitative meta-analysis used traditionally in I-O psychology. The process of making evidence-based decisions requires more focused and tailored reviews of evidence where both a practice question or problem and the conditions to which the evidence might be applied are taken into account.

## **The Target Article:** Barriers to evidence-based practice in I/O psychology.

- ➡ **Lack of demand from clients for evidence-based I/O psychology.** It is readily apparent from looking at the rapid adoption of some new and “cutting edge” practices that such decisions are not made in an evidence-based way.
- ➡ **The predominance of master’s-level practitioners** who have learned to practice I/O psychology in unsupervised ways.

If individual managers are mostly rewarded for achieving short-term goals as fast as possible rather than doing what works in the longer term, why would they be interested in evidence-based practice? Perhaps, the only way to overcome this barrier is by working with organizations to demonstrate that approaching problems in an evidence based way is more likely to produce effective and sustainable solutions. It is also important to emphasize that evidence based practice constitutes a family of approaches to making decisions and is not intended to provide the answer to every problem but rather improve the process and outcome of decision making.

A second barrier is the predominance of master’s-level practitioners who have learned to practice I–O psychology in unsupervised ways. Because of the level of such programs, such practitioners have a limited understanding of research, a limited capacity to access new evidence, and lack the skills to conduct their own systematic reviews let alone primary research. Collectively, we currently do not have enough of the necessary skills to widely undertake evidence-based practice, even though our background as psychologists gives us a strong foundation on which to build. CPD that enables evidence-based practice and helping I–O practitioners to access research evidence are two possible ways to overcome this barrier. It may also help to increase the opportunities for those qualified at the master’s level to go on to complete doctorates.

## **The Target Article:** Barriers to evidence-based practice in I/O psychology.

➡ As a consequence of our desire to market I–O psychology, we may be **reluctant to acknowledge the limitations of our knowledge** where evidence is mixed or where there are grounds for uncertainty.

➡ **The politics of evidence in organizations.** Power and politics are fundamental to decision making and also surround the identification and use of evidence in organizations.

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It can be difficult to achieve a balance between promoting a profession while at the same time acknowledging its limitations as clients may find this unnerving or see it as a sign of competence. I–O psychologists are especially challenged because other organizational consultants outside the discipline can be extremely bullish about their products and services despite their own absence of evidence. As skepticism is a key ingredient of evidence-based practice, its limited popularity in I–O psychology is something of a barrier. One way this can be overcome is to remind ourselves that skepticism is fundamental to scientific inquiry and to any area of practice based on science. It also has the potential to clearly differentiate us from other organizational practitioners and consultants, particularly if the discipline supports practice through systematic reviews, evidence-based guidelines, and practice-oriented research that contribute to more effective practice.

A fourth barrier concerns the politics of evidence in organizations. Power and politics are fundamental to decision making and also surround the identification and use of evidence in organizations. Senior leaders may feel they have the right or even responsibility to make decisions based on their experience and judgment that seem to fly in the face of the available evidence. The need to be explicit in evidence-based decision making means that those with vested interests in a particular course of action may find it more difficult to hide such interests. In general, an evidence-based approach may prove challenging particularly in organizations with highly political cultures. Although it is impossible to remove politics from evidence and decision making, evidence-based approaches do at least offer the possibility of making clearer distinctions among politics, values, interests, and other forms of information such as research evidence. The more decision makers are held accountable for their decisions, the more likely they are to welcome such distinctions.

## The Target Article: Prospects?

➡ This article concludes that I–O psychology cannot yet claim to be fully evidence based. Our analysis suggests that we have some way to go before we can reasonably claim to be an evidence-based area of research and practice in the sense it is used in other areas of evidence-based practice.

Beyond making our own practice more evidence based, we also have an important part to play in helping organizations and those who manage them become more evidence based. We envisage this could happen in several ways. First, we could provide systematic review services (or their briefer and quicker versions) to managers and organizations. These might be seen as particularly useful where the organization is trying to decide whether to invest a large sum of money in a particular intervention or program. For a fraction of the proposed program budget, we would be able to provide an objective and reasonably comprehensive review of what the published and (where available) unpublished research tells us about how effective the intervention is known to be and whether it might work here.

Second, we have the skills to help organizations either make sense of their existing internal data or collect new data that might diagnose problems or show what is working and why. We believe it is not unusual, even where organizations have large quantities of data about, for example, employee behavior, performance, and attitudes, for those data to remain largely unanalyzed or subject only to the simplest and least informative analyses such as cross tabs and zero-order correlations. I–O psychologists should be able to work with organizations to help them get the most out of the data they already have and where appropriate suggest additional data collection to develop a fuller picture of what is happening in the organization. Our roles as organizational knowledge brokers as well as our own evidence-based practice would be facilitated by the use of systematic reviews on practice questions. Systematic reviews need to be part of the professional training of I–O psychologists. A professional activity accessible to both master's-prepared and doctoral-level I–O psychologists, systematic reviews, and briefer versions are important ways of helping would-be practitioners learn to gather and use evidence while at the same time developing their skills in formulating questions, structuring reviews, and synthesizing findings.

Third, I–O psychologists have the background to enable us to work as facilitators and coaches for managers and management teams seeking to engage in evidence-based management as well as helping organizations collect the external and internal evidence they may need (described above). We can also help collect information about the perspectives of those who may be affected by a decision and help make explicit managers' own expertise and experience and how it is shaping a decision. In effect, we can support organizations to make decisions in a conscientious, explicit, and judicious way—in short, to help organizations to practice EBMgt.

## Commentary: Catherine Cassell

- ➡ The politics of evidence. One person's evidence is another person's dogma.
- ➡ Uniformity of research methodology – rejection of qualitative 'evidence'.
- ➡ Innovation lost due to the 'wait-time' for an eventual systematic review.

As Briner and Rousseau point out, as a community we are somewhat drawn to management fashions and fads, and it may be that evidence-based practice is just another one of these. I am not suggesting that using evidence is a bad thing, rather that we need to maintain some caution about moving I-O psychology in a potentially conservative direction where a one best-way critique of our research and evidence threatens methodological and epistemological diversity and innovation. In summary, if I-O psychology moves in this direction, I would like us to think thoroughly about how we define and understand what we mean by evidence and think quite carefully about what we might be discarding along the way.

## Commentary: Dean Bartlett

- ➡ A neglect of the political.
- ➡ Alternative models of evidence-based practice – where politics is balanced with scientific rationality, and evidence is not seen through the sole lens of a ‘positivist science’.

I conclude my commentary with a cautionary note. In the interests of stimulating debate, I have purposely aimed to challenge, to be controversial, and even to have a little fun along the way. However, we must also be careful not to throw out the baby with the bathwater. The critique that I offer is not a fatal one for the evidence-based project. It is perfectly feasible that due consideration of the missing political dimension within an evidence-based framework could overcome the problems highlighted. I have suggested an alternative operationalization of evidence-based practice, but in doing so, I am not suggesting that such critical and political analyses are necessarily better or more useful in and of themselves. Rather, I would argue that a model of evidence-based practice where alternative and critical voices are heard and where the growing body of rigorously scientific evidence about how power influences behavior (e.g., Lammers, Stapel, & Galijnsky, 2010) is incorporated will only serve to strengthen our evidence-based analyses and thereby our practice. Indeed, to not incorporate such evidence runs counter to the very principle of an evidence-based approach even on its own terms.



## Commentary: Amanda Thayer et al

- ➡ We are already there – in some areas of I/O psychology. Specifically teams and training.
- ➡ Student training wrong – I/O Masters trained for practice, PhD s for research, and never the twain shall meet!
- ➡ Universities corrupt practitioner/practice-oriented research by insisting on publications in top-tier “research-focused journals”.

In closing, Society for Industrial and Organizational Psychology (SIOP) leaders have placed an emphasis on closing the science–practice gap. A first step toward accomplishing this is for SIOP to continue to communicate this mission to its members, provide resources for practitioners and academics to learn how to translate, and change what is evaluated and rewarded. For example, we might assess cross-collaboration and provide formal, public praise for scholars, practitioners, and organizations who strive to bridge the gap through collaboration or publishing in each other’s journals. As a field, we must acknowledge and promote the value of becoming truly evidence based and then work to build a foundation on which we can advance. It is time to celebrate our research and our practice: Both are needed, both add value, and both should be recognized.

### Commentary: Michael Burke

➡ Meta-Analysis is likely the best way forward – more objective overall than systematic reviews. So, difficult to justify a return to more subjective “systematic reviews”.

### Commentary: George Banks and Michael McDaniel

➡ Publication Bias as the “kryptonite” of evidence-based practice, systematic reviews, and meta-analysis.

### Commentary: Victor Catano

- ➡ Lessons from Clinical Psychology
- ➡ The role of the Psychologist and context
- ➡ Science and practice linkage
- ➡ Credentialing and regulation
- ➡ Ethics

### Commentary: Georges Potworowski & Lee Green

- ➡ Take a systems approach by addressing the evidence consumption system in I/O psychology.

## Commentary: Gerard Hodgkinson

- ➡ Rejuvenate the Scientist Practitioner Model.
- ➡ Experience vs conceptual knowledge; that is where the real task begins – how to accelerate the development of expertise.
- ➡ Systematic Reviews are of secondary importance.

Like any radical innovation in its early stages of development, the notion of evidence-based practice constitutes a potentially major threat to the identities of practitioner I–O psychologists as skilled, autonomous professionals (Ryan & Ford, 2010). Extrapolating from Hodgkinson and Healey (in press), given that the mechanisms underpinning much of the bias against strategic change initiatives stem from automatic social categorization and stereotyping processes controlled by the reflexive system (Amodio, 2008; Dovidio, Pearson, & Orr, 2008), encouraging the conscious monitoring and adjustment of prejudices through reflective processes is an insufficient basis for overcoming them.

Accordingly, the most pressing priority facing those of us seeking to promote evidence-based practice is not the training of researchers and practitioners in systematic review procedures but rather how to convert such “cold cognition” enhancing technologies (i.e., tools and processes aimed at mental model change in the absence of emotionally supportive mechanisms) into “hot cognition” enhancing technologies (i.e., tools and processes aimed at mental model change underpinned by emotionally supportive mechanisms).

The failure to adapt our tools in this manner to the complex realities of the worlds of policy and practice can only serve to further divide the scientific and practitioner wings of the I–O psychology profession to the mutual detriment of both parties.

In the final analysis, however, as noted at the outset, the ultimate remedy to the problems identified by Briner and Rousseau lies not in the refinement of tools and procedures for the critical evaluation and synthesis of research evidence but in the blending of such evidence with the requisite expertise (gained over many years in the field) to make appropriate judgment calls, an exciting but challenging prospect that demands closer cooperation between university departments and skilled I–O psychology practitioners.

## Commentary: Matthew Cronin and Richard Klimoski

<u>Manufacturer</u>	<u>Supplier</u>	<u>Producers</u>	<u>End User</u>
Basic researchers Cognitive psychologists Social psychologists Sociologists Economists	Applied researchers Management I-O psychology Strategy	Practitioners MBA I-O MA HR MA	Stakeholders C-level executives Shareholders Employees
<i>Quality is:</i> valid with respect to domain, universal, basic e.g., human motivation	<i>Quality is:</i> valid with respect to work context, contingent, integrated e.g., reward systems	<i>Quality is:</i> useful in this organization, implementable e.g., specific payment plan	<i>Quality is:</i> justifiable, aligned with culture and other policies e.g., compensation package
<i>Knowledge, skills, abilities</i> – discipline knowledge, scientific method	<i>Knowledge, skills, abilities</i> – multi-discipline knowledge, scientific method	<i>Knowledge, skills, abilities</i> – managerial knowledge, organization/industry knowledge	<i>Knowledge, skills, abilities</i> – varies greatly

Figure 1. The evidence-based practice supply chain.

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### The Need for Trust and Respect

Academics should not be accountable for what the end users might want. That translation should be the HR practitioner's job. Similarly, the end user does not need to justify all practice decisions using the high standards of science. If it works, it works. The practitioner has the job of verification that there are no ill side effects.

In our view, [the supply chain framework](#) goes beyond "educating the consumer." It argues for the benefits of a partnership between pairs of actors in the flow (supply) of knowledge.

As in any partnership, it leverages the dynamics of specialization and coordination, of mutual trust, respect, and mutual influence.

As another advantage, it places the responsibility for evidence-based practice where it belongs at every point in the supply chain not just with academic researchers (Klimoski & Jones, 2008; Rynes, 2007).

## Commentary: Baughman et al

➡ We agree that good evidence is necessary for good practice but disagree that it is sufficient.

In I/O practice, evidence supports decisions but does not dictate them; practice decisions are rarely if ever clear-cut and I–O practitioners seldom if ever dictate courses of action to clients.

➡ We believe that I–O practice would benefit from promoting an argument- based practice rather than one focusing exclusively on evidence

Following are some possible outcomes from actively promoting argument-based practice in the I–O field.

First, a focus on creating stronger cases for action could increase the value the field places on achieving high-impact results in practice settings. While evaluating I–O practice mostly in terms of the amount and quality of scholarly research it draws on is consistent with a core value of due diligence in applied science, it may encourage putting process, sources, and methods above delivering results. We must be rigorous but in the service of creating tangible value.

Second, driven by the need to create value, I–O practitioners would seek knowledge and skills beyond those currently offered or promoted in our professional development programs. After all, when framing problems, developing solutions, and advocating for solution utility and value, more good evidence is better than less. When used to justify critical decisions and actions, it is the quality, value, and impact of evidence that matters most, not its source or pedigree.

Third, empowered by complementary knowledge and skills, I–O practitioners would become more competitive. I–O work occurs in diverse technical and nontechnical contexts that can require developing arguments for different audiences. Armed with additional conceptual and technical tools and with a code of ethics and professional standards guiding their application, I–O practitioners would become fluent in the language of business and sociopolitical reality and in the rules of discourse and foundational knowledge (e.g., economics) needed to engage in solving the complex problems found in these contexts (van Eemeren & Grootendorst, 1984).

Fourth, combining integrity and rigor with delivering effective solutions in the most complex settings, I–O practice would largely reflect the scientist–practitioner ideal. This already characterizes most senior I–O practitioners and top consultants. Thus, rather than looking to other fields such as medicine, nursing, or public policy to guide our practices, we would propose obtaining guidance from the practices of our own most senior and successful practitioners.

## Commentary: Richard Guzzo

- ➡ The practice of industrial–organizational (I–O) psychology is already evidence based.
- ➡ Digital data within Human Resource Information Systems (HRIS) and via Data Mining of biodata, social and professional network data is expanding the possibilities for ‘predictive analytics’ evidence accrual.

Other systems and databases complement the HRIS. Examples include recruiting and applicant tracking systems (sources of expansive biographical and work history data about applicants turned employees), “talent management” software (competencies, development, performance, potential, successor status, and other attributes of people), and payroll and timekeeping systems (hours worked and overtime hours worked). Benefits-related record-keeping systems also can be sources of relevant facts.

Increasingly, data from these multiple systems are being joined up in a “data warehouse,” an integrated repository of employee information that is friendly to extraction. The net effect of this integration is the rapid rise of high-quality, cumulated, accessible facts about populations (not just samples) of individuals and their behavior in their places of work.

Typically missing from these electronic sources are insights into cognitive processes, most pre-employment test data, and the subjective side of employees and their work experiences, such as can be captured through surveys. As regards employee surveys, there seems to be a growing use of identified surveys. Identified surveys enable individuals’ responses to be linked to other data about the respondents such as are found in HRIS databases and data warehouses (without necessarily revealing employees’ identities to the employer). Such linkages open up a wealth of opportunity for insight from research.

### **Implications for the Practice of Evidence-Based I–O Psychology**

Three major implications of this rapid accumulation of research-ready data are (a) organizations and the I–O psychologists in them are now situated to be primary producers of research as well as consumers; (b) opportunities for “practice-oriented research” as Briner and Rousseau describe it—collaborative efforts between application-oriented and research-oriented worlds—are rekindled; and simultaneously, (c) organizations are now very well positioned to be self-sufficient in matters of research to support practice. Large enterprises are recognizing this fact. Fink (2010) documents the recent growth of in-house research capabilities and the applications of sophisticated methods of analysis to human capital data. That is, scientific methods of analysis are being applied in house to support business decisions and practice, and I–O psychologists in the midst of it all are expanding the frontiers of the universe of I–O psychology as an evidence-based discipline.

## Commentary: Jazmine Boatman and Evan Sinar

➡ A logical path for organizational evidence-gathering.

## Commentary: Jean Bartunek

➡ Maslow's Grumbles as a measure of the health of I/O psychology.

### Grumbles About Evidence-Based Approaches

1 The practice of industrial–organizational (I–O) psychology could be improved considerably if it were based on evidence. [\[Metagrumble\]](#)

2 Practice is ahead of research in many content areas; furthermore, in I–O psychology scientists and practitioners each prize their own knowledge sources over the other's, raising concern regarding the quality of the interface between the two. [\[High-level grumble\]](#)

3 Sometimes I–O research does not address the real needs of practitioners but is carried out solely for a scholarly audience. Academics and psychologists are not mingling in I–O journals. Rather, academics are writing for each other. [\[High-level grumble\]](#)

4 There are academic-practitioner knowledge transfer problems; it isn't always clear to practitioners how to apply what is learned in research. [\[Low-level grumble\]](#)

5 There is, on the whole, little practitioner access to systematic reviews. [\[Low-level grumble\]](#)

6 There is an apparent lack of demand from our clients for evidence-based I–O psychology. [\[Low-level grumble\]](#)

7 Many practitioners have a limited understanding of research, a limited capacity to access new evidence, and lack the skills to conduct their own systematic reviews let alone primary research. [\[Low-level grumble\]](#)

8 Scholars may sometimes be reluctant to acknowledge the limits of evidence available at this point. [\[High-level grumble\]](#)

9 Evidence is not free of politics. [\[Low-level grumble\]](#)

The low- and high-level grumbles suggest the presence of uncertainty and anxiety about the use of evidence. The low-level concerns express how, for a variety of reasons, it is difficult for practitioners—consultants, managers, and others—to apply academically derived evidence, especially when they don't understand its derivation, how to collect it, or what to do with it.