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COMMENTARY

A panel discussion on addressing the science–practice gap with academic–industry collaborations

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Introduction

We agree with Zhou et al. (2024) that the science–practice gap continues to be a critical challenge for organizations and academics and is particularly challenging in the context of small businesses. At SIOP 2024, we invited four panelists to speak on this topic as part of the Lee Hakel Doctoral Consortium. Panelists included academics and practitioners with extensive experience in such collaborations (in alphabetical order: Emily Campion, Richard Landers, Georgi Yankov, and Chase Winterberg). For this commentary, we invited these same panelists to respond to Zhou et al.'s focal article. We presented questions to the panel regarding the science–practice gap, focusing on academic–industry collaborations and referencing points raised by Zhou et al. Although the panelists all agreed on the benefits of academic–industry collaborations, they varied a great deal in their responses to several questions, highlighting the complexities of addressing the science–practice gap. Below, we present a summary of the discussion.

Is the Science–Practice Gap an Issue?

The panelists were unanimous: yes, the science–practice gap continues to be a challenge that needs to be addressed. This gap has serious consequences for both I-O scientists and practitioners. For academics, the gap results in research with little practicality or grounding in the issues that businesses actually face. For practitioners, the gap results in ineffective practices that lack attachment to science. The panelists discussed several reasons for this gap, including the different occupational incentives for academics and practitioners (discussed more below) and a waning emphasis on the importance of understanding research in some I-O psychology programs. Several of the panelists noted that when discussing the gap, there needs to be a distinction made between the gap that exists between I-O research and I-O practice and the much more significant gap that exists between I-O research and general practice in businesses conducted by those without training in I-O psychology. As one of the panelists put it, "These unique segments of the gap can perpetuate one another, so ignoring one could attenuate closing another." That is, misalignment between I-O researchers and I-O practitioners makes it less likely that businesses will adopt I-O solutions. Similarly, the detachment of human resource departments and organizational leaders from I-O science can make it difficult for I-O practitioners to implement research-based solutions.

Is the Article's Focus on Small Businesses Justified?

All four panelists agreed that the science–practice gap is almost certainly greater for small businesses than for large businesses. They pointed out that small businesses rarely have the

resources to employ I-O psychologists. This makes it far less likely that those in the organization will have the knowledge or experience to apply evidence-based practices supported by I-O research. They also acknowledged that I-O psychology researchers have focused disproportionately on sampling from larger organizations for research. From a practical standpoint, it has traditionally been much easier for researchers to recruit samples of sufficient size from larger organizations. One panelist suggested that I-O psychologists' early work with the military created a field-wide culture of focusing primarily on the issues of large organizations that has persisted.

Even acknowledging that the applicability of I-O science is worse in small businesses, one of the panelists disagreed that the issue is more pressing for smaller organizations than for larger organizations. They noted that psychological research is "inherently noisy," with studies typically finding small effect sizes and high degrees of variability within and across populations. Even in nonintervention settings, such as selection, the correlations between the outcomes that I-Os care about and the tools available are not very high. The practicability of these effects assumes that they will take place in relatively large samples. It is unlikely that the predicted effects of an intervention will be observed in a small business comprising 10 employees. "For a small business, it is often going to be much more efficient to just try an amalgamation of techniques and interventions to see what works with their specific group. That is going to be much more efficient than combing through the literature."

What Are Some Opportunities for Academics and Practitioners to Collaborate?

The panelists discussed several avenues for academic–practitioner collaborations. Perhaps the most obvious opportunities come from collaborative applied projects. These collaborations can take the form of business partnerships (e.g., jointly creating a product) or application projects (e.g., jointly implementing an I-O intervention within the company). Panelists described their experiences working on both forms of these collaborative projects. Of note, many of these projects included small businesses. Partnering with academics offered several benefits for the practitioner panelists, including "opportunities to be innovative, to partner with academics who have the time and freedom to be on the cutting edge in their methods and ability to solve specialized problems." The academic panelists mentioned that applied projects can offer practical benefits of additional funding and sources for data collection. They also noted that collaborations offer the intrinsic benefits of engaging in work with clear and observable impact.

The panelists also discussed opportunities for academics and practitioners to collaborate in academic research and publishing. Practitioners often have access to privileged data sources and the resources to collect costly targeted data but typically have neither the time nor incentives to engage in the academic publishing process (i.e., writing and revising academic-style manuscripts). Academics can provide practitioners with their time and expertise in navigating this lengthy publication process. As such, academic–industry research collaborations can be productive and mutually beneficial. Additionally, all four panelists favored including practitioners as part of the peer-review process. Both academic panelists discussed including practitioners in their respective editorial roles, commenting that "research-serious practitioners tend to be just as good if not better than academic reviewers because they are not as likely to get hung up on minutia. Other than a better understanding of real-world constraints, practitioner reviews are typically pretty similar to reviews from academics."

One of the panelists also discussed opportunities for academic–practitioner classroom collaborations. Partnering in classrooms can be mutually beneficial. "Inviting practitioners to the classroom can expose academics and students to novel perspectives and practical considerations and encourages practitioners to stay up to date with the science." One of the practitioner panelists also mentioned that lecturing in classrooms allows them to practice communicating the science to larger groups, a skill that is applicable to most workplaces.

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How Do Academic–industry Collaborations Help to Narrow the Science–Practice Gap?

The panelists agreed that academic–industry collaborations can help to narrow the science–practice gap in some capacity. Academic–industry collaborations keep academics grounded in the practical constraints of practice. Staying in "the trenches," as one of the panelists phrased it, can keep I-O researchers in touch with the issues that businesses face and help academics adapt their research focus as novel business challenges emerge. As mentioned, collaborative projects can also provide academics with high-fidelity data sources that they are unlikely to access without the resources and networks of practitioners. These data can increase the precision with which researchers develop and test theories that can directly benefit organizations. For practitioners, collaborating with academics can keep them attached to the scientific community and make them more likely to engage in evidence-based practice. One practitioner panelist suggested that collaborations can provide practitioners with a sense of ownership over the organizational sciences that can motivate them to continue to stay engaged with academic research.

Two critical points regarding academic–industry collaborations were brought up in the discussion. First, although collaborations are a powerful tool for closing the science–practice gap for those involved in the collaborations, they are unlikely to solve the issue at the broader systemic level. Several panelists noted that academic–industry collaborations need to be paired with a renewed emphasis on the importance of understanding research in I-O education and a restructuring of incentives for both academia and industry. Second, panelists emphasized that academic–industry collaborations only help narrow the science–practice gap when the collaborations are successful. Unfortunately, all four panelists discussed major challenges faced by those in these collaborations.

What Are Common Challenges in Academic–Industry Collaborations?

Academic–industry collaborations can be challenging for the academics and practitioners involved. Several panelists discussed differing values and incentives between academia and practice that can lead to ineffective collaborations. The panelists noted that, for some academics, the generation of knowledge, absent applicability, is valued and rewarded. This is rarely the case in practice. These differences in values can result in misaligning goals that can lead to ineffective collaborations. Panelists also discussed the challenges that differing working norms between academia and industry can cause. One panelist mentioned that "timelines can be a real challenge for collaborations. Academics can be very slow and are often splitting their attention across several projects. Practitioners usually have very short timelines and quick turnarounds and need academics to have a much quicker pace for the collaboration to be beneficial." One panelist also mentioned that preconceived notions about industry tools can be an obstacle for practitioners who want to engage in research collaborations, noting that "reviewers are quick to dismiss any research stemming from my company's tools as a sales pitch."

Several panelists discussed corporate legal review and "red tape" as a major barrier in academic–industry collaborations. One panelist commented, "Once you hit legal review, everything halts," another panelist added, "I have seen well-designed, hard-fought projects wither the moment they go to legal." Corporate legal departments may not see the benefits of academic–industry collaborations for their organization and are likely to be very cautious in their reviews of potential research activities.

Interestingly, the panelists differed in their experiences in collaborations involving small businesses. A few panelists mentioned finding collaborations with small businesses difficult because of challenges convincing them of the value of these collaborations. As noted, small businesses are less likely to have I-O psychologists on staff and may have little experience collaborating with academics. However, another panelist commented that with a few exceptions, all of their academic–industry collaborations have included small businesses. "I would actually say

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collaborations are easier with small businesses because there is less red tape. The challenge there is sample size. But in my experience, small businesses have been more willing to work with us because it can boost their own credibility." Ultimately, the panelists agreed that the most successful academic–industry collaborations include businesses that see the value in research and evidence-based practice, regardless of the organization's size.

How Can I-Os Successfully Navigate Academic–Industry Collaborations?

The panelists offered several recommendations for those interested in engaging in academic–industry collaborations. Most importantly, for collaborations to be successful, all parties involved must understand and accept each other's goals. In this regard, one panelist commented, "You really have to radically empathize with the person that you want to work with and understand what their needs are, what their interests are, and why they operate the way that they do." As discussed, incentives vary greatly between academia and industry, and each party must work to ensure that goals are understood and aligned for collaborations to succeed. Our panelists also recommended that collaborators explicitly discuss timelines, working patterns, and deliverables before work begins to avoid ineffective collaborations resulting from differences in expectations and working norms. "A strategy that I have learned to use in my collaborations is very clearly spelled out deadlines and clear commitments. What is considered timely in academia and industry look very different."

Regarding collaborations with small businesses, particularly those with little experience working with academics, panelists emphasized the need for academics to clearly and precisely communicate the value of their research to the organization. Small businesses will likely have fewer resources to engage in speculative or exploratory research projects, so the value of any project and deliverables needs to be very clear. Panelists also suggested that, from a research output standpoint, academics should consider a mixed methods approach in collaborations with small businesses. "To address small sample sizes, sometimes it is possible to take a consortium approach, collecting data from multiple similar small businesses. Otherwise, qualitative research approaches can be helpful when sample sizes cannot power quantitative analyses."

Conclusion

Academic–industry collaborations will not solve the science–practice gap alone, but any solution to this issue includes these collaborations. Our panelists were very open about the challenges associated with academic–industry collaborations. Still, they were emphatic about the importance of these collaborations for improving science and practice and offered recommendations for navigating them successfully. During our panel presentation, we encouraged students in the SIOP Doctoral Consortium to begin discussing and forming academic–industry collaborations. We encourage readers of this commentary to do the same.

Reference

Zhou, S., Campbell, L. N. P., & Fyffe, S. (2024). Quantifying the scientist-practitioner gap: How do small business owners react to our academic articles? *Industrial and Organizational Psychology*, **17**, 379–398.

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