S Y M P O S I U M

Bridging the Research–Practice Gap

by Pratima Bansal, Stephanie Bertels, Tom Ewart, Peter MacConnachie, and James O'Brien

Executive Overview

Management research often bears little resemblance to management practice. Although this research–practice gap is widely recognized and frequently lamented, there is little discussion about *how* it can be bridged. We partly remedy this problem in this paper by describing our experiences with the Network for Business Sustainability. Our experiences showed that the paradoxes underlying the relationship between research and practice make bridging this gap difficult. We argue that the reason why the research–practice gap endures is that bridging it is beyond the capabilities and scope of most individuals, and we call for the creation of intermediary organizations like the Network for Business Sustainability. We close by outlining some of the activities that can be undertaken by these boundary-spanning intermediary organizations, with the hopes of better aligning management research and practice.

It is an article of faith that management research intends to inform practice. In reality, however, it is an open secret that most of what most management researchers do utterly fails to resonate with management practice. Even the captains of our Academy of Management have featured this concern prominently in their outgoing presidential addresses (Hambrick, 1994; Mowday, 1997; Pearce, 2004; Rousseau, 2006). They have described our research as "arcane" (Walsh, Tushman, Kimberly, Starbuck, & Ashford, 2007) and its implications for practice "ceremonial" (Bartunek & Rynes, 2010). Ghoshal (2005) even argued that the effect of management theory on practice is potentially harmful.

The research–practice gap has motivated several special editions of journals[1] and has also made mainstream news. The *Financial Times* (Schiller, 2011, p. 13) reported that "with critics continuing to query the real-world value of research and teaching, relevance has remained an issue for [business] school administrators." The *Economist* (2010) cited Bennis and O'Toole, who "criticis[e] MBA programmes for paying too much attention to 'scientific' research and not enough to what current and future managers actually needed."

Even though the research–practice gap is widely

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[1] Van de Ven and Johnson (2006) listed *Academy of Management Journal* (2001), *Academy of Management Executive* (2002), *Administrative Science Quarterly* (2002), *British Journal of Management* (2001), and the *Journal of Management Inquiry* (1997). This list could be extended to include *Human Resources Management* (2004) and the recently founded journal *Industrial and Organizational Psychology: Perspectives on Science and Practice*, which "focuses on interactive exchanges on topics of importance to science *and* practice in our field [emphasis added]."

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recognized and discussed, it endures. Researchers have spent most of their energy lamenting the gap and attempting to account for *why* it exists. They suggest that differences in norms, rules, and goals make productive exchanges and interactions difficult (Feldman & Orlikowski, 2011). There is too little discussion, however, on *how* to close the gap, which we tackle in this article.

This article recounts our individual and collective efforts to work in the midst of this gap through a unique and evolving organization called the Network for Business Sustainability (NBS). Founded in 2005, NBS is a Canadian nonprofit organization that offers a space for sustainability researchers and practitioners to interact meaningfully. Over the last six years, each of this article's authors has played a different role in NBS (founder and executive director, researcher, managing director, practitioner, and academic adviser). Here, we share our learnings with the hope of advancing the discussion on how to bridge the research–practice gap.

We do so in four major sections. The first identifies three major schools of thought for closing the research–practice gap. The second offers detailed first-person narratives based on our experiences. The third section synthesizes our learnings and offers our thoughts on how to span the gap. The final section offers two provocations. First, we believe that the gap should be *bridged*, not *closed*. The business of research demands a perspective different from the business of practice; closing the gap puts researcher objectivity at risk. Second, intermediary organizations, not lone researchers, are better positioned to bridge the gap because of the inherent paradoxes between research and practice.

Literature Review

The origins of the research–practice gap have been well laid out in the literature: Researchers prefer producing knowledge over translating and disseminating it (Van de Ven & Johnson, 2006), researchers have an incentive to produce research (Khurana, 2007) rather than to engage with practitioners, researchers and practitioners represent information in different ways and use different language and strategies (Kelemen & Bansal, 2002; Kieser & Leiner, 2009), and researchers and practitioners have different epistemological stances (Rousseau, Manning, & Denyer, 2008; Shrivastava & Mitroff, 1984). Moving beyond the origins of the gap, some scholars have offered ways to bridge the gap, including evidence-based management (Pfeffer & Sutton, 2006), engaged scholarship (Van de Ven, 2007), and relational scholarship (Bartunek, 2007). We describe each below, as they have anchored and informed our experiences at NBS.

Evidence-based management (EBMgt, as it has come to be known) aims to inspire practice through research knowledge. It assumes that "better, deeper logic and employing facts to the extent possible permits leaders to do their jobs better" (Pfeffer & Sutton, 2006, p. 12) because better evidence generates better decisions (Briner, Denyer, & Rousseau, 2009). Specifically, EBMgt guides the process of reviewing and synthesizing research to inform practice, such as through *systematic reviews* of prior research. Systematic reviews are a replicable methodology of reviewing and synthesizing the best available evidence in a field to better inform practice. Under EBMgt, management decisions are guided by a combination of elements, including "practitioner expertise and judgment, evidence from the local context, a critical evaluation of the best available research evidence, and the perspectives of people who might be affected by the decision" (Briner et al., 2009, p. 19). Ultimately, this approach aims to synthesize research and render it more relevant to practitioners, while being sensitive to particular contexts in which the evidence may be applied.

Engaged scholarship assumes that researchers and practitioners can investigate complex social problems by collaborating across the basic stages of the research process, including formulating problems, building theory, designing research, and solving problems. Rather than focusing on the evidence, as in the case of evidence-based management, engaged scholarship focuses more on the production of research as a multistage process. Within this process, Van de Ven (2007) proposes a range of possible activities, such as soliciting advice and feedback from practitioners during the research process, sharing power in collaborative researcher–practitioner teams, and evaluating policies and programs. Some forms of this approach

also draw on action research, advocating for researchers to embed themselves in management settings (Lawler & Mohrman, this issue).

Relational scholarship shifts the primary focus from the research community to the interface of research and practice (Bartunek, 2007). Through a democratic and mutually beneficial research enterprise, relational scholarship preserves—even celebrates—each community's unique identities and methods. Bartunek's (2007, p. 1324) vision of "a relational scholarship of integration" depicts two solid, separate poles, representing the academic and practice communities. Individuals begin to bridge the gap by taking tentative steps into the liminal space between these poles, conscious of the risk this effort entails. This approach advocates for new structures to facilitate more imaginative and useful research findings, implications for practice, and approaches to topics informed by the joint interests of both researchers and practitioners. Bartunek challenges us to imagine a future in which academic–practitioner conversations happen as a matter of course, enlivening both research and practice, without either community casting its own world aside.

These three approaches to bridging the research–practice gap are consistent in their objectives. They all call for researchers to engage with practitioners in the pursuit of knowledge. It was in this spirit that the Network for Business Sustainability was formed. We were inspired by these approaches, but in the practice of bridging we found their prescriptions incomplete. We learned that the terrain between research and practice was rife with obstacles and pitfalls. Through our "doing" we advanced our "knowing." We share our experiences in this paper, hoping to guide others embarking on a similar journey.

Setting the Context

Network for Business Sustainability

The Network for Business Sustainability was founded in 2005 to facilitate knowledge exchange among a community of researchers and practitioners in the area of business sustainability. By 2012, more than 900 researchers and 1,500 practitioners had joined the network. About 70% of its $450,000 annual budget was drawn primarily from the Canadian government's Social Sciences and Humanities Research Council of Canada (SSHRC). The remaining portion was drawn from about 20 industry and government partners. The NBS Web site (www.nbs.net) contains a growing collection of resources including eight different systematic reviews, about a hundred translated research briefs, five primers, and a range of other materials on business sustainability topics.

In 2008, the NBS developed a process that engaged practitioners and researchers. Each year The NBS Leadership Council, comprised of a diverse group of about 20 representatives from corporations, federal government departments, and nongovernmental organizations, identifies their 10 most pressing questions. Then, NBS contracts research teams to systematically review the research related to two of these questions, based on EBMgt protocols (e.g., Briner & Denyer, 2010). The research teams employ a rigorous process (available on the NBS Web site and from the corresponding author) to identify the best knowledge sourced from academic and practitioner resources and synthesize the findings for a practitioner audience. A Guidance Committee, comprised of four to six Leadership Council members (and an academic adviser since 2009), guides each systematic review.

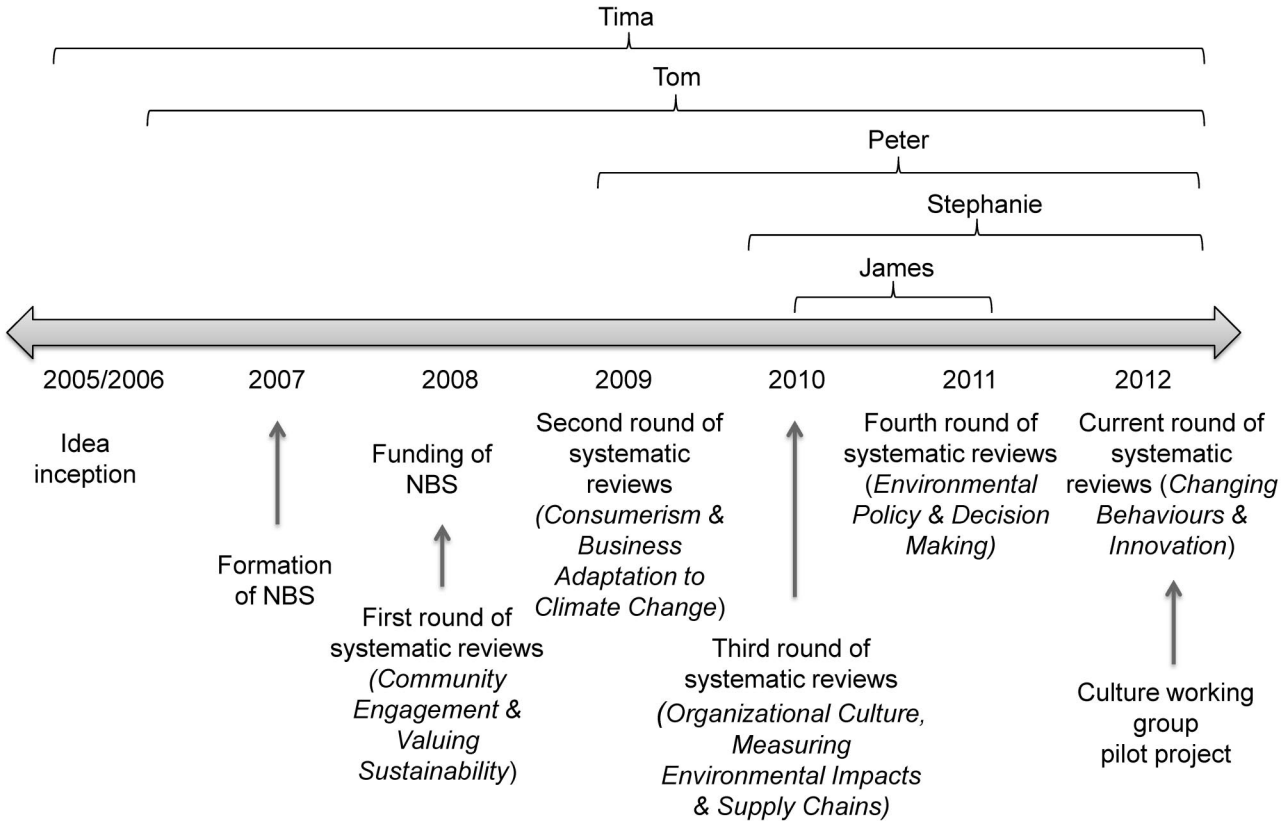
All five authors of this paper have played a role in this process. Figure 1 provides a timeline of NBS, the authors' engagement with the organization, and the systematic reviews that form its backbone.

The Culture Project

This paper focuses on one particular systematic review to illustrate our experiences in the research–practice space: the Culture Project[2] (Bertels, Papania, & Papania, 2010). The Culture Project emerged out of 2009 findings by the Leadership Council that one of the most important sustainability challenges faced by organizations was "how to embed sustainability in organizational culture." NBS issued a call for proposals to conduct a systematic review and awarded the proj-

[2] The full report for the Culture Project can be downloaded from nbs.net.

Figure 1
Timeline for the Network for Business Sustainability



ect to a research team led by Stephanie Bertels. The research team summarized and synthesized relevant knowledge as follows:

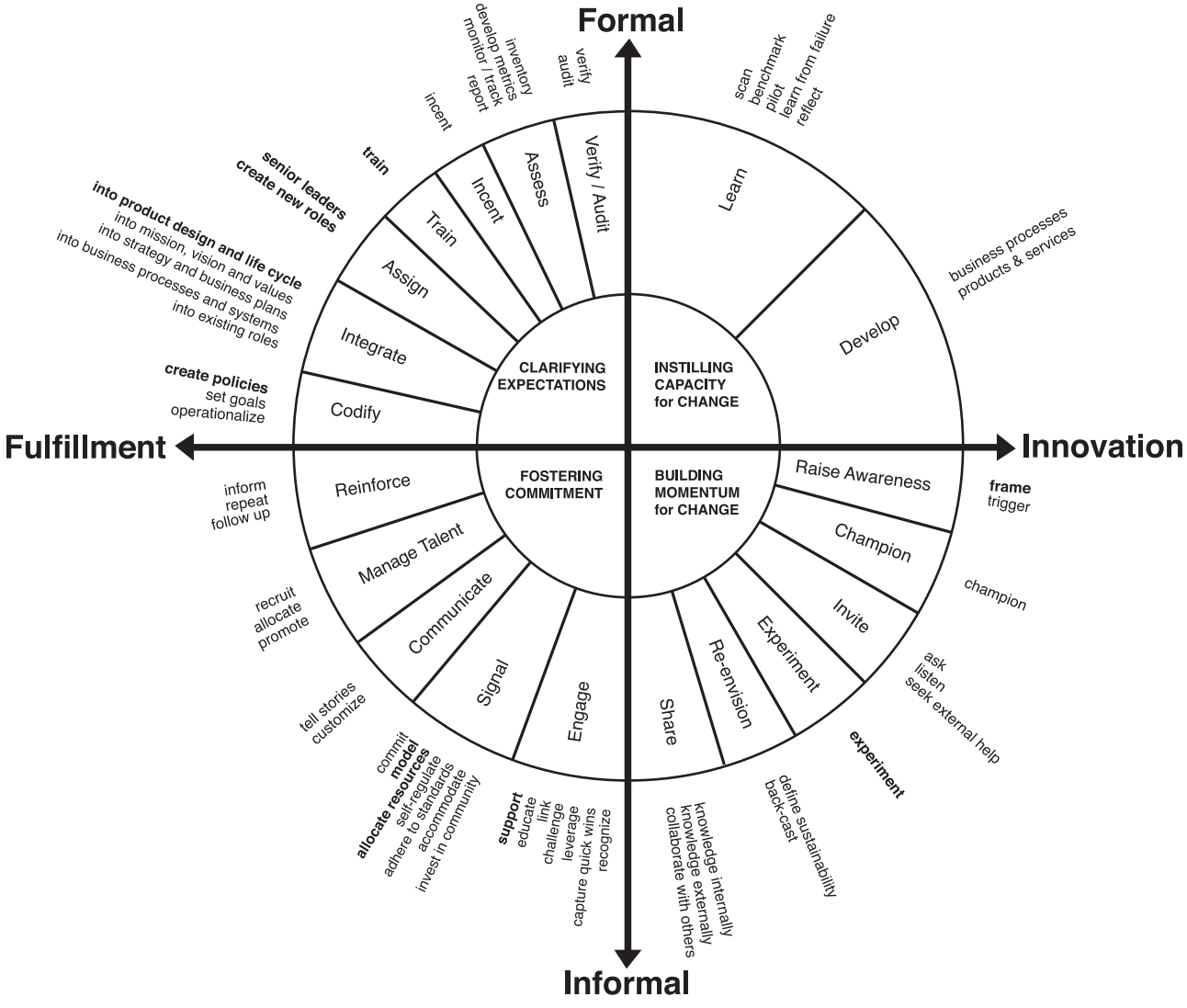
1. Scoped the study with the Guidance Committee to refine the research questions and develop a research protocol.
2. Identified 13,756 potentially relevant studies from both the academic and practitioner literatures.
3. Screened the total studies according to a set of criteria based on rigor and relevancy, reducing the number to 179 studies.
4. Extracted 1,695 relevant quotations from the studies.
5. Critically appraised the data (indicating the level of empirical support for the findings).
6. Synthesized the data and prepared a report with input from the Guidance Committee.

The resulting report features a framework depicted as a wheel that groups 59 different practices that help build and support sustainability in organizations into four different quadrants (see Figure 2). The practices vary on two main dimensions that reflect the importance of simultaneously attending to two different goals (fulfillment and innovation) through two different means (formal and informal) and the need to draw on a portfolio of practices from the resulting four quadrants to embed sustainability in organizational culture.

In the next section, we offer first-person narrative accounts of our individual experiences with the Culture Project and NBS. We use this device to share our learnings and vividly illustrate the different voices and tensions in bridging the research–practice gap. The roles played by the authors are as follows:

- **Pratima (Tima) Bansal** is the Founder and Executive Director of NBS. In addition to this

Figure 2
The Culture Wheel: A Portfolio of Practices for Embedding Sustainability



service role, she is also a professor at the Richard Ivey School of Business at the University of Western Ontario, teaching strategy and sustainability.

- **Tom Ewart** is the full-time Managing Director of NBS, overseeing its daily operations, including the systematic review process.
- **Stephanie Bertels** is the lead researcher for the systematic review of the Culture Project. She is also an assistant professor at Simon Fraser University in the Beedie School of Business, teaching sustainability and sustainable innovation.
- **Peter MacConnachie** is the practitioner who chaired the Culture Project's Guidance Committee. He has been a member of the Leadership Council for three years. His full-time job is Senior Sustainability Issues Manager for Suncor Energy, Inc.
- **James O'Brien** is the academic adviser on the Culture Project's Guidance Committee. He is also an assistant professor in the Aubrey Dan Program in Management and Organization Studies at the University of Western Ontario, teaching organizational behavior and human resource management.

Our Experiences Bridging the Research–Practice Gap

Tima Bansal: Founder and Executive Director of NBS

Soon after I received tenure, our national research council (SSHRC) offered a small grant program to assess the feasibility of advancing their "knowledge mobilization" strategy through the use of "strategic research clusters." I applied because I believed that business sustainability was one of the most significant issues confronting business and society, and it called for innovative research and business applications. Such work was best accomplished by assembling disparate communities.

To assess the need for a business sustainability research cluster, I assembled focus groups involving researchers, business managers, government policymakers, and nonprofit leaders. They clearly articulated a research–practice gap and the need to span it. Practitioners argued that business sustainability research was often inaccessible or irrelevant, and both researchers and practitioners wanted more opportunities to interact. These insights seeded NBS.

As a first step, I assembled the Leadership Council. One by one, I met prospective organizations, asking them to commit to joining for three years. They would be required to meet once annually to identify important research and contribute CDN$10,000 each year. It was incredibly rewarding, as most businesses I approached responded positively. In the first year, I recruited 10 corporations, three federal government departments, and two NGOs. In our first NBS Leadership Council meeting, we identified the practitioners' top 10 research priorities and selected the top two for systematic reviews.

At around this time, I came across the Evidence-Based Management Collaborative. This group, whose members were primarily academics, shared a common interest in improving management practice and education through the application of best available research evidence. I participated in a workshop hosted by Denise Rousseau at Carnegie Mellon University, and returned from the meeting excited about applying the EBMgt protocol to the top two research priorities identified by the Leadership Council. In the first year, I learned that the EBMgt protocol, which was drawn from the medical sciences, did not extend well to the messy reality of business sustainability research, and that we were breaking new ground. For instance, we found that the protocol guided researchers to *summarize*, rather than *synthesize*, prior work. We had inadvertently generated tables of "counts" of prior studies by topic, country, and authors, but not the frameworks, analytic tools, and best practices that interested our Leadership Council.

I also learned that practitioners were more interested in the authority that researchers provided than they were in the content. During this first year, we held a number of forums involving presenters from research and practice. The practitioners in the audience most valued other practitioners' presentations, which seemed to me to be rather thin on content and rigor. The academics' presentations were seen as lifeless and lacked context. The "research" being touted by consultants was seen as equivalent and often superior to that presented by academics.

This preference for consultant-based research presented itself again when we engaged the Guidance Committee to select the research team to complete the systematic review. We found that committee members would often advocate for consultants to fill the role, once again seeing consulting research as equivalent to academic research. Ultimately, I felt that we had to offer Guidance Committees more direction in selecting the research teams, as it became clear that they did not fully appreciate or value rigor.

We learned much over the next two years. Tom, NBS's managing director, captured our learnings in a protocol that led to much better reviews that summarized and synthesized knowledge (available on nbs.net and from the corresponding author on request). But there remained considerable variance in the quality of the outputs, as practitioners' interests would be difficult for some research teams to manage. In response, we added an academic adviser to the Guidance Committee. This role called for someone who could protect the rigor of the systematic review

process while the practitioner members pushed for relevance.

We also learned that summarizing and synthesizing research was not enough. We needed to generate easy-to-grasp models and frameworks—going the extra mile that researchers often don't. Stephanie's Culture Project was the first systematic review that took this huge leap forward. This framework was a product of the combined struggles of the Guidance Committee, the NBS team, and Stephanie's research team to find meaning in a vast amount of information. The result, I believe, is powerful because the framework really does integrate research and practice. We have heard from both audiences that the "culture wheel" is particularly powerful because it shows the full range of 59 different practices, and identifies those practices that are supported by rigorous research, so they can contextualize their own work.

I sometimes question the importance of rigor to relevance. Practitioners don't really seem to care about rigor, and management theory keeps being reshaped or overturned. But I have made peace with the view that evidence doesn't give us answers; rather, its purpose is to challenge deeply held doctrines. If we were guided only by relevance, we would risk finding merely what people wanted to hear. NBS's role is not to find truths, but rather to challenge what might be taken for granted.

Things have become steadily busier for me and for NBS over the past five years. If I had anticipated the long hard road ahead in 2005, I might not have embarked on it. I sometimes lament the toll it's taken on my own research. NBS demands are urgent and seemingly incessant. But having embarked on this journey and seeing where we have come, I have no regrets. I continue to believe that research-based practice and practice-based research are important if we are to crack the seemingly intractable challenges imposed by business sustainability.

Tom Ewart: Managing Director of NBS

I will never forget how a senior manager paraphrased my role as managing director of NBS: "You herd cats [researchers] and protect them from dogs [practitioners]." He understood perfectly what I do.

Researchers and practitioners are indeed different. I get it; everyone gets it. This is why NBS was created. Still, in retrospect, I didn't really get the extent of it until the first conference call I moderated in 2007. On the conference call, I had a researcher leading a systematic review and several practitioners on the Guidance Committee. The researcher spoke slowly and precisely, talking about "coding" and "inter-rater reliability." The practitioners, by contrast, were quick to respond with requests for "guides" and "tools." Instead of facilitating a productive exchange, I felt like I was struggling to make sense of what was being said.

The conference calls got easier over time as I gained the confidence and intuition to encourage both sides to speak up when they didn't understand. I took copious notes on these calls, which helped me guide the process through the twists and turns. My notes also informed this narrative. I found this gem from one practitioner in my notes: "I'm eager to apply your theory on asymmetrical interventions to what I do in practice, but I don't know what it means."

I recall a challenge I encountered in researcher–practitioner interactions in a systematic review before the Culture Project. It was the first conference call, and the practitioners described, at my request, the outcomes they wanted. Their aspirations were ambitious, in part because each practitioner brought a different set of expectations about the project. The researcher uncovered over 30,000 relevant articles, when normally the range would be 5,000 to 10,000. Clearly, the research question had been scoped too broadly. Before I could reassure the researcher that the project would be scoped down through dialogue with the practitioners, the researcher pulled out of the project. I worried that this would negatively affect NBS's reputation with the practitioners and funders (not to mention my own reputation), and would paint researchers as unreliable and flighty. Fortunately, a new researcher took up the project and skillfully scoped it down in dialogue with the Guidance Committee.

Over time, it has been rewarding to see how some practitioners have learned from such incidents and how they now drive their colleagues to narrow project scopes and avoid "drowning" the

research teams. They've also started to better understand how the research process works and how to scope research questions such that they can be answered on time and on budget. They are asking questions that imply more carefully and narrowly defined objectives, interventions, and outcomes than in previous years.

Another systematic review seemed to grow its own legs and run away from me. The academic researcher felt himself to be accountable to the practitioners on the Guidance Committee rather than to me. As a result, he responded enthusiastically to the practitioners' guidance, ignoring my requests to maintain methodological rigor. I didn't really understand the full magnitude of the problem until I saw the first draft of the report, which was missing the detailed tables of all the citations and his coding process. When I asked where they were, he responded, "I haven't coded for that because after we discussed it with the practitioner committee, they said that would not be of value for [them]." The foundation of NBS's mission is to amass credible rigorous knowledge, and the project did not demonstrate that rigor. It was after this experience that we decided to add an academic adviser to the Guidance Committee structure.

Although these challenging experiences offered some of the most important lessons, one of the most surprising, and positive, lessons came from the Culture Project. We saw lots of potential in the framework the research team had developed, so we hired a graphic designer to bring it to life. After dozens of design iterations, tripling the design budget, and a month's delay, we generated the Culture Wheel. Getting the visuals right was hard and required collaborating closely with artists, researchers, and users. I was relieved to see the business community react enthusiastically about not just the content but also the design. Peter MacConnachie, the chair of Guidance Committee, was right when he said: "You need to spoon-feed business audiences the one to two key visual messages."

I have lost many nights of sleep over the ten systematic reviews I have managed in the past four years. Some have seemed like duels, others more like dances. As I reminisce, my opening comments to this narrative come back to me: Researchers and practitioners really are different. But with thoughtful guidance, a good process, and much patience, they can work together to create something new, elegant, and truly meaningful.

Stephanie Bertels: The Lead Researcher on the Culture Project

I recall the first Guidance Committee meeting for the Culture Project. On the line with me were the NBS managing director (Tom), the academic adviser (James), and four practitioners (Peter among them). We started by talking about the research questions: How do you build a culture of sustainability? What can be learned from other initiatives? Was sustainability different from other organizational change efforts?

The practitioners each had a very different idea of how to define culture. On top of this, they seemed to use words interchangeably or use multiple phrases to describe similar things. Later, when we spoke privately, James described this as the jingle and jangle problem, a term coined by Block (1995). I remember thinking, "Well, at least it's not just me that finds this frustrating. It's even got a name."

During the call, I also sensed that the practitioners really weren't that interested in the details of the literature search process. But when Tom asked them to talk about outputs, they were quick to jump in with requests to know what "works," what doesn't, and why it doesn't. I started to worry that academic work in this field couldn't really tell us all that.

Rather than become mired in these issues, I decided to start the search process. NBS recommended that I use the Cochrane review process, which calls for effect sizes—a measure of the strength of the relationship between the variables under study. Its systematic orientation meshed nicely with my engineering and quality assurance background and I jumped right in, prepared to code, count, and document my decisions. But almost immediately, we ran into problems.

The vast majority of the studies we identified were qualitative case studies and didn't report an effect size. What's more, researchers also had the jingle and jangle problem: They used the same label for different things, and different terms to

describe the same thing. It started with the multiple meanings of sustainability, but there were also issues with how researchers defined terms like framing or championing or what they meant by incentives or training. Not only were there problems with construct clarity, there were also problems with their statement of claim—the recommendations made by researchers weren't always supported by data. On top of this, NBS required that I review not only academic work, but also practitioner knowledge. But the Cochrane process had no provision for dealing with practitioner reports or even theoretical academic papers. I called James again and we agreed that I would need to deviate from the Cochrane protocol.

This is when the original overarching concept of "practice" that I had used as a frame in my proposal actually came in handy. Instead of trying to summarize the results of each study, my research team coded what organizations were "doing." In retrospect, I see that this was the point where we migrated away from a pure Cochrane-style systematic review into something that resembled more of a content analysis. To deal with the issues around statement of claim, we developed separate codes for empirically tested practices and "proposed" practices—those practices recommended by researchers but not rigorously tested. These two categories opened the door to coding the practitioner reports.

Combining these two types of data proved to be very powerful. If we hadn't included the proposed practices, our framework would have included only about 13 empirically supported practices instead of 59. It wouldn't have been as robust, and it wouldn't have resonated as much with practitioners because it wouldn't have reflected their reality.

Throughout the process, I checked in regularly with the Guidance Committee, updating them on what I was finding and sharing the framework as it was evolving. We were all determined to produce something that would go beyond a laundry list of what companies were doing and whether or not the practices were working. These conversations gave me insights into the language the practitioners were using in their work.

As the framework evolved, it was interesting to see how the Guidance Committee interpreted and reframed it. For instance, when I first described one of the axes of the framework as a tension between innovation and implementation, they pushed back. They thought that implementation should underlie the whole framework, which forced me to rethink the categories. Ultimately, we relabeled the axes "innovation" and "fulfillment." The Guidance Committee also pushed me to demonstrate what they could do with my findings. Academic papers often make sweeping statements about the implications for practitioners; the practitioners wanted something that was concrete and actionable.

As we neared the end of the project, we needed to write an easily digestible executive summary with sound bites that could be used to promote the work. I was always comfortable writing for practitioners, but I had not anticipated what was to come. The NBS took my draft and stripped out all of my statements of claim and reduced my work to catchy sound bites. It was unnerving. But I see now that if I had qualified those sound bites (as I so desperately wanted to), the work wouldn't have resonated as much as it did with practitioners.

In fact, I was surprised by the attention the report received. I was bombarded with requests to talk to the media and present at conferences and industry events. At first, I worried that businesses might use the framework to do more than assess their culture; the engineer in me was coming out, and I was afraid my tool would be inappropriately applied. Those feelings subsided as I realized that companies were using the tool in interesting and unanticipated ways. Within a few months of the report's release, several large companies sent me their own adaptations of the Culture Wheel. Within six months, about a dozen organizations, including companies and a few municipalities, had shared versions that they had adapted to suit their context or needs. I was also invited into strategic conversations about embedding sustainability with some very senior people in these organizations. Clearly, this presents a great opportunity for follow-up research. Even as I'm writing this article, I'm working with NBS to assemble a working group of companies to refine and test the framework. We hope to build a micro-community of

practitioners and researchers interested in embedding sustainability into culture, to build on the findings of the systematic review.

Ironically, the more relevant I became to practitioners, the more I worried that I would be seen as irrelevant by researchers. I'm still a junior untenured scholar, and I sometimes worry that my actions will be viewed as self-serving, attention-seeking, or just "not serious." Some of my senior colleagues are saying that engaged scholarship is high-risk and best left for after tenure. Others are supportive because I'm having impact. I've decided to trust the process, as I truly want to do rigorous academic work that affects practice. Ultimately, I believe I will be doing better research and can't imagine doing it any other way.

Peter MacConnachie: Guidance Committee Chair for the Culture Project and Leadership Council Member

I had heard very little about NBS when my vice president of sustainability sent me to a meeting in Toronto in 2008. I had been given a page with the top 15 to 25 questions that sustainability people were asking about and was asked to come with the top three or four for my company and for the energy industry in general. I didn't know what to expect from the meeting.

At that meeting, I volunteered to join my first Guidance Committee. I was very much engaged in the process and felt a strong sense of responsibility to read the researchers' drafts and help "keep it real" for industry. I knew that some researchers can become embroiled in the academic debate over ideas, but I understood that the point of NBS was to make research relevant.

These projects always start with a discussion of what we hope the end product will look like—but only to an extent because systematic reviews seem more focused on the process than the outcomes. After the initial discussion, the research team seems to race around with their handful of research assistants—sort of like Google on steroids, yet much slower. There's almost a formula with NBS systematic reviews where the researcher explains the kind of search nets they're throwing out in the water and the wide range of literature they're exploring.

During conference calls, especially during discussions about the literature search methodology, I'm sure there are a lot of puzzled expressions and lifted eyebrows at the end of the phone lines. I expect most of us are thinking, "Well, you're the researcher, you know how best to gather the data." It usually isn't until our third or fourth meeting that the nuggets started popping into the nets. Until then, we are suspending judgment, thinking "I'm not sure where this is going, but let's go down this path anyway and see if we get it right." We never quite know what the outcome is going to be when we start, or where the research will take us, but there is always this "aha" moment of discovery where things start to gel, where there is actually some nice bit of structure behind all the research. But you don't know that until that magical moment.

Researchers tend to use words and phrases that just aren't used in industry. I rarely use the word "cognitive." I have never used the word "codify." The researchers are really good at capturing ideas, but not great at summarizing them succinctly. The ability to summarize is really important for industry. We're either lazy or overwhelmed—we don't want to read a 200-page document! We'll read a 10-page document. There are a lot of other documents competing for our eyeballs. As well, the information has to be somewhat visually appealing and digestible. We need the researcher to take the thousands of papers and tell us what should go on the one-pager that a businessperson puts on the bulletin board. We need the T-shirt phrase or a motto, like when the safety movement created "Journey to Zero" and "Take Two for Safety." I think my job is to help translate the research so that if I send the research to a colleague she will want to read it, and not say, "What the heck is this thing in my e-mail box?!"

The Culture Project started much like previous projects, until we got to the synthesis stage. I was still feeling really fuzzy about the project. Tom really pushed all of us out of our comfort zones into a different space. We challenged Stephanie quite a bit, and she challenged us on where we thought the project should go. There was a lot of discovery going on.

I recall a particular discussion about synthesiz-

ing what she found in her review. By the third or fourth conference call she'd gone through thousands of different references and had started categorizing things. Over the phone she started describing how the project was shaping up. I was sitting there doodling on a piece of paper. She suggested one way to synthesize the findings into a two-by-two matrix—typical of a business school researcher. I piped in and we had this great debate over whether or not the model should be a cube, a tetrahedron, or something else.

At that point, the data seemed to be forming into a structure. Stephanie gave us a picture that represented the evidence she was finding. She didn't seem to choose the structure; it kind of presented itself to her through the discussion. Once I heard her describe that structure, I felt I could then describe it to other people. That was my aha moment, and I felt that I could share her research with others and show its value.

But still I worried that she didn't make many concrete recommendations—maybe because she thought they were self-evident, or maybe because they extended beyond the hard evidence. Academics seem reluctant to recommend anything unless they know *the* definitive answer. People in industry want to know what has or hasn't worked elsewhere. We look for a range of options. In food terms, researchers want to eat à la carte, but industry wants a buffet to pick and choose the bits and pieces we like. There's no one absolute answer that's going to fit all companies, so we need to understand the range of options that could work. Tell us what you think and we'll decide if any of the ideas are worth pursuing. In the end, the Culture Project gave me a great tool that I could use to discuss sustainability at Suncor.

As I reflect on my experiences with NBS and its Leadership Council, it strikes me that we've created a network of unlikely collaborators. Researchers seem most interested in advancing research rather than improving practices. The Leadership Council comes up with questions and gives researchers great access to us. The NBS sits in the middle and helps researchers create useful resources from this access. NBS is unique and powerful in that it equips us with quality information to inform our thinking and action.

My current concern with Stephanie's project, now that it's over, is how do I—how do we, all of us—keep the conversation alive? I think researchers need to move the dialogue along because the industry people often are happy when we can take what we need. But there are many companies that may not even know about sustainability issues or how to approach them. It's easy for NBS to talk to its member companies; talking to those who aren't NBS members is the next fertile ground for NBS to till. NBS member companies should be opening doors for researchers and fanning out the research to their own respective industries. Doing so will help deepen the engagement and impact that researchers and industry have on each other and society.

I find that a lot of academic papers hit the nail sideways. The topic can be really good, but then they approach it differently than I expected. It is clear that NBS is hoping to hit the nail a bit more on the head.

James O'Brien: Guidance Committee's Academic Advisor for the Culture Project

After some prodding, I accepted Tima's request to serve as an academic adviser for an NBS systematic review. She was persistent, and assured me that the work was not onerous. She said she wanted me to serve in this capacity because of my involvement in the Evidence-Based Management Collaborative and my knowledge of organizational culture.

This was the first year in which NBS used academic advisers, so the role had not yet been completely defined. At the outset, I asked myself how I could best contribute. I anticipated that the main tensions were likely to be among the practitioners' demands for practical solutions, the resulting scope creep, and the need for researchers to ensure the methodological quality of any findings. After I got over my initial hesitations, I was excited about finding a fresh approach to the often-adversarial exchanges between researchers and academic reviewers.

During the first conference call with the research team and practitioners, the role of the academic adviser came sharply into focus through the image of a midwife. I would be someone who

would help the researcher deliver a strong and compelling review, while balancing the demands and concerns of the practitioners against those of the research team. The role called for being more of a sounding board and support system than a critic for Stephanie, as she balanced the practitioner demands against the constraints of available methods and the current state of the literature.

Over the course of the calls, it became very clear that some quite thoughtful and well-intentioned suggestions from practitioners had the potential to utterly derail the project, or to introduce unwelcome complexity. For example, the practitioners' descriptions of organizational culture included "anything that endures within the organization over time"; a value system; a set of identifiable practices in organizational structure, decision making, or leadership; and something that was likely fragmented into subcultures. It seemed that contending with these ideas could have consumed all the project's resources without delivering something useful to practitioners. Stephanie clearly tried to navigate scope creep, but she had to tread a fine line between being open to recommendations and losing control of the project. As the academic adviser, however, I could step in and provide perspective on why it was important to bound the project.

After the conference calls, Stephanie and I would chat online to interpret, vent, reassure, and strategize. Together, we worked to validate particular decisions and develop paths around obstacles. I was able to steer her to academic work on strength of claim and construct clarity. We also talked through the inherent tensions in the project, such as setting the bar so low that everything would be included in the review or setting it so high that there was nothing to talk about. This relationship with an academic adviser seemed to be a useful buffer for her; it validated her position or gave her opportunities to think about her approach to the work.

I was ultimately glad to have accepted Tima's invitation. This project became an opportunity to participate in an alternative and innovative approach to management research. From my perspective, I believe evidence-based management can and should be done. There is value in it as a general approach to research—translating research, advising, and influencing practice. The challenge is in how it should be done. We need to invest in adapting existing evidence-based techniques, which have largely been developed in healthcare settings, to the particular demands of the management context, where problems aren't so neatly defined. And, when we try to answer relevant questions, we must appreciate that our answers can compete with existing ways of knowing. The practitioners weren't interested in being told to adopt a specific practice because of the rigor with which it had been investigated. They wanted to know the scope of possibilities. We can provide this by engaging in dialogue with practitioners that reflects the intellectual power of our approaches and is mindful of their knowledge of the things we study. The "middle ground" of research and practice needs to be explored and mapped out in order for evidence-based management to thrive and succeed.

Bridging the Research–Practice Gap

In retrospect, our experiences yield some useful learnings, which bring the research–practice gap into sharper focus and illuminate a way forward.

The Research–Practice Paradox

With the many calls to bridge the research–practice gap, the question is why it endures. Based on the experiences we illustrated in the narratives above, we believe the gap endures because of the inherently paradoxical nature of research and practice. A paradox reflects "contradictory yet interrelated elements that exist simultaneously and persist over time" (Smith & Lewis, 2011, p. 382). There are a number of ways in which these paradoxes manifest themselves.

Researchers are pulled between the contradictory time orientations of practice, which entails rapid responses and sudden changes, and of research, which calls for long periods of uninterrupted deliberation. At the same time, researchers are torn between the imperative to define research problems precisely and investigate them carefully and deeply, and the messy reality of the problems of practice, which require breadth and immediate clarity. Researchers recognize the trade-offs

among generality, simplicity, and accuracy in theorizing (Weick, 1989), often opting for accuracy and generality, whereas practitioners prefer simplicity above all else. Researchers cherish and protect a few deep relationships with collaborators and colleagues, while recognizing that maintaining an association with practice is a social pursuit, requiring multiple relationships and networking. When navigating the research–practice gap, researchers struggle to negotiate the palpable disjunctions between the challenges of achieving rigor and the demands of maintaining relevance.

Working in the gap between research and practice calls for a willingness to embrace these paradoxes and a concerted effort to move forward in the face of the ensuing contradiction and contestation. Ultimately, as Smith and Lewis (2011) noted, paradoxes do not need to be dismantled or neutralized, but rather managed in a state of dynamic equilibrium.

The Activities of NBS

We believe it is challenging for most researchers to navigate these paradoxes on their own. Bartunek (2007) illustrated a lone researcher crossing the research–practice gap; we argue here that organizations are better positioned to bridge the gap. Organizations like NBS enable individual researchers to pool resources, draw on specialized skill sets that they do not possess, and create opportunities that would otherwise be beyond their reach. Lone researchers often scurry back and forth in the gap, wasting valuable research effort. Few are able to fully occupy the space and speak equally to both audiences with a single publication (Kelemen & Bansal, 2002). In this section, which is informed by our collective experience, we reflect on the opportunities and challenges for intermediary organizations, like NBS, that seek to span the research–practice gap.

Identifying Research Questions

If the intention of research is to inform practice, practitioners must help to shape and prioritize the research questions. Too often, the research that is undertaken can be esoteric for practitioners. "Dissemination is too late if the wrong questions are being asked" (Pettigrew, 2001, p. S67, cited in Van de Ven & Johnson, 2006). Yet researchers rarely consult practitioners in setting their research questions or in interpreting their results (Rynes, Bartunek, & Daft, 2001), which results in research that is "lost *before* translation" (Shapiro, Kirkman, & Courtney, 2007, p. 249).

To identify and prioritize problems, NBS draws on its Leadership Council. Involving practitioners in the process at the outset seeds relevant questions. NBS carefully selects the members for this group, involving noncompeting diverse organizations leading in sustainability to evoke diverse perspectives and candid conversations. The Leadership Council meets one day annually to identify their top ten business sustainability challenges, which NBS disseminates hoping to motivate new relevant management research. Moreover, by involving a diverse group of practitioners, not only does NBS serve a wider community of practitioners, it avoids being co-opted by single private interests (Brief & Dukerich, 1991; Grey, 2001; Kilduff & Kelemen, 2001). The process encourages conflict and negotiation, generating creative ideas that cut across organizational and sectoral boundaries (Van de Ven & Johnson, 2006). The process aims to identify research questions broad enough for practitioners, yet framed in a way to be researchable.

Shaping Knowledge Production

Researchers and practitioners value knowledge that satisfies different objectives. Whereas scholarly work strives for objectivity, accuracy, and generalizability (Bacharach, 1989; Sutton & Staw, 1995; Weick, 1989), managerial work aims for simplicity—something easy to communicate and understand, and relevant to a specific situation (Van de Ven & Johnson, 2006). Although practitioners see value and relevance in scholarly knowledge, they lament the challenges in reading, interpreting, and applying it (Booker, Bontis, & Serenko, 2008). Practitioners also cite their limited access to academic journals, overly scientific language, lack of prescriptions for action, their lack of time, and the sheer volume of scholarly work produced as impediments to making use of

the evolving body of knowledge generated by researchers (Briner et al., 2009). It is easy for practitioners to dismiss the vast amount of scholarly work that is generated, because it is often too narrow. Individual studies often fail to meet practitioner needs.

NBS overcomes these challenges in three ways. First, it systematically reviews prior work, rather than conducting new research. Although NBS uses a systematic review protocol, such syntheses can also be accomplished through meta-analyses, meta-syntheses, and other methods that rigorously aggregate knowledge (Briner & Denyer, 2010; Petticrew & Roberts, 2006). These robust, replicable processes offer a number of advantages over new research. By broadening the research beyond what can be done rigorously in a single study we can truly begin to answer practitioners' questions, and perhaps to motivate fresh questions and inspire ongoing discussion. By synthesizing a range of similar studies and/or by drawing research from adjacent theoretical and disciplinary perspectives and contexts, findings can be pooled to provide better answers to the broad kinds of questions often posed by practitioners. Furthermore, when done well, this kind of synthesis can help to generate new theoretical frameworks and to identify, prioritize, and even fill gaps in the literature (LePine & Wilcox-King, 2010).

The second way in which NBS overcomes the differences in knowledge desired by researchers and practitioners is through a Guidance Committee composed of practitioners and an academic adviser. This committee helps shape the call for proposals, selects the winning proposal, and advises the research team every two months through a conference call. By involving a committee of practitioners and researchers, NBS creates knowledge that meets the needs of both communities. NBS builds deep relationships with these practitioners, who ultimately learn to appreciate the value of academic research and evidence-based outcomes. NBS also builds capacity among researchers by offering intimate knowledge of practitioners' needs without the administrative burden of personally developing those relationships.

Third, NBS draws on both primary research and practitioner experience, which acknowledges the value of knowledge in the field (Schultz & Hatch, 2005). For example, only 13 of the 59 practices in the Culture Project were supported by prior academic work. The remaining practices were derived from practitioner experiences and provided an important platform from which further research could be undertaken. To meet the joint hurdles of rigor and relevance, Stephanie's research team carefully enumerated the practices supported by good evidence and those that were proposed but not yet validated. Broadening the data to include practitioner knowledge can broaden our understanding of the phenomenon.

Translating Knowledge

Our experience has shown that translating knowledge in a way that practitioners can use is a key challenge for researchers. As one astute observer said, "Sometimes academics take very exciting, engaging, and important work and present it in such a way that it looks like a butterfly squashed between two pieces of glass" (Blake Ashforth, as quoted by Bartunek, 2003, p. 203). Indeed, it may very well be that the flat, symbolic representation of our work dashes any hopes of practitioners' understanding the substance (Kelemen & Bansal, 2002).

NBS acknowledges the dual roles of research and practice. As a result, it encourages the dissemination of the work to research audiences—several of the systematic reviews have been published as journal articles or book chapters (Bowen, Newenham-Kahindi, & Herremans, 2010; Howard-Grenville & Bertels, 2012; Peloza, 2009). The systematic reviews also serve a number of practitioner audiences. NBS invests considerable efforts to shape the text, change the language, develop visuals, and offer short implications and key takeaways. The final products can include short executive reports, presentation slide decks, videos, e-books, and decision tools.

Yet we must be sensitive to the differences in language used by researchers and practitioners. Identifying language that can pass across the gap requires mediation between the researcher and the practitioner. Researchers do not easily change the way they write scientific articles. To advance science, it is important to detail methods, results,

and boundary conditions. However, such details are not needed for practice. Few people have the skills to mediate between research and practice, what Kieser and Leiner (2009, p. 528) called "bilingual" or "bicompetent" facilitators and Gulati (2007, p. 780) called "bilingual interpreters." Training such people would be a noble pursuit of business schools.

Disseminating and Mobilizing Knowledge

Traditionally, researchers focus their dissemination efforts on a narrow network of colleagues through refereed journals and conferences. Researchers need to find ways to reach, motivate, and enable practitioners to use their findings (Rynes et al., 2001). It is challenging for researchers to be heard in a crowded marketplace for management ideas (Pfeffer & Sutton, 2006). No matter how relevant the research findings may be, practitioners confront a cacophony of ideas and often do not have the tools or knowledge to discriminate quality. Practitioners, therefore, are increasingly relying on trusted, credible, reputable sources with whom they have built relationships.

NBS is starting to build a reputation for credible, rigorous knowledge and is forming such relationships with practitioners and researchers. It uses multiple channels, including a Web site, conferences, Twitter, and targeted events, and repurposes our content for other intermediaries. We continue to be challenged, however, to gain a share of voice in this crowded marketplace. It takes time, talent, and endurance to build such reputations and relationships.

Other valued intermediaries offer important avenues for disseminating research, such as the *Harvard Business Review*. Some researchers have reached practitioners through blogs, books, and the popular press. However, such efforts can be challenging and time-consuming for researchers, especially to build a broad audience of practitioners. NBS absorbs the cost of building these relationships and translating the research.

Moving Beyond Ideas to Action

If raising consciousness and changing behavior among practitioners are the desired outcomes of management research, providing knowledge is often not enough. Pfeffer and Sutton (2006) acknowledged the challenges of using knowledge to import practices, or theories, from one context to another. Even if practitioners understand the research ideas, they have difficulty knowing how to practice them in their specific context. Practitioners need to know more than "what," they also need to know "how to."

Action research is often described as a worthy tool for moving research to action. Coghlan defined action research as "an approach to research that is based on a collaborative problem-solving relationship between researchers and clients, which aims at both solving a problem and generating new knowledge" (2011, p. 53). Action research iterates between problem identification, action, and evaluation (Goduscheit, Bergenholtz, Jørgensen, & Rasmussen, 2008).

Action research, which is noticeably absent from North American research journals, necessitates the dual status of observer and problem-solver (Chisholm & Eden, 1993; Goduscheit et al., 2008). The researcher's objectivity can be called into question, as can the findings' validity and reliability, given that it is the efficacy of the researchers' recommendations that is being judged (Kieser & Leiner, 2009; McKelvey, 2006). Coghlan noted that "at the core of the debate appears to be modernism's adherence to the split between the knower and the known, where the position on knowing is a matter of a subject 'in here' looking at or reflecting on an object 'out there'" (2011, p. 64).

NBS is tackling this implementation challenge by adapting action research to the Culture Project. NBS will assemble a working group of researchers and practitioners to co-create new knowledge with the aim of embedding sustainability in their corporate culture. The research team will collect company-specific data from working group members, benchmark the data with others based on cutting-edge methods, and then train and empower members of the working group to change their practices based on these data. The research team will collect more culture data after some time has elapsed to assess the efficacy of the practices. NBS will assemble the working group, cover the research-

ers' expenses, and interface with members of the working group. In doing so, NBS mediates the relationship between the researchers and working group members, avoiding conflicts of interest.

This approach draws on the strengths of researchers not only as scholars, but also as teachers. The research team empowers a group of practitioners to apply the research and "own" the ideas, to implement change. All the while researchers remain objective. This cyclical process acknowledges and accepts provisional ways of knowing, which are tested in implementation, and returns new questions for further study. NBS subscribes to Coghlan's (2011) and Pfeffer and Sutton's (2006) edict to generate rigorous knowledge that effects change.

Conclusion: Learning From Experience

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.
T. S. Eliot, *Four Quartets*

Should We Close the Research–Practice Gap?

To this point, we have joined the general call to *bridge* the research–practice gap but sidestepped the question of whether it should be *closed*. Despite the possibilities created by bridging the gap, we acknowledge that it is important that critical distance is maintained, especially in relation to issues with wider social significance.

For example, current work in business sustainability directly challenges key business assumptions—issues such as whether unbridled economic growth is leading to environmental collapse, whether the concept of selling is compromising human health and happiness, and whether the drive for efficiency in operations numbs the human experience. These larger questions challenge the status quo. If practitioner interests drove all management research, researchers could lose their ability to critically evaluate the organizations they are tasked to analyze. Scholars need not focus only on finding solutions, but also on questioning the assumptions—the ones that practitioners cannot see or do not want to address. While some researchers should work eagerly to bridge the gap, others should remain outside the world of practice to see what insiders might miss.

Closing the gap also risks sending mixed messages about what is "good" research. Conducting good research is hard, and shifting the metrics could devalue the research process and its products. Researchers need clear and consistent signals of values and standards. If we are not careful about our prescriptions for closing the gap, we risk becoming too heavily vested in the world of practice, where urgent issues can displace enduring questions and the bias to action can take precedence over deliberation.

Further, it is presumptuous of researchers to assume that practitioners want the gap closed. The gap creates a buffer, allowing practitioners to grapple with problems and solutions without researcher interference, especially when research evidence is vague or equivocal. It allows practitioners to prototype, experiment, and learn vicariously (Pfeffer & Sutton, 2006). Although there is a place for the rigor provided by evidence, it can also be burdensome when speed, agility, and even creativity are paramount.

We are not arguing that the research–practice gap should be closed. Instead, we are asking that the liminal space be bridged, spanned, or filled. The gap endures because of the inherent paradoxes we identified earlier: Competing time orientations, the demand for more expedient forms of knowledge and problem solving, and a tendency to cultivate networks of mostly fleeting relationships make it difficult for even the most talented researchers to bridge the gap. Closing the gap risks having researchers behave as practitioners or vice versa, yet filling it opens up the opportunity to build intermediary organizations that can span the space and allow both research and practice to do what they do best.

The Boundary-Spanning Roles of Intermediary Organizations

NBS is a boundary-spanner. Such intermediary organizations maintain the strengths of Bartunek's separate poles without needing to cast aside the principles of research (or of practice, by implica-

tion). They help address the conflicting and competing priorities of researchers and practitioners, and can transcend the inherent paradoxes to simultaneously elevate both research and practice through practice-based research and research-based practice. Intermediary organizations extract value from the differences between the two worlds.

Many organizations fill the liminal space between research and practice; others include practitioner journals, consultants, and think tanks. Most of these organizations, however, occupy a small part of the space, whereas NBS has tried to span the entire space. We believe there is value in providing a stronger link between research and practice. In this final section of the paper, we hope to equip others with what we believe are the three key activities necessary for these boundary-spanning activities in the hopes of motivating new forms of intermediary organizations.

Convening

Convenors initiate collaborative endeavors and build collaborative networks by attracting the right parties to the table and by building trust and comfort among the parties to get the conversation started (Gray, 1985, 1989; Wood & Gray, 1991). By creating a space for interested individuals or organizations to become involved in solving a particular problem, the convenor makes an important contribution to establishing and developing an ongoing community (Gray, 1989). Convenors help to develop spaces conducive to joint interpretive forums where a variety of members can reflect and interpret information to improve the quality and impact of the knowledge being shared (Mohrman, Gibson, & Mohrman, 2001).

Facilitating

Whereas conveners bring different parties to the table, facilitators help to keep them there (Westley & Vredenburg, 1991). Facilitators support and enrich collaboration by assisting parties in communicating, negotiating, and problem solving. Facilitation helps identify the right questions, find common language, and sustain an ongoing dialogue. Good facilitators in this context are often bilingual or bicompetent people who are as comfortable talking about methods with researchers as they are chatting about firm strategy with practitioners. They create a safe space where business interests and academic interests can be jointly served without compromising the need for rigor by researchers and the pragmatic needs of business. They also create the semantic capacity to mediate between the research and practice communities and keep both parties at the table (Carlile, 2002). Good facilitators can delineate the knowledge gap, and they are able to motivate both parties to work within and across it.

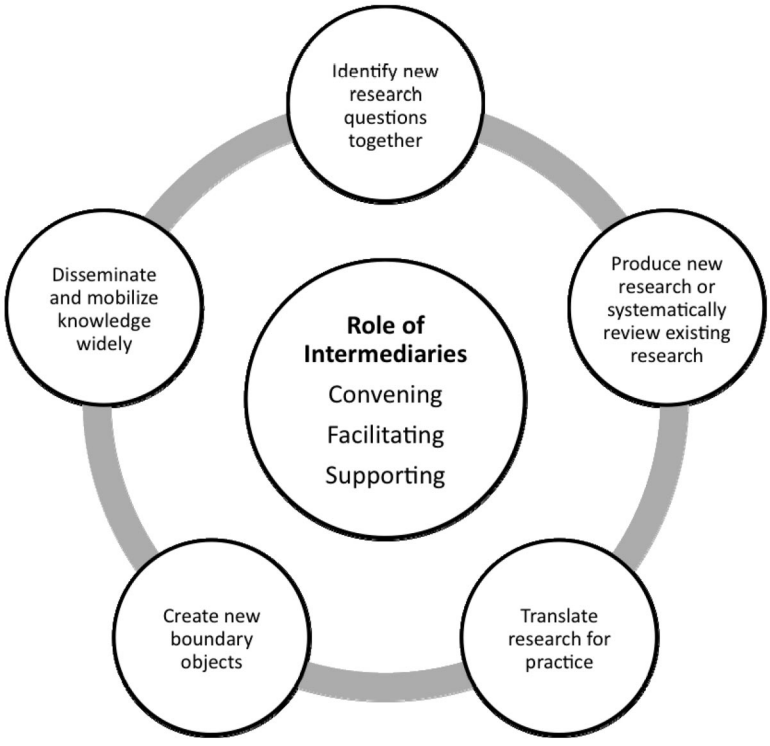
Supporting

The research–practice gap involves a broad range of knowledge-handling skills, such as knowledge production, translation, communication, dissemination, and training. Whereas most researchers are good at one skill and many are good at several, few researchers can span the spectrum. An intermediary organization can hire people who specialize in particular support roles. Much like medical writers, who need not research or practice medicine, these intermediaries need not be researchers or practitioners. The supporting role requires people who are specialized at their particular skill but are sufficiently fluent in the language of both communities. They can help practitioners and researchers co-create new boundary objects that embody knowledge from both communities. By engaging in creating these objects, both communities may find themselves transformed (Carlile, 2002).

These three roles—facilitating, convening, and supporting—help transcend the paradoxes between research and practice. Most researchers have some of these skills but few have them all, which is why we need intermediary organizations to bridge the gap. These skills also serve as the foundation for the activities that bridge the gap. We illustrate these skills and activities in Figure 3.

In this paper, we set out to share our experiences in bridging the research–practice gap in an effort to motivate others to do the same. We argued that the inherent paradoxes in research and practice make spanning the gap difficult for any one researcher—the gap calls for intermediary organizations. NBS is only one example of an

Figure 3
The Activities That Bridge Research and Practice and the Role of Intermediaries



intermediary organization; the field of management will benefit from many more. With the growth and development of intermediary organizations that foster communities focused around different management topics, we are confident that the relevance of management research will become more evident.

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