Enhancing the Practical Relevance of Research

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This article seeks to encourage scholars to conduct research that is more relevant to the decisions faced by managers and policymakers, and addresses why research relevance matters, what relevance means in terms of a journal article, and how scholars can increase the relevance of their research. I define relevant research papers as those whose research questions address problems found (or potentially found) in practice and whose hypotheses connect independent variables within the control of practitioners to outcomes they care about using logic they view as feasible. I provide several suggestions for how scholars can enhance research relevance, including engaging practitioners in on-campus encounters, at managerial conferences, and at crossover workshops; conducting site visits and practitioner interviews; working as a practitioner; and developing a practitioner advisory team. I describe several ways that scholars can convey relevant research insights to practitioners, including presenting at practitioner conferences, writing for practitioners in traditional crossover journals and in shorter pieces like op-eds and blogs, and attracting the interest of those who write columns, blogs, and articles about research for practitioners. I conclude by describing a few ways that academic institutions can encourage more relevant research, focusing on journals, professional societies, and doctoral programs.

1. Introduction

The theme of the 2015 annual conference of the Production and Operations Management Society (POMS) was "Expanding POM research, teaching, and practice to help organizations, society, economies, and the environment"—in other words, *relevance*. This reflects the Society leadership's view that operations management (OM) research needs to be more relevant to the world outside of academia.

I agree. Much of today's business school scholarship is far removed from the actual practice of management, a process that unfolded over decades (Khurana 2007; Augier and March 2011). This transition seems especially odd that this is so true for OM scholarship too given the field's roots in applied research a century ago that aimed to improve production processes. Some

of the most important research of that era was conducted by practitioners themselves, such as

Frederick Taylor's scientific management work, Henry Gantt's Gantt charts, and Ford W.

Harris's economic order quantity (EOQ) model. The assembly line, the Toyota Production

System, and statistical process control are also major developments in operations management

that came from practice (Fisher 2007). Yet if you were to show today's OM managers the titles

and abstracts from any recent issue of a top-tier OM journal, few would grant that we are

studying what they do. Even if a manager found a title promising, he or she would be hard

pressed to learn anything from the article itself, given how far academic vernacular has drifted

from ordinary English.

In this paper, I provide my perspective on why research relevance matters, what

relevance means in terms of a journal article, and how scholars can increase the relevance of

their research. The 2015 POMS conference's call for greater relevance in OM scholarship builds

on calls by some of the field's leading scholars to point the field toward more promising pastures

by developing a stronger empirical base (Fisher 2007b) and to pursue more interesting projects

(Cachon 2012). I also soon found that scholars of operations management and organizational

studies have been expressing concern for several decades about how irrelevant most management

scholarship is to practitioners.

Gene Woolsey was an early advocate of relevance in operations research (OR) (see, for

example, Woolsey 2003). A recent tribute by Camm (2015: 369) observed:

> Gene's position was that you, as an OR professional, shouldn't try to improve
> someone's process without getting experience with, and a good understanding of,
> that process. Consequently, Gene's students might find themselves riding along
> with Denver firefighters or working the late shift at a brewery…. Gene felt it was
> offensive to those running the process for an OR person to think he (she) could
> immediately step in and teach them how to improve that process.

Nearly 40 years ago, Hall and Hess (1978) were also expressing concerns of how operations research had grown increasingly disconnected from management practice. In 1993, Corbett and Van Wassenhove (1993) observed that *Harvard Business Review*'s declining coverage of operations research topics coincided with the field's growing unease about its declining relevance. When Steven Graves became editor of *Manufacturing & Service Operations Management* in 2009, he strongly encouraged more relevant research by calling for significantly more "papers that report on innovative implementations of OM research to real problems or that rigorously document existing practice and demonstrate how current modeling approaches succeed or fail in practice. I believe that our field is in desperate need of such work" (Graves 2009: 1). Similarly, Van Mieghem (2013: 3) noted that the failure to pursue research questions relevant to more than just fellow scholars "carries the risk that research becomes an intellectual exercise in self gratification, i.e., the quintessential 'ivory tower' syndrome."

The need for more relevant research is a concern in other disciplines and academic departments beyond business schools. In organizational studies, Janice Beyer, who would go on to become the editor of *Academy of Management Journal* and then president of the Academy of Management (AOM), lamented nearly 35 years ago that "increasing numbers of organizational scholars have begun to express concern that organizational/administrative science has had little effect on life in organizations" (Beyer 1982: 588). Thomas and Tymon (1982) noted that organizational studies (a) were not addressing phenomena or goals that practitioners faced and (b) were yielding results that were either obvious or unactionable. A decade later, the Academy of Management's 1993 presidential address—provocatively titled "What If the Academy Actually Mattered?"—referred to annual academic conferences as "an incestuous, closed loop" because scholars were still presenting research of interest only to each other (Hambrick 1994:

13). Around the same time, the inaugural issue of *Organization Science* opened with a lamentation that scholars were missing the opportunity to influence organizations, noting that "research on organizations has not typically focused on problems relevant to business and government organizations, and the real world of organizations has not drawn on the work undertaken by organizational scientists" (Daft and Lewin 1990: 1). The lack of managerial relevance has also been highlighted in the field of strategic management when Vermeulen (2005: 979), for example, observed that "[b]y cutting practitioners as an audience out of the loop, we cut out reality from the academic cycle."

Apparently, this history of dissatisfaction has not been sufficient, as it continues to this day in various domains of management research. In his 2000 AOM Presidential Address, Walsh observed that every year since Hambrick's 1993 remarks, the AOM conference has heard "president after president bemoan our irrelevance" (Walsh 2001: 216; examples include Mowday 1997 and Denisi 2010). The need for research to become more relevant continues to be voiced about research in international management (e.g., Panda and Gupta 2014), operations management (e.g., Gallien, Graves, Scheller-Wolf 2016), and decision support systems (Vizecky and El-Gayar 2011). In 2014, *New York Times* columnist David Brooks wrote: "The most stinging dismissal of a point is to say: 'That's academic.' In other words, to be a scholar is, often, to be irrelevant" (Brooks 2014). We can see, then, why the 2015 POMS conference chose its theme of urging more relevant research but can reasonably anticipate that its calls for greater relevance will not, on its own, bring much of a change.

This lack of influence doesn't reflect a lack of opportunity. As Brooks noted, "Some of the smartest thinkers on problems at home and around the world are university professors, but most of them just don't matter in today's great debates." It's a sentiment shared by many others.

In a recent article in *The Chronicle of Higher Education,* University of Michigan's Andrew

Hoffman called for professors to contribute to public and political debates "where expert

knowledge can move the conversation forward" and noted that the scarcity of their contributions

is "to the detriment of both the voting public and the academic community" (Hoffman 2015).

Making operations management research more relevant to managers and policymakers

requires all of us to reflect on our ambition as professors (or soon-to-be professors). Most of us

would agree that our primary duties include teaching our students and generating new knowledge

in our research. But the lack of practical relevance of much of our research might suggest that

few of us also have the ambition to improve the decisions of the managers and policymakers

whose actions we study. Hambrick's 1993 address said as much when he urged professors to

choose research topics that could improve management practice, imploring business school

faculty to "recognize that our responsibility is not to ourselves, but rather to the institutions

around the world that are in dire need of improved management, as well as those individuals who

seek to be the most effective managers they possibly can be.… It is time for us to matter"

(Hambrick 1994: 13). As Cohen put it, this requires a change in attitude, from "Pay attention to

what I do because I know what is important" to "How can I use my significant (academic) talents

to help?" (Cohen 2007: 1017).

That *Manufacturing & Service Operations Management* recently published a special

issue on practice-focused research (vol. 18, no. 1, 2016) seems like a positive step, until we ask

why the field needs a special issue to encourage high-quality OM research "focused on the

practice of OM" (Gallien and Scheller-Wolf 2013: 1). Contrast this to the research conducted at

another type of professional school that sits on many of campuses: *The Journal of the American*

Medical Association (JAMA) does not require special issues to encourage medical scholars to

conduct "research that helps doctors cure patients." (That said, even some domains of medical research have been critiqued for being "wasteful and lacking clinical relevance" (Buchbinder, Maher, and Harris 2015: 597)).

To be clear, these various calls for greater relevance should not be misconstrued to imply that rigor need suffer. The decades-long debate (still going on in some quarters) about whether research should be relevant *or* rigorous poses a false choice: research needs to be both, a point others have been making for some time (Vermeulen 2005; Gulati 2007).

In the remainder of this article, I clarify what I mean by relevance in the context of a research paper and describe several approaches that have helped me and other scholars make our research more relevant. I then offer some suggestions for how scholars can communicate results of relevant research to practitioners. I conclude with some suggestions for how our journals, professional societies, and doctoral programs can foster more relevant research.

2. Defining Relevant Research

Anyone calling for more relevant scholarly research must clearly state what he or she means by relevance. I don't mean "impact" which academics often measure as citation count, as that assesses only how much attention a paper has attracted from fellow scholars. Instead, my focus is on relevance to practice. To me, research is relevant if it has the potential to *improve the decision making* of managers or policymakers, a group to which I refer collectively as practitioners. The unit of analysis I am concerned with is a research paper intended to be published in a peer-reviewed journal, since such articles are the primary intellectual currency of the OM field. To me, research relevance is reflected in an article's research question, hypotheses, and implications.

2.1. Relevance in Research Questions

For those seeking to embark on a research project that will be relevant to practitioners, I suggest proceeding with a project only if you can answer "yes" to all three of the following questions:

1. ***Is the research question novel to academics?*** For example, would answering the question uncover new relationships between constructs, new nuances in relationships already known, or new mechanisms to better understand what drives those relationships?

2. ***Is the research question relevant to practice?*** Could answering the question actually *influence the decisions* of managers or policymakers? In other words, does the research seek "to solve a question of importance to practitioners working in that field"? (Vermeulen 2005: 980). Is the research focused on "problems and other issues that managers care about"? (Gulati 2007: 780). One should also be able to specify which practitioners in particular could benefit and how one knows that.

3. ***Can the research question be answered rigorously?*** For empirical work, one consideration is whether data are available with which to convincingly measure the constructs. Also, for research that seeks to reveal causal relationships and not mere correlations, does the context or data support a convincing identification strategy? For example, a study revealing that inventory levels are positively correlated with sales volumes is not nearly as informative to practitioner decision making as a causal study that reveals how inventory policies affect sales.

The first and third questions are familiar. What I want to emphasize is that scholarly novelty and rigor are just as important when considering which *relevant* research questions to pursue.

Wein (2009: 808) describes a broadly similar heuristic he uses to decide which research projects are likely to have a big impact on public policy:

> My rule of thumb for working on a problem was whether the answers to the following four questions were yes, no, no, and yes: Is the problem very important (i.e., could it directly or indirectly lead to catastrophic consequences)? Has the problem been sufficiently addressed in the academic literature? Has the problem been satisfactorily addressed by policy makers? Would the problem be fun (i.e., sufficiently challenging) to work on?

Gallien and Scheller-Wolf (2013: 2) provide another useful set of assessment criteria for practice-based research:

> How important and challenging is the OM problem considered? How applicable and relevant are the research results presented for practitioners—are the results having a significant effect on practice now and/or are they likely to have a significant effect in the near future? How novel is the problem considered, the methodological contribution, and/or the insights generated? How large and convincing is the impact reported (if applicable)?

And Gallien, Graves, and Scheller-Wolf (2016: 7) assert that the practical relevance of research depends on "how much the research question matters to society, and how useful the answer from the research is." They also highlight the potential for tension between a research question's generalizability—"the extent to which [it] is of interest to a large number of practitioners"—and its validity—"the extent to which research results and prescriptions (or predictions) are well-founded and apply effectively to real-world operations" (Gallien, Graves, and Scheller-Wolf 2016: 7). For a taxonomy of various forms of relevance, see Nicolai and Seidl (2010).

2.2. Relevance in Hypotheses

Relevant research hypotheses should have relevant consequents (measured as dependent variables) and relevant antecedents (measured as independent variables), and the proposed relationship between them should be sensibly grounded.

Relevant research should hypothesize consequents that managers care about. Operations scholars know better than scholars in most other disciplines that practitioners care about performance across many domains, well beyond such financial indicators as stock price and sales

volume. Classic examples include quality, labor utilization, on-time delivery, and productivity. Contemporary examples include occupational safety, environmental impact, and transparency.

As for antecedents, relevant research ought to consider the levers that practitioners actually have at their disposal. For example, many managers can implement specific activities, whether it be standardized programs such as the ISO 9001 Quality Management System Standard; tools such as statistical process control; or policies such as staffing rules, audit schemes, and training programs. But researchers seeking to examine the impact of bundles of activities such as supply chain capabilities bear the burden of conveying how such bundles can be implemented in the first place.

Relationships between consequents and antecedents should be grounded in the scholarly literature to be sure, but should also be grounded in reality. Does the flow of logical ideas that forms the rationale for your hypotheses resonate with at least *some* practitioners? If not, is that because your rationale is divorced from reality? As I will discuss below, listening carefully to practitioners' responses to proposed hypotheses can be very instructive. What do they find implausible and why? What alternative explanations do they offer? What conditions or limitations do they propose?

When empirically testing relationships, due consideration needs to be given to whether revealing mere associations would be sufficiently relevant and potentially actionable, or whether only revealing causal relationships would be. When causality is the goal, appropriate techniques to address endogeneity need to be brought to bear to avoid bias (e.g., Semadeni, Withers, Certo 2014). No level of rigor can make an inherently irrelevant question relevant (or, for that matter, uninteresting questions interesting).

2.3. Relevance in Implications

Relevant research should articulate implications that encourage practitioners to take action based on the findings. Researchers should therefore state clearly how their results should influence practitioners' decisions, using specific examples when possible and circumscribing the circumstances under which the findings are likely to apply. This means including—and taking quite seriously—an "implications for practice" section in papers and, ideally, vetting drafts of this section with pertinent practitioners.

3. Enhancing Research Relevance

Choosing a research question that *could be* relevant is one thing. Conducting research that *is* relevant is another. Because scholars tend to have little or no work experience in the fields they study, we need ways to cross the gap between our perceptions and the workplace realities, including an understanding of what issues are most important and the challenges associated with implementing operational changes. One of the easiest ways to learn what is important to practitioners is to read the popular press and the industry press. For example, to learn what managers are thinking about with respect to environmental issues in their operations and supply chains, I read online newsletters and magazines aimed at environmental management professionals and environmentalists, and I subscribe to updates about pending environmental laws and regulations. But that's just the tip of the iceberg. Dialogue and direct observation are better ways to figure out what research topics are relevant to practitioners, which independent variables are actually in their control, which outcomes they care about and how they typically measure them, and whether your rationale linking inputs to outcomes seems plausible. As Robert Hayes, a steadfast advocate for greater research relevance and tighter connections between academics and practitioners (Fisher 2007a), wrote, "we in academia have a great deal to learn

from those out on the firing line—if we care to listen to them" (Hayes 1998: 96). Below, I

describe several ways to accomplish that.

3.1. Create On-campus Encounters

Many of us invite practitioners to guest lecture to our students, but such visits also provide an

opportunity, perhaps while hosting our guest speakers for breakfast or lunch, to solicit feedback

on our research ideas.

Student groups, too, invite practitioners to speak to student groups and at conferences

they organize. Such visits provide additional opportunities for faculty to meet practitioners right

on campus without having to manage the logistics. All we have to do is get on the email lists that

announce these visits so that we can schedule a meeting with the speaker while he or she is on

campus. I have found it critical to make these plans in advance because many practitioners

schedule their visits fairly tightly around meetings arranged in advance.

For faculty at schools that offer executive education, those students—in one's own class

or in others—are also the practitioners from whom we could be learning (Tushman and O'Reilly

2007). Identifying executive education students who could be helpful to you might require some

coordination with the executive education program office. For example, faculty could share with

those staff members the managerial roles and industries they wish to learn about, so that the staff

can suggest particular participants.

3.2. Attend Practitioner Conferences

Academics rarely attend practitioner conferences—where managers or policymakers present to

each other—but they should. Conferences provide an opportunity to learn what practitioners

consider to be their own best practices and current challenges and how they react to potential

solutions presented by others. For example, managerial conferences relevant to my sustainable

operations research include the Ceres annual conference (a "network of investors, companies and public interest groups to accelerate and expand the adoption of sustainable business practices and solutions to build a healthy global economy"), the National Association for Environmental Management (NAEM) annual conference (which purports to be "the largest annual gathering for environment, health and safety (EHS) and sustainability decision-makers"), and GRI Global Conferences (the "world's largest gathering of leaders, thinkers and doers in the field of sustainability reporting"). I have also met managers engaged in global supply chain auditing by attending and presenting at the Ethical Sourcing Forum, an annual practitioner conference.

I have also met policymakers and managers at workshops run by regulators. Regulatory workshops at which I've presented include the U.S. Environmental Protection Agency's "National Training Conference on the Toxics Release Inventory" and "Next Generation Environmental Compliance Workshop," and the U.S. Department of Labor's "Use of Workers' Compensation Data for Occupational Safety and Health" workshop.

These types of conferences provide low-stress networking opportunities to ask managers for quick feedback about your research ideas and hypotheses. These conversations can initiate enduring relationships that could, in turn, lead some of the practitioners to become members of your practitioner sounding board (described below).

3.3. Attend Crossover Workshops

"Crossover workshops" are one of the best ways for scholars to ensure that their research ideas and hypotheses are relevant to practice and grounded in reality. Crossover workshops bring practitioners and scholars together to discuss research and typically include scholars presenting both preliminary research ideas and late-stage research to solicit feedback from managers or policymakers, with these practitioners sharing the latest trends and challenges in the field and

their "wish lists" of research questions that they would like answered. Because these events attract practitioners interested in academic research—and because of their smaller scale, typically involving 50–150 participants—scholars can (a) identify new research ideas and hypotheses, (b) network with practitioners who could then be their sounding boards, and (c) find out what language and logic resonates with practitioners and—just as importantly—what does not.

Some of the longest-running OM crossover workshops are the Consortium for Operational Excellence in Retailing (COER), organized annually since 1998 by my Harvard colleague Ananth Raman and Wharton's Marshall Fisher (COER 2015a, 2015b), and the Service Supply Chain Thought Leaders Forum (Cohen 2015), organized several times since 2002 by Wharton's Morris Cohen. The COER conferences is rooted in a research project Ananth Raman and Marshall Fischer started in 1997 that sought to address the question, "How will advances in information technology change the way retailers forecast demand and plan supply?" With assistance from Harvard's Walt Salmon, they recruited 32 retailers to participate, conducted multi-day site visits to most of them to understand their operations, and conducted research projects with some of them to improve their operations. The initial COER conferences, held in 1998 at Harvard and in 1999 at Wharton, reported progress of these projects to the 32 participating retailers. COER conferences have been held nearly annually since then with an increasing group of participants.

But because these events tend to be small and invitation-only, scholars interested in adopting this approach should consider organizing their own crossover workshops in their own subfields. For example, Jérémie Gallien, Karan Girotra, Marcelo Olivares, Kamalini Ramdas, and Jeff Skinner organized a "Collaborative Academic/Practitioner Workshop on Operational

Innovation" at London Business School in 2013 for academics and practitioners to learn from successful academic–practitioner research collaborations.

I have co-organized several crossover workshops and was impressed by how much I learned and by the interesting practitioners I met. John Mayo (Georgetown), Tom Lyon (University of Michigan), and I co-organized "Transparency and Accountability: The Role of Information Disclosure," bringing together scholars and regulators interested in the effectiveness of information disclosure on altering firms' operational behavior (HBS 2008). Ginger Jin (University of Maryland) and I co-organized a workshop called Research on Effective Government: Inspection and Compliance that assembled more than 100 scholars and regulators to discuss evidence-based approaches to bolster regulatory compliance (see Blanding 2015, HBS 2015; MCEP 2015). Scholars presented key findings from recent research, regulators provided feedback and suggested research questions they wanted answered, and members of both groups forged new relationships with each other.

3.4. Conduct Field Visits and Practitioner Interviews

Scholars can learn by directly observing what operations people do at work. Field work has a long tradition in many disciplines, perhaps most notably cultural anthropology and sociology, but also in OM; Fisher (2007b) profiles examples in the auto industry and other contexts. One might think it serves only to provide an empirical base for qualitative scholarly work and teaching cases. But field work can be very helpful to any OM scholar—including modelers and quantitative empiricists—because it involves observing practitioners in action, the problems they face, and the solutions they try. The chance to ask questions of practitioners—what exactly is going on here and why?—can lead to more relevant research questions and hypotheses. Hayes

(2000) describes additional benefits of and approaches to observing and learning from practitioners in action.

Each of us can take action on this front immediately. In my research that entails empirical analysis of archival data, my coauthors and I often interview practitioners to learn how they perceive the problems we are considering studying. We also seek their ideas for hypotheses and their feedback on our preliminary ideas. This has often led us to revise our initial questions and hypotheses to those that are more relevant to and well-grounded in the situation we are studying. We have also learned institutional details critical to identification strategies, such as how workers are assigned to tasks.

Faculty in schools that produce teaching cases can leverage site visits set up for case research to also ask practitioners about their research ideas. Others need to find ways to get themselves invited to field sites; a good start is to meet practitioners on campus and at conferences, as described above. OM scholars can take advantage of institutional initiatives designed to promote faculty access to field sites. At Harvard, for example, the Behavioral Insights Group fosters opportunities for faculty to collaborate with practitioners to conduct field experiments to improve organizational practices, while the Sustainability, Transparency, and Accountability Research (STAR) Lab does the same for scholars of those topics.

3.5. Work as a Practitioner

One of the best ways for scholars to learn the practical dimensions of the workplaces they are studying is to actually work as a practitioner through a short-term or part-time position, shifting one's role from an observer to an actor. A scholar interested in, say, ambulance scheduling could volunteer with an ambulance company to better understand the challenges its people face.

Dedicating substantial time to work as a practitioner is more common in some disciplines. Some economics professors and law professors take leaves of absence to assume government positions. This is not just for the occasional Larry Summers or Elizabeth Warren; there are many opportunities for junior and mid-career faculty. For example, many roles at the Council of Economic Advisors are filled by assistant and associate professors on leave from their ladder faculty positions. There are also opportunities to become resident and non-resident fellows and affiliates of think tanks such as the Brookings Institute, Resources for the Future, and the Public Policy Institute of California, which can, in turn, foster introductions to practitioners from whom scholars can obtain feedback on their research ideas.

3.6. Develop a Sounding Board of Practitioners

Many ideas in this section can provide *ad hoc* insights from practitioners, but even better would be to develop relationships with practitioners whom you can call upon regularly. For example, you could ask these practitioners whether your research questions strike them as important and, if not, how to improve them. You could also ask whether potential hypotheses are sensibly linking independent variables that they can control to dependent variables they actually care about and whether the logic underlying your hypotheses is well grounded in reality. As Fisher (2007b: 373) noted, "Something as simple as a conversation with a manager over lunch can be extremely useful in identifying problems and hypotheses for further investigation."

How do you assemble such a group? My practitioner advisory team includes former classmates who now work as environmental, health, and safety (EHS) managers; managers and regulators whom I met at practitioner conferences; and managers whom I met while writing teaching cases about their companies. Current and former students from undergraduate, MBA,

and executive education programs can also be excellent sources of information about whether your research questions, mechanisms, and implications are relevant to practicing managers.

3.7. Coauthor with Practitioners

Operations management, more so than many other management fields, has a long tradition of working and coauthoring with practitioners. Such collaborations not only can provide access to proprietary data and nuanced interpretations of that information, but can also ground the research project in questions relevant to practice, produce papers depicting mechanisms and interpretations that seem plausible to practitioners, and generally intensify a practitioner–collaborator's dedication to your project. Stanford's Laurence Wein (2009: 809), reflecting on his experience, notes how practitioner coauthors "contribute contextual details…that would have been impossible to find in the open literature." Gallien, Graves, and Scheller-Wolf (2016) provide useful guidance on how to establish and manage successful relationships with collaborating practitioners.

4. Conveying Relevant Insights to Practitioners

When I was first exposed to academic journals in graduate school, I quickly discovered that despite business schools being referred to as "professional schools," no managers I knew were equipped—or patient enough—to decipher academic articles, laced as they were with jargon, math, and statistics. But surely, I presumed, there were mechanisms to convey the insights of the research in a more broadly intelligible and actionable way. It took me about a decade to realize how wrong I was and how little investment there is in such mechanisms.

How can scholars reach practitioners? Harvard Business School Dean Nitin Nohria, like other deans, meets with alumni all over the world. Over the past few years, he has been asking them where they learn the most useful ideas to improve their businesses. Not where they learn

"good" ideas or "interesting" ideas, but ideas they have actually put into practice. In addition to *Harvard Business Review*, the answers Nohria hears most often include reports from the McKinsey Global Institute and other think tanks. TED Talks also make the list, as do managers at peer companies who share best practices at industry conferences and networking events. I would add to this list my conjecture that practitioners also learn a lot from the popular press and blogs they read, and from other crossover journals and conferences described below.

This section offers three ways scholars can convey research findings to the practitioners whose decisions they hope to influence: speaking at practitioner conferences, writing for publications read by practitioners, and attracting coverage by others who write for those publications.

4.1. Present to Practitioners

Presenting research at practitioner conferences lets you not only convey your insights directly to those whose decisions you want to influence, but also hear their questions and comments. This can help you sharpen your message and can trigger new relevant research. Presenting at practitioner conferences, I was usually one of the few academics there. These seem like an extremely underutilized opportunity to bridge the academic–practitioner divide. Scholars can contact conference organizers, who are often eager to find interesting speakers. Crossover conferences like COER, mentioned earlier, also offer beneficial access to practitioners.

There are also opportunities in less public settings, such as presenting research findings to executive education participants in class or over lunch and meeting face-to-face with managers and policymakers to brief them on your findings and insights. My coauthors Matt Johnson and David Levine and I have presented our research on occupational safety to OSHA managers; both they and we learned a lot. Wein (2009: 809) observes that while finding policymakers willing to

meet with him to discuss his latest research findings is "extremely time-consuming and at times very contentious, I think it is quite likely that none of my work would have had any impact if I (or Ed Kaplan, in the case of our smallpox work) had stayed in my office."

4.2. Write for Practitioners

Crossover journals and the trade press. *Harvard Business Review*, *Sloan Management Review*, and *California Management Review* are the gold standard of crossover journals for some faculty because of their prestige and their circulation, not to mention their inclusion on the *Financial Times* journals list that some schools use to determine which publications count toward promotion. However, they cover only a very small fraction of OM research, and their editorial scopes leave some topics not covered at all. *Harvard Business Review* and *Sloan Management Review* have also begun publishing shorter online-only articles that are often processed more rapidly, enabling faculty to post research insights in a more timely manner, but those lack the prestige of long-form articles published in the hardcopy magazines.

Narrower crossover journals provide another option. For example, *Interfaces* was launched in 1970 to "be informative, easy to read, brisk (for busy managers), topical, relevant, and professional… [and to] publish digests and highlights of current, interesting, and useful work in the world of managing and the management sciences" (Norden 1970: 1). Its current submission guidelines call for papers "on the practice of operations research and management science (OR/MS) and the impact this practice has on organizations." *Academy of Management Perspectives* is a journal "aimed at the non-specialist academic reader with a secondary audience that include existing and future 'thought leaders'"; it publishes articles that "synthesiz[e] and translat[e] theoretical and empirical research in management's distinct sub-fields in an

authoritative evidential manner that makes these findings accessible for scholars outside that subfield [*sic*]" (Academy of Management 2016).

Writing for these crossover outlets requires significant time and effort and can involve a lengthy editing process, a peer review process, or both, which makes this a substantial endeavor with an uncertain payoff. Fortunately, some of these outlets welcome proposals, which can save authors from wasting time developing pieces that the editors won't want.

Trade journals and the popular press also offer academics a way to reach practitioners— one that academics seldom use. Writing short articles aimed at practitioners can be fun because the sole objective is to convey the most important findings in an engaging manner. For example, Yale's Ed Kaplan has published in venues such as *Interfaces* and the *Boston Globe* about the implications of his research on the prevention of HIV transmission and terrorist attacks. I have found it very rewarding to write short articles summarizing my research findings for venues such as *The Guardian*'s "sustainable business" section, *The Compass* (a trade journal for health and safety professionals), *The Atlantic*, and *European CEO*. Such articles require a more conversational writing style than academics are accustomed to, but they have helped me hone the takeaways of my academic papers and better convey their value to practitioners.

Newspaper op-eds. Scholars conducting relevant research can also reach practitioners— and the consumers and citizens who might influence them—through newspaper op-eds. Wein, who has written a series of *New York Times* op-eds describing policy prescriptions to stem pandemics—based on his research—notes that op-eds and the resulting media coverage can both educate the public and pressure policymakers to act on one's research findings.

Blogs and social media. Some OM professors have developed blogs to summarize the findings of their own and others' research and to analyze news items through an OM lens. Leading examples include:

- *better operations: Thoughts on continuous improvement: from TPS to XPS* by Norwegian University of Science and Technology's Torbjørn Netland at better-operations.com

- *Ecommerce thoughts from Ann Arbor* by University of Michigan's Amitabh Sinha at ecommerceaa.blogspot.com

- *Global Supply Chain Musings* by Purdue's Ananth Iyer at aviyer2010.wordpress.com

- *Jay and Barry's OM Blog: A Blog for OM Educators* by Jay Heizer (Texas Lutheran) and Barry Render (Rollins) at heizerrenderom.wordpress.com; also provides questions to prompt classroom discussion

- *The Operations Room* by Northwestern's Marty Lariviere, Gad Allon, and Jan Van Mieghem at operationsroom.wordpress.com

- *UCLA Anderson Global Supply Chain Blog* by UCLA's Chris Tang, Felipe Caro, Charles Corbett, and colleagues at blogs.anderson.ucla.edu/global-supply-chain

  Many more blogs on OM topics are listed at SupplyChainOpz (2014, 2016).

Many other disciplines have pursued this idea, with some of the resulting blogs attracting very wide audiences. University of Chicago's Steven Levitt and Stephen Dubner launched the "Freakonomics" blog and podcast (http://freakonomics.com/blog) to translate new findings from economic research in a clever and engaging manner, building on the momentum of their popular book of the same title. Penn Law's Cary Coglianese created the "RegBlog" website and e-newsletter (www.regblog.org) to convey to practitioners and scholars insights from regulatory analyses and news; most of its articles are written by Penn faculty or students. Harvard Law School's "Forum on Corporate Governance and Financial Regulation" (corpgov.law.harvard.edu) blog and newsletter translate research on corporate governance and financial regulation. Some professional societies have created blogs for their members to translate their research. Examples include the blogs established by the Alliance for Research on

Corporate Sustainability (ARCS) (http://corporate-sustainability.org/blog/) and by the Academy

of Management's Organizations and the Natural Environment division

(http://one.aom.org/blogs/blog/152).

Some faculty use Twitter to share research insights and comment on news items to their

tens of thousands of followers. Leading examples include Austin Goolsbee (University of

Chicago economics), Ioannis Ioannou (London Business School strategy), and Justin Wolfers

(University of Michigan economics). Some faculty use LinkedIn; Wharton psychology professor

Adam Grant's posts, for example, have attracted as many as hundreds of thousands of views.

Faculty from a wide range of disciplines have presented highly engaging TED Talks to

convey their research findings to the general public (www.ted.com). For example, MIT's Zeynep

Ton highlighted her research insights on the relationship between wages and service in a TED

Talk that has attracted tens of thousands of views. Our field has much learn from behavioral

scientists whose TED Talks have been watched millions of times, such as those by Harvard

Business School social psychologist Amy Cuddy, Duke behavioral economist Dan Ariely, and

Harvard psychologist Dan Gilbert.

4.3. Encourage Others to Convey Your Research to Practitioners

Jane Lubchenco, a professor who has also served as head of a federal agency, observed that

academics often "lack the skills to translate complex information into simpler but still accurate

information… [and are] uncomfortable with modes of communication that are effective in public

communication—storytelling, using analogies and metaphors" (Hoffman et al. 2015: 72). Many

are reluctant to invest the time and energy to learn a new writing style. Fortunately, one

alternative to *your* writing an article that conveys your research to practitioners is to encourage

someone else who already possesses the requisite skills to do it. This requires identifying suitable

blogs—such as those described above—and newspaper or magazine columns that disseminate research findings to practitioners and convincing their authors to cover your research. Doing so enables scholars to leverage someone else's expertise in writing engagingly and his or her established communication channel to practitioners. In some cases, these benefits well exceed the drawback of losing editorial control. Identifying these individuals requires research and networking, and school and university press offices could help develop and disseminate press releases and practitioner articles—but only if those office's mandate were expanded beyond their typical focus on campus events and administrative news, a step that deans and university presidents should seriously consider.

Columns. Some faculty write newspaper columns that translate their own and others' research. Examples include a *Boston Globe* column by Harvard's Edward Glaeser, a *Le Monde* column by Harvard's Julie Battilana, and the "Economic View" column, by Cornell's Robert Frank, that ran in the *New York Times.* The *New York Times* "Upshot" column, written by both professors and professional journalists, compellingly conveys research findings as well.

Trade journals. Trade journals, which contain news and information for specific practitioner groups, can provide a well-targeted channel for OM research insights. Faculty can try to attract coverage by pitching their findings to the editors and writers of journals such as *APICS* (the journal of the American Production and Inventory Control Society), *Hotel Management, Operational Risk & Regulation, Operations Management*, *Safety & Health Practitioner,* and *Supply Chain Management Review*.

4.4. Communication Style to Reach Practitioners

Presenting to and writing for practitioners requires a communication style very different from the one in which scholars are immersed. As Hoffman (2016: 13) notes, "Speaking to lay audiences

is, in many ways, like speaking another language." For many of us, whatever gifts of engagement and vitality our writing once had has diminished through our doctoral training and the peer-review process. As a result, most of us have become all too familiar with academic writing that is "turgid, soggy, wooden, bloated, clumsy, obscure, unpleasant to read, and impossible to understand" (Pinker 2014).

While it remains important to convey why readers should believe your findings, writing for practitioners requires learning (or rediscovering) how to write journalistically. For example, it often requires engaging the reader right from the start. One way is to set up your research question as an important puzzle that needed solving and then concisely describe your findings. Illustrative anecdotes can be especially helpful. It is rare that a practitioner audience will care to hear about the prior literature, although this is not a universal rule. If, for example, your findings contradict prior findings or expand or contract the application of those findings, it certainly makes sense to state what was known before your research. There is little tolerance for academic jargon or esoteric terms such as *endogeneity*, *stochastic*, or *deterministic*. Pages of scholarly description of study details are often consolidated into a single paragraph. Simple graphs often convey the results more clearly to practitioners than statistics and regression coefficients do.

Speculating what our findings might mean beyond our context and sample is often quite difficult for scholars, given our training—and the ever-present reminders by our peer reviewers—to avoid overclaiming. However, practitioner outlets typically want academics to convey the lessons practitioners should take away from our research, which often requires a leap beyond our particular settings. I have found it important to maintain the distinction between what my studies have actually found and what my coauthors and I might reasonably speculate based on our findings.

I often find it helpful to read many articles in the practitioner outlet I am seeking to publish in to absorb its writing style and to learn how other academics have addressed these challenges. Hiring editors have helped me rediscover how to write to nonacademic audiences. University communications departments—and publicists, for schools or professors willing to hire them—can also play an important role by identifying and pitching your research to venues read by your target practitioner audience. For more comprehensive guidance on writing for practitioners, see Emerald Group (2014) and O'Hara (2014).

5. How Academic Institutions Need to Change

I have focused so far on what scholars can do to increase their own relevance. But academic institutions can also do a lot to foster a research culture that promotes relevance. While others have encouraged business schools to modify their tenure criteria to give more weight to relevance when evaluating research (e.g., Walsh 2011), I focus on changes that could be made more immediately by our journals, professional societies, and doctoral programs.

5.1. Academic Journals

Journal editors could require (or at least ask) authors to articulate the relevance (or potential relevance) of their research to some set of practitioners. *POM* recently launched an alternative approach by creating a "POM Practice" area to encourage studies "that highlight problems in a particular industry sector and develop potentially amenable or improved OM solutions," requiring that the problem be "based on a real situation faced by a company (or multiple companies in the same industry)" and that the proposed solution be practical and generalizable. Gallien, Graves, and Scheller-Wolf (2016: 13) suggest that all OM research should be evaluated not only based on its correctness and novelty, but also "how well it applies to the real world."

Editors can also accelerate the publication process for the research most relevant to current challenges.

Journals can also create the infrastructure to communicate research insights to practitioners. Some, including *Management Science* and *POM*, already provide brief "management insights" for articles, although they are often not readily comprehensible to practitioners and are posted behind a paywall that severely limits practitioners and the press from accessing them. Journals can and should do better ensure the accessibility of such pieces by editing them with an eye toward practitioner readers and making them publicly available. Chris Tang in his role of M&SOM Editor-in-Chief recently took such a step when that journal launched "M&SOM Review" in 2015. This initiative invites authors of recently published M&SOM articles to write short, publicly-accessible pieces that "distill the[ir] essence" to enable non-OM researchers to "see through the thicket of technical analysis; …appreciate the relevance of various M&SOM articles; and…apply the research findings" (Tang 2014). Nearly 20 such pieces were posted throughout 2015. More journals should adopt this practice, and go beyond this by providing professional writers to help researchers develop press releases and short pieces that translate their research insights to practitioners and place these in venues that reach practitioners.

Several recent initiatives have begun to address some of these objectives. *POM* is planning to launch an "online extension" by publishing publicly available short pieces in which scholars convey the managerial insights of their *POM* articles (Singhal, Sodhi, and Tang 2014). *Strategic Management Journal* has recently begun encouraging authors of accepted papers to develop short "video abstracts" that highlight research insights, posted publicly at www.youtube.com/user/StrategicMgmtSociety. The new *Academy of Management Perspectives*

initiative to publish research briefs at http://aom.org/amp/researchbriefs is meant to provide
"journalistic summaries" of select empirical articles published in other journals that are of
interest to scholars and practitioners.

Behavioral Science & Policy is a new peer-reviewed journal that is attempting to bridge
the scholar–practitioner gap in novel ways. It "features short, accessible articles describing
actionable policy applications of behavioral scientific research that serves the public interest"
and has a "dual-review process. Leading scholars from specific disciplinary areas review articles
to assess their scientific rigor; at the same time, experts in relevant policy areas evaluate them for
relevance and feasibility of implementation." Moreover, accepted articles "are edited to ensure
their accessibility to scientists, policy makers, and lay readers."

5.2. Professional Societies

Professional societies offer a few awards to honor relevant research. For example, the Institute
for Operations Research and the Management Sciences (INFORMS) offers a Revenue
Management and Pricing Section Practice Award to recognize "outstanding applications of
revenue management and pricing techniques." The POMS Applied Research Challenge award
honors "rigorous applied research that is relevant and innovative" that "involves a real
operation" and "makes a convincing case of its relevance to practice," among other criteria (Caro
and Tang 2015: 359). And M&SOM just announced its Practice-Based Research Competition
"to motivate, help develop, reward and highlight high-quality OM research papers with
significant practical relevance, and to publish these papers in the M&SOM journal" (M&SOM
2016).

The INFORMS Saul Goss Expository Writing Award recognizes researchers whose
articles demonstrate a consistently high standard of expository writing. The Academy of

Management's Organizations and the Natural Environment (AOM ONE) Division and the

Network for Business Sustainability co-sponsor a Research Impact on Practice Award for peer-

reviewed research "on any dimension of social or environmental sustainability" that "has

important implications for practice." The Strategic Management Society awards its SMS Best

Conference Paper Prize for Practice Implications to the best paper with practitioner relevance.

Gallien, Graves, and Scheller-Wolf (2016) argue that more prizes and awards for high quality

research based on scholar– practitioner collaborations could help increase its prominence and

thus encourage more of it.

        Professional societies could do a lot more. As Ackoff (1979: 194) suggested nearly 40

years ago, professional societies in the operations field could use their conferences not only to

facilitate communication among their academic members, but also to bring in ideas from

practitioners "from whom [the academics] can learn something relevant. At least one of the

society's meetings each year and one of its publications should be filled with contributions from

such outsiders." The POMS annual conferences recently began featuring a POMS Practice

Leaders Forum in which practitioners suggest research ideas to academics (Singhal, Sodhi, and

Tang 2014). Professional societies and universities can also create online clearinghouses to help

researchers and practitioners identify research projects of mutual interest. For example, the

Harvard Business School "Research Exchange" website lists field study ideas for which HBS

professors and doctoral students are seeking corporate settings

(http://hbswk.hbs.edu/Pages/classified.aspx). Such exchanges, whether implemented at

conferences or online, are a promising idea that can massively scale the engagement that occurs

at the specialized crossover conferences described earlier.

Ackoff (1979: 195) also recommended that professional societies establish "at least one journal addressed to their actual and potential consumers…that might be called *For Managers Only*… [to] contain relevant articles addressed to managers. Each member of the Society would designate a manager to whom a copy would be sent at no cost." While professional societies have launched crossover journals like *Academy of Management Perspectives* and INFORMS's *Interfaces*, their attempt to reach two disparate audiences—academics and practitioners—may be limiting their success in reaching practitioners. Ackoff's suggestion to narrow the target audience of certain journals to managers could address this.

Professional societies could also take the lead in better equipping faculty to successfully engage with practitioners by including sessions on managing media inquiries, writing op-eds and for the trade press, disseminating research insights through social media, and learning how to identify the key publications and reporters with whom to develop relationships. Stanford University's Leopold Leadership Program, for example, trains midcareer academic scientists from across North America to learn how to "engage effectively with leaders in the public and private sectors who face complex decisions about sustainability and the environment" (Leopold Leadership Program 2016). The non-profit COMPASS was created to help ocean scientists better convey insights of marine research to the general public, policymakers, and managers (Smith et al. 2013). Professional societies or universities could develop similar initiatives for OM scholars (and researchers from many other business school domains) to learn how to more effectively communicate research insights to practitioners.

5.3. Doctoral Programs

We also need to encourage and train our doctoral students to nurture the desire to conduct relevant research and to acquire the knowledge to do so, including by encouraging them to

engage with practitioners. Vermeulen (2005: 980-981) observed by reading doctoral program applications "that very few people aspire to become business academics with the intention to publish journal articles that will only be read by other academics (at best); rather, these applicants are much more inspired by the thought of gaining and developing truly relevant knowledge that might change the world of organizations." Hoffman (2016: 6) similarly notes that "[m]any graduate students report that they have chosen a research career precisely because they want to contribute to the real world; to offer their knowledge and expertise in order to make a difference." Therefore, we may not need to convince them to pursue relevant research but rather to show them how to avoid the insular scholarly view and style that will frustrate their original ambition to serve a real-world audience.

We can begin right away by having our students participate in the site visits and interviews described earlier. We can also shift our program requirements to ensure that all doctoral students engage with practitioners. At Harvard Business School, we have begun institutionalizing this idea with a requirement that doctoral students spend some time in the field, typically in their second or third year. Similarly, London Business School's PhD program in Management Science and Operations requires students to spend a month in the field. Such initiatives encourage students to learn about practitioners' experiences and challenges, and to engender a habit of engagement to ensure that their research remains relevant throughout their careers. Tushman and O'Reilly (2007) provide additional suggestions for how doctoral programs could better foster research that is both relevant and rigorous.

6. Final Thoughts

One concern I often hear about conducting more relevant research is that it takes more time. Many of the approaches described here do require time, although most do not take much:

perhaps a few additional days per research project to conduct some due diligence and to obtain

feedback. Given the time we already invest in any research project, a few days of due diligence

does not seem too high a price to pay, even in one's pre-tenure years when the opportunity cost

of time seems especially high. And against the initial investment one must balance the potential

for a positive feedback loop. Engaging with practitioners to develop relevant research not only

helps improve the research, but also increases the likelihood that practitioners will subsequently

read and appreciate a translation of that work. This can yield practitioner inquiries that can, in

turn, provide access to new field sites and new datasets, including proprietary data that has never

been shared with scholars before and can lead to novel lines of inquiry. Similarly, engaging in

relevant research—and especially choosing to work on problems connected to society's pressing

problems—can foster much needed engagement by scholars in public and political discourse

(Hoffman et al. 2015, Hoffman 2016).

In the end, how can we know if our field has succeeded in making our research relevant?

As Hayes noted more than a decade ago, we'll know when OM faculty "become the people to

whom high-level, practicing operations managers and consultants turn for information and

insight about the most important problems confronting them" (Hayes 2000: 110). But I suspect

that day when practitioners will regularly seek to learn from us will occur only after enough of us

scholars regularly seek to learn from them.

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References

Ackoff, R. L. 1979. Resurrecting the future of operational research. *Journal of the Operational Research Society* **30**(3) 189–199.

Academy of Management. 2016. Academy of Management Perspectives. Available at http://aom.org/amp/ (accessed January 2016).

Augier, M., J. G. March. 2011. *The Roots, Rituals, and Rhetorics of Change: North American Business Schools after the Second World War*. Stanford University Press, Stanford, CA.

Beyer, J. M. 1982. Introduction to the special issue on the utilization of organizational research. *Administrative Science Quarterly* **27**(4) 588–590.

Blanding, M. 2015. Business research that makes for smarter public policy. *HBS Working Knowledge*, October 19. Available at http://hbswk.hbs.edu/item/business-research-that-makes-for-smarter-public-policy.

Brooks, D. 2014. Professors, we need you! *New York Times* (February 16): SR11.

Buchbinder, R., C. Maher, I. A. Harris. 2015. Setting the research agenda for improving health care in musculoskeletal disorders. *Nature Reviews Rheumatology* **11**(10) 597–605.

Cachon, G. P. 2012. What is interesting in operations management? *Manufacturing & Service Operations Management* **14**(2) 166–169.

Camm, J. D. 2015. In memoriam—Robert E. D. (Gene) Woolsey. *Interfaces* **45**(4) 369.

Caro, F., Tang, C. S. 2015. The 1st POMS Applied Research Challenge 2014 awards. *Production and Operations Management* **24**(3) 359–368.

Cohen, D. J. 2007. The very separate worlds of academic and practitioner publications in human resource management: Reasons for the divide and concrete solutions for bridging the gap. *Academy of Management Journal* **50**(5) 1013–1019.

Cohen, M.A. 2015. Wharton Service Supply Chain Thought Leaders Forum. Accessible at http://opim.wharton.upenn.edu/fd/forum (accessed July 2015).

Consortium for Operational Excellence in Retailing (COER). 2015a. 2015 COER conference agenda. Available at http://www.hbs.edu/faculty/conferences/2015-coer/Pages/default.aspx (accessed July 2015).

Consortium for Operational Excellence in Retailing (COER). 2015b. The Fishman-Davidson Center for Service and Operations Management at The Wharton School. Available at http://opim.wharton.upenn.edu/fd/partnerships.php#coer (accessed August 2015).

Corbett, C. J., L. N. Van Wassenhove. 1993. The natural drift: What happened to operations research? *Operations Research* **41**(4) 625–640.

Daft, R. L., A. Y. Lewin. 1990. Can organizational studies begin to break out of the normal science straitjacket? An editorial essay. *Organization Science* **1**(1) 1–9.

Denisi, A. S. 2010. Challenges and opportunities for the academy in the next decade. *Academy of Management Review* **35**(2) 190–201.

Emerald Group. 2014. How to... write for a practitioner audience. Emerald Group Publishing Limited. Available at http://www.emeraldgrouppublishing.com/authors/guides/write/practitioner.htm.

Fisher, M. L. 2007a. Bob Hayes: Forty years of leading operations management into uncharted waters. *Production and Operations Management* **16**(2) 159–168.

Fisher, M. L. 2007b. Strengthening the empirical base of operations management. *Manufacturing & Service Operations Management* **9**(4) 368–382.

Gallien, J. 2013. Motivating research through industry interaction. *Proceedings of the Utah Winter Operations Conference.* Available at http://org.business.utah.edu/opsconf/?q=node/43.

Gallien, J., S. C. Graves, A. Scheller-Wolf. 2016. Practice-based research in operations management: What it is, why do it, related challenges, and how to overcome them. *Manufacturing & Service Operations Management* **18**(1) 5–14.

Gallien, J., A. Scheller-Wolf. 2013. Call for papers—Proposal for an M&SOM special issue on practice-focused research. *Manufacturing & Service Operations Management* **15**(2) 1–2.

Graves, S. C. 2009. A letter from the editor. *Manufacturing & Service Operations Management* **11**(1) 1–3.

Gulati, R. 2007. Tent poles, tribalism, and boundary spanning: The rigor-relevance debate in management. *Academy of Management Journal* **50**(4) 775–782.

Hall, J. R., S. W. Hess. 1978. OR/MS: Dead or dying? RX for survival. *Interfaces* **8**(3) 42–44.

Hambrick, D. C. 1994. 1993 presidential address: What if the academy actually mattered? *Academy of Management Review* **19**(1) 11–16.

Harvard Business School (HBS). 2008. Transparency and Accountability: The Role of Information Disclosure workshop. Available at http://www.hbs.edu/faculty/conferences/2008-transparency-and-accountability/Pages/agenda.aspx

Harvard Business School (HBS). 2015. Research on Effective Government: Inspection and Compliance Workshop. Available at http://www.hbs.edu/faculty/conferences/2015-research-on-effective-government/Pages/default.aspx (accessed January 2016).

Hayes, R. H. 1998. Developing POM faculty for the 21st century. *Production and Operations Management* **7**(2) 94–98.

Hayes, R. H. 2000. Towards a "new architecture" for POM. *Production and Operations Management* **9**(2) 105–110.

Hoffman, A. J. 2015. Isolated scholars: Making bricks, not shaping policy. *Chronicle of Higher Education*, Feb. 9.

Hoffman, A. J. 2016. Reflections: Academia's emerging crisis of relevance and the consequent role of the engaged scholar. *Journal of Change Management*. Forthcoming.

Hoffman, A.J., K. Ashworth, C. Dwelle, P. Goldberg, A. Henderson, L. Merlin, Y. Muzyrya, N.-J. Simon, V. Taylor, C. Weisheit, S. Wilson. 2015. *Academic Engagement in Public and Political Discourse: Proceedings of the Michigan Meeting.* Michigan Publishing, Ann Arbor, MI.

Khurana, R. 2007. *From Higher Aims to Hired Hands: The Social Transformation of American Business Schools and the Unfulfilled Promise of Management as a Profession*. Princeton University Press, Princeton, NJ.

Leopold Leadership Program. 2016. Fellowship overview. http://leopoldleadership.stanford.edu/fellowship-information.

M&SOM. 2016. The M&SOM Practice-Based Research Competition: A biannual practice-based paper competition for the M&SOM journal. http://pubsonline.informs.org/page/msom/practice-based-research-competition.

Maryland Center for Economics and Policy (MCEP). 2015. Research on Effective Government: Inspection and Compliance Workshop. Available at http://mcep.umd.edu/event/research-effective-government-inspection-and-compliance-workshop/ (accessed January 2016).

Mowday, R. T. 1997. Reaffirming our scholarly values. *Academy of Management Review* **22**(2) 335–345.

Nicolai, A., D. Seidl. 2010. That's relevant! Different forms of practical relevance in management science. *Organization Studies* **31**(09-10) 1257–1285.

Norden, P. V. 1970. A message from the president. *Interfaces* **1**(1) 1.

O'Hara, C. 2014. How to improve your business writing. *Harvard Business Review* digital article, November 20. Available at https://hbr.org/2014/11/how-to-improve-your-business-writing.

Panda, A., R. K. Gupta. 2014. Making academic research more relevant: A few suggestions. *IIMB Management Review* **26**(3) 156–169.

Pinker, S. 2014. Why academics stink at writing. *Chronicle of Higher Education*, Sept. 26.

Semadeni, M., Withers, M. C., Certo, S. T. 2014. The Perils of Endogeneity and Instrumental Variables in Strategy Research: Understanding through Simulations. *Strategic Management Journal* **35**(7) 1070–1079

Singhal, K., M. S. Sodhi, C. S. Tang. 2014. POMS initiatives for promoting practice-driven research and research-influenced practice. *Production and Operations Management* **23**(5) 725–727.

Smith B., N. Baron, C. English, H. Galindo, E. Goldman, K. McLeod, M. Miner, E. Neeley. 2013. COMPASS: Navigating the rules of scientific engagement. *PLoS Biology* **11**(4) e1001552.

SupplyChainOpz. 2014. SCM Global 100: Best supply chain blogs in the world. http://www.supplychainopz.com/2014/03/scm.html (accessed January 2016).

SupplyChainOpz. 2016. Blogroll. http://www.supplychainopz.com/p/blogroll_6.html (accessed January 2016).

Tang, C. 2014. Welcome to MSOM review. Available at https://www.informs.org/Blogs/M-SOM-Blogs/M-SOM-Review/Welcome-to-MSOM-Review.

Thomas, K. W., W. G. Tymon, Jr. 1982. Necessary properties of relevant research: Lessons from recent criticisms of the organizational sciences. *Academy of Management Review* **7**(3) 345–352.

Tushman, M. L., C. A. I. O'Reilly. 2007. Research and relevance: Implications of Pasteur's quadrant for doctoral programs and faculty development. *Academy of Management Journal* **50**(4) 769–774.

Van Mieghem, J. A. 2013. Three Rs of operations management: Research, relevance, and rewards. *Manufacturing & Service Operations Management* **15**(1) 2–5.

Vermeulen, F. 2005. On rigor and relevance: Fostering dialectic progress in management research. *Academy of Management Journal* **48**(6) 978–982.

Vizecky, K., O. El-Gayar. 2011. Increasing research relevance in DSS: Looking forward by reflecting on 40 years of progress. *Proceedings of the 44th Hawaii International Conference on System Sciences*, 1–9.

Walsh, J. P. 2011. 2010. Embracing the sacred in our secular scholarly world. *Academy of Management Review* **36**(2) 215–234.

Wein, L. M. 2009. Homeland security: From mathematical models to policy implementation: The 2008 Philip McCord Morse Lecture. *Operations Research* **57**(4) 801–811.

Woolsey, R. E. D. 2003 *Real World Operations Research: The Woolsey Papers*. Lionheart Publishing, Marietta, Georgia.