From the 3 Rs to the 4 Rs: Toward Doctoral Education that Encourages Evidence-Based Management through Problem-Focused Research

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Abstract

To make Evidence-Based Management (EBMgt) commonplace and effective, senior managers and academics must develop the capabilities that problem-focused research requires. Drawing lessons from alternative doctoral programs and problem-focused research, this chapter offers its readers concrete ways to support EBMgt in their educational, research, and senior management activities. It covers three related developments: 1) Alternative doctoral education programs producing a community of managerially experienced practitioner-scholars, that fosters EBMgt by bridging managerial and academic practice, 2) Problem-focused research, providing a new model of research for more effective EBMgt, refined in alternative doctoral programs, and 3) Overcoming barriers to EBMgt, new educational pedagogies and problem-focused research via Relevance, Respect, Resourcefulness and Reframing, or "the 4Rs." This chapter presents these developments as exemplified through an alternative doctoral program's fifteen-year evolution.

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Alternative doctoral programs
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Problem-oriented research
Practice-oriented research

"Profound differences in theory are never gratuitous or invented.
They grow out of conflicting elements in a genuine problem…"
John Dewey, *The Child and the Curriculum*, 1902

This chapter demonstrates that a powerful step toward encouraging senior managers to apply research evidence is to engage them in becoming practitioner-scholars: generators as well as consumers of the evidence they need. Managers must find the evidence and its foundational theories not only to be relevant and accessible, but *respectable* too. Managers and practitioners often remain skeptical about theoretical contributions to a particular problem, fearing that a theoretical focus supplants practical, demonstrably usable suggestions in a world too fast-paced for debate. The push to "do" trumps the mandate to "consider." Issues of relevance have been recognized and seriously addressed in scholarly literature (c.f., Schon, 1995; Huff, 2000; Van de Ven, 2007). However, the skepticism and even disrespect for both research and the scholars who produce it tend to go unrecognized and unexplored. Fulfilling the mandate for relevance, rigor and respectability requires a change not only in managerial outlook, but also in the fundamental development in the knowledge generation and educational practices of academics.

Alternative doctoral programs created since the mid-1990's attempt to produce doctoral graduates whose scholarship optimizes relevance and rigor. Based on the authors' our personal experiences (one as professor, the other as student, graduate and research fellow) with Case Western Reserve University's Weatherhead School of Management Doctor of Management program (hereafter, DM Program), we propose that the lessons from these programs for evidence-

based management (EBMgt) can be applied as meaningfully to traditional doctoral programs and to management education and research efforts generally. Indeed, expanding management inquiry from problems of theory to problems of practice bridges the divide between producers and consumers of knowledge, a divide both unnecessary and damaging to both scholars and practitioners.

Senior manager practitioner-scholars can become ambassadors linking research and practice. As such they are a critical resources for EBMgt, affecting both the respect manager's place on research-based evidence and the academy's capacity to generate relevant research. This bridging role is not without its challenges but, given their organizational and community stature, these practitioner-scholars have the advantage of implementing and modeling the use of EBMgt for their senior management peers and for lower levels of managers. Of perhaps greater importance for managerial practice, they participate in normative networks to "inform" (Gill & Hoppe, 2009: 48) senior managers elsewhere about the use of research in practice. And, in their teaching and consulting endeavors, practitioner-scholars argue far more persuasively for EBMgt's efficacy than traditionally trained scholars can. The academy has as much to learn from practitioner-scholars too. In their quest for doctoral credentials, practitioner-scholars model a different approach to articulating and solving practical problems, bringing theory to bear on problems rather than using problems as anecdotes in support of theory. This shift in knowledge generation requires the academy to use new and different muscles as well; by engaging all sides in the "debate," we believe that more practical, relevant and rigorous outcomes will ensue. By

creating a vibrant, sustainable community of hybrid scholars, we will better link two worlds too often divided by prejudices, misunderstandings and miscommunications.

We first present an overview of alternative doctoral education and the practitioner-scholar movement it supports, then the structure of the DM Program from which this chapter's illustrations are taken. Next, we consider developments positive for EBMgt, in particular problem-focused research, which enhances research's managerial *Relevance*. We examine what this research reveals about the knowledge needs of senior managers and how those needs can be framed as problems of practice and research questions to guide systematic inquiry. Turning to the "dark side" of our experiences, we then analyze two barriers to EBMgt that stem from lack of *Respect* -- specifically, skepticism manifested by senior managers about research-based evidence and the active disrespect that practitioner-scholars experience from some of their managerial peers. Overcoming these barriers involves changes in motivations and skills, requiring *Resourcefulness* by academics as well as managers. We then return to positive developments, describing pedagogies used in alternative doctoral education that offer promise for producing such resourcefulness. We close by describing ways that practitioner-scholars are spreading problem-focused research, stimulating cadres of managers and academics to *Reframe* their work in ways that favor and honor EBMgt.

Doctoral Education of Practitioner-Scholars: A "Case" Student

"Alternative" doctoral education complements EBMgt in that it promotes empirical research combining rigor with relevance. It produces expert managers who apply scholarly skills in their practice, as well as managerially experienced educators. Our DM Program was one of the first in a growing number of programs educating senior managers with high levels of experience. Some programs offer DBA degrees, some PhDs, and others executive doctorates. Gill and Hoppe (2009) provide a compendium of such degree programs in the UK, US and Europe. They find that the programs fit the characterization of "professional doctorates" (Bourner, Bowden & Laing, 2001), including a focus on research into issues of concern to practice and a part-time format that sustains the candidates' managerial identities.

The learning contract (Goodman & Beenen, 2008) in alternative doctoral programs imposes obligations on both students and faculty. Programs are committed to their candidates' personal growth and transformation by developing their skills of scholarship while maintaining skills for practice. In return, the candidates contribute to the institution's mission and stature by producing and disseminating scholarly research and by carrying out their managerial work in ways that advance theory, while serving as thought leaders among their managerial peers. Because the DM Program's members see it as innovative and frequently discuss its distinctive characteristics, mention of their own unique obligations under the learning contract is frequent and explicit. In our experience, both students and faculty see themselves as part of a movement to reduce the gap

between the academy and managerial practice. The formation, in 2010, of the Professional Doctorate in Business Council, an international council of leading programs, and the earlier creation of the Executive Doctor Consortia within the Organization Development and Change Division of the Academy of Management (Spreitzer & Shwartz, 2004), give credence to the growing appeal of this movement. So, too, does the promoting of "professional" doctorate programs by the accrediting body for business schools, the AACSB (Gill & Hoppe, 2009). As a community of practice (Wenger, 1998), faculty, students and graduates of alternative doctoral programs are developing their own epistemologies, epistemologies that favor the generation of research useful to managers.

What motivates a faculty to create an alternative doctoral program? At the Weatherhead School, faculty from various disciplines came together out of a desire to attend to the needs of advanced, executive-level professionals encountering vexing problems at high organizational levels. For many senior faculty members, teaching lower-level managers in the school's masters degree programs, these advanced professionals and their complex problems held a different appeal. The DM program's journey has challenged its faculty, graduates and students. With much reflection and more than a little angst, program members sought, made and endured frequent curricular and pedagogical revisions aimed at continuous improvement, and producing scholars who would remain in, and transform, managerial practice.

The DM Program is as research-intensive as it is practice-oriented. The DM Program is as research-intensive as it is practice-oriented. Each fall its

twenty to twenty-five new students start their research fieldwork as early as their first semester coursework. The program is designed as a lock-step three-year program, with a total of 54 credit hours including 32 research credit hours logged over a series of three to four-day residencies in six semesters and two summers. The timeframe is ambitious and the curriculum demanding; after15 years of experience, we find that approximately 65 percent of enrolling students are able to complete the program in their first three years. The program has developed an option for a fourth year of discipline-based study, culminating in a traditional PhD degree. This option was designed to satisfy some candidates' desires for entry to faculty positions in conventional management schools that question alternative degrees.

A common view among academics, even reflected in the AACSB's own prioritizing of doctoral programs (Gill & Hoppe, 2009), in fact, is that practice-oriented doctorates are of lower quality than traditional, disciplinary-focused doctorates. To counter this perspective, the DM Program is as concerned with rigor as it is with relevance. It measures its success in producing rigorous research by the high acceptance rates of its students' research at the Academy of Management (AOM)'s annual conferences and other academic conferences, and by the receipt of several AOM awards and nominations. Table 1 lists the presentations made and awards received in one calendar year by 27 members of the second and third year classes.

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Somewhat to our surprise, we have discovered that the problem-focused research pursued in the program not only produces relevant knowledge, but advances theory too. We hope that this palpable contribution to managerial theory will ultimately cause a reexamination of the underlying assumptions in the academy about the value of these alternative programs, putting them deservedly on par with traditional disciplinary-focused doctoral programs. By virtue of their contributions to theory and research, elements of alternative doctoral education's purposes and pedagogies can enhance the education of traditional doctoral candidates, to further the progress of EBMgt.

Achieving Managerial Relevance through Problem-Focused Research

Differentiating itself from discipline-based research driven by theory, practice-relevant research starts and ends by focusing on *problems of practice*. The goal of such research, and of evidence-based management, is to produce knowledge that is *used* by managers to address their problems, rather than knowledge that academics deem *usable* but few managers actually use.

The DM Program's research requirements, outlined in Table 2, present the stages of problem-focused research. In the program's first year the candidate specifies a problem of practice and a conceptually informed research question. In the second year the candidate investigates this question empirically and develops grounded theory, developing insights via descriptive fieldwork and qualitative methods. Re-conceptualizing the problem of practice in light of this qualitative inquiry, the candidate then specifies a research question to be pursued via quantitative inquiry. During their final semester, students integrate their

qualitative and quantitative findings and begin disseminating their findings to groups of managers, primarily in their own organizations and industry associations, who are facing a comparable problem of practice.

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The choice of problem in the research process described above belongs to the student, not the faculty, and is typically based on the candidate's own substantial managerial experience and vexations. The candidate performs direct inquiry into the chosen problem of practice, carrying out semi-structured interviews with managers and a review of popular management literature to create an initial specification of the problem. The candidate then combines this specification with a multi-theoretical, often multi-level conceptualization, producing a model of the problem and its associated managerial, organizational, and institutional processes. In this way, the research is both problem-driven and theoretically informed (Salipante & Aram, 2003). From the model, the doctoral researcher specifies an overarching research question that is both problem and context-specific, and then investigates it through the sequence of qualitative and quantitative inquiries as described above.

Qualitative and Quantitative Methods for Inquiring into Managers' Problems of Practice

Through hard experience, the DM Program faculty has learned to limit the forms of qualitative and quantitative methods used by candidates. One reason is to

provide efficiency in training candidates in rigorous methods, conserving faculty resources for guiding candidates to completion within the contracted time frame of the program. Of equal importance,, particular qualitative and quantitative methods have proved better than others at facilitating a continuing connection with practice and enabling the researcher to address the complexity of senior management problems. This narrowing is consistent with Briner, Denyer, and Rousseau's (2009) call for evidence to be created with methods that are appropriate to the questions being asked. Through choices of appropriate methods, and specifications grounded in both managers' own constructions of a problem and its context, the findings from problem-focused research are more meaningful and actionable for managers than is often the case with traditional, theory-driven doctoral research.

The DM Program has evolved to rely more heavily on interpretive methods where qualitative research is concerned. Candidates develop grounded theory reflecting practitioners' realities (Glaser & Strauss, 1999) and focusing on processes that senior managers can influence. Students are trained in ethnographic methods, including phenomenological interviewing (Spradley, 1979; Kvale & Brinkmann, 2009) and naturalistic data analysis (Lincoln & Guba, 1985; Emerson, Fretz & Shaw, 1995; Strauss & Corbin, 2008). In the initial stage of their research, undertaken in the first months of doctoral study, students apply these methods in small sample studies of expert practitioners who are living the researchers' focal problems. This immediately inserts the budding practitioner-scholars into the field to discern how other managers are framing and

experiencing their chosen problem. Importantly, this grounding in practice is consistent with the attributes of practice-oriented research in other evidence-based fields—it investigates the conditions of practice and the actual experiences of practitioners (Rousseau, this volume). In parallel, the nascent researchers receive in-depth instruction in information literacy, enabling search for a range of relevant scholarly literatures to inform and conceptualize the problem (Werner, this volume).

Ethnographic and grounded theory research methods enable problem-focused researchers to better understand the lived worlds of managers—and is likely to be valuable in practice-oriented research more generally. We found that students' qualitative inquiry yielded insights into the nature of the problems that these senior manager practitioner-scholars failed to see when they were operating in their everyday managerial mode. Consistent with studies finding that organizational members lack an ability to specify key features of their own organizational culture (c.f., Capelli & Crocker-Hefter, 1996), managers can find it difficult to objectively identify and analyze key features of the problems they confront. Stepping back to systematically and qualitatively observe a phenomenon provides insights otherwise overlooked during business as usual. Not only is it difficult for managers to recognize and appreciate the key features of a particular problem "in the trenches," the pace of activity and pressure for rapid action can impede the reflection time necessary to process those problems in a meaningful way.

What is it about phenomenological interviews that led candidates to revise the framing of their problems of practice? Ethnographic interviewing differs from structured interviewing by not relying on respondents' assessments and analyses. Rather, it collects their descriptions of events and social interactions related to the problem. When analyzed by the practitioner-scholar researcher, these descriptions inevitably provided insights into the problem's underlying issues. We learned the value of these expert practitioner interviews by accident. Initially, faculty simply suggested to students that they engage in one or two interviews with managers experienced with the problem. Students found these interviews useful and conducted additional interviews on their own. Doing so helped to build skills used in the many phenomenological interviews required for their subsequent qualitative research projects (Table 2).

Besides helping to identify the evidence needs of managers, ethnographic interviews may offer an additional possibility for fostering EBMgt. When subjects describe their experiences in ethnographic interviews, they have an opportunity to ponder their own "evidence" for making decisions. Managerial informants often thank students for the interviews, expressing appreciation that the time and method involved permitted valuable reflection and insight. Many requested further information about the research, eager to learn new ideas and practices. Such comments indicate that an ethnographic interview based upon a problem of practice in itself can be a valuable tool for opening respondent-managers to the consideration of research-based evidence and knowledge.

In the quantitative research phase of the DM Program, a parallel evolution resulted in the use of structural equation modeling to analyze constructs based on candidates' collected survey data. Students are directed to find and customize validated scales that reflect important phenomena identified in their qualitative research. Often, students also construct and validate their own scales, if they have identified concepts that have received little or no prior research. We have found that methods of structural equation modeling, by enabling the simultaneous analysis of differing constructs, capture sufficient conceptual complexity to match the most important features of a problem of practice. In addition, since structural equation modeling is not uniformly used or even understood in practice, it permits students to explore the possibility of deeper, more complex quantitative relationships than they may have previously considered.

Broadening the Adoption of Problem-Focused Research

The problem-oriented style of research described above, with its constant attention to managerial practice, can be understood as corresponding to key elements of EBMgt defined and conceptualized by Briner et al. (2009). Their definition of EBMgt as combining the use of particular sources of information – practitioner expertise and judgment, evidence from the local context, critical evaluation of best available research evidence, and the perspectives of people affected by the manager's decision -- focuses on the particular, the specifics of problem and context the manager confronts. Correspondingly, problem-focused research attends directly to a particular problem situation that confronts managers. In seeking to discover involved managers' understandings and perspectives on the

problem, including their constraints and their knowledge of the problem's context, it addresses Briner et al's fundamental claims about the nature of EBMgt -- it represents what managers (not scholars) do, concerns managerial practice, involves managers generating their own knowledge, and requires getting research out to managers.

Problem-focused research has evolved sufficiently that its key features have been tested in various doctoral education and research settings. For more in-depth discussions, we suggest two references. As introduction, see Salipante and Aram's (2003) overview of practitioner-scholarship, based upon the doctoral education of advanced practitioners in the DM Program. For greater detail and a broader targeting of doctoral students and faculty studying organizations, see Andrew Van de Ven's *Engaged Scholarship* (2007). The two approaches are highly complementary. Combining their stated characteristics, as in Table 3, provides a concise summary of elements of problem-focused research that can be pursued by students and faculty in both alternative and traditional doctoral programs. The reader is invited to note differences from theory-driven research and consider their consequences, as we do below.

---------- Insert Table 2 about here ----------

By conducting research that engages managers in a systematic inquiry into problems of practice rather than problems of theory, a researcher avoids framing a challenge and its associated phenomena in their own construction of reality.

Highly lauded scholars have learned the value of focusing on reality as experienced by practice. In his work on the effect of automation on the skill requirements of industrial jobs, Michael Piore framed a problem and survey in conjunction with John T. Dunlop, one of the most renowned labor economists and labor relations experts in the U.S. and a former Secretary of Labor. Yet Piore (1979) reported that his respondents steered him away from this academically driven framing as disconnected from their realities. Similarly, Sutton and Rafaeli's (1988) exemplary research turned to participant observation and semi-structured interviewing in order to comprehend their subjects' realities, when their theory-driven research produced unexpected and unexplainable results (Frost & Stablein, 1992).

Problem-focused knowledge production is not a novel idea, even if infrequently used in formal management research. It is an everyday practice among managers, since they continually generate their own practical knowledge in a manner consistent with Dewey's (1929) work on pragmatism (Aram & Salipante, 2003). This knowledge always arises from a practical, real-world problem. Gibbons and associates (1994) differentiate two modes of knowledge production, with Mode 1 being the traditional academic model. Mode 2 knowledge generation occurs more naturally among people in practice, starting and ending with a relatively short-term problem. Knowledge to solve the problem is generated by drawing together, often across the boundaries of organizations and occupations, the specialized expertise of a variety of individuals. The analog in problem-focused research is drawing together, often across disciplinary

boundaries, multiple informative theories and bodies of empirical studies. The criterion for successful knowledge generation in Mode 2 is a practical solution to the problem, in the form of a process, product or service. Due to that criterion, participants in the knowledge generation are socially accountable for their efforts in the short term, in a manner that academics are not. Once the problem is solved, it is rarely codified and there is little attention to generalizing the practical knowledge beyond the particular situation in which it was generated. The knowledge is typically not spread through publication but rather through individuals moving from one project or employment context to another.

Those concerned with the limited application of Mode 1 produced knowledge by practitioners have proposed that the academy meld some elements of Mode 2 knowledge production into its research efforts. Most specifically, Ann Huff (2000) has proposed a Mode 1.5 synthesis. This synthesis is more demanding than Modes 1 and 2, requiring the meeting of additional criteria beyond that of either mode alone. As the characteristics of Van de Ven's engaged scholarship outlined in Table 3 suggest, Mode 1.5 requires that participants in the knowledge production process engage with people in practice and address their issues, while continuing to strive for abstraction and generality.

To more fully realize EBMgt, the academy must expand Huff's (2000) Mode 1.5 idea considerably. Rather than melding the nature of the knowledge production in which practitioners and scholars engage to create a hybrid, we assert that new forms of scholarly inquiry be considered. Specifically, problem-focused research should be recognized as a model of knowledge generation with

its own epistemology and methods, prizing and producing both particularized and generalized knowledge (Aram & Salipante, 2003) by synthesizing relevant theories around a reality-framed problem of practice. In the sections below we develop the claim that, although rich scholarly traditions have been built upon exploring problems of theory and should be continued, only inquiries into problems of practice (with their amorphous, transdisciplinary and sometimes baffling dimensions) will yield evidence-based solutions that match senior managers' needs. This form of engagement with the research ultimately creates more ambidextrous managers, equally at home with intuition and with evidence while integrating the two. By reframing scholarly inquiry to include knowledge generation driven by the problems of practice, we lever the power of alternative doctoral programs, institutionalizing their processes and creating more opportunities for EBMgt to find its way into classrooms and managerial practice.

Increasing Relevance through Synthesis of Theories

Although problem-focused research starts and ends with a problem of practice, it is not atheoretical. Quite the contrary, as noted above, problems of practice should be informed by not one but several theories. In the DM Program we have relied on a premise that has been repeatedly confirmed:

> Rarely, if ever, does a single body of evidence or theory sufficiently inform a problem of practice.

Accordingly, each candidate is guided by several advisors to search for evidence and theory that lend insight into phenomena associated with a problem of practice. Relevant literature is often located in diverse disciplines, requiring

access to advisors from a variety of disciplinary backgrounds. In this regard, problem-focused inquiry diverges sharply from theory-based inquiry that observes disciplinary bounds, and even from research that is inter-disciplinary in a limited fashion. An active search process is necessary to identify scholarly literatures that offer promise for remedying the problem. This process is inevitably inefficient; false starts are common. It is also conceptually demanding, since the candidate must integrate a range of evidence and concepts from different scholarly literatures

As noted in Table 3, the need to integrate multiple theories is characteristic of problem-focused research into senior management problems. This characteristic is both a critique of and significant challenge to EBMgt, since management research and education are typically segmented by disciplines (e.g., applied psychology) and functions (e.g., accountancy). Integration of multiple bodies of research-based knowledge does not fit neatly into either normal or revolutionary science (Kuhn, 1962). Rather, it is a *synthetic science* that requires substantial creativity (Gardner, 1988) in order to select and integrate disparate concepts and evidence. It is demanding of nascent scholars and, for that matter, traditionally trained academics. Methods of conceptual integration across disparate bodies of literature are not formally developed in academia. Few faculty are expert in them, since the scholarship of integration (Boyer, 1990) has been slow to gain acceptance in traditional academia (Dauphinee & Martin, 2000), despite calls for more interdisciplinary studies.

A consequence of this dearth of integration across disciplines in the academy is that many members of the DM Program have experienced a significant challenge in using multiple theories, a challenge that might be termed *conceptual reductionism*. When initially developing a conceptual model to address a problem of practice, a candidate is sometimes pushed by a faculty advisor to narrow the conceptual focus to a single theory with which the advisor is most familiar. This is a natural often-unconscious process, since many academics make their contributions by dedicating themselves to one body of theory. Conceptual reductionism also occurs when designing the conceptual model that guides the quantitative phase of the research, this time due to methodological considerations rather than theoretical commitments. The temptation at this stage is to narrow the focus to those constructs that have been well researched quantitatively, offering validated instruments to the researcher.

We would like to claim that skills of integration are taught formally in our doctoral program. They are not. Rather, candidates are pushed by the faculty that teach their research methods courses to identify, explore, select and synthesize evidence and concepts from a range of literatures. As problem-focused researchers, practitioner-scholars must be willing to hold their ground with discipline-based scholars concerning the importance of being synthetic. Faculty who teach the methods courses in the DM Program attempt to be the watchdogs for reductionism. In pushing our candidates, we not only encourage them to bridge the divide across disciplines to develop effective evidence-based insights to address their problems of practice, we also encourage our faculty colleagues to

think more broadly about their own fields, enriching their experiences and creating yet another "hybrid" group of scholars with a focus on practical relevance. Both faculty and students are on an important journey, as we strive to maintain the multi-disciplinary nature of problem-focused inquiry.

Synthesizing Concepts, Near and Far

In quantitative research, transporting findings from one setting to another raises questions about external validity, calling for field research to test the application. In problem-focused inquiry, however, findings and concepts from other contexts are seen as potentially informative. From an interpretive research perspective, the issue is whether a particular concept developed in one context can be transported to another to aid in thickly describing phenomena in one's focal context:

> Theoretical ideas are not created wholly anew in each study; … they are adopted from other, related studies, and, refined in the process, applied to new interpretive problems. If they cease being useful with respect to such problems, they tend to stop being used and are more or less abandoned. If they continue being useful, throwing up new understandings, they are further elaborated and go on being used. (Geertz, 2003, p. 192.)

For problem-focused research, identifying several concepts that can be usefully transported to the focal managerial context is a way of responding to the complexity of the problem of practice. Drawing from anthropology, we have described this transporting process in terms parallel to those of *emic* and *etic* knowledge. Theory that is developed in a particular context and that reflects members' understandings can be understood as "experience-near" (Geertz, 1974)

to a particular field of practice. In our program we apply this idea to theory that is specific to a given context, terming it *concept-near*. An example is agency theory in the field of corporate governance. In contrast, *concept-far* refers to theory that has been developed in other contexts, including other industries. Often, concepts-far are at a higher level of abstraction with potential application in a wide range of managerial situations. Examples include structuration theory, complexity theory, and theories of collective action. Each of these theories provides a broad integration framework that enables the researcher to incorporate several otherwise disparate concepts. Such theories are not often taught in management programs, but senior managers in the DM Program find them to be powerful conceptual resources for examining their problems.

As Geertz suggests in the quotation above, attempts to transport concepts and findings from concept-far literatures are valuable for theory development. They provide a test of the theories' utility in particular managerial contexts, and they provide an opportunity to refine the theories. In this fashion, problem-focused inquiry can make two contributions that support the generation and application of evidence-based knowledge:

1. Problem-focused inquiry can further the development of practice-relevant theory by academics, and
2. Problem-focused inquiry can identify broader bodies of evidence and theory that senior managers would find useful in addressing their problems.

The first of these points suggests that it is realistic to ask management academics to engage in problem-focused research, particularly in partnership with

colleagues from other disciplines, since it leads to theory development. The second point indicates that engaging in such research would increase the relevance of research findings for senior managers, expanding their use of research. Taken together, these points suggest that the problem-focused research developed in alternative doctoral programs could be exercised by many management academics and become integral to the development and dissemination of EBMgt in practice. As we reconsider the nature of the problems we address, we bring the academy's scholarly contributions closer to the real-world problems found in 21st century management, a point that we attempt to develop next.

The Revealed Nature of Senior Managers' Problems

What are the characteristics of 21st century management problems? Put another way, what are managers' knowledge needs? Madhavan and Mahoney (this volume) note the challenges that EBMgt encounters in addressing "macro" issues that managers face, such as those in strategic management. Similarly, we have found that senior manager practitioner scholars focus on problems of practice at the macro level. These problems differ in scale and scope from those encountered at lower managerial levels, the levels typically considered as targets for EBMgt.

Proper framing of a problem of practice is essential to producing managerially useful knowledge. The goal of problem framing is to identify puzzling or challenging aspects hindering effective outcomes. For instance, one DM student was concerned about misguided technology investment decisions in medicine. He eventually framed his problem as involving surgeons' rejection of

new clinical technologies, which led his inquiry to ask, "How do surgeons make decisions to adopt or reject clinical technologies?" While at first blush this may seem like a theoretical inquiry, for practitioners developing and disseminating new innovative medical technologies, this decision making process on the part of users was the critical puzzle to unravel. Because of the myriad directions in which any research project might proceed, effectively pinpointing the challenging aspects of the problem identifies the particular types of research-based knowledge that managers need.

To better understand senior managers' knowledge needs as they search for information relevant to solving macro-level problems, we reviewed the problems of practice and related research questions recent graduates of the DM Program have addressed. Analyzing these problems of practice led us to several tentative, but interesting, interpretations. First, the time horizon of these questions is, in contrast to Gibbons et al.'s (1994) specification of Mode 2, practitioner inquiry, quite long. Second, they are complex, tending to operate at multiple structural and theoretical levels. And third, they vary broadly in scope, raising interesting insights about the generalized nature of their outcomes. The following paragraphs illustrate each of these in turn.

Long Time Horizon

The problems of practice represented in practitioner scholar research are persistent and vexing. They reflect the knowledge needs of senior managers concerned with guiding their organizations in a strategic fashion, rather than smaller, short-range problems faced in day-to-day managerial life, even though

the insights they generate contribute to the daily routine. As a result, these problems of practice have long time horizons, or might even be viewed as time-neutral. For example, one student chose to explore the role of governance and leadership in inter-organizational collaborations, seeking to better understand how to make these collaborations more effective over time (Brennan, 2010). Another sought to understand how for-profit executives fare when migrating into leadership positions in the non-profit world (La Belle, 2010). A third student looked deeply at how companies might repair trust at times when loyalty and customer confidence have been severely damaged by company or industry actions (Talton, 2010). The context in which these questions arise is timely and very current. Experience in the intuitive world of practitioners provides unsatisfactory answers to these broad questions.

Practice-oriented research generates new avenues for thinking about these critical and persistent challenges. The combination of the timely nature of the context of the challenge, together with the extended, nearly time-neutral nature of the inquiry, suggests that EBMgt may be well positioned to tackle the "wicked" problems (Rittel & Webber, 1973) of managerial and organizational life. These wicked problems of practice are ones in which the nature of the problems that practitioners face are not satisfactorily answered in the practitioner literature, do not lend themselves to a "silver bullet" response, or are not answered by a single body of research-based evidence.

Structural and Theoretical Complexity

Nearly all of the enumerated problems of practice we reviewed represent complex problems that can be explored on multiple levels – structurally and theoretically. La Belle's (2010) work with crossover CEOs (as described above) has application at the sectoral level (for nonprofit sector leaders concerned about mission dilution), the organizational level (for organizations seeking effective leaders), the personal level (for current and future nonprofit leaders), and at the team level (for Boards and search committees seeking to better understand the process to select and develop effective leaders). La Belle (2010) drew upon several theories from upper-echelon theory to socialization theory to leadership theories of behavioral complexity, creating a platform that addressed the issues unique to her inquiry.

The work of a fourth student, Teague (2010), similarly captures structural complexity by drawing on multiple theories. Seeking to understand how to drive employee volunteerism, Teague (2010) searched for academic literature to frame the problem. Drawing on four different academic theories, he created a frame of reference for potential volunteers, for corporations seeking to encourage volunteerism and for nonprofits looking to corporations to help them recruit people to assist in their causes.

Finally, marrying structural as well as theoretical complexity, the research of a fifth student investigated the role of leadership and organizational learning in creating effective innovative outcomes (Smith, 2010). Her initial problem of practice sought to understand how leaders use conversation to drive learning and innovative co-creation of solutions to organizational challenges. As her work proceeded, she examined her findings at an organizational level, asking whether

certain types of balanced leadership led to more effective innovation and ultimately to better company-level financial performance. In each of these cases, the theories and sources that formed the foundation of her work shifted with the unit of analysis. The findings were highly consistent across both structures -- individuals assessing their teams and their own behaviors and individuals assessing their organizations -- but the sources and methods differed. The former drew on adult learning theories, discourse analysis, motivation and absorptive capacity, while the latter applied multi-factor leadership theory and ambidextrous innovation theories. In fact, although the two sections of Smith's (2010) work provided a consistent set of insights about organizational leadership and innovation, her qualitative work was accepted for presentation at the Annual Meeting of the Academy of Management by the Managerial and Organizational Cognition Division, while her quantitative work was accepted the following year by the Technology and Innovation Management Division of the same body. Her multi-faceted problem of practice led to application of multiple theories from difference academic fields, and to contributions to those fields' theories.

Variations in Scope

Problems differ in their scope, some applying to single industries, others to multiple, some to single societies and others to a range of geographical or cultural settings. These differences have implications for the generalizability of the knowledge needed, raising issues of external validity (for quantitative evidence) and concept transportability (for qualitative evidence).

Our student Adelegan's (2009) work was very specific to Nigerian pulp and paper companies, as he sought to understand the drivers of adoption of eco-innovation. Finding a strong link between the adoption of cleaner technologies and higher firm performance, Adelegan used his research to make a case for a particular course of action by these companies. Might this apply more broadly in other developing countries or in other industries? Perhaps his findings may be generalized, but the research scope was quite limited to a particular, highly localized challenge.

Another student sought to understand the drivers of performance in academic medical centers, in particular the role of organizational sensemaking among the sponsors, designers and implementers of change (Sheshadri, 2010). Although Sheshadri's (2010) work was context-specific, looking into the role of doctors and other important stakeholders, his insights on the role of the team in implementing change has important applicability to complex organizations broadly.

How Senior Managers' Problems of Practice Evolve

Earlier, we noted that the stated problems of practice evolve as the problem-focused researcher proceeds through key phases of their multi-method project. Here we consider how that happens, and what this portends for senior managers' use of EBMgt. Fundamentally, conceptions of a problem of practice evolve as practical realities and theory interact. As Talton (2010) reflected:

> I came in wanting to help a company become more beloved, developing loyalty through an emotional connection with

> stakeholders. But this seemed to be too big a problem. I realized that any emotional connection, or even transactional loyalty starts with trust. Trust became my focus while the economy was tanking and trust was being violated all over (leaders, bankers, priests). This led me to ask, how can we repair trust when it's broken?

Talton's (2010) stated problem evolved in practice as she was looking to shape its parameters. Further evidence of the timely nature of the stated problems, changing external factor necessitated a flexibility that might not have occurred were her work a problem of theory.

Fisk (2010) reported to us a similar experience: "I came in to study enterprise integration assuming that the answer would be technological. But the literature took me down a social processes path." And Sheshadri (2010) agreed: "I started thinking about the technology of change (like Six Sigma and other similar processes) only to discover that it's less about that than about how incompletely we have studied teams. Sensemaking came out of my concept paper process." With a theory and a new perspective to shape his thinking, Sheshadri (2010) observed that he had started with a quite narrow focus, switched paradigms, widened his scope, shifted and ultimately found a very different set of insights than he expected to find. Both Fisk (2010) and Sheshadri (2010) developed critical insights that might not have developed had they not begun a deep literature search; the academic literature held insights that not only surprised them but helped them to shape fundamentally better questions.

Finally, Oliver (2010) started with a broader problem of practice as he sought to better understand the financial impact of microfinance in emerging economies. Over time, his focus narrowed considerably as he looked at the effect of micro-credit on poverty in a single African country, using an established database to provide a wealth of information.

In every case we examined, however, the doctoral students were seeking insights that extended beyond their own felt challenges -- even the relatively narrow questions resulted in broadly stated descriptions of their own scholarly identity. Clearly, they all sought to bring a range of new conceptual tools to their multi-level, complex problems and perceived their own journeys as "proof" that research-based evidence provides insights to persistent problems. We asked one cohort of graduating DM students to write statements of their scholarly identity. The resulting statements mitigate any concern that engaging in problem-focused research would lead scholars away from theory. We suggest again that EBMgt provides an important avenue to permit practitioners to reflect upon their own contributions to problem-focused practice. As more practitioners are trained in its use and more academics adopt a problem-focused approach, EBMgt's value to practitioners will be recognized and will proliferate.

In sum, problem-focused research seems to lend itself to addressing the macro challenges senior managers face in guiding their firm's strategic, operational and functional direction. The scope and timelessness of the questions practitioner-scholars ask suggests that EBMgt value may be most evident to

senior level managers, since they tackle complex, multi-level problems that have eluded solution for years.

Senior Managers' Problems Call for a New Mode of EBMgt Problem Framing

To respond effectively to the knowledge needs outlined directly above, EBMgt must provide senior managers with theory and evidence that reflect the same holistic and strategic perspective that these managers apply to their complex problems. Elsewhere in this Handbook, Rob Briner and David Denyer discuss the proper framing of questions in systematic reviews of empirical research that will be effective for EBMgt. They present examples of questions "that require much greater specificity." Since systematic reviews must identify extant bodies of empirical literature from which to synthesize evidence, and since those bodies of research are narrowly focused, a review question must itself be narrow. Nearly always, a selected body of such research deals with a single phenomenon, requiring a narrowing of the problem to that phenomenon. This narrowing is not only necessary but also effective at providing evidence useful in particular managerial decisions, as Briner and Denyer illustrate. However, this very narrowing is ill-suited to many types of problem statements that our senior manager scholars frame.

Consider Briner and Denyer's example of a question requiring greater specificity for a systematic review: "How is trust between organizations broken and repaired?" This question is exactly of the complexity that senior managers face, as discussed above – long in time horizon, broad in scope, and involving

multiple levels. Note that Talton's (2010) problem of practice, discussed earlier, was of a remarkably similar focus and breadth to the cited example – namely, the breakdown of trust. For Talton (2010), the context was trust between organizations and their consumers. The breaking of bonds of customer loyalty led she and other senior managers to have a strong concern with broken trust. Her problem's breadth was maintained at that managerially relevant scope throughout her research by framing her research question as, "How can organizations repair trust when it is broken?" In her inquiry this breadth was maintained first by synthesizing two bodies of theory to address both micro and meso-level phenomena, and then by conducting field research directly tied to the stated problem of practice. Achieving this breadth is not easy. In each research project, the problem-focused researcher faces the daunting task of framing the problem and research question in a way that retains managerial relevance, yet still makes the question researchable.

If senior managers are to find EBMgt relevant, narrowing each problem so it matches an extant body of research will reduce their view of its relevance. Problem-focused research can be contrasted with applied research, with the latter understood as the application of a particular theory or evidence to a problem. Applied research requires a narrower framing of the problem to match an extant body of research. However, when EBMgt proceeds this way with a complex problem, senior managers will reduce their assessment of EBMgt's relevance. In contrast, relevance can be maintained through the methods of problem-focused research discussed above, particularly the synthesis of multiple bodies of

academic knowledge, specification of a research question that targets the key managerial puzzles and knowledge deficiencies, and research design that addresses the broad problem in a specified managerial context. These methods enable EBMgt to address the complex problems that senior managers face.

Lack of Respect for Management Research and Researchers

So far, this chapter offers positive developments concerning EBMgt, however, there is a "dark-side." Strong forces operate against senior managers' adoption of EBMgt. We turn to those here. Certain experiences in the DM Program indicate severe challenges for EBMgt's goals of getting research out to practitioners for their use.

The "Will" and the "Skill" for EBMgt

The most significant managerial challenges to EBMgt we believe center on two elements: managerial dispositions toward research-based evidence, and managerial skills for locating and critically interpreting such evidence for use in their decision-making. In the practical world, these concepts might be described simply as "will" and "skill." The prototypical candidate in our program is an executive, typically 40- or 50-something in age, with substantial experience at high levels of for-profit, nonprofit or public sector organizations. These senior managers have self-selected into doctoral education and, accordingly, should be more inclined toward using scholarly products than their peer managers – that is, they have higher EBMgt "will" than their managerial brethren. Our general experience, however, is that even senior managers who self-select to pursue scholarly work are largely unaware of research-based evidence. They are neither

disposed toward, nor skilled in, reading empirical research and reviews of such studies. We have discovered that our senior managers' doctoral education must include features that change their dispositions toward research and provide them with skills in locating scholarly literature and critically interpreting it. A particular challenge in developing senior managers into practitioner-scholars is to change their mind-sets such that, rather than being committed to a particular problem solution or a theory promising such a solution, they become committed to pursuing a research question that will yield empirically-based knowledge. Often, this can be accomplished in a single semester with, as we discuss in the "Overcoming Barriers" section below, instruction and tasks that develop skill in locating and deconstructing empirical research studies. Similar student tasks might be applicable to masters-level education, in order to provide a larger cadre of managers with EBMgt-relevant dispositions and skills.

As with senior manager doctoral candidates, faculty in the DM Program also face challenges of dispositions and skills in problem-focused research. Regarding will, we faculty have found that we must often bend on our disciplinary commitments to particular theories in order to guide candidates toward other theories that might better inform their problems of practice. We have discovered that we lack skill and methods for synthesizing multiple theories, as problem-focused research requires. And, we have found that we are now more critical and reflective regarding our own research and its practical impact, or lack thereof. These are important issues because the dispositions and skills of faculty

as well as senior managers bear heavily on the possibilities for more widespread adoption of EBMgt.

Skepticism Regarding Research-Based Evidence

Other contributors to this handbook, particularly Kovner and Leung & Bartunek, lack of managerial receptivity to EBMgt. This barrier has a weak and a strong form. The weak form involves a bias against empirical research and its tendency toward descriptive analysis of small slivers of a particular theory and toward the prescriptions of management gurus. The strong form is manifest by an active disrespect for doctorally-trained academics, seen as possessing slowly-derived, theory-driven knowledge out of touch with practical realities.

Doctoral candidates can be expected to be well-read with an appreciation for scholarly thought, consistent with EBMgt's call for managers to incorporate research-based evidence in their decisions. Indeed, we have found that participants in our alternative doctoral program were active consumers of "new thinking" prior to entering our program. They sought to stay abreast of knowledge in the management field by reading sophisticated analyses in places such as *The Economist* and books by popular management authors. In this regard, they likely distinguished themselves from their managerial colleagues, betraying their interest in advanced graduate education and willingness to commit significant time to learning the craft of empirical research. Once in their doctoral studies, they were encouraged by their instructors to locate and read academic literature relevant to their individually chosen problems of practice. Depending on their specific educational and professional backgrounds, some were able to

locate and master empirical work from respected academic journals, while others experienced great difficulty in doing so. Some individuals in the latter group searched for writings by management gurus known to them. These writings were not empirical research reports but, rather, prescriptions based on the scholar's accumulated work and wisdom. When one student was encouraged to search for the empirical research that a particular scholar had produced and that underlay the scholar's claims, the candidate reported that he could not locate such work. The good news is that these senior managers were willing to incorporate thinking from the academy in their decision-making. The bad news is that their will and skill in reading and incorporating managerially focused literature does not always transfer to will and skill in locating and consuming empirical research.

Another form of skepticism derives from unfamiliarity with statistics and quantitative research methods. In the first months of their doctoral studies, some students report that they simply skipped the methods and results sections of articles. By so doing, they were expressing their discomfort with the most uniquely scholarly sections of quantitative empirical research, those requiring the most critical reading to assess the work's rigor. These omissions speak to the research's relevance to these managers. But, as one student reflected upon completing the program, "I now realize the importance of being able to understand all of the analysis myself and being able to access knowledge that I didn't previously understand."

Additionally, some candidates lack experience in synthesizing qualitative findings to develop meaningful, thoughtful observations. The bullet-point

presentation styles managers widely use can impede the ability to inquire, analyze, synthesize and report in clear, well-articulated prose. These underused skills can create obstacles in writing, as well as critically reading texts whose insights would contribute to the shape and outcomes of their research. In fact, each year a few new candidates drop out due to the program's critical reading and writing demands. In addition, formulaic approaches to classic management dilemmas presented in the practical literature do not always transition effectively to evidence-based inquiry; as a result, students often find that relearning methods for crafting an inquiry and stating a problem is as hard as developing the evidence to inform a solution. Finally, to be successful, managerial students must commit themselves to inquiry and not rush to demonstrate a proposition. These factors, as well as time challenges and life interruptions, drive the lion's share of the dropout rate in the program. This suggests that there may be a reasonable proportion of senior managers that will struggle with evidence-based management, no matter how compelling its contributions.

Finally, problem-focused research demands that its pursuers develop the skill of moving across levels of abstraction, from the particular to the general, and back again. Many of our doctoral candidates initially experienced difficulty in finding research relevant to their problem of practice. The difficulty arises when a student looks solely for concept-near studies, only to discover a lack of empirical research on the particular topic and in the specific setting of interest to the student. For example, LaBelle's (2010) empirical work on CEOs crossing over to the nonprofit sector was a first in its field. Her research necessitated

significant extrapolation from other areas of leadership research, including studies of managerial transitions and leader competencies conducted in various for-profit settings. Eventually, with assistance from their instructors and reference librarians, candidates discover that they can build their conceptual models by transporting to their focal settings concepts and research from other settings. They learn that their problems of practice and research questions need to be restated at higher levels of abstraction, in order to identify and apply research-based knowledge that was concept-far. Managers searching for research-based guidance will likely encounter similar difficulty, and thus benefit from specific research training not currently in the typical manager's tool-set.

Past education plays a role in how practitioner-scholar doctoral candidates approach the research literature. Engineers have less difficulty in coping with the methods and results sections of quantitative research. Professionals from fields such as law regularly use scholarly literature, making them more at ease with empirical management research.

Is skepticism about research-based evidence common among managers? The revealed preferences of some among our scholarly-leaning students -- namely, favoring popular management literature and avoiding empirical research -- suggests that a broad cross-section of senior managers are unwilling or unable to access research-based literature directly. We consider antidotes to this skepticism, after discussing the stronger form of managerial unwillingness.

Active Disrespect of Research-Based Evidence

Most DM program graduates remain in managerial practice during and after their doctoral studies. In surveys of graduates, a small but significant number reported that they had encountered active disrespect for their doctorates among some clients. This disrespect was sufficiently strong and frequent that the graduates had learned that, in certain situations, not to disclose their doctorate.

Others experience a misfit between their positions and their newly-acquired scholarly skills. Some have been told by their peers that they had changed, and not necessarily for the better. Many practitioners unaccustomed to academic theory do not favorably regard the word "theory" -- the moniker "theoretical" is often likened to "abstract" or "irrelevant to everyday practice". These candidates frequently sought new positions where they could express their scholarly skills. In contrast, other graduates successfully continued in their current organizations, applying their research findings and scholarly skills in such settings as medical centers where education and research are valued.

One DM candidate investigated the use of research-based evidence in decision-making bodies charged with policy formulation (Walker, 2009). She found major differences across institutions, with some highly politicized bodies neither seeking nor using such evidence in any systematic fashion. A common belief in the latter was that research-based evidence is not definitive. Rather, members saw it as marshaled by parties on both sides of an argument to support their particular positions. That such a jaundiced perspective would exist among managerial decision-makers would be disheartening enough, but these findings provide even more cause for pessimism since the subjects of the research were

themselves academics -- specifically, educators from community colleges. If significant numbers of educators disrespect empirical research as irrelevant to their own decision-making, and if few among us practice in our educator roles the type of evidence-based teaching discussed by Goodman & O'Brien's (this volume) should we be surprised that some managers actively disrespect empirical research and the academics who produce it?

The claim here is not that active disrespect permeates all managerial settings. Rather, the indication is that settings vary dramatically in their receptivity for research-based evidence. And, settings where receptivity might be expected, such as educational settings, are not always characterized by evidence-based decision-making. Consequently, those training doctoral candidates, and proponents of EBMgt, should be realistic about the prospects for active consumption of practice-relevant research. The implication is that initial EBMgt efforts should be targeted, and doctoral programs interested in promoting EBMgt might best orient themselves toward those organizations and managerial functions that favor the application of research-based knowledge. Indeed, as one first-year student reported, as soon as her colleagues in the organization's human resources function heard of her doctoral studies, tbey asked her to partner in several publishing endeavors.

Overcoming Barriers to EBMgt through Pedagogy and Reframing

Although simply training a cohort of practitioner-scholars goes some distance toward demonstrating the value that exists at the intersection of practice and the academy, sensitivity to the particular challenges suggests that further efforts are

required. In particular, how might we create antidotes to skepticism and disrespect for empirical research? From observing the journey of Doctor of Management candidates, we offer several suggestions.

To mitigate skepticism of academic research, we suggest the following:

1. Programs that purport to address practitioner-scholar research must stay scrupulously focused on rigor and relevance. This means continually shifting between rigorous academic process and very practically focused and well-articulated problems of practice. As referenced above, pursuing relevance and rigor provides an ever-present challenge not only for the student but also for the members of the faculty advising and engaging them. This process of learning enriches and expands the skill-sets of each. Clearly, the academy must not view practitioner-scholar programs – doctoral or otherwise – merely as opportunities to indoctrinate the uninitiated.

2. Practitioners seeking evidence-based insights need significant time and instruction to learn, appreciate, and adapt to the style of academic research. It is key that they develop skill in critically assessing the quality of scholarship. Toward this end in the DM Program, two instructional approaches have proved critically important. The first type of assignment requires students to *deconstruct* the structure of empirical research articles. Over the course of one semester each student searches for and deconstructs approximately twenty empirical studies relevant to that student's particular problem of practice. With assistance from reference librarians and scholarly online search tools, students become skilled at finding relevant empirical literature. In their initial searches, using *Google*

Scholar rather than standard academic bibliographic databases is critically important, since has familiar features. And, once they look beyond concept-near to concept-far literature, students are surprised at the amount of research relevant to their problem. Although some are challenged by their initially meager knowledge of statistics, repeated deconstruction of articles' structure enabled students to become comfortable with digesting empirical studies within a few months of entering doctoral studies.

Part way through their first semester, an additional requirement is added to the deconstruction assignments: to analyze the author's *line of argument*. Toulmin's (2003) framework for deconstructing arguments is a valuable tool for this purpose. His framework of claims, grounds, warrants, backing and qualifications (Toulmin, Rieke & Janik, 1984) alerts students to weakly vs. strongly-supported claims, and enabled them to identify the various bases on which a claim could be supported. It provides students with a conceptual tool for knowledgeably critiquing an article's quality, and for constructing their own scholarly work. In addition, this deconstruction enhances our nascent practitioner-scholars' respect for well-supported arguments and rigorous empirical work; it gives them the skill and confidence to tackle scholarly literature. Their skills and respect are deepened by contrasting exemplary scholarly work with popular management pieces, leading them to become highly critical of less careful, poorly supported work on both sides of the aisle.

3. Doctoral program members -- faculty and students alike -- must reframe the meaning of the word "theory." Faculty can reframe theory beyond simple

unitary models to include trans-disciplinary syntheses that better match the complexity of many managerial problems. Managers can reframe their mindsets to understand that a theory is not by definition an ivory tower concept and that good theories are built on empirical testing. Similar to the function of a systematic review for EBMgt, a well-tested theory represents knowledge based on a body of empirical research. "There is nothing as practical as a good theory" sounds silly on its face, but is far more meaningful than it seems. All managers and leaders have a set of beliefs, or "implicit theories" that guide them, whether consciously or not, in their judgments and decisions (Levy, Stroessner and Dweck, 1998). By better understanding implicit theories that guide managerial decision-making and their role in determining ultimate outcomes, there is potential to reframe an important element of managerial skepticism in a manner that supports evidence-based inquiry. Although our doctoral cohort may represent the "converted," many express a newfound appreciation for theory. As one student commented, "I find myself now looking to the literature not for answers but for theories."

To mitigate the disrespect some of our doctoral candidates experience from their colleagues, we suggest the following:

1. Engaging industry associations as research partners and disseminators. Such associations often have educational missions and can reach industry members who appreciate research-based knowledge. The associations add legitimacy to the knowledge and reframe it in ways relevant to their members.

2. Requiring presentations of research-based evidence by practitioner-scholar doctoral candidates to their managerial peers, presentations that explore with those peers its incorporation in their practice. For instance, several of our doctoral candidates presented their research and their findings within their own organizations and the settings in which they collected data, with joint discussion of how the research might directly benefit the organization. Other candidates presented their findings in small colloquia where the audience constituted managers and academics from the region. Prominent expert practitioners served as discussants on the candidates' research papers, assessing their relevance and stimulating discussion. These discussants and the general managerial and academic participants were enthusiastic about these experiences and encouraged the program to create more exchanges around research and practice, although discussants often remarked that they had to read a paper three times before they caught its meaning.

Leung & Bartunek (this volume) offer additional ideas for creating forums for interchange, and they note the importance of clear communication. Indeed, after being immersed in academic terminology for several years, our soon-to-graduate scholars rediscovered the necessity of paying careful attention to the language used to describe their research and its findings. They put special effort into translating their findings and methodologies, making them more familiar and less intimidating. For example, practitioners are not well versed in structural equation modeling. Our students work to explain findings in metaphors, managerial terms,

and plain language to make their value clear without requiring statistical knowledge.

3. Exploring new formats for disseminating practitioner-scholar research, including online forums and blogs, connecting research-based knowledge to the direct experiences commonly reported in such forums. For instance, one graduate responded to a blog posted by a consultant on an industrial marketing forum. His response drew on theories of trust and findings from his own research to challenge the consultant's statements. Exploring new outlets, such as hybrid journals and books, might also aid in the dissemination of problem-focused research.

Reframing among Doctoral Faculty

The above six strategies for overcoming managerial skepticism and disrespect are designed to produce, among managers, a positive reframing among managers of both research and researchers. However, as we have noted, making EBMgt attractive to senior managers also requires reframing efforts by faculty themselves regarding the production and dissemination of knowledge. Ideally, from an EBMgt perspective, faculty engaged in doctoral education would devote some of their own research efforts toward problem-focused research, producing the kinds of rigorous and relevant knowledge that they are asking of their doctoral candidates and engaging with managers concerning the relevance of their research questions and findings. At a minimum, when guiding the focus and design of their candidates' research, doctoral faculty concerned with the dearth of EBMgt must be sensitive to helping their doctoral candidates bridge the practice-theory

divide. For instance, they must encourage dissemination not only through interaction with academic communities but also managerial communities. The latter requires that faculty be open to their candidates writing in a style that translates evidence-based insights into practitioner language. In many ways, an EBMgt-supportive reframing by doctoral faculty requires that they be reflexive regarding their own natural, often unconscious, inclinations to (re)produce theory-focused, discipline-based scholars such as themselves.

Do practitioners and academics need to compromise their identities in order to reframe their perspectives in ways that support the spread of EBMgt? For instance, should traditional PhD programs give less attention to developing disciplinary depth? We believe the answer to be a resounding "No." Regarding managerial identities, consider that Rousseau et al.'s (2009) definition of EBMgt roots the use of research-based evidence in the everyday managerial practice of information-based decision-making. Doing so enables EBMgt to be an extension, rather than a departure, from managerial practice and identity. It brings EBMgt into line with Gibbons et al.'s (1994) Mode 2 analyses describing how practitioners generate usable knowledge. Similarly, academic researchers can take a lesson from practitioner-scholars' research. Discipline-based academics can at least occasionally pursue problem-focused research, knowing that this style of research produces contributions to theory and, sometimes, identifies new conceptual domains or syntheses with powerful concepts from other disciplines. Problem-focused research can be understood as "discipline-based *plus*", where academics access, appreciate and import concepts from other disciplines.

Similarly, there is no need to provide candidates in traditional doctoral programs with less disciplinary training. For them, learning methods of problem-focused research will build on their disciplinary bases, enabling them to partner effectively with academics from other disciplines and with senior managers.

Conclusions: Sustaining and Leveraging a Field of Practitioner Scholarship

This chapter addresses the emergence of a field of scholarship -- practitioner-scholarship – that offers significant opportunities for the advancement and spread of EBMgt. The contemporary community of practitioner-scholars is generating knowledge explicitly designed to optimize rigor and managerial relevance. And, this community models EBMgt managerial practice and credibly informs communities of managerial practitioner peers. The significance of the field of practitioner-scholarship for EBMgt, then, can be at least partially understood as involving knowledge production, research dissemination, and the institutional spread of EBMgt. In terms running through this chapter, these issues take the form of the four R's: Relevance, Respect, Resourcefulness, and Reframing. Reflections on our pursuit of an engaged, problem-focused style of research in an alternative doctoral program lead us to several conclusions regarding these four R's., reflected below and in Figure 1.

---------- Insert Figure 1 about here ----------

1. Relevance: When armed with the proper scholarly skills, experienced senior managers who are doctoral candidates find academic research and theory

to be relevant to their problems of practice. This experience indicates that, in the right circumstances, their peers could become similarly disposed to using research-based evidence in EBMgt. Analyzing the senior management problems studied by candidates in the DM Program at Case reveals that such problems are typically complex, long-term, broad in scope and across multiple levels. They call for a style of research -- termed *engaged* or *problem-focused research* -- that responds to these characteristics. These problems also require EBMgt supporters to develop new methods for transforming academic knowledge into managerial knowledge; in addition to systematic reviews, methods are required that synthesize multiple bodies of theory and empirical research. Alternative doctoral programs, such as the DM Program at Case, are in the process of refining such methods of problem-focused research, educating practitioner-scholars in their use, and informing faculty elsewhere about these methods and pedagogies.

2. Respect: Significant challenges to EBMgt reside in the differing responsibilities (Speicher & Adams, this volume), perspectives (Leung & Bartunek,this volume) and views of evidence (Potoworski & Green, this volume) of academics and managers. Experiences with senior managers in our DM Program indicate that such high-level managers tend to be skeptical about academic theories and research. Part of this skepticism resides in their lack of experience and skill in using academic research. The skepticism is not as severe a problem as is the active disrespect for scholars that some practitioner-scholar graduates have experienced. Some organizations and functional areas are more

inclined toward research and researchers, suggesting that EBMgt efforts be initially directed toward managerial fields that respect rigorously-produce evidence.

3. Resourcefulness: Senior managers' skepticism about use of academic theories and research-based evidence can be overcome through particular educational efforts and pedagogies discussed in this chapter. These provide advanced managers with the opportunities and skills for locating and critically interpreting academically produced knowledge. Making these educational efforts requires resourcefulness on the part of management education programs and senior managers. Programs must devote resources to making these opportunities available for managers at all levels of education. Senior managers need both the will and time to develop these skills themselves and to provide opportunities for lower-level managers to do so.

4. Reframing: It is easy for members of the academy to recognize the need for managers to reframe their perspectives, if EBMgt is to be more broadly applied. However, issues of respect and reframing cut both ways. Management researchers and educators must respect managers' problem perspectives, contexts and capabilities in developing and applying knowledge. Challenges lie not only in the dissemination of research-based evidence, but also in the production of research by the academy. New ways for academics and managers to engage each other, and for the hybrid practitioner-scholars to pursue both practice and research, ultimately rest on the willingness of various practitioner and academic

communities to reframe particular perspectives that they hold. This reframing need not challenge their identities but, rather, add new elements to expand them.

Supporting EBMgt

Individuals serving in many roles can support EBMgt by helping to develop and sustain a community of practitioner-scholars and by participating in problem-focused research. Educators in research-intensive institutions can consider the initiating of an alternative doctoral program to train practitioner-scholars, or add to their traditional doctoral programs training in problem-focused research. Similarly, academic researchers can stretch beyond their theory-driven research to engage with managers and carry out problem-focused research. On their side, managers can provide access to themselves and their peers for problem-focused research. They can help to shape new research questions and research applications by creating joint manager-academic forums where managerial problems and the managerial interpretations of findings from problem-focused research projects are discussed.

But, this paper's main contention is that practitioner-scholars in the most potent positions to support EBMgt, not only by continuing to produce and disseminate research that connects with managers' problems of practice, but also in modeling their application of research-based knowledge in practice. Interviews with DM graduates conducted and analyzed by Adjunct Professor Nicholas Berente indicate that practitioner-scholars pursue issues in their managerial practice in greater depth, assessing those issues and using information in a more disciplined way:

moving beyond "*Power Point slides and three paragraph notes … [to] get the chance to make arguments*"

"*to look at things in a deeper way"*

"*to stop, think, look around and ask questions"*

"*to reframe how you view problems"*

"*think about things in a much more analytical way.*"

Practitioner-scholars use their own and others' research-based knowledge in their daily practice:

"*on a professional level it helped me look at issues in a way … an evidence-based approach."*

"There are things that I learned about building trust that I employ everyday … I'm living the research that I conducted."

Not only can practitioner-scholars model such EBMgt-supportive behavior for others, they can be more explicit in informing and guiding others:

"*Still making presentations around the world on my research.*"

"*Now I dedicate every ounce of free time to teaching and mentoring others at my company*."

"As a result of my analysis we actually revised company policy … It is the first leading indicator ever created in our industry and it is being published as a best practice."

The training of doctoral graduates who possess the desire and skills required to actively bridge between the academy and practice is well under way.

Expanding the community of practitioner-scholars will require the commitment of yet more management academics to producing scholars in other than their image.

In this chapter we have discussed a number of concrete practices that have proven useful in educating practitioner-scholars. We have proposed that these practices can be used not only in alternative doctoral programs but also in traditional doctoral education, to the benefit of EBMgt. But, is it sufficient to educate only doctoral students to inhabit the intersection between practice and scholarship? We assert that it is not. Kovner (this volume) identifies graduate education as the one venue where EBMgt initiatives are well accepted and where protracted efforts, such as Pearce's (Chapter X) EBMgt textbooks and Rousseau's (this volume) EBMgt courses to MBAs, can be crafted to encourage and develop the will and skill among managers and managers to be.

Our experience suggests that the community of practitioner-scholars is well positioned to contribute both to practice and the academy. Nonetheless inserting EBMgt approaches in traditional management education may further enhance the ability to effectively meld two seemingly diverse approaches and styles. In short, we assert that these alternative doctoral programs represent the tip of the proverbial iceberg -- that problem-focused empirical research can be spread through an enlarging community of practitioner-scholars and adopted by many discipline-based academics, and that this style of research may prove to play a critical role in the evolution of management practice. How exciting to think of a future in which these ideas have become so prevalent in management

education that the alternative doctoral programs need no longer be described as "alternative"!

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