

Chapter XX

Knowledge Fusion: A Framework for Extending the Rigor and Relevance of Knowledge Management

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ABSTRACT

The article proposes a simple framework termed ‘knowledge fusion’ to extend the rigor and relevance of knowledge management (KM). It points to some gaps in the current body of knowledge about KM, and provides a parsimonious set of ‘partitions’ that link to and from traditional knowledge management research and practice. It proposes that attention be paid to knowledge mobilization that reflects the demand side that is dominated by knowledge being part of individual identity and hence personal choice of whether, where, why and with whom to share knowledge and expertise as oppose to just understanding the traditional knowledge management that addresses only the supply side of information and the creation of environments for communication

and collaboration, especially those “knowledge” largely being independent of the individual.

INTRODUCTION

The aim of this article is to point to some gaps in the current body of knowledge about knowledge management (KM) and in doing so to suggest extensions to its frameworks and to areas of investigation that build on its strengths. We propose a simple framework for what we term knowledge fusion, based on the following line of argument that captures what knowledge management is as a field, rather than what many of its critics feel it should *not* be as a domain of intellectual study and social action:

Knowledge Fusion

1. Knowledge management is axiomatically a mission-driven, corporatist field. Its focus is not on knowledge but on management processes that use information resources and related corporate “assets” to enhance innovation and collaboration: knowledge creation, knowledge sharing, and knowledge dissemination. There are many valid and powerful alternatives to the axioms of KM, explicated by Ekbia and Hara (2004), Ekbia and Kling (2003), Wilson (2002), and Fuller (2001), but they basically reject KM for its mission as much as its methods and intellectual base. To a large degree, “membership” in the KM field of both research and practice involves accepting the corporatist mission. We choose the word “corporatist” carefully, since it captures the view of knowledge as organizational assets, the aggressive goal of innovation, and the purposive intentions of generating a high return on investment that drives KM in both the private and public sectors. This view generates conflict for many thinkers who do not believe that knowledge is to be valued mainly for its contribution to organizational payoff.
2. KM as a corporatist practice is in many ways an announcement by the information systems community that it has positioned to move beyond information organization to information deployment; that shift is signaled by the choice of “knowledge” as the target of “management.” A constant tension in the KM field is the difference between information and knowledge, but at its core KM has been information-centric. It aims at connecting innovation and growth, the core goals of the enterprise, back to information-based capabilities, one of the obvious means to that end, and to raise its own centrality as a strategic force in and of itself rather than as a support base for change management, process innovation, and business capability development. KM is thus as much an organizational ambition as a domain of research and practice.
3. A major current limitation to progress in KM application and impact is that there is a very clear difference between the fundamental dynamics of knowledge management and of knowledge *mobilization*. Knowledge management addresses the supply side of information organization, creation of environments for communication and collaboration, leveraging of intellectual capital, and incentives for shifts in work practices, especially those that either impede or facilitate knowledge-sharing, with “knowledge” largely being independent of the individual; it is a corporate asset. Leonard’s (1989) assertion is representative here: “Just as organizations are financial institutions, so they are knowledge institutions.” Knowledge mobilization, by contrast, reflects the demand side that is dominated by knowledge being part of individual identity and hence personal choice of whether, where, why, and with whom to share knowledge and expertise (Keen, 2006; Qureshi & Keen 2005). Knowledge mobilization views information and knowledge in terms of situational needs—“what do I need to know *now*?”—while knowledge management tends to focus more on “what knowledge can we provide to our employees and what mechanisms can we put in place for them to make most effective use of it?” The push-pull tension between management and mobilization is captured in a comment by a manager that, “The organization does not understand how knowledge is shared here and I tend to ignore the knowledge management initiatives wherever I can” (Von Krogh, Roos, & Sloucm, 1994).
4. There can never be a universal “theory” of knowledge management, any more than there is any consensual agreement on what is knowledge in the mainstream of philosophy or any shared operational agreement as to its

nature across the arts, sciences, theological, and political fields. We highlight the word “never” here. KM relies on pragmatics to generate conceptions of knowledge that are actionable. There is a two-sided danger here: the pragmatics may be over-simplistic and also open to easy challenges from those who do not share the pragmatist perspective. Perhaps a larger and more damaging danger is that if the conception of “knowledge” remains a constant debating point and source of demurral, no one gains neither KM pragmatists, philosophical idealists, nor activists in the anticorporatist sphere. The discussion just gets cloudier instead of clearer.

5. KM thus should not get stuck in definitional debates, but it does need some shaping framework that encourages intellectual and pragmatic diversity and a balance between the thought leadership priorities of the pragmatists, often consultancy firms, and the research and scholarship excellence of the intellectual disciplines, mostly but not entirely in the academic communities. Our proposal is to “partition” the wider field of “knowledge” into four areas: *knowledge management*, the goal; *knowledge mobilization*, the enabler; *knowledge embodiment*, the study of what it means to “know”; and *knowledge regimes*, the organizational, political, and sociological factors that shape how knowledge is focused, authenticated, legitimized, and validated in the organizational and professional context. Each of these is a distinctive arena, in terms of its main fields of research and scholarship, axiomatic base, mode of investigation, and professional communities. Our knowledge fusion framework rests on the logic that contributions from these communities will come from how they link their specific

body of theory and practice to the mission of knowledge management. We see three main links: (1) knowledge management and knowledge mobilization; (2) knowledge regimes and knowledge management; and (3) knowledge embodiment and knowledge mobilization.

6. As with total quality management (TQM) and business process reengineering (BPR), knowledge management is driven by two potentially conflicting traditions: thought leadership ambitions among leading consultants and consulting firms and research excellence priorities and practices in the academic community. TQM illustrates the fusion of these; consultants such as Deming, Juran, and Crosby led the field, drew on research by such figures as Ishikawa and on the management experience of many innovative companies, including Toyota and Motorola, to the benefit of all (Kruger, 2001). As BPR illustrates, thought leadership that is entirely detached from the scholarly and research communities lacks staying power, in that the gaps and contradictions in its claims and conceptions quickly erode its validity; it is more claims leadership than thought leadership. One of our aims in developing the knowledge fusion framework is to help KM be more like TQM than BPR. We suggest that just as academic research has formal criteria and standards that help define “excellence,” thought leadership must be built around comparable criteria, which include its links to the intellectual traditions relevant to its claims and concerns.

We intend our framework to be commonsensical rather than controversial; we define a new commonsense as one that is obvious fifteen minutes after you hear it but that fifteen minutes beforehand you might never have thought of it.

THE GROUNDED THEORY DEVELOPMENT OF KNOWLEDGE FUSION

Our analysis of the KM field and formulation of the knowledge fusion framework is a grounded theory investigation that began from a wide-ranging scan of an almost unsurveyable field. Scholar Google lists 220,000 references to “knowledge management”; the fragmentation and breadth of the field is indicated by the fact that only a tiny fraction of these are cited in even twenty of the other close to a quarter of a million publications. A Google search on the term generates 57 million results. To put that in context, “business process reengineering” produces 1.3 million and “electronic commerce” produces 28 million (February 2006).

Such proliferation eliminates any practical possibility of a grand theory of knowledge management or a unified definition of “knowledge.” Our approach to generating a grounded theory base for KM extension is to identify salient themes in knowledge management, such as communities of practice, knowledge sharing, knowledge creation, tacit knowledge, and intellectual property, and then to test how well conceptually and in practice they hold up. This process identified where we saw a need for new “codings.” These are distinctions that we propose as part of a generic taxonomy of knowledge fusion and as researchable domains of investigation. For example, it became clear from our analysis that the widely-used distinction between explicit and tacit knowledge (Nonaka & Takeuchi, 1995) is not robust and has generated tautologies and challengeable conclusions, such as the claim that tacit knowledge is knowledge that cannot be made explicit and structured, followed by the statement that a goal for knowledge management is to make tacit knowledge structured and explicit (Gourlay, 2000; Haldin-Herrgard, 2000). Gray (2001) provides a succinct summary of the tacit-explicit knowledge distinction and

states that “most organizations want to transfer tacit knowledge to explicit knowledge.”

It is a substantive matter for the effectiveness of KM whether or not this transfer is possible and even conceptually meaningful. We propose, via Wilson (2002), a simple extension of the distinction to include implicit knowledge as the bridge between tacit and explicit. Implicit knowledge is what we take for granted, rarely think about, and are surprised to find that others do not share; many faux pas that we make when we travel abroad reflect the fact that a national culture has many areas of implicit knowledge concerning etiquette and social norms. The red-faced blunderer asks, “Why didn’t you tell me about that?” One replies, “You didn’t ask and it’s obvious anyway.” Our suggestion is that tacit knowledge be accepted as inherently tacit and that, using our coding distinctions, knowledge management should structure explicit knowledge, which is information-centric, explicate implicit knowledge through dialog, and leverage tacit knowledge through respectful collaboration.

Our grounded theory approach is more than taxonomic in its goals and less than ontological. It is a search for a parsimonious addition to the distinctions in the KM field which will help resolve conceptual contradictions and reported problems of application, such as the tacit-explicit contrast. This helps avoid getting caught in the definitional debate.

Clearly, new distinctions are needed for KM to achieve its targeted impacts. A review of the literature on disappointments and failures in knowledge management impacts (Lucier & Torsilieri, 1997), states that 84 percent of KM projects fail; Storey and Barnett (2000) and Barth (2000) thus pointed us to the needed distinction between knowledge management and knowledge mobilization that is at the core of our proposed framework. We did not “invent” knowledge mobilization nor redefine “knowledge” or “knowledge management” to incorporate it but instead added

it as a new coding and then looked at where and how it contributes to the KM mission. That in turn pointed to the value of a new distinction in knowledge mobilization of three levels of personal knowledge identity in how individuals assess their own knowledge and how and when to share it: accountable, discretionary, and autonomous knowledge (Qureshi & Keen, 2005).

The final stage in the development of the knowledge fusion framework is to narrow down the very broad range of KM topics, distinctions, and concerns into a parsimonious set of “partitions” that link to and from traditional knowledge management research and practice. We propose that knowledge fusion has four main partitions:

- **Knowledge management:** The organizational mission for continuing the evolution of information management to become a core factor in business innovation; the supply and dissemination of knowledge-relevant information, communication and process capabilities, and the development of change management initiatives in order to build new knowledge-building and knowledge-sharing practices.

Given the mission, issues of technology options and methods are highly germane to this partition, whereas they are a distraction or even a red flag for commentators who largely oppose the main KM axioms. These critics stress that technology in and of itself is not relevant to knowledge. But it is highly relevant to knowledge management and there are many emerging developments in technology that are promising enablers of new knowledge work, especially in the library sciences, where exploration of and expertise in archiving the Semantic Web and library resource management are adding an often missing dimension to the mainstream information technology focus on data base management systems, data repositories, and Web portals (Khou, Singh, & Chaudhry, 2006).

Technology is very much part of this partition of knowledge fusion.

- **Knowledge mobilization:** The dynamics of the processes by which individuals make their own personal choices about information seeking, knowledge creation, and knowledge sharing. This demand side must be synchronized with the supply side for effective joint benefit. The discretionary and personal nature of knowledge activation and identity leads to many gaps in practice between corporate supply and individual use, between push and pull. In addition, more and more elements of personal knowledge creation and sharing lie outside corporate ownership and control. Blogs, for instance, are becoming a significant force in professionals’ knowledge-sharing and in the impact of blogs on a company’s reputation and a number of companies are harnessing them to create two-way communication links with their constituencies, in effect mobilizing both company and stakeholder knowledge-sharing. In Microsoft and Sun Microsystems, over a thousand employees publish their own blogs about life in the company, technology, and industry trends. Both firms claim that these blogs have significantly improved their ability to reach, communicate with, influence, and even recruit from the development community; that is, to broaden the reach of their knowledge mobilization (Scoble & Israel, 2006). Blogging illustrates the potential value of the partitioning approach to knowledge fusion. It is as yet little studied in the context of corporate knowledge management, though there is a growing body of work on the role of blogs in e-knowledge and distributed knowledge creation in professional communities (Norris, Mason, & Lafrere, 2004). Given the rapid growth in blogging (around 60 million

in early 2006) and its increasing corporate focus, this is a topic that merits study and certainly organizations should make them part of their knowledge mobilization if not part of their knowledge management.

One of the main conclusions from our initial scanning of the KM field that directly led to the identification of the need for a knowledge mobilization partition supports the often criticized “relabeling” of information management as knowledge management. It is that after around forty years of sustained effort to “manage” information, the state of good practice has solved most of the main historical problems of structuring, integration, standards, interoperability, data management, networking, scaling, and so forth. It has moved from information “systems” to information and communication platforms. These platforms are now positioned to enable a very wide range of new practices, processes, and relationships. A decade ago, many such uses of IT were impractical and the opportunities for knowledge mobilization highly constrained. At last, we have the knowledge management platforms; knowledge mobilization now becomes higher on the urgency list in terms of both research and practice. Mobile technology in particular transforms the very nature of on-demand access to and delivery of information and services. (e.g., Keen & Mackintosh, 2002.)

This is signaled by the larger number of studies on KM failures; most of these reflect successful technical designs and implementations but problems in mobilization. (See Keen [2006] for a brief review of the 9/11 Commission Report which shows that the information needed to first prevent and then respond to the terrorist conspiracies was almost all in place and available. The Report describes a knowledge management success but a knowledge mobilization disaster.)

- **Knowledge embodiment:** The deep processes of “knowing” in the widest sense of the term. The pragmatic and axiomatic KM

conception of knowledge as an organizational asset is obviously partial at best and many commentators claim that it is largely invalid and little more than a relabeling of information. (Wilson [2002] attacks the “nonsense” of knowledge management in this regard.) As we show later in the article, the KM conceptions are fully defensible in terms of its focus on knowledge as an organizational asset, and nonsensical only if the foundational organizational aims of KM are rejected.

That said, those aims do represent a selective and specialized view of the immensely wide world of knowledge creation, application, and use and will benefit from a complementary analysis, development, and application of theory from that wider world in order to extend and enrich knowledge mobilization. Many KM researchers are thus exploring reference disciplines, most obvious philosophy and epistemology, which address such topics as the social and political nature of knowing, speech act theory and the linguistic nature of knowledge, the nature of tacit knowledge, and ethical issues. Their goal is to enrich, not to attack KM.

Connecting such lines of investigation to the pragmatics of knowledge management concepts and applications is, in our view, best handled through viewing knowledge embodiment as a partition in and of itself, but one whose findings and frameworks can be brought into focus through being linked to the knowledge mobilization partition. The logic of this is that any effort to generate a consensual concept of knowledge will fail and that much of the research in this partition has had less impact on KM than it merits because it is positioned as a new approach to KM *as a whole*. We suggest that its power will come from rigorous scholarship and research made relevant by showing how and where it helps in increasing knowledge mobilization.

Knowledge fusion thus argues that the axioms, definitions, goals, and practices of KM form its chosen, deliberate, and selective bounding of the knowledge world and that rather than aim to impose competing, alternative, or conflicting views of knowledge embodiment on KM as counter theories, it is simpler and more pragmatic to map them into KM in a way that KM can absorb them. Anticorporatists and social theorists will reject this approach. And so they should. Our framework is not aimed at helping improve the rigor and relevance of the entire field of knowledge studies—that would be both absurdly pretentious and totally impractical—but only at helping the applied KM field to improve KM.

- **Knowledge regimes:** This term refers to the contextual rules, controls and processes that directly shape and constrain knowledge management. These include political, cultural, and sociological factors. Our identification of knowledge regimes as a partition of knowledge fusion was prompted by work in political science (Sowell, 1996), philosophy (Foucault, 1980), organizational decision making (Keen & Sol, in press), and the wide literature that links knowledge management to questions about capitalism and post-capitalism. The legitimacy, verification, use, and control of information are an integral part of what Foucault calls “Regimes of Truth” (Ebdia & Kling, 2003). Knowledge regimes are the sociopolitical forces that strongly affect the specific legitimacy, meaning, and effective rights of ownership of “knowledge.” These include organizational design, information systems, professional associations, incentive systems, and “culture.” Knowledge regimes vary widely between countries, with history, censorship, and social norms often creating bounds on knowledge embodiment, knowledge management, and knowledge mobilization.

Again, our proposal of knowledge regimes as a partition is intended to resolve the rigor-relevance tension in knowledge fusion. The mainstream of knowledge management is driven by relevance to business and organizational innovation and collaboration. It maintains that focus sometimes at the expense of rigor; the extreme instances of this are vendor claims that say document-management software is “knowledge,” or the casual comment in a leading book on KM that begins, “Because of the human element in knowledge” (Davenport, De Long & Beers, 1997). Surely, any scholar in fields that address knowledge embodiment and knowledge mobilization would almost scream in reply that humans are not an element in knowledge but *are* knowledge. The remark makes more sense in its context of the conceptualization of knowledge as a corporate asset, much of which is embodied in information resources, not people. That said, this is certainly not a rigorous statement and it is typical of ones that critics of KM zero in on very quickly.

Conversely, discussions of knowledge regimes are often highly abstract and formalistic. They also often adopt very different axioms of “knowledge” than does KM. For example, Day’s (2001) history of KM highlights “the European documentalist, critical modernist and Italian Autonomous Marxist influenced Post-Fordist traditions.” Fuller’s (2001) blandly titled *Knowledge Management Foundations* is anything but that; it is a resonant and complex exploration of “civic republicanism” and social epistemology. His KM manifesto includes discussion of “pseudo solutions” such as cyberplatonism, and academic bullionism (the “scourge of KM”). Both Day and Fuller offer a counterview to just about every assumption, goal, and application of knowledge management. An obvious question then is why they self-classify their work as KM, virtually guaranteeing that it will have no impact on the communities within the field? The logic of the knowledge fusion framework of partitions is that such work is a very valuable potential contribution to KM

if, and only if, it can build linkages to the KM mainstream instead of trying to supersede it or bury it beneath a my-citations-are-more-obscure-than-yours bibliographic mountain.

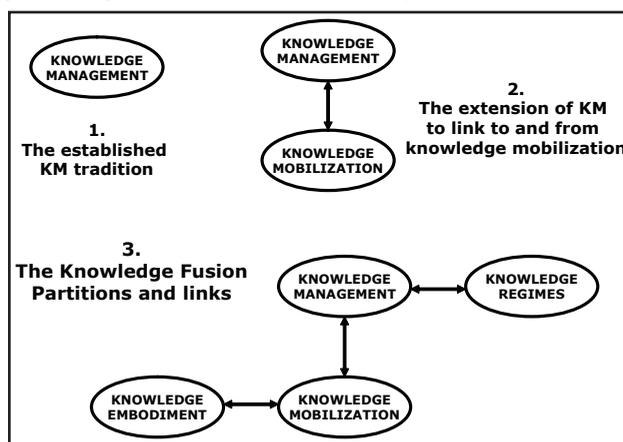
Our proposal of partitions is aimed at helping improve both the rigor and relevance of the knowledge management field through appropriate use of reference disciplines. These are fields of scholarship and research—the two are not always equivalent—that offer insights, theories, and findings that are relevant to but not within the immediate academic and professional purview of KM. The knowledge management field as a whole will be enriched through such diverse and unconnected reference disciplines as epistemology, library sciences, and education (where there is an innovative stream of research and application on information-seeking, interface design, and learning behaviors directly relevant to knowledge mobilization) (Khoo et al., 2006), sociology (we are seeing a resurgence of references in KM articles to Berger and Luckman’s [1966] work on the social construction of reality that is highly relevant to knowledge embodiment), political science (knowledge regimes), critical theory (e.g., Baudrillard, 1994), hermeneutics, economics, phe-

nomenology, and computer science. Partitioning and linking to the core knowledge management plus knowledge mobilization fusion is a vehicle for making all this rigor relevant.

Figure 1 summarizes our knowledge fusion framework. To be of value, it must pass tests of parsimony (the knowledge management field does not need any increase in elaborate individual conceptual schema or in the vocabulary of terms floating across its many journals and topics), usefulness in helping provide a coherent and comprehensive high-level mapping of a very complex and fragmented field, and originality in pointing to new lines of investigation and lessons from existing research. That judgment will be made by our readers.

The recommended agenda for knowledge fusion is thus: (1) Maintain the mainstream focus in KM on harnessing organizational resources for the purpose of innovation, knowledge-creation, and collaboration; (2) Sharpen the focus on linking individual demand and use of peoples’ own and others’ knowledge (knowledge mobilization) to organizational supply and encouragement of new practices and processes (knowledge management); (3) Enrich the discussion of “knowledge” and

Figure 1. From knowledge management to mobilization to fusion



knowledge embodiment and thus of opportunities for knowledge mobilization; and (4) Investigate the impact of knowledge regimes on knowledge management assumptions and practices, including the role of dissent, and adapt those practices to meet the changing demands of other regimes, including those of customers, competitors, pressure groups, and social movements.

THE VALIDITY OF THE AXIOMATIC BASE OF KNOWLEDGE MANAGEMENT AS A MISSION-LED NOT TOPIC-DRIVEN FIELD

Our entire line of argument centers on one core conclusion from our analysis of the KM field: that the very criticisms made of it are at the same time valid but in many instances irrelevant. Most of the criticisms address weaknesses in the “knowledge” component of KM. But knowledge management is not about the topic of knowledge as such but the mission of management. Knowledge management is in fact part of a corporatist regime of truth, in Foucault’s sense of the phrase. It is fully valid to attack that regime on social, political, or moral grounds—KM is very much a part of Big Business—but criticisms made on the same terms about the validity of KM itself largely miss their mark.

Here are some standard criticisms of knowledge management:

- It uses fuzzy, inconsistent, and contradictory definitions of knowledge.
- It is largely a relabeling of information management through “search-and-replace” marketing.
- It is driven by consultants and vendors.
- It has produced poor practical results.

The first criticism is misleading in that it implies that elsewhere there is a body of consistent and reliable definitions of knowledge. No one on

this planet has successfully generated an accepted and universal theory of knowledge after 2,500 years of continuous effort. The irresolvable debate or more often conflict between science and religion is a difference of belief about what is knowledge and hence “truth.” Just try and synthesize a definition of “knowledge” and “truth” from a sampling of the great philosophers, whose entire careers were devoted to answering the question of what is knowledge: Plato, Aristotle, Descartes, Kant, Locke, Kirkegaard, Nietzsche, Heidegger, Wittgenstein, Foucault, Habermas, and Searle, to name just a tiny few. These are titanic thinkers whose concerns were epistemological and ontological, with Heidegger’s *Meaning and Being* an indicator of the scope and depth of their search.

Knowledge management is far, far less ambitious and basically adopts axiomatic views of knowledge. The test of the value of these axioms and their implications is the domains of effective action that they enable in organizations. Their limitations come not from any definition of knowledge but of gaps between axioms, actions, and impact. But the test is not one of “truth.”

It must be recognized the axioms of KM do limit application and impact and thus merit investigation, including drawing on the field of philosophy as a reference discipline. There are four main elements in KM axioms:

1. Knowledge is an organizational asset.
2. It can be managed like other assets.
3. The purpose of knowledge is action.
4. The primary goal of KM is to encourage knowledge-sharing and collaboration.

Each one of these axioms is open to challenge, but not if we replace the word “is” in each item on the list with “should be”; should be an organizational asset, should be managed, should be action, should be a priority target, and should be knowledge-sharing and collaboration. That simple substitution switches from KM as a topic and an intellectual claim to a mission. It establishes a

knowledge regime that excludes certain types of knowledge and knowledge embodiment.

One of the authors of this article, for instance, knows much more about Shakespeare than about information technology, his main field of study and application relevant to KM. If the purpose of knowledge is action (Alavi & Leidner, 1999), then he is a complete failure; the only actionable value of this knowledge is to read more Shakespeare. Similarly, he is an expert on antique Egyptian stamps; the only contribution to action here is to motivate him to spend a lot of money on eBay.

From a knowledge identity perspective, his knowledge of books and his philatelic hobby is core to his sense of self, his knowledge-seeking, and the communities in which he shares his knowledge. It is completely irrelevant to knowledge management in the business and academic communities he works in; unless he decides to become a stamp dealer. The axioms and mission of KM *exclude* many domains of knowledge embodiment on the basis of “should be” as the intention for the KM mission and “is” as the axiom that drives that mission.

Consider substituting “should not be” for “should be” on the KM list of axioms and a very different intellectual discourse emerges, one that many commentators on knowledge regimes and knowledge embodiment are really trying to build: knowledge should not be managed as a corporate asset, the purpose of knowledge should not be action, and so forth. “Should not” defines an alternative regime of truth, one that places civil society ahead of corporatist modernization, for instance. Ebdia and Kling (2003) dissect the degree to which the financial analyst, shareholder value, and business press regimes of truth explain how Enron so easily deceived the public and how complicit these regimes were in helping them do so. This is a powerful attack on the “recipe” that business has constructed as its social reality (Berger & Luckman, 1966). Such a view cogently states that that the problem with knowledge man-

agement is knowledge management. It stands outside the field of KM, looking in on it.

In our view, the entire field of KM will be improved in its intellectual focus by sharpening the being in and looking in distinction. Should KM be about the “shoulds?” That is an irrelevant question. It *is* about them. Should it move towards the “should not” extreme? Then it would not be knowledge management as a corporatist regime but something else. Knowledge fusion then means that the relevance test for linking research in reference disciplines in the partitions of knowledge embodiment, mobilization and regimes to knowledge management is to help turn “should” into “is.” Epistemology, phenomenology, and post-Fordist social capital Italian Marxism may rigorously propose the “should not” viewpoint, but that is irrelevant to KM.

We do not intend in any way to make our analysis here a defense of knowledge management as a socially constructed reality and a corporate regime of truth. Indeed, our ongoing study of the impact of the Internet on corporate reputation, which alerted us to the growing impact of blogs, raises a complex question as to how organizations can avoid being so locked into their knowledge regimes that they exclude information and knowledge that may later turn out to be relevant to their success and even survival, and how they can include appropriate dissent and “whistle blowing.” A cautionary tale here is the degree to which Wal-Mart’s knowledge management strategies overlooked what was obvious to many observers who read *The Nation*, *Mother Jones*, and *Progressive* instead of *The Wall Street Journal*: the company was accumulating a reputation as an callous employer, union-buster, sexual discriminator, brutal exploiter of suppliers, ruthless outsourcer, and callous corporate machine indifferent to anything except its own growth. In 2005, Wal-Mart moved from being the darling of the business knowledge regimes to the Darth Vader of many of the political and social conscience knowledge regimes.

The issue here is not whether or not these accusations and the vivid adjectives we use in the above paragraph are “true”—they are certainly seen as truths in liberal democratic circles—but that Wal-Mart’s knowledge regimes blocked out the information. Now, the company has installed a massive new knowledge mobilization capability, a “war room” (Barbaro, 2005) that monitors the entire Web, including blogs, to alert the company to positive and negative coverage, respond, communicate, and, perhaps most important of all, listen. In 2006, it began to reach out to the bloggers with offers of information and communication that, with their permission, Wal-Mart would provide for them to incorporate in their own knowledge mobilization: publishing, discussion, and community-building. Given that several surveys suggest that 2-8 percent of Wal-Mart’s more affluent customers are beginning to boycott the company (Barbaro, 2005), Wal-Mart would have benefited from more and earlier attention to Web-enabled knowledge mobilization rather than just internal knowledge management.

This suggests that research in the knowledge regimes partition on the role of dissent, dialectics, and critical enquiry (Courtney, 2001) may offer valuable lessons for knowledge management and mobilization. It may well be that such research begins from rigorous obscurity and over time will establish its relevance.

THE CONSULTANTS’ ROLE IN KM: THOUGHT LEADERSHIP VS.—OR WITH—RESEARCH EXCELLENCE

The second major criticism of KM as a field is that it is largely vendor- and consultant-driven. Wilson’s (2002) excoriation of the nonsense of knowledge management states in its opening sentence that the growth of KM as “a strategy of consultancy companies is one of a series of such strategies dating from Taylor’s (1911) ‘scientific management.’” The implied logic of this state-

ment is to suggest that the source of intellectual development matters as much as its nature, and that consultancy-driven work has some inherent built-in limitation, most obviously definitional weaknesses and biases (“in management consultancy it is, perhaps, not too serious to fail to distinguish between related concepts the task of the academic researcher is to clarify the use of terms so that the field of investigation has a clearly defined vocabulary”).

That certainly puts Taylor in his place (perhaps had he been an Assistant Professor at the Stevens Institute of Technology, to whom he left the bulk of his estate, scientific management would be legitimate), along with the other consultants who profoundly shaped management thought and stimulated a wide range of research that went a long way beyond clarifying terms: Deming, Juran and Crosby in TQM; Follett, the “prophet of management”, whose work in the 1930-1950s on constructive conflict and “co-ordination” was immensely influential in its time and that has increasingly been recognized as foundational for organizational theory; and Beckhard, uniformly acknowledged by his colleagues at MIT as a core figure in the development of the modern human relations school. What makes them relevant to the development of the knowledge management field is that they are noted for what leading consulting firms routinely talk about as their goal for innovation: “thought leadership.” A Google search on the term plus the name of any of the leading consulting companies produces between 20,000 and 200,000 results. “Knowledge management + thought leadership” generates 650,000.

There is some evidence that, contrary to the view that knowledge management was largely driven by consultancies in order to find a new revenue stream after the drying up of the largesse generated by Y2K and ERP implementation, the main factor was instead their own need to innovate. As many areas of their markets commoditized, including large scale information systems development, they needed to increase

Knowledge Fusion

Box 1.

	<u>Google</u>	<u>Scholar Google</u>
Total quality management	139 million	1.2 million
Business process reengineering	1.3 million	21 thousand

their internal productivity, which mainly meant improving collaboration and knowledge-sharing, particularly about projects, clients, and in-house expertise; in other words, they had to invent knowledge management. While the title of CIO (Chief Information Officer) originated in business, that of CKO (Chief Knowledge Officer) was very much the domain of the large consultancies. Much of the most influential work on KM has originated in the same firms, often written by individuals who have spanned the worlds of academia and consulting (such as Davenport, a professor at the University of Texas and Boston University and also director of KM research centers at Ernst and Young and Accenture.)

Thought leadership (TL), wherever it originates, plus research excellence (RE) would appear to be a powerful combination for a mission- rather than discipline-driven field. Our knowledge fusion framework implies that thought leadership will tend to center on the management-mobilization link, since that is where so many of the practical problems and disappointments of KM investments appear to be generated (Qureshi & Keen, 2005). Excellence in research will tend to focus on the regimes-management or embodiment-mobilization linkages.

Our line of argument obviously accepts the primacy of the corporatist view of the organizational purpose of KM for the evolution of the field, accepts that much of KM is really an extension of information management as a force for innovation and collaboration, and accepts the value of thought leadership being driven by consultants as well as

academics. That said, thought leadership based on weak thought will not create a sustainable forum for strong research and its momentum will inevitably evaporate as realism intrudes on assertion. The total quality management and business process management fields provide contrasting examples in this regard.

TQM was built on consultant evangelism (Juran, Crosby, Deming), supported by brilliant application by managers, most obviously Toyota's Ohno, and extended by a wealth of first-rate research (e.g., Ishikawa). The result is a field that continues to grow in terms of academic research outputs. Using Google plus Scholar Google as a rough comparative index for degree of interest plus degree of research activity respectively, commonsense would suggest that if the first is huge and the second tiny, then this is a field that is likely to be just a fad; the reverse would signal a specialist academic field. The contrast between TQM and BPR is shown in Box 1.

One might argue that the research/buzz ratio is higher for BPR than for TQM, but what these figures suggest is that few serious scholars now have any interest in BPR. Yet BPR certainly established a powerful thought leadership position for its best-known proponents, an MIT professor (Hammer) and the head of a leading IT consulting firm (Champy) that had a very distinguished record in the IT field in generating many of the most influential "big ideas" of the 1970-80s.

Unlike TQM, somehow BPR did not generate the creative tension and integration between thought leadership and research excellence that

our formulation of knowledge fusion aims at encouraging. If KM is to be effective in generating a lasting impact on research and practice, it simply must ensure that the acronymic equation is $KM = TL + RE$. However, the pragmatics of KM as organizational mission opens the door to what might be termed intellectual sleight of hand: finessing problems by avoiding them. Hammer and Champy did this basically by not defining what a business process is and making almost casual assertions without a single citation to others' work. There is an aggressive anti-intellectualism in their work, illustrated by the command on the book jacket to "forget all you know about business; it's wrong."

Thought leadership demands intellectualism, in the form of the synthesis of experience and disciplined development of reliable methods that so marks the work of the TQM leaders, and scholarship-backed articulation of principles, exemplified by many writers who move between the worlds of academia and consultancy such as Hamel in corporate strategy and Davenport in knowledge management. Many of the critics of the KM field almost axiomatically assume that it does not need such thought leadership, and that good scholarship and applied research will generate momentum, credibility, implementation, and impact. We argue that thought leadership is integral to the very goals of KM, and that just as there are formal criteria for assessing research quality, there is a need for a comparable if less formal set of broad categories for intended thought leadership. We suggest the following list:

- **An explicit inclusion in the articulation and explication in the article or book of the axiomatic base underlying the new focus and of the limits of the domain of applicability.** This, rather than the much-debated issue of a definition of knowledge or knowledge management, appears to us to be key in moving KM forward. There can never be a universal grand schema for knowledge management. It should be perfectly acceptable for contributors to the field to state that, for instance, the purpose of knowledge is action but they need to recognize explicitly that that is an axiom not a truth and that it immediately limits the nature, domains, and methods the lens applies to. It also excludes many areas for investigation in the partition of knowledge embodiment in that it implies a narrow range of epistemological considerations (for instance, it implicitly defines what "expertise" means and how it should be leveraged).
- Our knowledge fusion perspective argues for much more careful presentation of "here is one way of viewing XYZ" instead of "this is *the* way." How much richer and more dynamic a field might BPR have become had its leaders couched their message in such wording as, "Here is one perspective on business processes that emphasizes an industrial engineering approach..... it highlights as targets of opportunity..... it does not apply so well to processes that are less structured and that rest on negotiations and tacit knowledge....." Equally, we suggest that the quality of intellectual discussion in KM will be improved by critics and commentators getting away from attacks that basically begin, "ABC's paper claims that..... It is wrong and based on an incorrect definition... Here is the correct one."
- **A succinct and robust articulation of a "management lens."** A genuinely different perspective on some practical aspect of either the field as a whole or some specific area within it where the new lens opens up major opportunities for innovation and collaboration, the two basic reasons for investing in KM, however defined.
 - **An active search in the scholarly and research literature for grounded support**

for the conceptions and claims. The famous science fiction writer, Theodore Sturgeon, replied to a statement from the audience that “90 percent of sci-fi is crud”; “Madam, 90 percent of *everything* is crud.” A responsibility of anyone staking a claim to thought leadership, whether through a consulting firm’s “white paper,” a business press article, a book, or an article in a research journal, is to know and build on the 10 percent. Fields such as TQM, BPR, and KM that are action- and mission-driven run the risk of becoming ahistorical. They look ahead at organizational “transformation” and stress the newness of their perspectives.

In passing, we note that in our view, Wilson’s attack on KM as nonsense richly sampled the 90 percent of crud; many of the quotes and examples he provides are simply silly, vapid, ephemeral, consigned to the ashcan of dead trees, and unlikely (one hopes) ever to be cited again. For instance, Wilson ably garrotes a five line KM course description (whose Week 1 is a “collage overview”); written no doubt by a professor who had no idea that it would be selected as evidence of the flaws in the entire KM field. But his ability to mine the KM field and find so many nuggets of coal, not gold, is for us a warning signal that intellectual quality control must apply to white papers, MBA college curricula, trade press articles, guru interviews, and any other formal statement of a position on KM. Again, we hope that our partitioning of the field may contribute, if only a little, to sharpening its scholarly focus and perhaps to help highlight the 10 percent that matters. (In the spirit of knowledge mobilization, we have begun a program funded by Nanyang Technological University to build a blog/portal/literature repository/Semantic Web implementation that highlights the best of thought leadership and research excellence. Of course, “best” implies a particular knowledge regime and key general question for the Semantic Web: *whose* semantics, not *which* semantics).

One area of gold, not coal, for thought leadership is the scholarship of management theory. It is noteworthy that the leading books on knowledge management rarely investigate the literature of management and organizational theory. It is as if the knowledge worker somehow came into being around 1969 (when Drucker announced the coming of the knowledge economy) and that knowledge management as a discipline emerged in 1990 with Svelby’s book that appears to be the first that explicitly uses the term. There is a wealth of earlier literature that addresses many of the core themes and concerns of KM but is rarely mentioned in the field. We referred to Follett’s work on constructive conflict, to which should be added the Carnegie School’s astonishing stream of thought leadership plus research excellence exemplified by March, Simon, and Cyert. Simon’s *Sciences of the Artificial* and *Administrative Behavior*, for example, are directly about, not just relevant to, the goals and themes of KM and helped earn him a Nobel Prize. Other scholars whose work addresses knowledge regimes but that is relatively infrequently referenced by the KM thought leaders include Argyris, Schon, Galbraith, Churchman, Barnard, and Thompson, to name just a few.

In our articulation of knowledge fusion, we have largely emphasized how the partitions of knowledge mobilization, embodiment, and regimes can enhance that of the knowledge management partition. We suggest that as a partition within knowledge fusion, there is value for KM to link far more closely than it has to the resonant scholarship of management theory.

CONCLUSION

At the core of our framework is a single distinction that we view as fundamental to the effective development and impact of knowledge management as both a field and an area of management practice: knowledge mobilization. Initially, our

investigation was targeted at arguing that knowledge management should incorporate and even convert to our viewpoint. Our work remains centered on knowledge mobilization but we quickly realized that unless we carefully maintained a respectful boundary between knowledge management and knowledge mobilization, we would merely add to the blur and multiplicity of KM and get caught up in the definitional debates. To establish our own axioms and distinctions, especially that of knowledge as identity with three levels of activation – accountable, discretionary, and autonomous knowledge – we would need to move into intellectual assault mode, attacking the axioms of knowledge as corporate asset and as independent of the individual. That made no sense at all; it would represent an intellectual arrogance, negativism, and waste of effort that impedes rather than contributes to a cumulative tradition of research and practice.

As we moved consciously to adopt a grounded theory approach to positioning our conceptions of knowledge mobilization, and activation, we increasingly acknowledged the extent to which knowledge management is axiomatic rather than definitional in its very varied domains of theory and practice and that in many ways the axioms drive the theory and practice. The heterogeneity of these domains is both the opportunity and the problem for knowledge management. They are an opportunity, for instance, in that the work of Habermas (1984), Rorty (1991) and Searle (1995) in the field of philosophy appears more and more as of direct practical relevance to our understanding of knowledge mobilization. They are a problem in that discussions of their work at the theoretical level and from the perspective of their own axioms do not connect well if at all to the mainstream of KM.

But it should do so. Partitioning the semi-infinite reference disciplines relevant to “knowledge” helps achieve this. The central test of the validity and value of our knowledge fusion framework is whether the proposed partitions parsimoniously

but also comprehensively both capture the scope of the disciplines and focus them insights on knowledge management, rather than knowledge.

Our framework has a selfish purpose: to help us leverage our work. We hope that it helps others in the knowledge management field leverage their own. We have no interest in promoting knowledge fusion as a new theory or “model.” We developed it to guide our own investigation and collaboration with colleagues. We offer it as a vehicle for knowledge mobilization in the knowledge management field. Every single one of the themes and viewpoints that we review in this article has been addressed by dozens and even hundreds of KM thinkers and practitioners and our bibliography does not do justice to the range and volume of work that we reviewed or the work we overlooked; it is largely illustrative. The diversity and quantity in many ways motivated our study; there is too much of it, it does not seem to be generating a cumulative tradition of study on which results build on each other, and at times KM is almost a haystack in which almost any needle can be found just by digging around. Something has to be done to frame KM, not to homogenize it, but to give it more shape. We hope that our framework offers a useful starting point.

Finally, we listed as one of the main criticisms of knowledge management as a field the claim that it so far has generated disappointing results. Compared to, say, the field of supply chain management (SCM), where the total costs of logistics have been reduced by 40 percent as a percent of gross domestic product (Earle & Keen, 2000) and commentators can point to companies such as Dell, Wal-Mart, UPS, and Li & Fung, whose growth and spectacular success were built on SCM. We have as yet no comparable large-scale successes in knowledge management, and the “learning organization” and “knowledge company” remain distant dreams. Binney (2001) states that we have many knowledge management *applications* but very few knowledge management *systems*. In the end, the validity of knowledge management as a

field will be determined by its results. Knowledge fusion is aimed at helping mobilize critical enquiry, in the widest sense of the term, thought leadership and research excellence to influence and hopefully add value to the efforts of the managers who will build the KM equivalents of Dell and Toyota. That may be a long way off, but that is the reality test for the field of knowledge management.

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