Building a Knowledge Map:

An Analysis of Five Years of Topics Presented at a

KM Community of Practice

Andrea Hornett, Ed.D.
Penn State
axh45@psu.edu
610-648-3241

Eric W. Stein, Ph.D.
Penn State
ews3@psu.edu
610-648-3256

Penn State Great Valley
School of Graduate Professional Studies
Management Division
30 East Swedesford Road
Malvern, PA 19355-1443

Abstract

Previously published research (Stein, 2005) presented the factors contributing to the success and longevity of a knowledge management-focused community of practice operating continuously since 1999, and meeting monthly in a large metropolitan region in the United States. This paper extends that research by analyzing the presentations made and topics selected by that group over a five year period. We explore patterns in this data through content analysis and devise a preliminary map (Novak, 1998) of the knowledge domain. We view the results of this work as an example of collective sensemaking (Weick, 1995) based on the differing needs, values and perceptions of multiple stakeholders.

Introduction

Communities of practice (Barab & Duffy, 2000; Lave & Wenger, 1991) are forms of organization that encourage knowledge sharing and sensemaking. In this study, we look at the sensemaking of a community of practice for knowledge management through an examination of the topics selected for presentation over a five year period from 2001-2005. Members of the community, the Knowledge Management Group of Philadelphia (see Stein 2005) are knowledge workers and emblematic of the knowledge society (Drucker, 1969). They learn from a variety of interactions with vendors, peers, colleagues, and other outside groups and stakeholders. Their sensemaking within specific organizational contexts is not the focus of this study. This study focuses on the group itself and seeks evidence of its sensemaking activities by analyzing the topics it selected for presentation over a five year period.

Significance

We believe this study adds to our understanding of sensemaking in a multiple stakeholder environment (Brown & Duguid, 1991; Weick, 1995) and provides empirical support for the hypothesis (e.g., Iverson & McPhee, 2002) that knowledge management is a function of the unique interactions that occur between people and technologies. It also offers a better understanding of the practice of knowledge management and how organizations are implementing knowledge management strategies. Analysis of the case sheds light on how KM has evolved over time in response to new strategic initiatives and innovations in technology that enables KM.

Biases and Limitations

This study concerns one organization operating in a metropolitan region of the United States since 1999. We can not generalize from this study to all other knowledge management groups or communities of practice since the stability and longevity of this organization are unique. On the other hand, we believe this study can yield some understanding of the issues involved in collective sensemaking and learning in such a context.

Another strength and potential bias of the study is that both authors are members of the study organization. The authors' interpretations of the data result from their active participation in the KM Group and its Executive Committee during the five years under study. In sum, they have both an academic and an experiential understanding of the issues. Borrowing from the language of anthropology, they would be considered participant-observers or in the parlance of Schon (1983) "reflective practitioners." The strengths and limitations of such research methods are widely known and accepted.

Review of the Literature

This study is grounded in three domains in the organizational sciences literature: communities of practice, knowledge management, and sensemaking. Each of these domains is a relatively new area of management science having appeared in journals only over the past fifteen years. In addition, each of these domains independently poses new considerations for organizational theory and the related issues of managing knowledge in the emerging global knowledge society.

Communities of Practice

A community of practice is a set of people who share a concern, a set of problems, or a passion about a topic (Wenger et al., 2002). These people improve their knowledge and expertise in the topic area by interacting on an on-going basis (Wenger et al., 2002). These communities can arise spontaneously when like-minded people meet (Brown & Duguid, 2000), and they can persist over time when carefully cultivated by the membership (Wenger, et al., 2002).

While workers have formed guilds and associations throughout history, communities of practice are a relatively recent topic of interest because in the new knowledge society both individuals and organizations benefit when knowledge workers collaborate to improve expertise and performance (Davenport, 2005). In addition to benefits found in the past, where individual practitioners benefited from advancing a profession and coordinating its practice, these new communities of practice have an additional stakeholder: the corporation or organization that houses the knowledge

management practitioner. Corporations are interested in compiling their knowledge assets and managing them over a period of time, regardless of employee turnover or tenure.

The salient appeal of knowledge management strategies for corporations is that knowledge creates value and that this can exist and be managed beyond the minds of the specific individuals who may have participated in the creation of this knowledge. In addition, aspects of knowledge management such as search and expert locating offer opportunities for any employee anywhere to access best practices and build on previous knowledge while expediting time to market. Benefits of corporate knowledge management systems include speed, quality and expertise.

Communities of practice are primarily venues for collaboration and sharing expertise. Accordingly, organizations have sought ways to initiate and support communities of practice. There have been a variety of publications in the past fifteen years for both practitioners and academics that offer advice on communities of practice. An analysis of these disparate offerings suggests five characteristic elements of communities of practice (Stein, 2005):

1. A knowledge domain of interest
2. A set of interested and interconnected participants
3. Opportunities for on-going processes of sensemaking, knowledge sharing, and discovery within the domain of interest
4. A set of resources related to the domain of interest including methods, tools, theories, practices, etc., that are acquired, retained and accessible by the community; and
5. Processes by which the community maintains and refreshes its membership.

As a consequence of these five characteristics, communities of practice enable interaction among the members and provide the means to share interests in ways that result in a common repertoire of stories, methods, and shared mental models (Stein, 2005). Accordingly, communities of practice are a form of learning organization

(Argyris & Schon, 1978; Baets, 2005; Brown & Duguid, 1991; Chawla & Renesch, 1995; HBR, 2001; Starkey, et al., 2004; Schwandt & Marquardt, 2000; Senge, 1990), and knowledge system (Tsoukas & Mylonopoulis, 2004). Because communities of practice are learning organizations, they can serve as venues for knowledge creation, knowledge sharing, knowledge storage and other aspects of knowledge management.

Knowledge Management

In a fashion similar to that of communities of practice, knowledge management has been a subject of interest to both practitioners and academics. Knowledge management is considered a business strategy or variety of strategies (Dixon, 2001; Davenport & Prusak, 1998). While knowledge originates in and with people, it creates networks, communities and routines whose life spans exceed that of the tenure of the individual members (Czerniawska & Potter, 2001; Leibowitz, 2000). Accordingly, theories of management are re-focused from people to processes in analysis of these networks and routines. In this way, knowledge management becomes an integral aspect of communities of practice and vice versa.

Nonaka (1995) identifies socialization as an aspect of knowledge management in connection with knowledge creation, transfer and use. Accordingly, communities of practice can be viewed as an economical means for integrating people and technology around a shared interest (Stein, 2005). In other words, they are a low cost entry into a corporate knowledge management strategy.

Many examples of KM strategies involve large organizations (Dixon, 2000). However, a KM strategy does not have to involve large investments in technology. Knowledge management processes overlap with all kinds of organizing activities. This is particularly true in academic literature where organizational scientists seek to define and integrate learning, knowledge, and action in organization theories.

Vera and Crossan (2001) say that "knowledge exists in socially-distributed activity systems, where participants employ their situated knowledge … which is itself constantly developing" (p.621). From this perspective, knowledge, action and learning

are intertwined. Accordingly, knowledge management becomes a broader concept, freed from specific tools and technologies, and an integral element of learning and doing. People and organizations who seek to capture, transfer, and recall ideas, practices, routines and concepts of value to their work are engaged in some form of knowledge management however primitive.

Many non-academic practitioners, however, hold a different perspective. To them, knowledge management comes with specific tools and techniques, usually under the purview of a corporate information technology department. These practitioners want to learn about the tools and technologies and how they work and are deployed. They view knowledge management as a category of information technology that employs portals, taxonomies, search engines, and electronic tools for both synchronous and asynchronous collaboration. They see KM as something new, something codified in tools, something deployed with expectations of adoption by workers to improve productivity and performance. Further, they want to measure the results of acquiring and deploying these tools. They do not read the academic literature; they rely on the Gartner Group (www.gartner.com), KMWorld, and similar organizations to keep them up to date. That is how they make sense of trends.

Sensemaking

One of the organizing rationales and distinguishing features of a community of practice is shared sensemaking (Stein, 2005). Sensemaking has at least seven characteristics (Weick, 1995). It is "grounded in identity construction, retrospective, enactive of sensible environments, social, ongoing, focused on and by extracted cues," and "driven by plausibility rather than accuracy" (Weick, 1995, p. 17). Further, sensemaking is grounded in both individual and social activity (Weick, 1995). These characteristics suggest that communities of practice are venues for sensemaking and, conversely, social sensemaking may tend to create communities of practice as on-going venues for identity construction. However, not all learning is shared by all members in some concordant fashion. Considerable sensemaking and learning may occur among

peripheral members of the community (Lave & Wenger, 1991).

As we approached this study, we expected to see evidence of sensemaking within the knowledge management group that would indicate maturation of knowledge management as a field of practice. We also hoped we could deduce some of what was being learned in the community about its practice. In this way, we might see patterns of knowledge management evolving as a practice.

Research Questions

The primary research question motivating this study was: How is the body of knowledge that comprises KM changing and evolving over time and what are the social mechanisms that influence such changes? KM represents a set of concepts and ideas about the ways human beings create, manage, and use knowledge. As the field matures we would expect to see some shifts in the priorities for particular concepts, topics, or practices as negotiated by the participants. In short, we wanted to know what factors are more important today than they were five years ago. To answer this question, we decided to look at the ways one particular group was engaged in making sense of what was important. Just as newspaper editors must decide what is newsworthy and deserves space in the newspaper, so must individuals and groups tasked with knowledge management decide where to focus their energies. The case we selected for study (The Knowledge Management Group of Philadelphia) provided an ideal place to examine this question because the group and its Executive Committee had to wrestle with the selection of a topic each month.

Armed with the case-specific historical data, we were curious about the answers to these specific questions:

1. Which topics were covered over a five year period?
2. Can we discern changes or patterns in the selection of topics?
3. What were the influences and mechanisms that enabled the group to make its selections?
4. Can we build a useful map of the knowledge domain?

Case Characteristics

The group under study, the Knowledge Management Group of Philadelphia (see Stein 2005), is an organization of approximately 300 members formed in April, 1999. The diverse membership includes several large companies in the Philadelphia / Wilmington metropolitan region of the United States (e.g., AstraZeneca, DuPont, Rohm & Haas, SAP, Unisys, Vanguard), universities such as Penn State and Drexel University, consultants, and other companies and institutions. Monthly meetings typically generate attendance from thirty to fifty people, depending on topic and location. This interaction is supplemented by an on-going electronic chat room (Yahoo Groups) where discussion and related information is shared and stored.

The KM Group's website (www.kmgphila.org) explains that it was "formed to address the needs of area organizations in managing knowledge assets." Knowledge assets include intellectual capital (e.g. what employees know; patents), procedural knowledge contained in documents and administrative structures, and knowledge embedded information systems. The goals of the group are to "promote the sharing of KM best practices, to provide a forum for group problem solving on KM problems and to encourage networking and professional collaboration in the area of KM" (www.kmgphila.org). "Knowledge management includes the activities related to the creation, capture, organization, maintenance, retrieval, and use of organizational knowledge to promote improved decision-making and performance"

(www.kmgphila.org).

A small, self-selected group within the larger group manages the work of arranging venues, identifying and soliciting speakers, selecting topics, and maintaining the website and the Yahoo! Groups collaboration space. This group calls itself the Executive Committee and currently includes seven members. They meet monthly within two days after each session. These meetings provide an opportunity to evaluate the session and plan future meetings. During 2005-2006, the Executive Committee included representatives from Astra-Zenea, DuPont, Hilt & Associates, Rohm and Haas, Penn State (2), and SAP.

Data and Methods

The strengths and weaknesses of case studies are well known. As suggested by Yin (1989) and others, we used multiple data sources from the case to cross-check our findings and to limit undue bias. Since its inception, the Knowledge Management Group has stored the titles, descriptions and PowerPoint slides of its monthly presentations and these were the basis for a content analysis. Five years of documents were reviewed and analyzed for their essential messages (See the Appendix, Table A for a complete list of the topics). These data were sorted and re-grouped in a variety of ways (e.g., Appendix, Tables A and B) and the patterns were analyzed. We worked in tandem: authors had the dual roles of looking for patterns and reviewing and evaluating results and interpretations. We also had access to survey information conducted with the membership in 2005. These data were analyzed to produce descriptive statistics about the future preferences for KM topics.

Coding and Analysis of the Textual Material

We used both a priori and emergent coding of the text-based data. In the first phase, we utilized an a priori coding structure for the topics based on eight categories relevant to the knowledge management process by borrowing loosely from Grant (2004)

who aligns knowledge management with strategy. Topics that did not fit into one of these categories were coded as "other." These categories are arranged roughly to correspond to the generally accepted parsing of the knowledge management process into phases: knowledge generation, knowledge organization, and knowledge utilization. See Table 1.

Table 1: A Priori KM Coding Categories Used

#	Code	KM Process	Definition
1	KC	Knowledge Creation	Generating new knowledge. Examples: original research; product design
2	KA	Knowledge Acquisition	Acquiring existing knowledge. Example: recruiting new personnel
3	KId	Knowledge Identification and Location	Identifying the sources of knowledge in people or systems. Examples: taxonomies; search engines; expert locators.
4	KSt	Knowledge Storage and Organization	Process of retaining, indexing and maintaining knowledge. Example: capturing business rules in knowledge bases and software
5	KS	Knowledge Sharing	Sharing and enriching knowledge among groups of people. Example: communities of practice
6	KI	Knowledge Integration	Integrating streams of knowledge among people and through time and place. Example: new product development
7	KR	Knowledge Replication	Applying knowledge from one context to a different situation or context. Example: implementing best practice; knowledge xfer
8	KMr	Knowledge Measurement/Use	Measuring the use and impacts of knowledge on organizational outcomes: Examples: after-action reviews; Intellectual Capital Accounting; ROI, ROA
9	Other	na	Examples: conferences on knowledge sharing; the future of KM

The second a priori coding scheme we used distinguished between topics that had

a technical emphasis, a social orientation, or a joint socio-technical orientation (see Table 2). We thought this was important since the literature typically defines KM as a function of both people and technologies.

Table 2: A Priori Socio-Technical Coding Categories Used

#	Code	Orientation	Examples
1	S	Social or management orientation	Establishing mentoring programs; organizing a community of practice
2	T	Technical orientation	Learning about the features of a new KM technology; e.g., a document management system; an expert locator.
3	ST	Socio-technical orientation	Implementing a new technology for strategic reasons

In the next phase of the study, we used ATLAS.ti (www.atlasti.com), a content analysis program, to search for emergent patterns and classifications in the data by running frequency counts of words. The raw data included the titles of the presentations, summary descriptions, PowerPoint slides (where available) from each meeting, and open-ended survey data. In this analysis we looked for the relative importance of particular KM ideas and concepts.

Findings: KM Process Coding Scheme

Figure 1 displays the frequency that topics were assigned to the KM process categories previously defined (see also Appendix-Table A).

Knowledge sharing is the dominant category with more than twice the occurrence of any other category. This is the area where both technology and human behavior most obviously intersect, and thus appeals to technologists, managers and consultants. Next most frequent are knowledge creation and knowledge identification. This is not surprising since a number of members of the organization represent pharmaceutical companies where managing intellectual assets is a full-time job. Knowledge replication and knowledge storage/organization are the next frequent topic area. These sessions tended

to be more technical in nature. Knowledge measurement is next followed by knowledge acquisition and integration. The latter is one of the most difficult, but important areas of concern; i.e., how to measure KM outcomes in terms of value to the organization. This is under-represented simply because there are few experts in the field and it is area of on-going debate. The "other" category included reports on trends at KM World and Gartner Group conferences, sharing information on the APQC benchmarking studies, or discussing the future of KM.

Figure 1: Frequency of topics by KM Process categories (2001-2005)
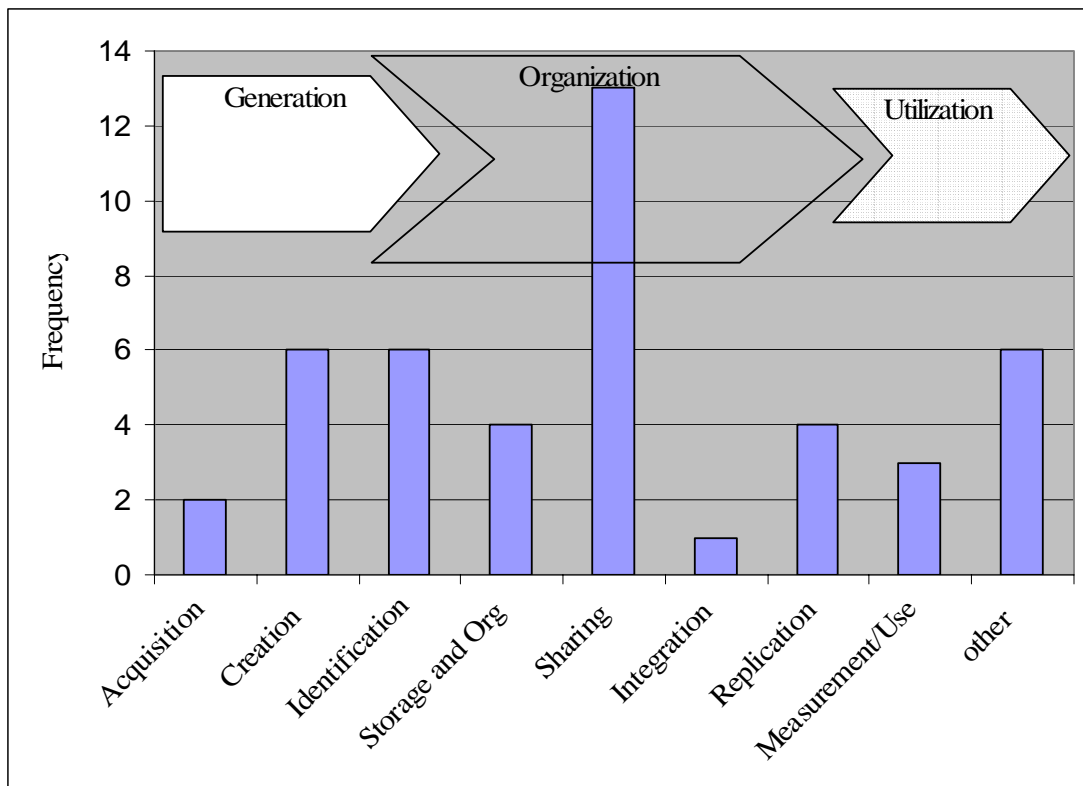
Discussion. The early years of the group were spent exploring knowledge management as a nascent practice and trying to share information on some of the technologies that were offered to corporate consumers. The group was interested in learning about anything that

related to the general topics of knowledge management and how it was defined. Monthly topics were sometimes selected opportunistically based on speaker and venue availability. Later the group spent more of its time on aspects of knowledge sharing: how to do it, how to reward it, and how to make it part of the culture. In general, topics have moved from defining KM and how to go about it to understanding KM as a part of corporate strategy. A continuous theme has been about ways to share knowledge so that practitioners create links between KM strategies and business value. Means for doing this include providing access to knowledge through portals, expert locators, e-collaboration, social networks, story telling, and virtual communities.

Findings: Socio-Technical Coding Scheme

Figure 2 displays the frequency that topics were assigned according to its socio-technical orientation as previously defined (see also Appendix-Table B). Of the forty-four sessions analyzed twenty one (21) primarily emphasized aspects of human behavior and motivation; sixteen (16) focused on the use of tools, software or systems; and seven (7) combined both perspectives in a socio-technical systems approach (Cherns, 1976; Eason, 1988; Mumford, 1983).

Figure 2: Frequency of topics by Socio-Technical Orientation (2001-2005)
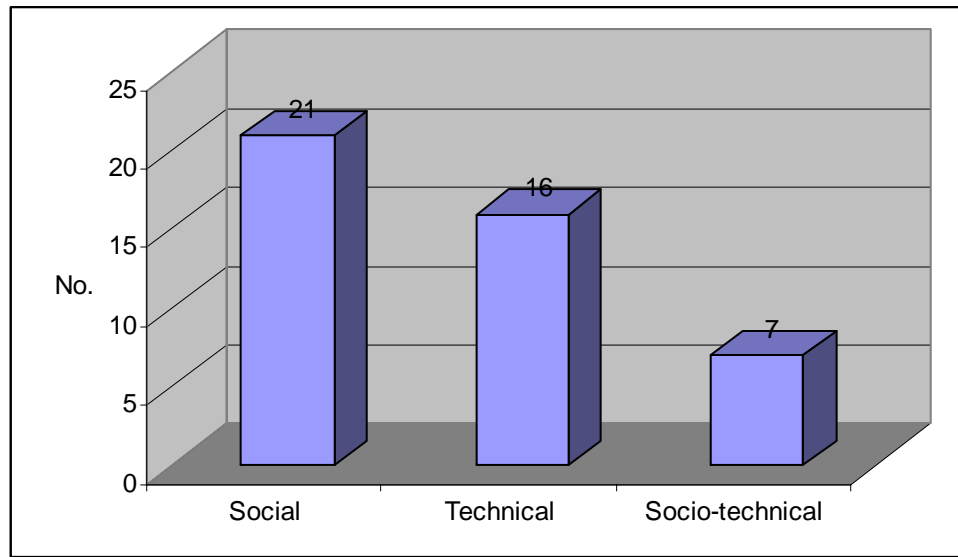
Discussion. As seen above, the majority of topics of interest had a social or management orientation. This suggests that although technology is important, KM challenges are chiefly viewed as non-technical or socio-technical.

Findings: Emergent Coding Patterns

A content analysis of the summaries of the sessions (about 8000 words) illustrates the dominance of certain ideas and concepts as part of a shared language. Figure 3 depicts the relative frequencies of key words and concepts used by members of the organization and by presenters. Knowledge is the most ubiquitous concept utilized 98 times or 1.23% of all words other than articles of speech. KM is second at 73 times. Next is management (43), information (37), business (33), new (28), learning (27), technology (26) and community (25). At the next level we find several word clusters: collaboration, communities, customer, value, results, customer, and people, among others.

Figure 3: Most Frequently Used Words in KMG Presentations (by count)
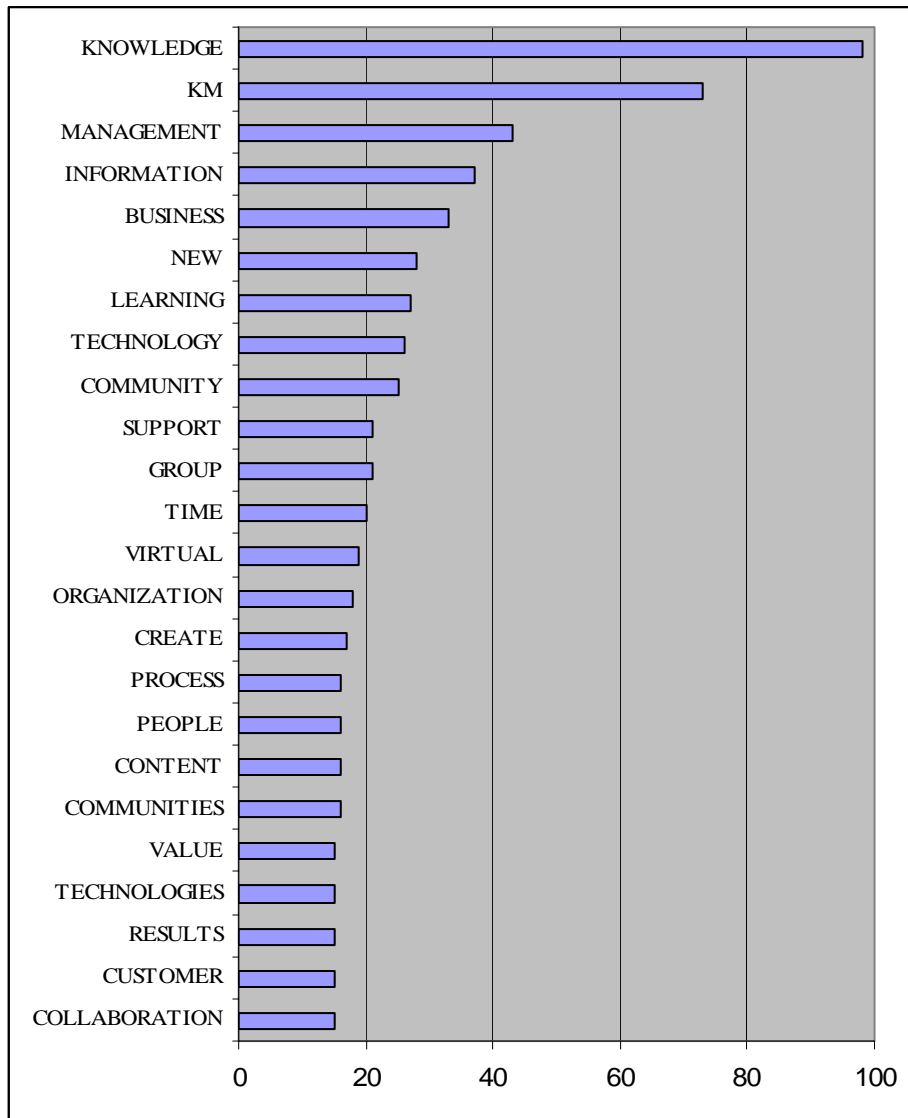
Discussion. The analysis of the language of the KM Group presentations is indicative of the dominant concepts used by the group. Unfortunately, it does not include the rich discussion periods and question and answer sessions during each of the presentations. As participant/observers, we believe these discussions would indicate a similar pattern of words and language for making sense of knowledge management. The field of knowledge management blends both sociological and technological considerations for the

performance and results of humans and their tools (Appendix, Table B). It is a socio-technical system and its sensemaking necessarily includes language from both realms: human learning and performance and technology and software. This is evident when mapping the KM Group to a framework that combines the socio- and the technical.

Findings: Membership Survey

In September, 2005, a member of the KM Executive Committee conducted a three question electronic survey of the general membership (200+) regarding reasons for attending or not attending monthly meetings. The results are provided in Table 3.

Table 3: Results of the Membership Survey 2005

Q1. What is your primary reason for attending a KM Group Meeting?		
Response	**Number**	**%**
Topic	38	59 %
Networking	11	17 %
Stay current in field	6	9 %
Don't attend	4	6 %
Speaker	2	3 %
Other	3	5 %
Total	64	100 %

Q2. What is the primary reason you would <u>not</u> attend a meeting?		
Response	**Number**	**%**
Schedule conflict	27	43 %
Inconvenient location	15	24 %
Topic not of interest	12	19 %
Inconvenient day/time	5	8 %
Not notified soon enough	1	2 %
Not notified at all	1	2 %
Other	2	3 %
Total	63	100 %

Discussion. This brief survey provides support for the central thesis of this paper; i.e., that the selection of topics are important to the group. 59% of respondents cited the topic as the primary reason to attend monthly meetings (and 19% cited the topic as a reason <u>not</u>

to attend). The second most important reason was to network. Our interpretation of the latter is that knowledge sharing (via networking) is a fundamental aspect of the organization's appeal and is of keen interest to KM practitioners.

The survey also included an open question requesting topic ideas for future sessions (see Appendix-Table C). The results of a frequency count are provided in Figure 4. The results show considerable overlap with the other sources of data.

Figure 4: Frequency Counts of Future Topic Ideas from 2005 Survey
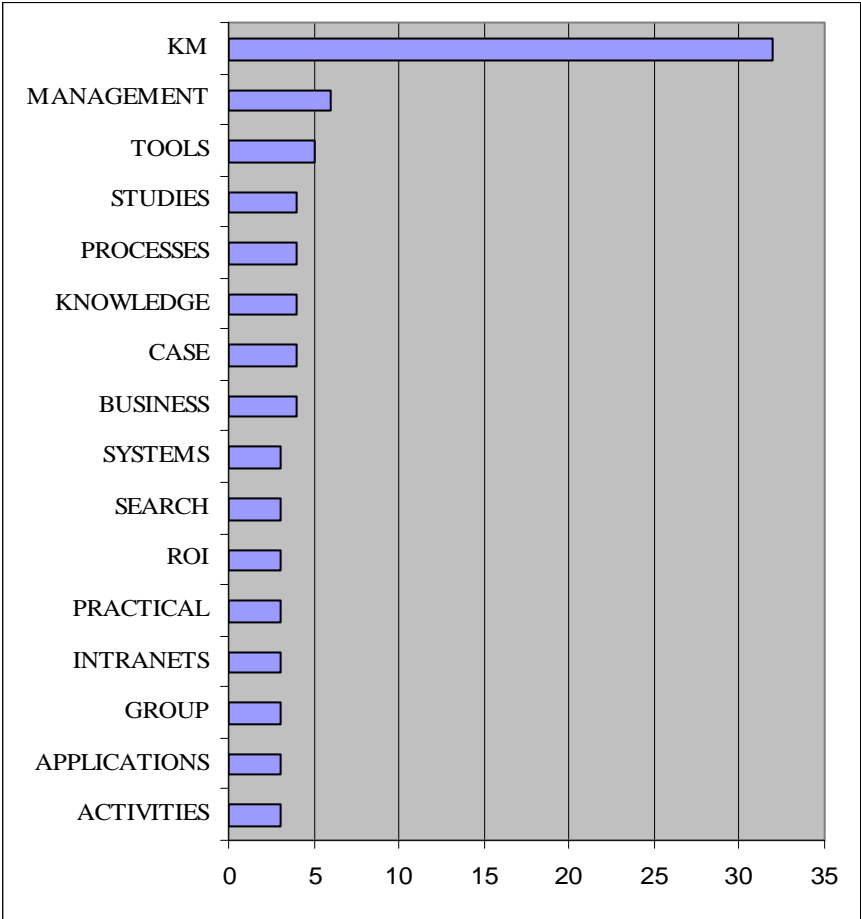
Interpretation of Findings

We began with four research questions:

- Which topics were covered over a five year period?

- Can we discern changes or patterns in the selection of topics?

- What were the influences and mechanisms that enabled the group to make its selections?

- Can we build a useful map of the knowledge domain?

The findings section of this paper addresses the first and second questions extensively. We perceived a wide range of needs represented among the topics from a concern with "what is KM?" and "what do I buy?" to finding ways to ensure that KM contributes to competitive advantage. There was a low incidence of repetition. The category of highest incidence, Knowledge Sharing, provided the most common ground for members of both socio- and technical orientations and responsibilities. The quest for new topics required a process to assign priorities. Accordingly, we asked what were the mechanisms that enabled the group to make its selections? The document analysis did not alone yield an apparent answer to this question. However, as participant-observers on the Executive Committee, we were able to make connections and construct some plausible hypotheses based on the findings and our experiences.

Mechanisms of Selection

Throughout the five years, the KM Group, primarily through the action of its Executive Committee, met regularly to consider topics and approach potential speakers and identify venues. Each "semester" the group sought to respond to the threads of past discussions and the emerging interests of the members. Sometimes, the Committee led with innovative ideas (e.g. The Great Debate in 2000) that playfully questioned the entire practice of knowledge management. As participant-observers, we knew the Executive Committee played a primary role in selecting topics and speakers and scheduling the

sessions. Supporting that activity, a variety of sources played roles in surfacing issues to the Committee's attention. Members volunteered to share their experiences. Networks of relationships yielded topic ideas, speaker ideas, or both, and in 2005, the Committee conducted a survey to prompt ideas from members. However, this description fails to depict the weeding and threshing processes of the Executive Committee.

For instance, one of the members of the KM group was exploring new social research techniques, had interesting data, and volunteered to make a presentation. Some on the Committee were in favor of the presentation; others were not. Some thought it was appropriate while other members thought it might be too "academic" to be of interest to the general membership. For a year, this topic would surface for discussion but no consensus could be reached and was kept on the "back burner." The issue was resolved by pairing this presentation with the work of an external expert on the topic. The invited speaker made a presentation and the member mentioned above (and another KM group member) commented on the main presentation. The issue was thus resolved to everyone's satisfaction by constructing a session that offered multiple perspectives and balanced theory with application.

The Executive Committee's deliberations thus involved implicit criteria that sessions be of interest to at least 20-40 members and address other factors such as relevance to the field of KM, balance theory and practice, restrict commercial messages, and maintain speaker quality, among others. The Executive Committee made these tacit rules explicit by writing down guidelines for presenters to assist them in understanding the audience and the nature of the group; in a sense, this was a form of socialization. In addition, a member of the Executive Committee was in contact with each speaker to ensure good quality. So, it was in this context that the Executive Committee attempted to effectively respond to a variety of stakeholders and competing interests.

Stakeholders.

The Executive Committee managed the needs of several different stakeholders. Some sought tactical, practical applications. Some wanted strategies. Others held an

enterprise perspective or needed to advocate at the enterprise level. Some stakeholders were primarily concerned with the work teams in the organization. Some were stewards of communities of practice and advocates of spreading communities throughout their enterprises. Other members needed to make a good business case with executives to secure resources for what they were selling or implementing in the organization. The longevity of the KM Group suggests that this community of practice had a sensemaking process that selected topics and speakers relevant to this new KM world (Bennet & Bennet, 2004), and in consideration of the socio-technical aspects of KM.

Evidence of Sensemaking

We believe the KM Group exhibits each of the seven properties Weick (1995) identifies in sensemaking: identity construction; enactive of sensible environments; social; ongoing; focused on and by extracted cues; and driven by plausibility rather than accuracy; and it is retrospective.

'Grounded in identity construction' means that members of a sensemaking organization hold some core beliefs in common and these enable them to define their space (Weick, 1995) and make strategies within it. The KM Group's website clearly articulates its identity as an organization and mission but more than that, the presentations and topics for five years give rich context to the KM Group's space and to the members' understanding of what constitutes knowledge management. Further, Weick claims that struggles over identity are at the root source of sensemaking. This is the nature of the KM Group's monthly Executive Committee meetings. It is here that the members create a space for articulating and negotiating topics and speakers in an on-going dialogue about identity and purpose. Some topics and presentations have been more successful than others in terms of popularity or currency but all topics and presentations have served to define the KM Group identity and to color the perceptions of all members no matter how active. Accordingly, "sensemaking is the feedstock for institutionalization" (Weick, 1995, p. 36). Therefore, the topics and presentations reinforce the identity of the organization while also defining the concepts of knowledge management. The KM

Group is as the KM Group does. In this way, the KM Group as a sensemaking organization enacts its environment. This environment is the focus and the sustenance of the KM Group in a self-reinforcing dynamic of ontological oscillation (Weick, 1995). The KM Group is primarily a sensemaking organization and the sense that it makes sustains it as an ongoing group.

Sensemaking is ongoing Weick (1995) says, meaning that it is a flow, neither starting nor stopping, and it is 'focused on and by extracted cues', meaning that people use simple, familiar structures as representations of more complex concepts. Indeed, the monthly meetings of the KM Group necessarily focus on topical, pragmatic elements that form useful cues for the participants to enact their environments, subject to the politics of interpretation. In this regard, the consensual nature of the KM Group's Executive Committee suggest this community of practice is at a nascent stage of development, absent rules, codes, or polarities of practice. Harmony is achieved because sensemaking is about "plausibility, pragmatics, coherence, reasonableness, creation, invention, and instrumentality" (Weick, 1995, p. 57). A potential participant who does not perceive value in a KM Group session in advance will most likely not attend, thus insuring an audience with agreement around the potential for value. Sensemaking is a social process "contingent on the conduct of others" (Weick, 1995, p. 39) because human thinking and social functioning are aspects of each other (Weick, 1995). The nature of the process is such that a sense of community as an aspect of both identity and process is inevitable. Further, people are conscious of what we have done never the doing of it, and thus sensemaking is retrospective. While the KM Group does not meet Senge's (1990) definition of a learning organization or Huber's (1991) because it is not a single entity with collective responsibility for improving that organization's singular performance, it is engaged in learning (Argyris & Schon, 1997; Probst & Buchel, 1997). The KM Group is a learning community (Tosey, 1999) that creates, acquires and transfers knowledge and modifies its behavior to reflect new knowledge and insights (Garvin, 1993).

Building a KM Concept Map

       We began this study with the assumption that we would discern a clear pattern of KM topics or be able to depict patterns yielding a picture of the evolution of KM as a field of inquiry. What we found was both more complex and more dynamical than anticipated. Our knowledge of the organization revealed that the Executive Committee was influenced by a variety of stakeholders as noted earlier and attempted to respond to their diverse needs. The focus of the various stakeholders ranged from narrow tactical concerns at the individual level to making teams more effective to much more far-reaching strategic enterprise concerns. After some deliberation, we built a map with two well-known dimensions used to analyze organizations: strategic orientation (tactical-strategic) and levels of analysis (individual-group-enterprise). We were able to successfully position topics within this space including those with a socio- or technical orientation. This map is shown in Figure 5 and includes examples of topics representing the differing needs, values and perspectives of the multiple stakeholders of the KM Group.

Figure 5: KM Concept Map based on Multiple Stakeholder Interests and Perspectives

	Individual	Group	Enterprise
Strategic	Strategic Story-telling ///////////////////// SNA Tools	Stewardship of a CoP ///////////////////////////// GDSS	KM and ROI ///////////////////////////// IT for Business Intelligence
Tactical	Performance Management ///////////////////// Electronic Signatures	After-Action Reviews ///////////////////////// e-Learning	KM and New Product Developmt ///////////////////////// Portal Development

Notes:
1. The split box provides examples that are socio- (top) or technical in nature (bottom)
2. GDSS=Group Decision Support system
3. CoP=Community of Practice
4. KM=Knowledge Management
5. ROI=return on investment
6. SNA=Social network analysis

This map shows that the field of knowledge management attracts a variety of stakeholders whose concerns range from tactical work processes to business strategy. As such, the map is useful to KM practitioners trying to discern a sensible pattern in the chaos. The KM Group effectively negotiated the needs of these various stakeholders as represented in the dimensions of the map through its sensemaking abilities.

Conclusions

This study describes a community of practice holding a shared interest in knowledge management while simultaneously containing multiple stakeholders and competing interests, values, and perspectives. The use of the label 'community' clearly does not mean homogeneity. It is not a melting pot. It is a complex, dynamic system of needs and priorities, with members split between socio- and technical orientations. This

volunteer community of practice has negotiated these conflicts for over five years and this process is evidence of robust sensemaking.

There may be significant differences between diverse "at-large" communities such as the one studied here and communities that lie wholly within an organization; this should be the subject for future study. The failure of some groups to make sense of the implicit dichotomies within the 'community' might explain their demise. Future research is needed on the relative homogeneity of communities of practice and how they negotiate multiple stakeholders and competing values.

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