

Chapter Two

REVIEW OF THE LITERATURE

Introduction

The first section of this literature review focuses on developing an understanding of the field of KM in terms of *breadth*, including building a familiarity with the terminology of the field. It does not purport to present the direction of the many hundreds of authors writing in the field, but tries to capture the early authors and those that have continued as thought leaders in the field of knowledge management as it emerged, and the areas of their ideas. It briefly introduces the work of many of those thought leaders interviewed in this study. The 14 KM learning objectives developed by the public sector are used to help develop a surface understanding of those things considered part of the field of KM.

Secondly, I explore the concept of a complex adaptive system in an effort to develop a common language and set the groundwork for findings presented in the discussion. Finally, in the literature review on “passion” I explore the following questions: What role does passion play in creativity? What is the connection between passion and leadership? What is the relationship between passion and reason? Is there an intellectual passion? And finally, can passion be used as a determinant or indicator of value? The focus of this review is on the power of passion in communicating thoughts, its role in leadership, and its use as a determinant or indicator of value. However, I also consider other aspects of passion that appear in the literature, including the relationship of passion and the concept of flow. Finally, this review of passion will be used to develop a framework for exploring the aspects research participants associate with passion.

Knowledge Management

Peter Drucker broadly described the current shift from industry to information to knowledge, which he says started around 1960 and is expected to continue until 2010 or 2020, as follows: “We are entering the knowledge society in which the basic resource is no longer capital, or natural resources, or labor, but is and will be knowledge, and where knowledge workers will play a central role.” (Skyrme, 1999, p. 11)

Historical Beginnings

While Peter Drucker had been writing about the knowledge worker for a decade or more, it was not until 1986 that Karl Wiig coined the knowledge management (KM) concept at a keynote address for the United Nation’s International Labor Organization. That same year in Sweden, Karl-Erik Sveiby introduced the concept of the invisible balance sheet, a way of codifying the value of knowledge to organizations. By 1989 companies like Skandia AFS and Celemi in Sweden had developed techniques for taking

intellectual capital into account on their balance sheet and, here in the U.S., Price Waterhouse had integrated KM into its business strategy. The term “intellectual capital” was used by economists and businesses to tie the intangible value of knowledge to the “capital” value of the organization. Situation dependent, individuals in the KM field sometimes use these terms interchangeably. In 1991 Tom Stewart published his first article on intellectual capital and, first in articles then in a book, Ikujiro Nonaka and Hirotaka Takeuchi presented a series of case studies focused on how Japanese companies created knowledge through innovation. In 1993-95, Karl Wiig produced detailed work that explored the foundations of KM; how people and organizations create, represent and use knowledge; how to manage knowledge organizations; and specific methods and practical approaches to managing knowledge.

Meanwhile, in 1994 Ernst & Young and the Strategic Leadership Forum held the first KM conference, followed in 1995 by the Knowledge Imperative Symposium sponsored by the American Productivity and Quality Center (APQC) and Arthur Andersen. By the mid-90s, APQC had recognized that KM was integral to both the productivity and quality of organizations, and since that time KM continues as the key focus of their research. During that same period, Dorothy Leonard-Barton presented research that tied successful innovators to companies that managed knowledge. This focus on innovation continues today as a major theme in KM. The rapidly rising field of information systems gave impetus to knowledge management as the development of software made information and document management more effective, and decision-makers looked to KM to figure out how organizations could effectively use the information they could now store, organize and access.

In 1997, Lief Edvinsson and Michael Malone teamed up to further explore the use of intellectual capital as the bottom line of the organization. This same year saw Verna Allee’s work on expanding organizational intelligence with the use of knowledge. The following year, Tom Davenport and Larry Prusak published well-researched studies on how organizations manage what they know, a definitive overview of KM that helped establish a vocabulary and concepts for the growing field. That same year Etienne Wenger released his findings on the relationship of learning, meaning and identity to communities of practice, the first definitive work on the use of communities as a KM tool. Communities of practice and interest became integral to the sharing of knowledge supported through KM in organizations.

In 1998, Carla O’Dell and Jackson Grayson married KM to organizational productivity and quality in their research on the transfer of internal knowledge and best practices. This same year, the U.S. government, led by the Department of the Navy, became a major player in leading implementation of KM through publication and worldwide distribution of virtual toolkits. While APQC continued practitioner research in this area, IBM sponsored the Institute for Knowledge Management, dedicated to producing cutting-edge research and case studies in this emerging field. A number of industry and government organizations participated in both of these research efforts, providing the

opportunity to expand their independent efforts across the growing KM community of business and academic practitioners. By the end of the 20th century, KM had exploded across industry and government, bringing with it a plethora of new technologies and processes touted as the answer to organizations moving into the new world of global connectivity and competition.

During the early years of the new century, a number of knowledge management books have come out that developed new aspects of the field. In 2000, John Seely Brown and Paul Duguid explored what they called the social life of information which looked at information (and the knowledge created from that information) as a real force for societal change. From a client relationship perspective, Ross Dawson took a professional services firm's viewpoint of knowledge based on client relationships, forwarding the notion that to be successful, professional services firms had to both manage knowledge for themselves as well as transfer that approach to their customers. Nancy Dixon used case studies to show how companies thrive by sharing what they know, what she calls common knowledge, and explored knowledge transfer systems and their application. The following year saw a rising interest in storytelling exemplified by Steve Denning's documentation of The World Bank in an expanded case study, showing how they used the springboard story to share lessons learned world-wide. As had occurred with communities of practice and interest, storytelling was quickly embraced as a KM tool for knowledge sharing.

As an indicator that KM was becoming widely known and used world-wide, 2003 saw the development of what Debra Amidon called the innovation superhighway, describing a global vision of knowledge innovation at all levels of the economy. Note the continuing focus on innovation in KM that had begun in the previous decade. That same year a two-volume, 1,300 page handbook was forwarded by Clyde Holsapple. These volumes have 65 separate chapters covering the breadth and depth of KM written by 91 authors, many of whom are engaged in continuing research in the KM area.

While these introductory paragraphs to what will become an overview of KM thinking are presented in a historic context and in terms of early authors, works and events, the growth of KM cannot be communicated in a linear fashion, nor is its development limited to any selected set of authors, whether representing scholarly research, the trade press, or the popular press. Ideas appear to have emerged from around the world in hundreds and hundreds of private and government organizations and non-profit and academic institutions—often with similar ideas emerging simultaneously from different sources as technology moved into the workplace and world-wide connectivity became a reality. However, all of the widely-published authors mentioned above and others whose work followed these early offerings, contributed new thoughts to the emerging field of KM that were then built upon by others as the value of KM to organizations became more widely understood. This overview is organized around these thoughts, beginning with an exploration of the varying definitions and approaches to KM.

Defining KM

As individuals and organizations began to recognize potential value in KM, there emerged nearly as many definitions of KM as there were individual authors. Nearly every KM book in the literature forwards its own definition of knowledge and knowledge management. This, of course, makes interpreting each book somewhat challenging. A number of authors define knowledge in relationship to, or close to, information (Woolf, 1990; Turban, 1992; Beckman, 1997). Others consider knowledge to derive from experience and thinking and say it originates in the mind (Bennet & Bennet, 2004; Davenport & Prusak, 1998; Probst, Raub & Romhardt, 2000), and a third group considers the classical definition of knowledge—justified true belief—to be the best one (Nonaka & Takeuchi, 1995; van der Spek & Spijkervet, 1997). Some authors consider knowledge to be actionable (Bennet & Bennet, 2004; O’Dell & Grayson, 1998; Sveiby, 1997) A somewhat surprising observation is that many, if not most, authors of KM books do not even define or address their meaning or interpretation of the concept of knowledge! As introduced in chapter 1, for purposes of this study, *knowledge* is defined as the human capacity (both potential and actual) to take effective action in varied and uncertain situations. In the interest of providing the flavor of KM definitions, a representative set is included in Table 1. Several of these authors attempt a detailed, all-inclusive definition of the term.

Table 1
Definitions of Knowledge Management

Definition	Source	Reference
KM is the systematic, explicit, and deliberate building, renewal, and application of knowledge to maximize an enterprise’s knowledge-related effectiveness and returns from its knowledge assets.	Wiig	(Wiig, 1993)
Nonaka and Takeuchi used knowledge creation as the “capability of a company as a whole to create new knowledge, disseminate it throughout the organization, and embody it in products, services, and systems.”	Nonaka and Takeuchi	(Nonaka & Takeuchi, 1995)
“KM is getting the right knowledge to the right people at the right time so they can make the best decision.”	Petrash	(Burkowitz & Petrash, 1997)
“KM involves the identification and analysis of available and required knowledge, and the subsequent planning and control of actions to develop knowledge assets so as to fulfill organization objectives.”	Macintosh	(Macintosh, 1996)
“KM applies systematic approaches to find, understand, and use knowledge to create value.”	O’Dell	(O’Dell & Grayson, 1998)
“KM is the explicit control and management of knowledge within an organization aimed at achieving the company’s objectives.”	van der Spek	(van der Spek & Spijkervet, 1997)
“KM is the formalization of and access to experience, knowledge, and expertise that create new capabilities, enable superior performance, encourage innovation, and enhance customer value.”	Beckman	(Liebowitz & Beckman, 1998)
“KM is human activity that is part of the knowledge management process (KMP) of an agent or collective. KMP, in turn, is an ongoing, persistent, purposeful interaction among human-based agents through	Firestone	(Barquin, Bennet & Remez, 2001a)

which the participating agents aim at managing (handling, directing, governing, controlling, coordinating, planning, organizing) other agents, components, and activities participating in the basic knowledge processes (knowledge production and knowledge integration) into a planned, directed, unified whole, producing, maintaining, enhancing, acquiring, and transmitting the enterprise's knowledge base.”		
KM is viewed as a process for optimizing the effective application of intellectual capital to achieve organizational objectives.	U. S. Dept. of the Navy	(Porter, Bennet, Turner & Wennegren, 2002)

Further examples of the variety of meanings associated with the field of knowledge management can be seen in Daryl Morey's book of classic and contemporary works on knowledge management. In the preface he noted,

All books, even collected works, are influenced by the bias of the editors. In particular, there is a strong bias toward the learning-centric view of knowledge management in this collection as opposed to an information-centric view. The learning-centric view emphasizes that knowledge is the 'capability to act effectively' and is derived from learning. Knowledge management in this view is a management function that accelerates learning. (Morey et al., 2000, pxii)

The information-centric view is exemplified by the Gartner Group definition of knowledge management: "Knowledge management is a discipline that promotes an integrated approach to identifying, managing and sharing all of an enterprise's information assets, including database, documents, policies and procedures as well as unarticulated expertise and experience resident in individual workers" (Morey, Marbury & Thuraisingham 2000, pxii).

A clear pattern emerging from the definitions in Table 1 and dozens more considered by the author is the recognition of knowledge as a human resource essential for the success of the organization or enterprise, and thus the need to "manage" that resource. "Manage" means making the best use of the resource, not to "control or direct" the resource. How to *develop, manage and apply* that valuable resource, then, becomes the focus of KM strategies, processes and approaches.

KM Overviews in the Literature

Karl Wiig, often referred to as the father of knowledge management, provided a thorough review of the field when he formally introduced the subject to the public through his three books referenced above (Wiig, 1993; Wiig, 1994; Wiig, 1995). These books are thorough and both conceptual and pragmatic. Wiig emphasized fundamental concepts, focusing on knowledge, meta-knowledge and the management and application of knowledge to improve organizational performance. This groundbreaking work lays a KM foundation built on three pillars: Pillar I, *Exploring Knowledge*, includes surveying,

categorizing, analyzing, codifying and organizing knowledge. Pillar II, *Finding the Value of Knowledge*, includes appraising and evaluating. Pillar III, *Actively Managing Knowledge*, includes synthesizing knowledge-related activities, handling, using and controlling, leveraging, distributing and automating, and implementing and monitoring knowledge-related activities (Wiig, 1993, p. 20).

Wiig also provided many visuals, taxonomies and practical suggestions for understanding and applying knowledge. Although his three books are seminal contributions to the field—and recognized by many practitioners as such—they are not as widely known as many others and are difficult reading for a newcomer to the KM field.

In a survey article titled “The Current State of Knowledge Management,” Thomas Beckman stated that “Knowledge management (KM) is an emerging discipline with many ideas yet to be tested, many issues yet to be resolved, and much learning yet to be discovered” (Beckman, 1999, p. 1). Consistent with this stage of KM and its diversity of views, Beckman presented a brief outline of major ideas and practices in the field. Addressing the conceptual perspective of KM, Beckman listed eight definitions of knowledge proposed by different authors. In his knowledge typology dimension he described five different typologies. He then considered the field from the additional perspectives of processes, technologies, organizations, management and implementation. Each of these perspectives yields a differing set of viewpoints by knowledgeable authors in the field. These viewpoints are not so much in conflict as they provide different ways of seeing the subject. In his conclusions Beckman noted,

Until the past few years, most of the knowledge, experience, and learning about KM has been accessible to only a few practitioners. However, during the past 3 years an explosion of interest, writing, research, and applications in KM has occurred. . . . Future work must focus on building practical experience through extensive experimenting, prototyping, and testing—especially in the process, technology, organizational, and implementation perspectives. In addition, the conceptual frameworks and integration across KM perspectives need more investigation and development. (Beckman, 1999, pp. 1-1 through 1-22)

He then suggested 21 KM books to read. His references contain 45 books and articles.

A growing interest in KM was also occurring in the U.S. Federal Sector. Sponsored by the cross-government Knowledge Management Working Group, working sessions were held in 2000-2001 to build an understanding of the concepts, roles, and importance of KM in the U.S. government. As a result of these sessions, the working group developed “learning objectives” for KM courses taught in the public sector. These objectives in essence span the field of KM for the Federal sector.

At the time this set of learning objectives was formalized, I was Co-Chair of the Federal Working Group, leading implementation of KM across the Federal government.

These learning objectives set the scope of the field of KM for the Federal sector as well as the tens of thousands of businesses and tens of millions of professionals that support the U.S. government. They make clear connections to earlier management movements such as total quality management and provide a business focus for KM while emphasizing the importance of learning and knowledge; in other words, focusing on both the values of intangibles to the Federal sector and linking those intangibles directly to people and learning. The ideas presented through these learning objectives, built on the foundational work of research institutions such as APQC and The Knowledge Institute as well as practitioners, provide an objective overview of the content of the field. Each of the learning objectives and a short explication of them is included below.

Learning objective 1: Have knowledge of the value added by knowledge management to the business proposition, including the return on investment, performance measures, and the ability to develop a business case. Though knowledge management is capitalized in this objective, knowledge management is best considered as having a small “k” and a small “m.” The intent is that knowledge management is not an initiative in and of itself, but supports the mission and business objectives of the organization, thus positioning KM as a strategic enabler for the organization. KM is an extremely broad field. Using metrics brings solid management practices to the forefront of decision-makers, thereby enabling choices.

Learning objective 2: Have knowledge of the strategies and processes to transfer explicit and tacit knowledge across time, space, and organizational boundaries, including retrieval of critical archived information enabling ideas to build upon ideas. Since Nonaka and Takeuchi (1995) first explored the interaction between tacit and explicit knowledge, there has been a steady growth of interest in the capture of tacit knowledge. Aging workforce issues in the public sector have served as a catalyst for the development of processes and systems that facilitate understanding the role and importance of context in decision-making. But this objective goes beyond understanding the nature of tacit and explicit knowledge to focus on the transfer of understanding. Increasing the dynamics of transfer moves knowledge through the organization at an increasing rate; the more knowledge that is being transferred, the more it is available to others—and the organization—as a resource. The use of teams, communities, mentors, and dialogues coupled with widespread organizational trust greatly assists the organization in sharing tacit knowledge.

Learning objective 3: Have knowledge of state-of-the-art and evolving technology solutions that promote KM, including portals and collaborative and distributed learning technologies. We live in a world of technology. The exponential increase in data and information is both driven and enabled by information technology. We have the ability to reach further and further across domains and within domains for ideas and solutions. Knowledge repositories, automated libraries, computer services, databases, etc. offer the capability for not only storing large amounts of data and information, but also efficient and intelligent retrieval and assemblage capability.

Powerful search algorithms, intelligent agents, and semantic interpreters allow employees to rapidly retrieve information needed for problem-solving and decision-making. Knowledge managers and leaders need to be aware of these capabilities, how they are used, and how to integrate their operation with people to ensure knowledge availability and application.

Learning objective 4: Have knowledge of and the ability to facilitate knowledge creation, sharing, and reuse including developing partnerships and alliances, designing creative knowledge spaces, and using incentive structures. Knowledge creation, sharing, and reuse are the heart of KM programs and the knowledge-centric organization. As people share knowledge, and other knowledge workers use that knowledge and find new ways to improve on it and innovate, its value increases for all of the organization. This process also provides the opportunity to identify integrators (knowledge leaders who connect people and ideas together) and subject matter experts (who provide depth of thinking in specific areas). In turn, those involved in exchanges benefit from the exchange through a more complete understanding of the area addressed, thereby becoming a more valuable resource to the organization.

Learning objective 5: Have knowledge of learning styles and behaviors, strive for continuous improvement, and actively engage in exploring new ideas and concepts. People learn differently. Some learn through reading, others through lectures or visual or graphic representations, while still others learn by doing. Effective transfer of information requires understanding different learning styles and how people learn. Since adults learn best from direct experience with real-world problems, how can this be extrapolated across a virtual environment? (Knowles, 1998). As learning becomes the mutual responsibility of leaders and workers, knowledge professionals must be constant learners, seeking new information and exhibiting behavior for others to model by continuously striving to improve the organization's use of information and knowledge. This objective also sets the stage for capitalizing on new learning approaches including broadband Web-based multimedia. As new concepts unfold, models and theories for learning will evolve. A foundation in this area will prepare the organization and its knowledge workers for the future.

Learning objective 6: Have working knowledge of state-of-the-art research and implementation strategies for knowledge management, information management, document and records management, and data management. This includes project management of knowledge initiatives and retrieval of critical archived information. Knowledge leaders and workers need to understand the conceptual linkages between knowledge management, information management, and data and records management. KM is part of a larger movement enabled by information technology, a movement that has brought us into the information age and is rapidly propelling us toward an age of increasing complexity where knowledge appears to be the only thing that can deal with complexity. There are continuing advances in data management, document and records management, and information management that will make information technology

infrastructures more effective in supporting knowledge workers as they make their organization more effective through intelligent management of the knowledge environment. The knowledge centric organization will make maximum use of technology and the latest research findings related to information and knowledge management.

Learning objective 7: Have understanding of the global and economic importance of developing knowledge-based organizations to meet the challenges of the knowledge era. We live in an omni-linked world. Anyone in the world can talk to almost anyone else in the world in real time. Technology has provided totally new ways of moving and transferring data, information, and knowledge among individuals, organizations, and governments. The results of these interactions are increased communication, and a corresponding increase in the flow of ideas and the making of decisions. Organizations are forced to scan, select, and quickly respond to the increased flow of Web-based exchanges and actions. Moreover, as the number of nodes in networks increase, the number of links increase, and as the links and their consequent relationships increase, so does the complexity. Critical thinking, the possession of deep knowledge, and the ability to work collaboratively with others who think differently may help address issues of increasing complexity. Knowledge-based organizations need to provide time and space for critical thinking.

Learning Objective 8: Have the ability to use systems thinking in implementing solutions. KM addresses powerful activities throughout environments, organizations, cultures, and economies. As one considers the relevant issues and opportunities, systems thinking provides a means for looking at the “big” picture while examining the component parts. Systems thinking assumes that almost everything is a system, made up of connecting elements and their relationships. Systems thinking is one of the integrative competencies that knowledge workers need to work effectively in a complex environment. Systems have boundaries and behaviors that are different from their individual elements. Systems thinking emphasizes the importance of relationships and structure within the organization and makes individuals aware of the effects of their efforts on others in the organization, permitting them to understand and perform their roles more effectively.

Learning objective 9: Have the ability to design, develop, and sustain communities of interest and practice. Communities are social constructs. In a primarily virtual world, communities provide a fundamental capability for developing and sharing expertise throughout the workforce. Communities of practice share a domain of practice, crossing operational, functional, and organizational boundaries and defining themselves by knowledge areas, not tasks. In like manner, communities of interest share a domain of interest. Communities are managed by establishing and developing connections between individuals and organizations, and focusing on value added, mutual exchange, and continuous learning. They have an evolving agenda as participant knowledge builds and related areas of exchange emerge.

Collaboration, innovation, learning, and knowledge sharing are at the core of communities of practice and interest. Communities increase information flows in order to maximize knowledge, and exploit existing competencies to achieve maximum return. They also facilitate the transfer of best practices and lessons learned between organizational content centers, thus creating efficiencies while improving effectiveness. And communities fill in the gaps where organizational knowledge falls short and where enterprise information is underexploited. In short, sometimes we do not know what we do not know. Communities encourage personnel to access key resources and build new knowledge to complete tasks faster, better, and easier.

Learning objective 10: Have the ability to create, develop, and sustain the flow of knowledge. This includes understanding the skills needed to leverage virtual teamwork and social networks. The flow of data, information, and knowledge moves around in the networks of systems and people. It is shared through team interaction, communities, and events, and is facilitated through knowledge repositories and portals. This flow is both horizontal and vertical, including the continuous, rapid two-way communication between key components of the organization and top-level decision-makers. With increased connectivity, we reach further and further across organizations, communities, industries, and the globe to tap resources. Virtual teamwork requires new skills of leadership, management, and facilitation to create and maintain the trust, open communication, and interdependencies needed for physically separated individuals to collaborate effectively.

Learning objective 11: Have the ability to perform cultural and ethnographic analyses, develop knowledge taxonomies, facilitate knowledge audits, and perform knowledge mapping and needs assessments. As the amount of information and knowledge increases, tools such as taxonomies, audits, and maps help organize information for decision-making. While search engines and agents keep improving, the bottom line is that the human brain is the final arbiter of effective relationships and patterns. Analytic techniques such as cultural and ethnographic analyses and social network analysis help leaders understand organizational cultures and their characteristics. Culture is often cited as one of the main barriers to successful implementation of KM.

Learning objective 12: Have the ability to capture, evaluate, and use best-known practices, including the use of storytelling to transfer these best practices. The use of best practices across industry and government can provide efficiencies and increase effectiveness, if they are indeed best practices for the organization implementing them. How is the applicability of a best practice determined? How do you understand the context of the best practice, the simple rules that made it successful in some organizations?

Storytelling, the construction of examples to illustrate and understand a point, can be used to effectively transfer knowledge and best practices. A variety of story forms exist that will arise naturally throughout organizations, including scenarios and anecdotes. Scenarios are the articulation of possible future states, constructed within the

imaginative limits of the author. An organizational story is a detailed narrative of management actions, employee interactions, or other intra-organizational events that are communicated informally within the organization. Storytelling connects people, develops creativity, and increases confidence. The appeal of stories in organizations helps build descriptive capabilities, increase organizational learning, convey complex meaning, and communicate common values and rule sets. There is a natural sharing of stories through the use of teams and communities.

Learning objective 13: Have the ability to manage change and complex knowledge projects. Management concepts, whether old or new, are about change management. Considering Ross Ashby's law of requisite variety, which says there must be as many or more ways to change a system as those things in a system that need to be changed, today's world of increasing complexity presents increasing challenges (Ashby, 1964). It is also recognized that cultural change of any kind is a long, slow process. Add to that the fact that KM initiatives are particularly challenging because of the uncertainty of outcomes. Most managers like to change only one or two things at a time to mitigate against unintended consequences. This is not possible with KM. Accomplishing change requires daily support of sharing knowledge openly throughout the entire organization.

Learning objective 14: Have the ability to identify customers and stakeholders and tie organizational goals to the needs and requirements of those customers and stakeholders. Total quality management brought to the forefront the tried and true values successful organizations have used for years, a focus on customers and stakeholders. No matter what new approach or initiative is popular, the government must keep a focused eye on the needs of their constituents, and ensure all efforts underway contribute to fulfilling their needs. This makes good business sense for public and private organizations alike.

KM Strategies

KM strategies, that is, how to bring KM into an organization or to create a KM organization from the start, have been addressed by a number of authors. In particular, intellectual capital (IC) has been recognized as a vital force in organization effectiveness. There has been a significant effort to understand what intellectual capital is and how it can be strategically managed to harness and leverage an organization's knowledge and learning capacity to improve its long-term competitive advantage. A wide variety of strategies are suggested by various authors, with each strategy centering on a single or small group of factors. For example, Henry Chesbrough and David Teece considered innovation as the primary focus while Daniel Kim dealt with individual and organizational learning, and Arthur Armstrong and John Hagel addressed On-Line Communities while others addressed culture as the payoff (Klein, 1998). Some authors offer specific processes for managing intellectual capital, treating intellectual capital as a stock to be acquired, audited, stored, and applied (Brooking, 1996). This represents the IT perspective. Conversely, some KM professionals consider this a very narrow and

misplaced approach—particularly in treating IC as an asset—presumably owned by the corporation. This is not surprising since historically there has been a breach between the KM technologists, people who see knowledge as information to be stored and moved around by technology (Borghoff & Pareschi, 1998; Defense Acquisition University, 2002; Ruggles, 1997; and Tiwana, 2000), and those who believe that KM is about humans and their ability to create, learn and apply knowledge, with IT having a support role.

The implementation strategy for KM in the Department of the Navy (DON) serves as a model for the growth of knowledge and sharing across the Department (see Figure 1). For example, when exploring a new idea—whether within an individual or in an organization as a whole—closed structured concepts are first created. As these

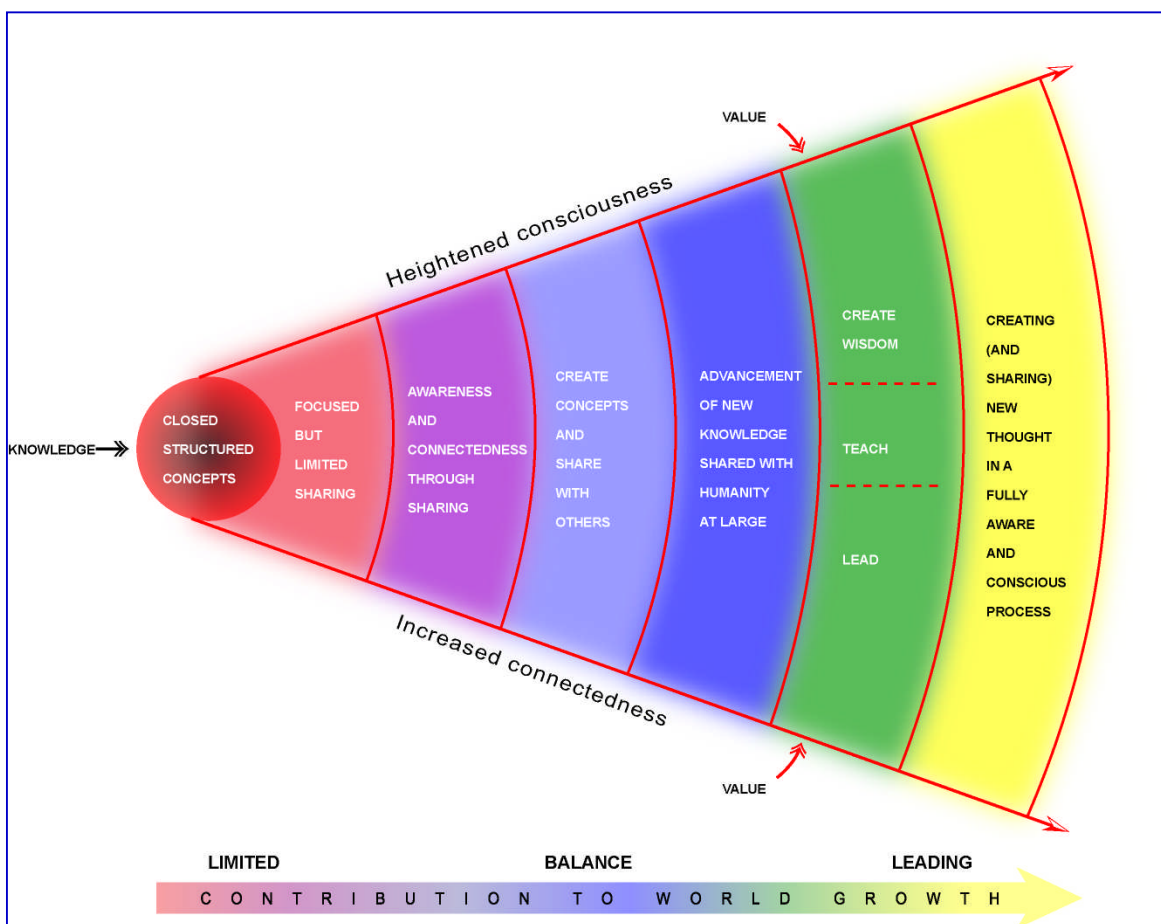


Figure 1: The growth and sharing of knowledge.

Note: From *Organizational Survival in the New World: The Intelligent Complex Adaptive System*, by A. Bennet and D. Bennet, 2004, New York: NY: Elsevier. Copyright 2004 by A. and D. Bennet. Reprinted with permission.

concepts germinate, some focused but limited sharing of these concepts occurs. Over time, particularly if positive feedback occurs during the limited sharing, there is increased sharing and a deeper awareness and connectedness through sharing occurs, i.e., a common understanding of the concept is shared across a larger number of people. From this framework, individuals and organizations participating in this sharing create new concepts and from those concepts new innovations, purposefully sharing them across and beyond the framework leading to application of these ideas to everyday work. As connectedness increases, there is also heightened awareness, or consciousness, of the potential value of these concepts to a larger audience, leading motivated individuals and organizations to advance these concepts even further, engendering the rise of social responsibility.

The change strategy suggested here is holistic, and not bounded by the organization. Indeed, it encourages interactions across large relationship networks and sharing and learning across organizational boundaries. The DON implementation strategy was viewed in terms of orchestrating and implementing 12 specific elements: creating a shared vision; building the business case; demonstrating leadership commitment; facilitating a common understanding; setting limits; sharing new ideas, words and behaviors; identifying the strategic approach; developing the infrastructure; measuring and incentivizing; providing tools; promoting learning; and visioning an even greater future (Bennet and Bennet, 2004; Porter, Bennet, Turner & Wennergren, 2002).

KM Techniques and Processes

Knowledge creation and renewal as a process in knowledge management has received a great deal of attention. The process of continuous learning to stay ahead of the knowledge demands of the market-place has been addressed by a number of well-known authors. Dorothy Leonard-Barton (1995) identified those characteristics that lead to an organization's continuous renewal of knowledge as: enthusiasm for knowledge; drive to stay ahead in knowledge; tight coupling of complementary skill sets; iteration in activities; higher order learning and leaders who listen and learn. She also examines the nature of core technological capabilities and the activities that sustain them, placing full responsibility for the creation of knowledge in organizations on managers. In her words, "Within corporations, managers at all levels of the organization are the keepers of the wellsprings of knowledge. To them falls the responsibility for selecting the correct knowledge sources, for understanding how knowledge is accessed and channeled and for redirecting flows or fighting contamination" (Leonard-Barton, 1995, p. xiii).

Transfer of Best Practices

Although the field of knowledge management is still young, in some organizations it has reached a level of maturity where discipline and consistency are beginning to set in. The role of best practices, growing out of the total quality management movement, is now being taken up by knowledge management. For example,

the American Productivity and Quality Center, well known for its significant contributions over the past several decades in Best Practices and productivity enhancement, developed a questionnaire to assess the state of knowledge management in organizations (APQC, 2000, p. 5-6). APQC also identifies and elaborates on KM landmarks that include: value propositions, culture, structure and roles/responsibilities, information technology, KM implementation approaches and measurement (APQC, 2000, p .9).

In 2004, Michael Koenig and Kanti Srikantaiah published a collection of *Knowledge Management Lessons Learning: What Works and What Doesn't* including the following themes: What is KM?, KM Strategy, Lessons Learned, Implementing KM, Education for KM and Learning In KM, Communities of Practice, Content Management, KM Costs and Economics, KM Measurement, Trust, Finding the Focal Points, KM Stars and Thought Leaders, Taxonomy, Standards, Roles in KM, Portals and Visual Design, and Competitive Intelligence (Koenig & Srikantaiah, 2004).

Social Capital

The recognition of social capital as a significant contributor to organizational performance is a fairly recent phenomena within the knowledge management field. Social capital considers the value of people and their relationships in creating, sharing, leveraging and applying knowledge throughout the organization. It has become clear that with the advance of communication technology, networking among knowledge workers can significantly improve their ability to share and create knowledge, opening the door to a new form of collaborative enterprise (Skyrme, 1999). Using personal networks to improve the organization's social capital and tap into hidden resources (Baker, 2000) and building communities of practice to share ideas, problems and knowledge are now common approaches to building and using social capital (Wenger, 1999) (Wenger, McDermott & Snyder, 2002). Taking a different approach, Rob Cross and Larry Prusak expanded what is called Social Network Analysis, a process for mapping the relationships among people, teams, or across organizations. It is particularly effective in assessing the flow of information through communication and collaboration (Cross and Prusak, 2002).

Eric Lesser, Michael Fontaine and Jason Slusher have pulled together articles that look at the relationship of knowledge and communities, explaining how communities can be viewed from an organization's perspective and how communities can manage organizational knowledge (Lesser, Fontaine & Slusher, 2000). Tom Davenport explored the worker as investor concept and concludes the organizations who consider their workers as investors can attract and keep people who can, and will contribute significantly to the corporation (Davenport, 1999). Taking a broader stance, Don Cohen and Larry Prusak considered social capital as the source of organizational effectiveness and explored its major aspects: trust, networks and communities, space and time to connect, social talk and storytelling (Cohen & Prusak, 2001).

KM and Organizational Learning

With the birth of KM and especially spurred by the publication of Peter Senge's organizational learning work in 1990, there has been increased interest within the KM community in organizational learning and its relation to knowledge management and knowledge organizations (Senge, 1990). Examples include ASTD's book of 17 case studies covered in Phillips and Bonner. As noted in the preface, a new breed of senior-level positions such as the chief knowledge officer and chief learning officer have come into existence to lead implementation of KM initiatives and the supportive training and learning needed to keep up with the turbulent environment (Phillips & Bonner, 2000). The relationship between organizational learning and KM has been explored by Alex Bennet and David Bennet who connected individual learning and KM, learning and communities of practice, learning and systems thinking, and learning and flow. Each of these pairs of activities is found to be mutually supportive, highlighting the importance of treating them as a whole whose mutual relationships provide the real payoff in organizational performance (Bennet & Bennet, 2004).

KM as a Discipline

By the year 2000, The George Washington University had begun a degree-granting program with a concentration in KM. More than 25 doctoral students signed up that first year, with several transferring from other doctoral program. Under the leadership of Michael Stankosky, this group of students began the task of creating a body of knowledge for what they call the discipline of KM. As demonstrated in Figure 2, they

Table 2

Explication of the Four Pillars of the George Washington University KM Model

Pillar	Aspects	Disciplines/Key Elements
Leadership	Strategic planning, vision sharing, specific and general goals and objectives, executive commitment, KM programs tied to metrics, formal KM roles in existence, tangible rewards for use of KM, special recognition for knowledge sharing and performance criteria for KM items	Draws from operations research, management science, psychology, philosophy, logic, linguistics, management information systems and behavioral profiling.
Organization	Operating procedures for knowledge sharing, business process reengineering (BPR), management by objectives (MBO), total quality management (TQM), metric standards, hierarchical/centralized/decentralized, matrix-type organization, open/sharing, closed/power based, internal partnering versus competing type culture	Draws from psychology, operations research, organization development, philosophy and socio-linguistics.
Technology	Data warehousing, database management, multimedia repositories, groupware, decision support systems, corporate intranet, business modeling systems, intelligent agents, neural networks, etc.	Draws from computer science, operations research, electrical engineering, math/statistics, logic and management information system.

Learning	Tacit and explicit knowledge understood, sharing vision/team learning, management support for continuous learning, knowledge captured and distributed, KM values and principles formally encouraged, virtual teams/exchange forums in use, communities of practice/shared results are active, innovation encouraged/recognized/rewarded	Draws from the disciplines/key elements of cognitive psychology, organization development, systems engineering, management philosophy, personal mastery and introspection.
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grouped all the key elements of KM into four pillars, similar to “Newton grouping his observations about gravity under the laws of motion” (Stankosky & Baldanza, p. 269 in Barquin, Bennet, & Remez, 2001). Built across multiple disciplines, the four pillars are leadership, organization, technology, and learning. The sub-elements of these pillars, as can be seen in the 14 learning objectives developed for the Federal sector that explore many of the same themes, demonstrate the breadth of the field. In the sub-elements (and in the 14 learning objectives earlier) both technology and learning are closely linked to KM. By 2004, there were more than 100 universities world-wide that offered concentrations and/or degree programs in knowledge management.

The Complex Adaptive System

Looking back in history, perhaps the oldest reference to systems is C. W. Churchman’s suggestion that the Chinese *I Ching* is the oldest systems approach (Hammond, 2003, p. 13). A more recent beginning of complex adaptive systems goes back to 1950 and the beginnings of General System Theory. In 1955, the biologist Ludwig van Bertalanffy published his seminal work on General System Theory. It is still found in bookstores to this day (von Bertalanffy, 1969).

In 1956, the Society of General System Records (SGSR) was born to foster interdisciplinary research on a general theory of complex systems (Hammond, 2003, p. 9). Although the SGSR is still alive today, the hope of creating a general theory of systems has not occurred. However, in the early 1960s, J. W. Forrester of the Massachusetts Institute of Technology (MIT) developed a new field he called System Dynamics which, with the aid of computers, was able to model some complex systems to better understand their behavior (Forrester, 1971).

In 1990, Peter Senge, also with MIT, rejuvenated the popularity of system studies with Systems Thinking, an approach to make understanding systems easier through the use of causal loop analysis and systems archetypes (Senge, 1990). Unfortunately, for truly complex systems there is no way to predict their behavior.

The Santa Fe Institute was created in 1984 to better understand complexity and complex adaptive systems. This modern consortium of leading researchers in fields as diverse as biology, physics, economics, and management has once again brought

complex systems into the public eye. The Institute, focusing heavily on complex adaptive systems, defined complexity as

The condition of the universe which is integrated and yet too rich and varied for us to understand in simple common mechanistic or linear ways. We can understand many parts of the universe in these ways but the larger and more intricately related phenomena can only be understood by principles and patterns—not in detail. Complexity deals with the nature of emergence, innovation, learning and adaptation. (Battaram, 1996, p. 12)

As in many relatively new fields there are several definitions of fundamental concepts. For example, Ralph Stacy, a professor of management, considered a complex adaptive system as having a large number of people, with multiple non-linear relations that allow the system to learn and adapt (Stacy, 1996, p. 10). Alex and David Bennet considered complex adaptive systems, or complex adaptive organizations, to be composed of self-organizing components that seek to maximize their own goals, but operate according to rules and in the context of relationships with other components and with the external world (Bennet & Bennet, 2004, p. 26). For a third perspective, consider Singer's description, "Complex adaptive systems, first, all involve numerous interesting agents where aggregate behaviors are to be understood. Such aggregate behavior is non-linear; hence it cannot simply be derived from summation of individual components behavior" (Morowitz & Singer, 1995, p. 2).

The recent research on complexity and complex adaptive systems covers areas such as chaos (Cohen & Stewart, 1994; Waldrop, 1992; Ward, 2001); biology (Kauffman, 2000); management (McMaster, 1996; Stacey, 1996; Stacey, Griffin & Shaw, 2000); learning (Stacey, 2001); and philosophy (Rescher, 1998). Although complexity and complex adaptive systems have only recently entered the areas of organizational performance and knowledge management, their applicability is often felt by the pressure of an increasingly complex environment coupled with the rapidly changing demands of organizations.

The phenomenon of emergence is closely tied to complexity and complex adaptive systems. Robert Axelrod and Michael Cohen defined emergence as properties of a system that its separate parts do not have. As an example, they pointed out that "no single neuron has consciousness, but the human brain does have consciousness as an emergent property" (Axelrod and Cohen, 1999, p. 15). While emergence can be observed, it cannot be traced back to its source, because its origin lies in a large number of non-linear, networked relationships that are untraceable. As Johnson puts it, "it wouldn't truly be considered *emergent* until those local interactions resulted in some kind of discernable macrobehavior" (Johnson, 2001, p. 19). One emergent behavior is labeled as swarm intelligence, a characteristic of social insects working without supervision and primarily self-organized, with coordination arising from different interactions among members of the colony (Bonabeau & Meyer, 2001).

Today it is becoming widely understood that for modern organizations to survive and grow they must recognize and utilize their organic nature (Baskin, 1998; Conner, 1998; Espejo, Schuhmann, Schwanager & Bilello, 1996; Fulmer, 2000; Haeckel, 1999; Meyer & David; 2003; Murphy & Murphy, 2002; Wheatley, 1999). With the recent emphasis on learning organizations (Argyris, 1999; Belasen, 2000; Chawla & Renesch, 1994; Garvin, 2000; Senge, 1991) and the recognition that with organizational learning can come organizational intelligence (McMaster, 1996; Pinchot & Pinchot, 1994; Wiig, 1994) we can consider the intelligent complex adaptive system, or ICAS. Organizational intelligence can be taken to be “the ability of an organization to perceive, interpret and respond to its environment in a manner that simultaneously meets its organizational goals while satisfying its stakeholders; that is, its employees, customers, investors, community and environment” (Bennet & Bennet, 2004, p. 30).

For purposes of this research, a complex adaptive system is composed of a large number of self-organizing components that seek to maximize their own goals but operate according to rules and in the context of relationships with other components and the external world. In an intelligent complex adaptive organization the actors are people. The individuals would be self-organizing in the sense of having the freedom to locally structure and restructure their roles, responsibilities and relationships as needed to maximize their group and individual effectiveness. These are constraints on what they can do in the sense of maintaining the organization’s direction and overall cohesion. By creating a dynamic balance between organizational focus and local flexibility, force of intent and adaptability work together (Bennet & Bennet, 2004).

Passion

*Let your soul exalt your reason
to the height of passion, that it may sing;
And let it direct your passion with reason,
that your passion may live through its own daily resurrection,
and like the Phoenix rise above its own ashes.
(Gibran, 1992, p. 50)*

What roles does passion play in creativity? What is the connection between passion and leadership? What is the relationship between passion and reason? Is there an intellectual passion? What does it mean to use passion as a determinant or indicator of value? These are some of the questions explored in this literature review.

Defining Passion

Looking at the term in a historical context, *Passions* (in the plural) was used in the work of early Western philosophers to represent what we now call *emotions*. For example, early analysis of emotions using the term passions appears in dialogues of Plato and in Aristotle’s *Rhetoric*; as well as in the Greek discussions of virtue and vice. As an aside, according to Lou Marinoff, ancient Greek philosophers had a propensity to indulge

both their reason and passions alike, in the hopes of perfecting the former and outgrowing the latter (Marinoff, 2003).

Passions also appears in the moral theology of Thomas Aquinas and in Benedict Spinoza's *Ethics*; and in books of political theory, such as Niccolo Machiavelli's *The Prince* and Thomas Hobbes's *Leviathan* (Adler, 1992, p. 185). Rene Descartes' "six 'primitive' passions—wonder, love, hatred, desire, joy, and sadness—are not meaningless agitations of the animal spirits, but ingredients in the good life" (Frijda, 2000, p. 6). David Hume insisted that, "What motivates us to right (and wrong) behavior . . . were our passions, and rather than being relegated to the margins of ethics and philosophy, the passions deserve central respect and consideration" (Frijda, 2000, p. 6). Hume also believed that *moral distinctions are derived from passion* rather than from reason. "Morals excite passions, and produce or prevent actions." By contrast reason is "perfectly inert" and can never produce or prevent an action (Honderich, 1999, p. 110). The philosopher Georg Hegel affirmed, "Nothing great in the world has been accomplished without passion." In like manner, the term "passions" appears in many historic works of poetry and history (Adler, 1992, p. 185).

Although the use of the word *passion* to specifically represent a strong emotion or desire is first recorded around 1250 AD, "the generalized meaning of a strong liking, enthusiasm (as in a *passion for horses*) is first recorded in 1638" (Barnhart, 1988, p. 761). The *Oxford English Dictionary* (updated in 2002) cited 12 different perspectives on the concept of *passion*, first presenting the use of the term representing the suffering of pain, specifically the suffering connected to Jesus' Crucifixion in Christian theology. Among these dictionary listings, the specific meanings that help build context for this study are:

passion/noun

- 5a A strong barely controllable emotion
- 5b A fit or outburst of such an emotion
- 5c A literary composition or passage marked by strong emotion; an emotional speech.
- 8 A strong enthusiasm for (specified) thing; an aim or object pursued with strong enthusiasm.

passion/verb

- 1 Excite or imbue with (a) passion.
 - 3 Express or be affected by passion or a strong emotion
- (*Oxford English Dictionary*, 2002)

Psychologist Nico Frijda saw passions as often extending to desires, thoughts, plans, and behaviors that persist over time. "They may lead to performing behaviors regardless of costs, external obstacles, and moral objections. These are the characteristics of passion in the more modern sense—the desires, behaviors, and thoughts that suggest urges with considerable force" (Frijda, 2000, p. 59).

The Biological Context

In a biological context, passion is an emotion (externally observed) or feeling (internally experienced), a biologically determined process that *can be induced by external events and circumstances*. This induction process may be either conscious or subconscious to the individual. “The brain induces emotions from a small number of brain sites, most of them located below the cerebral cortex and are known as subcorticals” (Damasio, 1999, p. 60). Cognitive changes are induced through emotions via the secretion of certain chemicals that cause significant alterations in brain function. Such alterations may change the mode of cognitive processing, such as the sensitivity of auditory and visual sensors (Damasio, 1999). Further, Antonio Damasio talked about a range of stimuli that constitute inducers for certain classes of emotions, allowing for a considerable variation in the type of stimuli that can induce an emotion (both across individuals and cultures). But all the stimuli are considered part of the set of inducers (Damasio, 1999, pp. 52-53). At the end of the literature review these concepts will be used to provide the foundation of a passion framework.

In *How the Mind Works*, Steven Pinker presented a theory that passions are “no vestige of an animal past, no wellspring of creativity, no enemy of the intellect” but that the intellect is “designed to relinquish control to the passions so that they may serve as guarantors of its offers, promises, and threats” (Pinker, 1997, p. 412). To illustrate, Pinker presented examples from *The Maltese Falcon*, *The Godfather*, *Dr. Strangelove* and other movies that demonstrate sacrifices of will and reason as effective tactics in the bargains, promises, and threats that are part of social relations. In *The Maltese Falcon*, the character played by Humphrey Bogart dares the henchmen to kill him, knowing he is needed alive in order for them to retrieve the falcon. The Godfather tells the heads of other crime families that he is a superstitious man, that if an unlucky accident befalls his son he will blame them. Dr. Strangelove, a top nuclear strategist, carries the news that the doomsday machine is triggered automatically and cannot be reversed. These, then, are acting as guarantors. In like manner, if you are buying a car from (for example) Mother Teresa, her passion and reputation for doing good would serve as the guarantor that you were not being cheated. Pinker concluded that “the apparent firewall between passion and reason is not an ineluctable part of the architecture of the brain; it has been programmed in deliberately, because only if the passions are in control can they be credible guarantors” (Pinker, 1997, p. 412-413).

The latest scientific findings reviewed by Norman Rosenthal suggest that we “endorse the existence of unconscious emotional processes and their powerful influence on preferences and actions” (Rosenthal, 2002, p. 29). While he admits emotions do not always work as they should, Rosenthal argues in favor of the emotions as intelligent and necessary for proper decision-making. He stated,

It is clear now that the two great domains, reason and passion, are both critical to our ability to make proper decisions. Emotion unchecked by reason can lead to

disaster, but without emotion, a person is unable to plan properly or form and sustain social bonds, even in the presence of adequate reasoning ability. . . . When passion and reason work well together, like the partners in a successful marriage, the outcome is a happy one. When they are at war, like hostile spouses, the result is no end of grief.” (Rosenthal, 2002, p. 31)

Citing recent studies in neuropsychology, Damasio reported that human beings actually require emotions in order to reason effectively (Damasio, 1994). Similarly, Marinoff reminded us that, “People are not machines, nor should we behave like machines” (Marinoff, 2003, p. 62).

Intellectual Passions

To help understand the meaning of intellectual passions, Polanyi referenced a study done with chimpanzees, stating that the researcher demonstrated that chimpanzees “derive pleasure from the discovery of a new ingenious manipulation, quite apart from the practical benefit they derive from it . . . they will repeat the performance for its own sake, as a kind of play.” He likened these intellectual tastes of the animal to those of a child, and said that these “prefigure, no doubt, the joys of discovery which our articulate powers can attain for man” (Polanyi, 1958, p. 133). Polanyi went on to identify science itself as an intellectual passion.

Passions charge objects with emotions, making them repulsive or attractive; positive passions affirm that something is precious. The excitement of the scientist making a discovery is an intellectual passion, telling that something is intellectually precious. . . . The function which I attribute here to scientific passion is that of distinguishing between demonstrable facts which are of scientific interest, and those which are not . . . scientific passion serves . . . as a guide in the assessment of what is of higher and what of lesser interest; what is great in science, and what relatively slight. (Polanyi, 1958, p. 135)

Several points in Polanyi’s work are significant to this study. First, his close *linking of joy with intellectual passion*. Second, his assertion that *positive passions affirm that something is precious*. Third, that passion can be used as a *determinant of what is of higher interest and great*.

Passion and Leadership

In their work on leadership credibility, James Kouzes and Barry Posner discussed both exhibiting and encouraging passion as an *important leadership attribute*. “When we talk about what we love to do, gain a deeper understanding of others, share more intimately, and truly enjoy the interaction, our energy and passion are contagious. By caring, loving, and showing compassion, we can release a spirit in people that is unequalled. This is something that we can do in business every day” (Kouzes & Posner,

1993, p. 235). Interestingly, Kouzes and Posner related leadership passion to suffering in their discussion of credibility. They believed that the most passionate people are those who have suffered the most, those who have “risked their independence, their fortunes, their health, and sometimes their lives for people and *a purpose beyond themselves*. Passion earned from suffering is inspiring. Leaders who are truly inspirational, who demonstrate courage and passion, are the first to suffer” (Kouzes & Posner, 1993, p. 232). While this study may not take the concept of passion to this extreme, in a highly competitive and potentially crisis-oriented world there is certainly a risk in creating and forwarding new ideas.

Tom Peters and Nancy Austin said that leadership connotes “unleashing energy, building, freeing, and growing” (Peters & Austin, 1985, p. xix). They further stated, “We must cultivate passion and trust, and at virtually the same moment we must delve unmercifully into the details. How do we do it, or at least make a beginning? That’s what *A Passion for Excellence* is all about” (Peters & Austin, 1985, p. xx). Joe Batten called his leadership article based on go-givers instead of go-getters as “Servant-Leadership: A Passion to Serve.” Servant-leadership is an active process that involves both engagement and reflection (Batten, 1998). Lawrence Lad and David Luechauer discussed five pathways to achieve servant-leadership (cognitive, experiential, spiritual, organizational and community) stating that, “Each of the approaches encourages passionate commitment, action, and a sense of urgency on behalf of the leader” (Lad & Luechauer, 1998, p. 60).

The relationship between leadership and passion is not new to the literature. John Maxwell cited passion as one of the 21 indispensable qualities of a leader, becoming the person others will want to follow. He saw passion as the first step to achievement and stated that passion increases your willpower, changes you and makes the impossible possible. In summary, “Nothing can take the place of passion in a leader’s life” (Maxwell, 1999, p. 83).

In answering the question of whether leaders are born or made, Charles Handy responded that if you find something you’re passionate about, then you have got one of the three elements of being a true leader (Handy, 1999, p. 131). Thomas Neff and James Citrin interviewed 50 business leaders who have achieved what they term as extraordinary success. While these leaders demonstrated a wide range of personalities and styles and represented a cross section of the population, they identified 10 traits that these leaders appeared to have in common. No trait appeared more noticeable than that of passion for their people and companies. “Quite simply, they love what they do. In many ways, passion is the counterpart of . . . *Doing the Right Things Right*, inspiring employees to achieve greatness” (Neff & Citrin, 1999, pp. 379-380). For example, Elizabeth Dole states, “Having a passion for what you do, a sense of mission that comes from the heart, gives you the energy, drive and enthusiasm that’s contagious and essential for leading an organization” (Neff & Citrin, 1999, p. 380).

Passionate leadership is a term used by Chip Bell, who believed that the reason some leaders are embraced while others are rejected has little to do with reason, but everything to do with passion. Bell asserted that passion is more honest than reason. Passion “makes us feel free, alive, and somehow ‘a real, whole person’ and, when leaders surface that feeling in us, we are somehow more energized, more like a knight ready for battle” (Bell, 1997, p. 196). Philosopher/psychologist Rollo May believed there is an energy field between humans, and that when a person reaches out in passion, others answer with passion (Rollo May, 1953). Bell summed this up, “Passionate connections provoke passionate responses. Leadership is fundamentally about influencing” (Bell, 1997, p. 197). Anita Roddick, The Body Shop founder, agreed, “We communicate with passion—and passion persuades” (Kouzes, 1998, p. 324). Bell went on to say:

People may be instructed by reason, but they are inspired by passion. . . . Why are you here, in this role, at this time? What difference will you being here make? What legacy will you leave behind? Will you be forgotten for what you maintained or remembered for what you added? Imposing mountains are climbed, culture-changing movements are started, and breakthrough miracles are sparked by leaders who took the governors off rationalism and prudence, letting their spirit ascent from within. (Bell, 1997, p. 198)

Sara Melendez stated that, “Effective leaders are passionate about the cause they are promoting and about their commitment to the greater or public good” (Melendez, 1996, p. 299). We have noticed this expression of passion related to commitment beyond the self in references cited earlier. Peter Senge said that people’s passions flow naturally into creating something that truly excites them. “The passion at the heart of every great undertaking comes from the deep longing of human beings to make a difference, to have an impact. It comes from what you contribute rather than from what you get” (Senge, 1990, p. 62).

Passion and Creativity

In the Public Broadcasting Station (PBS) television series on “The Creative Spirit,” Daniel Goleman, Paul Kaufman and Michael Ray revealed what they called the hidden anatomy of the creative process. They stated: “Finally, the element that really cooks the creative stew is passion. The psychological term is intrinsic motivation, the urge to do something for the sheer pleasure of doing it rather than for any prize or compensation” (Goleman, Kaufman & Ray, 1992, p. 30). The Nobel Prize-winning physicist T. Amabile, when asked what he thought made a difference between creative and uncreative scientists, stated that the most successful, groundbreaking scientists were not always the most gifted ones, but those that were driven. “To some degree a strong passion can make up for a lack of raw talent. Passion ‘is like the fire underneath the soup pot,’ Amabile says. ‘It really heats everything up, blends the flavors, and makes those spices mix with the basic ingredients to produce something that tastes wonderful’” (Goleman et al., 1992, p. 31).

Mihalyi Csikszentmihalyi also related passion directly to the attribute of creativity. From 1990 to 1995, Csikszentmihalyi and his students at the University of Chicago videotaped interviews with a group of 91 what they termed as exceptional individuals, people who (a) had made a difference to a major domain of culture (sciences, arts, business, government, or human well-being in general), (b) were still actively involved, and (c) were over 60 years old. From these interviews, Csikszentmihalyi developed the 10 dimensions of complexity—what he called the real characteristics of creative persons. His ninth dimension stated “most creative persons are very passionate about their work, yet they can be extremely objective about it as well” (Csikszentmihalyi, 1996, p. 72). The research identified an energy generated by this conflict between attachment and detachment, an energy that was mentioned by many of the respondents as being an important part of their work. Csikszentmihalyi believed that the reason for this was relatively clear. “Without the passion, we soon lose interest in a difficult task. Yet without being objective about it, our work is not very good and lacks credibility. So the creative process tends to be what some respondents called a yin-yang alternation between these two extremes” (Csikszentmihalyi, 1996, p. 72). This movement from passion to objectivity, from action to reflection, was called out by respondents as what allowed them to keep learning and adjusting to new situations. “Their creativity unfolded organically from idea to action, then through the evaluation of the outcomes of action back to ideas—a cycle that repeated itself again and again” (Csikszentmihalyi, 1996, p. 316).

Dorothy Leonard and Walter Swap noted the movement from Taylorism (where people were hired for their muscle) through total quality (where people were hired for their muscle and brains) to knowledge work (where people are hired for their muscle, brains and passion). “This passion is what gets people up in the morning . . . and it can come in the form of passion for the job, for innovation, or for the organization” (Leonard & Swap, 1999, p. 178). Built on intrinsic and extrinsic motivators, Leonard and Swap noted that it is passion that “fuels creativity,” then presented dozens of examples that support their statements. For example, a former Harley-Davidson CEO, Richard Teerlink, explained:

We didn’t want people who just come to work. We wanted people to be excited about what they do, to have an emotional attachment to our company. It was the excitement they got when they were standing in line in the supermarket wearing a Harley T-shirt and someone said, “Do you work at Harley? Wow!” We got people who wanted to work for this kind of company, who wanted to make a difference. (Leonard & Swap, 1999, pp. 182-183)

Leonard and Swap believed that real enthusiasm is contagious. They quoted Fisher-Price’s Lisa Mancuso: “I love the product; I feel passion for what I do . . . I couldn’t champion something I didn’t love” (Leonard & Swap, 1999, p. 182). Before leaving these authors, I cite one more finding by these authors, “Passion and enthusiasm thrive in an atmosphere of optimism and confidence in the future” (Leonard & Swap, 1999, p.191).

Amabile and Polanyi have also presented significant evidence of the importance of passion alongside personal investment to spur creativity and engage the persistent effort required to develop expertise or create significant innovations in a domain (Amabile, 1997; Polanyi, 1966).

Passion and Communities of Practice

With the emergence of knowledge management came a new understanding of the importance of relationships in the workplace, and interest in communities of practice as a practical way to manage knowledge. The authors of the definitive text on communities of practice found three criteria that help to define the scope of the domain. First, was to focus on dimensions of the domain important to the business. Second, was to focus on “aspects of the domain community members will be passionate about. This assures that the community will be attractive enough to members to grow and develop” (Wenger, McDermott & Snyder, 2002, p. 75). Third was to define the scope wide enough to bring in new people but narrow enough that most people in the group would be interested in the topics discussed.

Later in the text, the authors stated that “Informal phenomena—professional passion, relationships, and identity—are now the frontier of management” (Wenger, McDermott & Snyder, 2002, p. 217). In Tom Stewart’s latest work the value of the firm’s knowledge earnings can be calculated as the difference between the earnings from the financial plus physical assets and the total earnings (Stewart, 2001, p. 319). This new approach to managing in the knowledge economy recognizes the importance of intangible assets—passions, relationships and skills—on the balance sheet. Etienne Wenger concluded that, “The most successful communities of practice thrive where the goals and needs of an organization intersect with the passions and aspirations of participants” (Wenger, McDermott & Snyder, 2002, p. 32).

Passion and Flow

Charles Belitz and Meg Lundstrom identify passion as one of the nine attributes that create the power of flow (Belitz and Lundstrom, 1997, p. 47). Flow is a concept described by Csikszentmihalyi in the early 1990s and the subject of considerable research and study since that time. In the early work of Csikszentmihalyi, flow is defined as “the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it” (Csikszentmihalyi, 1990, p. 4). This is the optimal experience, “when a person’s body or mind is stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile” (Csikszentmihalyi, 1990, p. 3).

Using Csikszentmihalyi’s concepts of flow, the eight conditions that combine to create the flow experience are: Clear goals; quick feedback; a balance between opportunity and capacity; deepened concentration; being in the present; being in control;

an altered sense of time; and the loss of ego. As Csikszentmihalyi noted, “I have given the name ‘flow’ to this common experience, because so many people have used the analogy of being carried away by an outside force, of moving effortlessly with a current of energy, at the moments of highest enjoyment” (Csikszentmihalyi, 2003, p. 39).

In discussing the origins of flow, Csikszentmihalyi found elements of the flow experience in a number of religions—Christianity, Buddhism and Taoism, for example. He then quoted the anthropologist Mel Konner, who when asked if every culture produced a religion, why every culture sought God, answered: “It’s not God—they are seeking the rapture of life, to understand *what it means to be alive*” (Csikszentmihalyi, 2003, p. 60).

Similarly, Belitz and Lundstrom state:

Flow is engendered by passion—passion for life, for knowledge, for a cause, for a relationship, for truth. Passion means caring deeply about something beyond ourselves. It means engaging with it at intense levels. It means letting go of self-protective caution to involve ourselves wholeheartedly with what we love. (Belitz & Lundstrom, 1997, p. 57)

This passion “opens us up to a larger picture” (Belitz & Lundstrom, 1997, p. 57). Passion is the intensity of flow, the intense desire to be “active and engaged in the course of events” and the intense drive to know truth, “to answer the basic questions of existence: why we’re here, what we’re supposed to be doing, what it all means. Not satisfied with surface explanations, we use every moment as an opportunity to break through to something new, to learn. We fully engage with what comes our way” (Belitz and Lundstrom, 1997, p. 57). In a discussion of people skills, Goleman cited focus and passion as an important element of achieving group flow. “The demands of meeting a great goal inherently provide focus; the rest of life can seem not just mundane, but trivial by comparison. For the duration, the details of life are on hold” (Goleman, 1998, p. 228).

The Spiritual Context

The concept of passion also plays a significant role in the Five Buddha Families of Vajrayana Buddhism. This teaching describes processes for the transmutation of the five major energies (anger, pride, passion, jealousy and apathy) and the emotions connected to these energies. The Vajrayana approach looks at these energies as part of the spiritual path—the stronger an emotion, the more useful it can be as a vehicle for awakening. Awakening is the aim of consciousness, the Buddha’s state of mind, the only state in which even pain and suffering are borne with ease (Walsh & Shapiro, 1983). Alan Watts described awakening in this manner, “If you were awake, you would understand that you and the whole universe are pretending: projecting yourself at the point called here and now in the form of a human organism” (Watts, 2002, p. 57). The Dalai Lama, certainly a definitive source on Buddhism, defined the verbal root of Buddhism as, “to waken from the sleep of ignorance and spread one’s intelligence to

everything that can be known” (Gyatso, 1992). Passion, then, is viewed as a strong vehicle for awakening.

Each of the five major energies has both negative and positive potential for the individual, and it is part of the individual’s growth process to work through the negative and transform these energies into positive forces in their lives. Of the negative aspect of passion, Tara Bennett-Goleman stated that

passion, in the sense of neurotic clinging, grasping, and craving, can manifest itself as a hysteric’s shallow seductiveness, or as the hypnotic charisma of a manipulative con artist. It manifests as an alluring, pleasing and always seductive pursuit of objects of desire. (Bennett-Goleman, 2001, p. 312)

This energy, when transmuted, takes the form of discriminating awareness, “*taking a precise interest in, and paying keen attention to, whatever presents itself. This ever-inquisitive awareness opens up communication: other people are seen and understood in their full distinctiveness, and related to with empathy and a warm compassion*” (Bennett-Goleman, 2001, p. 312).

Irina Rockwell went so far as to state that *we create our reality based on passion*. Passion is referred to as “padma energy,” energy that *helps people speak from the heart* and “draw out other people and engage them. . . . This sense of pleasure and promise magnetizes others” (Rockwell, 2002, p. 52). On the negative side, Rockwell said that people have to “engage their passion without losing sight of the danger of getting caught up in or intoxicated by it . . . we don’t want to eliminate their passion; we want to cultivate it, refine it.” (Rockwell, 2002, p. 184) Similarly, to the religions of India who draw their fundamental teachings from the Bhagavad Gita and Upanishads,

The most basic human struggle is not the external quest for food, shelter, or a mate . . . but rather the attempt to rule our passions—our internal desires and cravings. If they are not contained by meditative practice, or restrained by practical reason, or expressed by wholesome habits, or transcended by conscious awakening, the incessant grasping gives rise to attachments, which are thought to be the source of all our suffering. (Marinoff, 2003, p. 58)

According to Lou Marinoff, the Jewish cabalists, the Christian Gnostics, the Islamic Sufis, the Hindu Brahmanas and the Buddhist awakened ones all teach theories, techniques, and methods for reasonably guiding the self’s passions (Marinoff, 2003). Sooner or later they all lead *to the center of oneself*, the concept described above as awakening.

In Summary

As explicated above, passion is considered a term to indicate those desires, behaviors, and thoughts that suggest urges with considerable force (Frijda, 2000, p. 59). From a biological viewpoint, passion (both the emotion that is externally observed and the feeling that is internally experienced) can be induced by external events and circumstances, which become part of a set of stimuli that includes considerable variation in the type of stimuli both across individuals and cultures (Damasio, 1999, pp. 52-53). Further, morals excite passion and even that moral distinctions are derived from passion. (Honderich, 1999, p. 110)

Passion is considered an important leadership attribute, and the most passionate people are described as those that have a purpose beyond themselves. Passion is considered contagious, and “by caring, loving, and showing compassion we can release a spirit in people that is unequalled” (Kouzes & Posner, 1993, p. 235). Passion and trust are linked directly to leadership, defined as unleashing energy, building, freeing and growing (Peters & Austin, 1985, p. xix). Servant-leadership is specifically described as a passion to serve (Batten, 1998), and approaches to servant-leadership encourage passionate commitment, action, and a sense of urgency (Lad & Luechauer, 1998, p. 60). Further, passion is the counterpart of doing the right things right (Neff & Citrin, 1999, pp. 379-380).

Love and passion are directly linked to thought leaders (Leonard & Swap, 1999, p. 182) and both passion and enthusiasm are found to thrive in an atmosphere of optimism and confidence in the future (Leonard & Swap, 1999, p. 191). Whether communities thrive or not is directly linked to the ability to have the “goals and needs of an organization intersect with the passions and aspirations of participants” (Wenger, McDermott & Snyder, 2002, p. 32). Here goals represent the values of the organization.

Passion, driving the intensity of flow, elevates values and engages reality at all levels in its search for “what it means to be alive” (Csikszentmihalyi, 2003, p. 60). This is also reflected in the spiritual context of passion as a strong vehicle for awakening (Gyatso, 1992; Walsh and Shapiro, 1983; Watts, 2002) and energy that helps people speak from the heart, and draw out other people and engage them (Rockwell, 2002, p. 52).

Focusing on intellectual passion, joy is linked to passion, positive passions affirm that something is precious, and passion can be used as a determinant of what is of higher interest and great (Polanyi, 1958, p. 135). Passion is also that gift of emotion that causes individuals to take a precise interest in and pay keen attention to (Bennett-Goleman, 2001, p. 312); to open us up to a larger picture (Belitz & Ludstrom, 1997, p. 57); and to promote the greater good (Melendez, 1996, p. 299). As Senge so eloquently stated above, passion is directly connected to the “deep longing of human beings to make a difference,” to contribute (Senge, 1999, p. 62). Passion, then, has potential as an indicator of value to

the individual, and is directly linked to those larger things the individual (self) feels are important.

It is clear that passion is a *source of energy for the individual*. The question presented by Marinoff is how to bring the mind and the heart, reason and passion, into a peaceful coexistence. He believes that almost everyone can transform their passionate energies into the art of living reasonably, with the goal of using reason to channel passion into beneficial forms of expression. Going even further, Marinoff stated that it is possible for the “passion for one’s own life . . . [to take] a backseat to principles of duty toward others, or other causes.” This is a “victory of a passion for serving others over a passion for preserving the self. It can even be interpreted as a way of making one’s life meaningful” (Marinoff, 2003). This is the higher passion for the greater good called out by Belitz, Goleman, Teerlink, Neff and Citrin, Czikszentmihaly, Melendez, Senge and in other discussions above. This context sets the stage for recognizing passion as a determinant or indicator of what, in Polanyi’s words, is of *higher interest or great*.

Developing a Working Framework

To explore the primary research question (What aspects of KM contributed to the passion expressed by KM thought leaders?) we will develop a framework based on the literature review around passion. Underlying this framework is the biological viewpoint forwarded by Demasio that passion can be induced by external events and circumstances which become part of a set of stimuli. Further, that this set of stimuli includes considerable variation in the type of stimuli (across individuals and cultures) which includes internal inducers as well as external inducers.

As shown in Figure 2, external and internal inducers make up a set of stimuli that result in passion. This passion is both externally observed and internally felt in a variety of ways, and is also correlated to the larger aspects of self. The definition of passion, the internal inducers, lists of elements externally observed and internally felt, and a list of correlates to the larger self are all developed from the characteristics of passion discussed in the literature review. Because this construction is based on a biological model, passion is considered in terms of an autopoietic system, that is, a system that evolves through continuous exchange and interaction with its environment (both adapting to and influencing its environment). In the framework, feedback loops have been drawn from externally observed elements to passion as well as from internally felt elements to passion, indicating that—as an autopoietic system—the things we feel and the ways we act influence ourselves as well as our environment. There is also a feedback loop from the larger elements of self correlated to passion back to passion, i.e., indicating that these elements have the quality of sustaining or increasing passion. This idea of larger elements of self sustaining or increasing passion is based on the literature review. For example, Kouzes and Posner asserted that the most passionate people are those who have a purpose beyond themselves; Melendez said effective leaders are passionate because of their

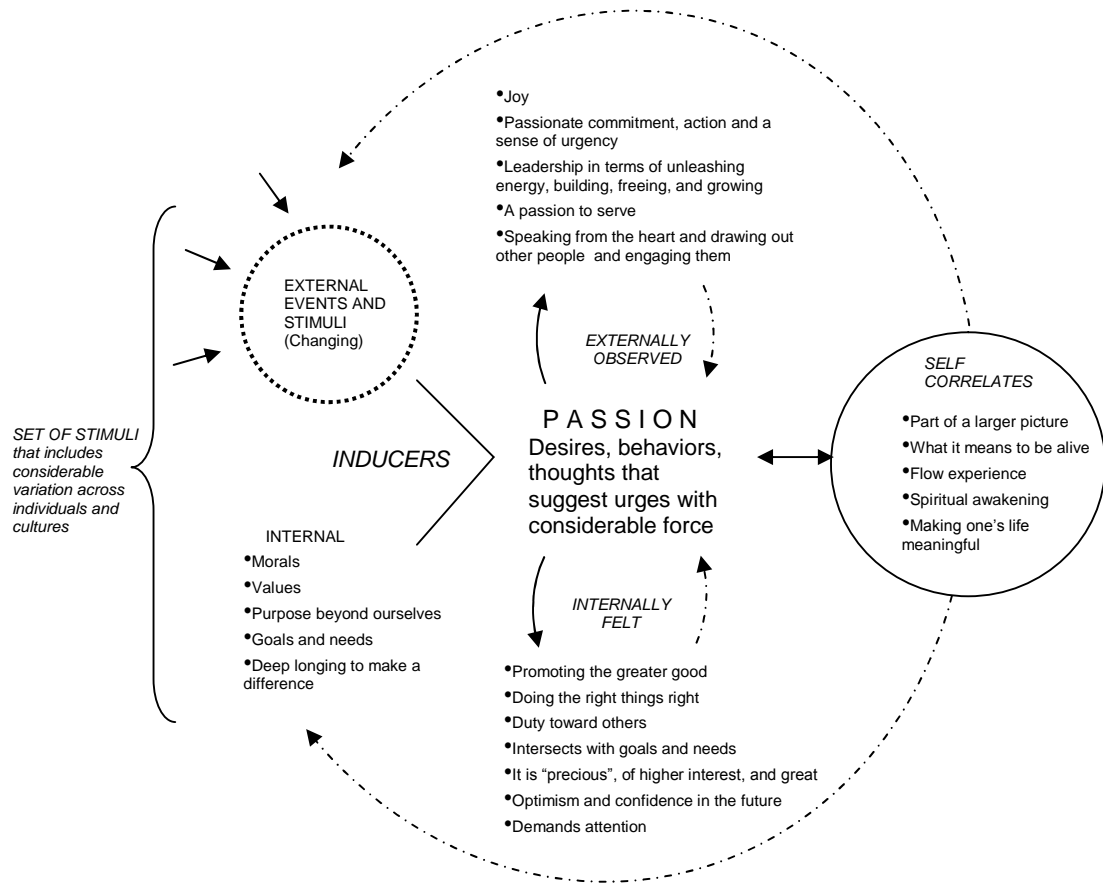


Figure 2. Framework to explore aspects of passion.

commitment to the greater or public good; Senge said passion comes from what you contribute not what you get, etc.

This framework will serve as a template for clustering and exploring thought leader response.