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# Identification of Organizational Cultural Factors That Impact Knowledge Sharing

CAPSTONE REPORT

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Running head: IDENTIFICATION OF ORGANIZATIONAL CULTURAL FACTORS

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### Abstract

The purpose of this literature review is to identify organizational cultural factors that impact knowledge sharing. In organizations able to cultivate a knowledge-sharing work environment, employees share ideas as a natural part of their job function, rather than something they are forced to do. The selected literature reveals that there are six key social factors that impact knowledge sharing: trust, autonomy, power politics, care, competence leverage, and collaboration; and two key motivational factors: incentives and motivation.



<b>Introduction.....</b>	<b>7</b>
<i>Problem.....</i>	<i>7</i>
<i>Purpose .....</i>	<i>8</i>
<i>Research Questions.....</i>	<i>8</i>
<i>Primary research question.....</i>	<i>8</i>
<i>Secondary research questions.....</i>	<i>8</i>
<i>Significance.....</i>	<i>9</i>
<i>Audience.....</i>	<i>11</i>
<i>Limitations .....</i>	<i>11</i>
<i>Time frame .....</i>	<i>11</i>
<i>Sources .....</i>	<i>12</i>
<i>Topic description .....</i>	<i>12</i>
<i>Selection criteria.....</i>	<i>13</i>
<i>Audience.....</i>	<i>13</i>
<i>Focus .....</i>	<i>13</i>
<i>Data Analysis &amp; Writing Plans Preview .....</i>	<i>13</i>
<i>Data analysis plan .....</i>	<i>13</i>
<i>Writing plan .....</i>	<i>14</i>
<b>Definitions.....</b>	<b>16</b>
<i>Terms and Definitions .....</i>	<i>16</i>
<b>Research Parameters .....</b>	<b>19</b>
<i>Search Strategy .....</i>	<i>19</i>
<i>Preliminary Results.....</i>	<i>22</i>
<i>Data Analysis Plan .....</i>	<i>22</i>
<i>Level of analysis.....</i>	<i>22</i>
<i>Number of concepts.....</i>	<i>23</i>
<i>Code for existence or frequency.....</i>	<i>23</i>
<i>Distinguish between concepts .....</i>	<i>23</i>
<i>Coding rules.....</i>	<i>24</i>
<i>Irrelevant information.....</i>	<i>24</i>
<i>Code the text .....</i>	<i>24</i>
<i>Analyze results .....</i>	<i>24</i>
<i>Writing Plan .....</i>	<i>25</i>
<b>Annotated Bibliography .....</b>	<b>26</b>
<b>Review of the Literature.....</b>	<b>51</b>
<i>Theme #1: Defining Data, Information and Knowledge and Their Relationships .....</i>	<i>51</i>
<i>Theme #2: Knowledge Types: Tacit, Explicit, Individual and Organizational .....</i>	<i>52</i>
<i>Theme #3: The Need to Create a Supportive Knowledge Sharing Culture .....</i>	<i>53</i>
<i>Theme #4: The Impact of Culture on Knowledge Sharing .....</i>	<i>55</i>
<i>Theme #5: The Impact of Organizational Culture on Knowledge Sharing .....</i>	<i>57</i>
<b>Conclusion .....</b>	<b>65</b>
<b>References.....</b>	<b>67</b>



## Introduction

### *Problem*

Knowledge sharing is a concept that, in general, refers to the exchange of framed experiences, values, contextual information and expert insight (Davenport & Prusak, 1998). According to Davenport and Prusak (1998), knowledge sharing provides a framework for evaluating and incorporating new experiences and information.

Karlsen and Gottschalk (2004) maintain that culture, defined as the values, rules, practices, rituals and norms through which an organization conducts business (Brache, 2002, p.102), plays a critical role in the knowledge sharing process. They describe a number of ways in which culture interacts with knowledge sharing: (a) it shapes assumptions about what knowledge is worth exchanging; (b) it defines the relationship between employee knowledge and organizational knowledge; (c) it establishes the context for social interaction that plays a key role in how knowledge will be shared; and (d) it shapes the processes by how new knowledge is created, validated and disseminated throughout the organization.

Widen-Wulff and Gimman (2004) examine how organizational culture plays a central role in how readily employees share knowledge. They suggest that in organizations able to cultivate a knowledge-sharing work environment, employees tend to share ideas and insights because they see knowledge sharing as a natural part of their job function, rather than as something they are being forced to do. Janz and Prasarnphanich (2003) state that organizations that desire to improve their knowledge sharing efforts should aim at strengthening and developing an environment where employees are motivated to share what they know.

### *Purpose*

The purpose of this literature review is to identify organizational cultural factors that have an impact on knowledge sharing. In this study, the concept of an “organization” refers to a knowledge-based enterprise, defined as any organization that effectively leverages their knowledge base (McKeen & Smith, 1998). An “organizational cultural factor” refers to the attributes of an organization. According to Bures (2003), these attributes can be tangible, such as dress code or physical work environment or intangible, such as shared values and definitions of success.

Ford and Chan (2003) believe that knowledge sharing is one of the most challenging processes for a knowledge-based enterprise to address and indicate that organizational culture may make employees reluctant to share what they know. For example, Davenport and Prusak (1998) describe risk aversion – a situation in which the organizational approach to punish employees for mistakes, may hinder an employee from sharing their knowledge to realize better performance, for fear of being reprimanded.

### *Research Questions*

This literature review focuses on the following research questions:

*Primary research question.* What organizational cultural factors impact knowledge sharing? (Alazmi & Zairi, 2003; Bures, 2003; Davenport & Prusak, 1998; De Long & Fahey, 2000; Ford & Chan, 2003; Kim, 2007; McDermott & O’Dell, 2000)

*Secondary research questions.*

1. What is knowledge? (Davenport & Prusak, 1998, p. 5)
2. What is knowledge sharing? (Nobeoka & Dyer, 1998)
3. What is culture? (Brache, 2002, p. 102)

4. What is organizational culture? (Jane & Prasarnphanich, 2003)
5. What is an organizational cultural factor? (Schein, 1988; Bures, 2003)
6. Why is knowledge sharing important to an organization? (Alazmi & Zairi, 2003)
7. What is a knowledge-based enterprise? (Doyle & Adeline, 1998)

### *Significance*

According to Jane and Prasarnphanich (2003), organizational culture is the most significant input to effective knowledge management (KM) and organizational learning, in that organizational culture determines the values, beliefs and work systems that encourage or impede learning and knowledge sharing. Chan and Ford (2003) state that companies have long understood the value in harnessing data and information that resides in and is created within the organization.

Knowledge management on the other hand, is a newer phenomenon than information management (Chan & Ford, 2003). While KM can be supported through the use of technology, Ford and Chan (2003) note that knowledge is a much more nebulous resource than data and information. Harris's study illustrates that knowledge is a resource contained within the minds of an organization's employees (as cited in Chan & Ford, 2003). Alavi and Leidners' study noted that knowledge is one of an organization's only resources that increases in value, which sets it apart from other company resources that depreciate over time (as cited in Chan & Ford, 2003). They further state that knowledge sharing becomes particularly relevant to an organization since it captures the process of disseminating knowledge from one individual or group to another within the organization. Thus, the assumption underlying this study is that organizations wishing to leverage organizational knowledge must create an environment in which knowledge sharing will thrive.

Traditionally organizations tasked with improving knowledge sharing focused on the information technology and technology-driven aspects of managing information and neglected to account for the impact the organizational cultural factors would have on facilitation (Davenport, De Long, & Beers, 1998). Technology, as the sole solution to facilitating knowledge sharing, has not proven to be the answer and has turned out to be an ineffective approach to knowledge management in general and knowledge sharing in particular (Ford & Chan, 2003). Garavelli, Gorgoglione and Scozzi's study noted that most failures in the field of knowledge management in general and knowledge sharing in particular can be attributable to the organization's over-emphasis on building technology infrastructures while uniformly ignoring the organization's cultural factors (as cited in Kim, 2007). These failures have led to increasing recognition that the key to successfully sharing knowledge requires focus on organizational culture and how it may be impacting knowledge sharing (Davenport, De Long, & Beers, 1998).

Brink (2001) writes that knowledge sharing is considered a social interaction between people. He notes that organizational cultural factors, such as trust and collaboration, can have direct impact on this interaction. Bures (2003) claims that organizational cultural factors exist, are not homogenous across organizations and they impact knowledge sharing. Delong and Fahey (2000) state that the identification of these factors (e.g., trust, collaboration, empowerment, politics, power, autonomy, etc.) and the organization's ability to cultivate and reinforce them will positively impact an employee's willingness to share with others.

Davis's study states that the human factors in knowledge sharing focus on aspects that encourage people to share what they know (as cited in Brink, 2001). Schein and Ulrich's study believed for example that empowerment, defined as the act of involving people in the changes that will affect them, can greatly improve an employee's motivation to create and share

knowledge (as cited in Brink, 2001). Nonaka's work believed that an autonomous individual strives for personal development thus increasing the likelihood of personal growth, knowledge creation and knowledge sharing (as cited in Brink, 2001).

### *Audience*

This study is directed at two groups; organizational leaders and key employees (change agents) within the organization who play an important role in defining and implementing any change to the organization's work environment to encourage knowledge sharing. The first group consists of senior management (President, Senior Vice President, and Vice President of Product Design). Chan and Ford (2003) believe that senior management support of any efforts to effect change on the organization's culture to facilitate knowledge sharing is critical. The second group can be described as the organization's change agents. Jones (2006) defines a change agent as an individual possessing skill sets in learning, changing, adapting, forecasting, anticipating and creating change. This group consists of employees who are on the cutting edge of product development and acceptance including senior interaction designers, product managers, business owners and project managers (Jones, 2006). According to Jones (2006) these individuals tend to unofficially drive or have great influence in product development and product selection. Obtaining their buy-in to alterations in the work environment should positively impact the adoption of any new process by the organization's senior management and staff (Jones, 2006).

### *Limitations*

*Time frame.* The literature collected for this study with few exceptions is published between 1998 and 2007. While knowledge management has been an established discipline since 1991 (Nonaka, 1991), the majority of the literature retrieved focuses on the time period where

organizations have begun to focus on identifying organizational cultural factors that encourage and or impede knowledge sharing.

*Sources.* Literature for this study consists primarily of topic-relevant papers and articles (references that appear in professional publications, for example, Sloan Management Review) (acquired from a variety of academic and business databases, including Academic Search Premier, Business Source Premier, Communications and Mass Media, Sage Journal, Library, Information Science and Technology, Journal of Information Science, and Knowledge Management Journal. The retrieved literature provides case studies, literature reviews and research papers focusing on those terms relevant to the primary and secondary research questions listed in the Purpose Section of this study.

*Topic description.* The purpose of this literature review is to identify organizational cultural factors that have an impact on knowledge sharing within an organization. In this study, the concept of an ‘organization’ refers to a knowledge-based enterprise, defined as any organization that effectively leverages their knowledge base (McKeen & Smith, 1998). Knowledge sharing is defined as the exchanging of framed experiences, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information (Davenport & Prusak, 1998).

Knowledge-based enterprises have come to terms with the fact that knowledge is the most valuable resource in this knowledge-intensive economy (Alazmi & Zairi, 2003). Davenport, De Long and Beers (1998) state that organizations have long understood the value in harnessing data and information that resides in and is created within the organization. Despite substantial agreement regarding the competitive value of knowledge, the problem of how to

foster an organization's ability to facilitate and stimulate knowledge sharing has been much more perplexing (Kim, 2007).

*Selection criteria.* The literature selected for this study meets the following standards as outlined by Leedy & Ormrod (2005):

1. The article includes content relevant to the topic and synthesized results
2. Authors are either generally recognized as leaders in their respective fields and or are educators
3. The content addresses at least one of the identified research sub-questions listed later in this document
4. Full text access, reproducible in hard copy

*Audience.* This study is directed at two groups; organizational leaders and key employees within the organization. This audience is targeted because they play an important role in defining and implementing any change to the organization's culture to encourage knowledge sharing.

*Focus.* The practice of knowledge management encompasses the entire spectrum of knowledge creation, capture and flow into and within an organization (Blumentritt & Johnston, 1999). The literature selected for this study focuses on the identification of organization cultural factors that impact the sharing of knowledge, for example, employee-based trust and institution-based trust, which have been identified as having a positive or negative impact on an employee's willingness to share what they know (Kim, 2007). The study does not focus on the actual steps an organization may take to create and sustain an environment conducive to knowledge sharing.

#### *Data Analysis and Writing Plans Preview*

*Data analysis plan.* The approach to data analysis selected for use in this study is content analysis. Leedy and Ormrod (2005) define content analysis as a detailed and systematic

examination of the contents of a particular body of material for the purpose of identifying patterns, themes, or biases. A content analysis is ideally suited for a literature review since a specific body of textual material is to be identified and reviewed.

According to Busch et al. (2005) there are two general categories of content analysis: conceptual analysis and relational analysis. This study utilizes the conceptual analysis approach for its content analysis. A conceptual analysis establishes the existence and frequency of concepts. Busch et al., noted that these concepts are most often represented by words or phrases in the selected literature. For instance, the primary research question for this study focuses on what organizational cultural factors impact knowledge sharing. A conceptual analysis looks for key terms or phrases (e.g., organizational cultural factors, knowledge sharing, etc.) and the context of these in relation to the primary and secondary research questions, as a way to gauge the relevancy of the literature being examined Busch et al. Complete details of the data analysis plan can be found in the Research Parameters section of this document.

*Writing plan.* Leedy and Ormrod (2005) report that too many literature reviews simply report on what other people have learned about a particular topic. A good literature review assembles the information, evaluates, organizes and synthesizes what has been presented by others in the field (Leedy & Ormrod, 2005). During the synthesis of the literature for this study, focus is on identifying and presenting patterns and themes pertaining to the research questions being studied. Boyatzis describes this as the thematic approach (as cited in Braun & Clarke, 2006). Boyatzis defines a thematic analysis as a method for identifying, analyzing and reporting patterns (themes) within the data (as cited in Braun & Clarke, 2006). A theme captures something important about the data relative to the research question and represents some level of patterned response or meaning within the overall literature set (Braun & Clarke, 2006). The

literature review must provide sufficient evidence of the themes identified within the data set, capturing the overall essence of the point being made without unnecessary complexity (Braun & Clarke, 2006). Complete details of the writing plan can be found in the Research Parameters section of this document.

## Definitions

The topic of this study focuses on the organizational cultural factors that impact knowledge sharing. Definitions for each of these terms are derived from the selected literature and are provided in order for the audience to better comprehend the content as it is reviewed.

### *Terms and Definitions*

*Change agent* - Individuals that facilitate the transformation and exploitation of knowledge. Should possess skill sets in learning, changing, adapting, forecasting, anticipating and creating change (Jones, 2006).

*Critical mass* – In relation to the implementation of knowledge sharing initiative critical mass can be defined as achieving enough individuals participating in an activity to sustain that activity until it can become part of the organization's culture (Hall, 2001).

*Explicit knowledge* – Is knowledge that can be expressed in the form of words, numbers and can be shared in the form of specifications, manuals, general documents (Desouza, 2003).

*Extrinsic motivation* - Refers to engaging in an activity for the potential rewards or benefits earned (Lin, 2007).

*Incentives* - Inducement to successfully accomplish a task. Examples include increased salary, bonuses and or promises of a job promotion or job security (Lin, 2007).

*Intellectual capital* - The knowledge a company's employees have about its products and services -- as well as the company's organizational systems and intellectual property -- make up its intellectual capital (Taylor, 2001).

*Intrinsic motivation* - Refers to engaging in an activity for its own sake, out of interest, or for the pleasure and satisfaction derived from the experience (Lin, 2007).

*Knowledge* - Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information (Nichols, 2000).

*Knowledge-based enterprise* – defined as any organization that effectively leverages their knowledge base (McKeen & Smith, 1998).

*Knowledge management* - Knowledge management focuses on facilitating and managing knowledge-related activities, such as creation, capture, transformation and use of knowledge (Lin, 2007).

*Knowledge sharing* - the exchanging of framed experiences, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information (Davenport & Prusak, 1998).

*Knowledge worker* - Often described as a worker whose role is making decisions based on the analysis of information (Lin, 2007).

*Organization* - refers to a set of social relations deliberately created, with the explicit intention of continuously accomplishing some specific goals or purpose (Stinchcombe, 1964).

*Organizational culture* – Can be defined as a pattern of shared basic assumptions learned by a group as it solved problems of external adaptation and internal integration that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems (Schein, 1986).

*Organizational cultural factor* – Schein (1988) describes organizational cultural factors as consisting of assumptions, values, and artifacts. Assumptions represent interpretive schemes that people use to perceive situations and to make sense of ongoing events, activities and human

relationships. Values represent beliefs into what is important to a person. Artifacts include things such as an organization's art, technology, behavior patterns, language, rituals and ceremony.

*Organizational knowledge* - When knowledge from several subunits or groups is combined and used to create new knowledge, the resulting tacit and explicit knowledge can be called organizational knowledge (Hatch, 2008).

*Professional culture* – Pentland defined professional culture as the distinct set of values, norms and practices of the individual employee where members value knowledge differently from other groups within the same organization (as cited in Kim, 2007).

*Tacit knowledge* – tacit knowledge is defined as work-related practical knowledge learned informally through experience on the job. It is an intellectual and cognitive process that is neither expressed nor declared openly but rather implied or simply understood (Anthony & Brockmann, 2002).

### Research Parameters

The research parameters section of this study contains the report of the search strategy including search terms, databases used, and the evaluation criteria for selection of references, the data analysis plan and the writing plan. The goal of this section is to provide the reader with a clear understanding of the methods used to develop the study.

#### *Search Terms*

- Change agent
- Critical mass
- Extrinsic motivation
- Explicit knowledge
- Incentives
- Intellectual capital
- Intrinsic motivation
- Knowledge
- Knowledge management
- Knowledge sharing
- Knowledge worker
- Organizational culture
- Organizational knowledge
- Tacit knowledge

#### *Search Strategy*

According to Leedy and Ormrod (2005), the initial identification of the main research question and its associated secondary questions provides a way to focus attention as literature is

searched and evaluated. The criteria for the search strategy included; (a) initial search terms from the primary research question and the associated secondary questions were identified and employed, (b) review of the initial literature collected provided additional search terms, (c) excerpts of the literature relevant to this study's purpose were reviewed and where applicable the actual titles of the citations employed were extracted and searched upon for relevancy.

Navigation of the identified databases consisted primarily of utilizing advance search capabilities that allow better multi-term queries, filtering by select fields as well as by full-text only returns. Utilization of these tools has resulted in greater precision.

The literature collection parameters were (a) database selections for searches were focused on general business, computer science, information science and information technology (b) search results were further refined to return only those results that provided full-text of the literature in question, (c) selected literature is retrieved from the vertical databases EBSCOHost Web (Academic Search Premier, Business Source Premier, Communication and Mass Media, Library, Information Science & Technology Abstracts and MLA Periodicals Directory), Sage Journal Online, Google Scholar and CiteSeerx. The following searches have been conducted (see Table 1).

Databases	Keyword	Results	Quality
EBSCOhost	cultural barriers + knowledge management	5	Good
	cultural issues + knowledge sharing	3	Fair
	cultural factors + knowledge sharing	1	Poor
	knowledge sharing	1149	good
	knowledge management	11860	Fair
	Organizational knowledge	465	Fair
	Intrinsic + knowledge sharing	8	Good
	Extrinsic + knowledge sharing	6	Good
	motivation + knowledge sharing	80	Good
	Incentives + knowledge sharing	36	Good
	knowledge exchange	225	Poor
	knowledge sharing + culture	132	Good
	professional culture + knowledge sharing	2	Good
	tacit knowledge + knowledge sharing	23	Fair
	organizational culture + knowledge sharing	2	Poor
	culture + knowledge sharing	132	Good
	culture + knowledge worker	13	Poor
	intellectual capital + knowledge sharing	30	Good
	knowledge + knowledge sharing	1130	Fair
	intrinsic motivation + knowledge sharing	3	Good
	extrinsic motivation + knowledge sharing	4	Good
	issues + knowledge sharing	71	Fair
	barriers + knowledge sharing	39	Fair
	autonomy + knowledge sharing	12	Fair
Sage Journals	Nobeoka + Dyer	3	Good
	Tsai	28	Good
	Hsui-Fen	3	Good
	Widen-Wulff Ginman	14	Good
	McDermott + O'Dell	4	Fair
CiteSeerx	knowledge sharing	3410	Fair
	knowledge sharing + working environment	152	Fair
	knowledge sharing + incentives	20,853	Fair
	knowledge sharing + motivation	187,510	Poor

Table 1: Record of searches

### *Preliminary Results*

The EBSCOhost Web aggregated database provided a plethora of business and academic resources. As the above table illustrates, the results were relatively good and provided a broad range of full-text articles and papers well-suited for this study. In addition to the EBSCOhost Web database access to the Sage Journal Online site was available under a trial period. Similar to EBSCOhost Web, the quality as well as the quantity of full text articles and papers made this database an extremely valuable source of material for the topic under review. CiteSeerx database as shown above provided a significant number of full-text articles pertinent to this research topic. Over 115 papers on knowledge sharing, knowledge management, social computing, social networking, organizational culture, and competitive advantage have been identified, including one pertinent literature review on the topic of knowledge management, by Sage & Small (2006).

### *Data Analysis Plan*

This study utilizes the conceptual analysis approach for content analysis (Busch et al., 2005). A conceptual analysis establishes the existence and frequency of concepts. Concepts are most often represented by words or phrases in the selected literature (Busch et al., 2005). The conceptual analysis begins with the researcher identifying the research question and then choosing the samples of literature relevant to the research topic. The text is reduced to categories consisting of a word, a set of words or phrases and then coded against a set of criteria that has been established by the researcher (Busch et al., 2005). There are eight steps to the coding process, detailed below in relation to this study.

1. *Level of analysis.* The researcher must decide what level of analysis will be conducted for this study. The level of analysis for this study involves both the coding of single terms

(e.g., culture, knowledge, etc.) and for sets of words or phrases (e.g., knowledge sharing, organizational cultural factors, organizational culture, etc.)

2. *Number of concepts.* Several decisions are needed at this stage of the analysis. The researcher must decide whether to code for every single occurrence (both positive and negative) of a word that appears or only code for words that have been pre-defined. The second decision involves deciding on whether to allow for words/phrases outside of the pre-defined list. For this study, the researcher allows for the opportunity to add material during the coding process. Even though preliminary searches have been limited to the topic under study, the flexibility allows for the possibility of new discovery that might emerge during analysis, which could have the potential for improving the overall review.
3. *Code for existence or frequency.* The researcher must decide whether to code for term existence or frequency. Coding for existence means that a term is counted only once regardless of the number of times it appears in the sample. Coding for frequency means that a count of the total number of times a term is used in a sample is recorded. For this study, the researcher codes for existence. Reviewing and coding for instances of the terms “organizational culture factors” and synonyms of factors (e.g. issues) (and other pre-defined terms) is significant as they will be a strong indicator that the sample under review is relevant to the research questions.
4. *Distinguish between concepts.* The researcher must decide the level of specificity; whether terms are coded exactly as they appear or whether coding is allowed for terms that are similar. For this study coding is allowed for near terms. For example, the phrase “organizational cultural factors” and the phrase “organizational cultural issues” would be coded the same as factors and issues could be considered synonyms. Another example

may be “knowledge sharing” and “knowledge exchange.” The context that the word/phrase is being used in is also taken into consideration when deciding whether to code a word/phrase as similar or not.

5. *Coding rules.* Rules must be defined so that coding is consistent throughout the samples. For this study, translation rules, defined as rules that govern the coding of terms are employed to insure that for example “knowledge sharing” and “knowledge exchange” are coded consistently between samples.
6. *Irrelevant information.* During the analysis guidelines are determined to deal with irrelevant information. Irrelevant information is defined as information that has no bearing on the topic under review. For example, while information technology plays a role in facilitating knowledge sharing, this topic is outside the scope of this study and as such would be irrelevant to determining the organizational cultural factors that affect knowledge sharing.
7. *Code the text.* Once the above decisions and guidelines have been completed a decision on the method of coding needs to be made. Given the relatively small amount of data to be reviewed, manual coding (as opposed to utilizing a computer application) is utilized. This method shall allow the researcher to more easily identify any coding errors made during the overall coding exercise.
8. *Analyze results.* Once the literature has been coded the researcher must begin the process of drawing conclusions and generalizations. Factors identified during coding are next organized into themes, to support this process. See the Writing Plan below, for details at this stage.

*Writing Plan*

Information elements focusing on the primary research topic, organizational cultural factors that impact knowledge sharing are derived from a content analysis process described above. These elements are reviewed, coded, synthesized and then organized according to a thematic model, which forms the basis for the plan to develop the Review of the Literature section of this study. A theme is defined as something important about the data reviewed in relation to the research question, and represents some level of patterned response or meaning within the data set (Braun & Clarke, 2006). A preliminary review of the selected literature reveals five potential themes, framed as questions, relevant to organizational cultural factors. The final set of themes may evolve, based on the actual analysis outcome:

1. What is the difference in data, information and knowledge and why is the distinction important?
2. What are the different types of knowledge; including their impact on knowledge creation and knowledge sharing?
3. What is the role of a knowledge sharing environment in relation to knowledge sharing?
4. What role does organizational culture play in knowledge sharing in relation to selected dimensions?
5. What characteristics of social and motivational factors play a role in knowledge sharing?

### Annotated Bibliography

The annotated bibliography is a list of the most relevant literature pertaining to the topic under review. Each annotation contains the APA-styled citation, the article abstract, and a description of the credibility of the work. The criterion for inclusion in the annotated bibliography is that each document must have a primary focus on knowledge sharing and organizational cultural factors that impact knowledge sharing. The annotated bibliography contains 20 articles and constitutes the group of references (data set) used for the content analysis. As such, each reference supports the development of the Review of Literature section of this study.

Alavi, M., Kayworth, T., & Leidner, D. (2006). An empirical examination of the influence of organizational culture on knowledge management practices. *Journal of Management Information Systems*, 22(3), 191-224. Retrieved May 15, 2009 from <http://0-search.ebscohost.com.janus.uoregon.edu/login.aspx?direct=true&db=buh&AN=19675857&site=ehost-live&scope=site>

Knowledge management to facilitate the creation, storage, transfer, and application of knowledge in organizations has received wide attention in practice and research in the past several years. Organizational culture is often cited as a significant challenge in knowledge management practices. Although many studies raise the issue of organizational culture's influence on knowledge management success, few investigate the way in which this influence manifests itself. This paper describes how organizational culture influences knowledge management practices. It provides support, using a case study method, by examining the cultural values and knowledge management approaches within a large global information services company and one of its

knowledge communities. The findings highlight the influence of culture on the use of knowledge management technologies and the outcomes of such use.

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Dorothy E. Leidner is the Randall W. and Sandra Ferguson Professor of Information Systems at Baylor University. She has broad international experience, having previously served as Associate Professor at INSEAD and as Visiting Professor at the Instituto Tecnológico y des Estudios Superiores de Monterrey, Mexico, at the Institut d'Administration des Entreprises at the Université de Caen, France, and at the University

of Mannheim, Germany. She has published in a variety of journals, including MIS Quarterly, Information Systems Research, and Organization Science. Dr. Leidner is currently serving as coeditor-in-chief of Data Base for Advances in Information Systems. She also is serving as an associate editor for MIS Quarterly, associate editor for Decision Sciences, associate editor for Decision Support Systems, and senior editor for the Journal of Strategic Information Systems.

Alazmi, M., & Zairi, M. (2003). Knowledge management critical success factors. *Total Quality Management*, 14(2), 199-204. Retrieved May 7, 2009 from <http://0-search.ebscohost.com.janus.uoregon.edu/login.aspx?direct=true&db=buh&AN=10288949&site=ehost-live&scope=site>

Knowledge management (KM) is one of the growing interests in today's business, and the number of enterprises turning to knowledge management is increasing quickly, as they have found there are definite benefits. Therefore, with the importance of KM being realized, businesses are viewing KM as a critical success factor in today's dynamic borderless society. In the light of this, it is easy to understand why a multitude of factors become considerations in implementing a knowledge management function.

This article presents a report on the critical success factors that directly impact knowledge management in general and knowledge sharing in particular. The paper provides support to in identifying factors that are key to impacting knowledge sharing.

Professor Dr. Mohamed Zairi is a professor of Best Practice Management at the Bradford University School of Management in West Yorkshire, UK. He is also the Director of the European Centre of TQM. In June of 2005 Professor Zairi was awarded the Juran Chair in Total Quality Management by the Juran Foundation in conjunction with the e-TQM College – the

Dubai-based electronic educational institution. Dr Zairi is also dean of the eTQM College in Dubai and is an advisor to many large organizations and government bodies.

Brink, P. (2001). Measurement of conditions for knowledge sharing. *Proceedings of 2<sup>nd</sup> European Conference on Knowledge Management*, 1-16. Retrieved May 7, 2009 from [http://www.onthebrink.nl/documenten/measurement\\_conditions\\_ks.pdf](http://www.onthebrink.nl/documenten/measurement_conditions_ks.pdf)

This paper describes a model to quantify conditions that enable knowledge sharing in an organization. Based on this ‘level of facilitated knowledge sharing’ we are able to identify the next steps to be taken, i.e. which conditions are most appropriate to stimulate. In addition, this measurement provides an indicator of the effectiveness of (one or more) actions taken, and may help in steering knowledge sharing efforts. This article presents a broader view of those factors impacting knowledge sharing. Focus is placed on the social, organizational and technical factors impacting knowledge sharing. The paper concludes that motivational factors are directly impacted by the organizations culture and this impact plays a significant role in facilitating knowledge sharing.

Paul van den Brink presented this peer-reviewed paper at the Proceedings 2<sup>nd</sup> European Conference on Knowledge Management, Bled, November 2001. Mr. Brink is the Collections Management manager for Delft University. Delft is the Netherlands largest technology university and ranks amongst the top universities in the field of technology according to the Times Higher Education ranking.

Bures, V. (2003). Cultural barriers in knowledge sharing. *E+M Economics and Management, Liberec, 6*, 57-62. Retrieved May 7, 2009 from

<http://lide.uhk.cz/fim/ucitel/buresv11/publications/CulturalBarriers.pdf>

Knowledge management and support of its activities from human, as well as technological side, is new and very actual. The purpose of this article is to briefly inform about problems connected with sharing knowledge as one of the basic activities of knowledge management. The article is divided into two parts; the first part describes individual and social barriers of knowledge sharing. The second is dedicated to the conflict of motives as a special individual obstacle arising partly from other barriers, but mostly from the used incentive system. The article discusses that the impact of these social and cultural barriers has to be mitigated through the evolution of an organization's culture. It continues to elaborate that this change is not quick nor without its own challenges. The change must be gradual and requires considerable time, energy and resources.

The paper identifies specific organizational and social factors that directly impact knowledge sharing. It further addresses the need to eliminate where possible and mitigate when feasible those factors identified as impacting knowledge sharing. This paper focuses on one of the main themes of this literature review and is pertinent to this analysis.

Validimir Bures is a professor at the University of Hradec Kralove, Czech Republic and is a regular presenter at the European Conference on Knowledge Management. The 5<sup>th</sup> ECKM attracted over 96 papers from 33 countries on 6 continents.

Chan, Y., & Ford, P. (2003). Knowledge sharing in a multi-cultural setting: a case study. *Knowledge Management Research and Practice, 1*, 11-27. Retrieved May 7, 2009 from  
<http://www.palgrave-journals.com/kmrp/journal/v1/n1/pdf/8499999a.pdf>

This paper focuses on the effect that national culture has on the dissemination of knowledge within the organization. Hofstede defines national culture as the collective programming of the mind which distinguishes the members of one human group from another (as cited in Chan & Ford, 2003). Hofstede has argued that organizational cultural factors are nested within national culture and as such are impacted by this nesting (as cited in Chan & Ford, 2003). Understanding this impact is relevant to the focus of this literature review.

Organizational culture has been shown to influence the success of knowledge management practices. Hofstede's theory specifies that organizational culture is not independent of national culture. A case study of an international subsidiary was conducted to explore the extent to which knowledge sharing is dependent on national culture. Results indicate that language differences can create knowledge blocks, and cross-cultural differences can explain the direction of knowledge flows. This paper concluded that while language plays a role in impacting knowledge sharing, organizational cultural factors were found to be more instrumental in impacting knowledge sharing.

Dianne P. Ford is an adjunct professor and Ph.D. candidate in Management Information Systems and Organizational Behaviour at Queen's School of Business at Queen's University. Her research interests are in knowledge management, cross-cultural issues, organizational culture, leadership, trust, and adoption of technology. Her work has been presented at Canadian Psychological Association and Administrative Sciences Association of Canada conferences, and she has published in IEEE Transactions in Engineering Management and the Handbook on Knowledge Management. Yolande E. Chan is an Associate Professor of Management Information Systems at Queen's School of Business, Queen's University, Canada. She holds a Ph.D. from the University of Western Ontario, an M. Phil. in Management Studies from Oxford

University, and S.M. and S.B. degrees in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology. Dr. Chan conducts research on knowledge management and on information technology strategy, alignment, and performance. She has published her findings in journals such as Information Systems Research, MIS Quarterly Executive, Academy of Management Executive, Journal of Management Information Systems, Journal of Strategic Information Systems, Information & Management, and Communications of the AIS.

De Long, D., & Fahey, L. (2000). Diagnosing cultural barriers to knowledge management.

*Academy of Management Executives*, 14(4), 113-127. Retrieved April 14, 2009 from  
<http://management.uta.edu/Casper/5323/DeLong%20&%20Fahey%20AME%202000.pdf>

Organizational culture is increasingly recognized as a major barrier to leveraging intellectual assets. This article identifies four ways in which culture influences the behaviors central to knowledge creation, sharing, and use. First, culture—and particularly subcultures—shape assumptions about what knowledge is and which knowledge is worth managing. Second, culture defines the relationships between individual and organizational knowledge, determining who is expected to control specific knowledge, as well as who must share it and who can hoard it. Third, culture creates the context for social interaction that determines how knowledge will be used in particular situations. Fourth, culture shapes the processes by which new knowledge—with its accompanying uncertainties—is created, legitimated, and distributed in organizations. These four perspectives suggest specific actions managers can take to assess the different aspects of culture most likely to influence knowledge-related behaviors. This diagnosis is the critical first step in developing a strategy and specific interventions to align the firm's culture in support of more

effective knowledge use. The results show that organizational cultural factors and the various sub-cultures discovered directly impact knowledge sharing. While it has determined these factors have a direct impact on knowledge sharing, the paper goes on to illustrate how management can play a role in shaping and improving the culture to positively improve knowledge sharing.

David De Long is an adjunct professor at Babson College and holds a doctorate in organizational behavior from Boston University. A research fellow at Andersen Consulting's Institute for Strategic Change, De Long has provided services to organization's seeking to leverage organizational knowledge for sustained innovation and growth. Liam Fahey is an adjunct professor of strategic management at Babson College. He is the author or editor of eight books and over 40 articles and book chapters. His recent books are Learning from the Future: Competitive Foresight Scenarios and Competitors.- Outwitting, Outmaneuvering, and Outperforming. This paper points out the impact organizational cultural factors; specifically collaboration as well as management actions have on the creation and sharing of organizational knowledge.

Goody, M., & Hall, H. (2007). KM, culture and compromise: interventions to promote knowledge sharing supported by technology in corporate environments. *Journal of Information Science*, 33(2), 181-188. Retrieved April 18, 2009 from <http://0-search.ebscohost.com.janus.uoregon.edu/login.aspx?direct=true&db=aph&AN=25291982&site=ehost-live&scope=site>

The theme of knowledge sharing is discussed extensively in the knowledge management literature. Such work tends to focus on the barriers that impede knowledge sharing activity. Of

these 'culture' is commonly cited as a major obstacle. This article examines what is meant by the term 'culture'. In the context of efforts to promote good practice in knowledge management, it is argued that straightforward reference to culture as a barrier to knowledge sharing is inadequate. Rather, firms should be looking at power issues and, in particular, organizational politics to explain success and failure in attempts to motivate knowledge sharing. The domain of socio-technical studies is considered as a means of unpicking cultural issues at work in specific environments through the deployment of actor-network theory to identify shifting organizational power relationships.

The paper meets the selection criteria for this study as it focuses on organizational cultural factors relevant to the politics of the organization itself. Power has been recognized as a factor in impacting knowledge sharing.

Organizational politics and the power that is involved is the primary theme of this paper. Politics and power are identified as organizational cultural factors that play impact knowledge sharing. The focus on these specific factors is relevant to the overall synthesis of literature in identifying those organizational factors that impact knowledge sharing.

Dr. Hazel Hall is Reader based in the Centre for Social Informatics in the School of Computing at Edinburgh Napier University where she teaches modules on knowledge management (KM), business information sources, information delivery and research methods at undergraduate and postgraduate level. As well as holding a doctorate and a master's degree in information management, Hall's background includes qualifications in French and Italian language and literature from the Universities of Birmingham, Nantes and Paris Sorbonne. Hazel's main research expertise lies in information sharing in online environments within the

context of knowledge management. Her doctoral thesis considered the role of the intranet in knowledge sharing.

Melanie Goody Melanie joined TFPL in March 2008 following a successful career with KPMG. Her roles have included Director of Research & Information Services, Head of KM Operations and Director of Web Services. She also spent some five years working as a consultant in KPMG's Public Sector Consulting practice.

Melanie brings extensive experience of knowledge and information management (KIM) from the user and supplier perspective. Her unique set of competencies includes in-depth experience of the knowledge and information (KIM) world, unrivalled experience of buying content and products, and of providing services to meet strategic business needs. She has a real understanding of how excellent information and knowledge management can help organisations meet their business goals, and has proven leadership and management skills.

Greengard, S. (1998). Will your culture support km? *Workforce*, 77(10), 93-98. Retrieved May 7, 2009 from <http://0-search.ebscohost.com.janus.uoregon.edu/login.aspx?direct=true&db=f5h&AN=1181726&site=ehost-live&scope=site>

Focuses on the implementation of knowledge management (KM) on companies in the United States. Cultural barriers that need to be broken for the successful implementation of KM; cultural problems faced by companies upon implementation of KM; how to get the support of employees for KM implementation. This article meets the criteria for selection by focusing on content relevant to the topic of how organizational cultural factors impact knowledge sharing. The primary theme of this article focuses on how incentives play a crucial role in facilitating knowledge sharing. Incentives, both extrinsic and intrinsic have been identified in the data

corpus as a key organizational cultural factors impacting knowledge sharing making this article a relevant contribution to the data set.

Mr. Greengard is the President of the American Society of Journalists and Authors and is often a guest lecture at the University of Wisconsin, Madison.

Gurteen, D., (1999). Creating a knowledge sharing culture. *Knowledge Management Magazine*, 2(5), 1-4. Retrieved May 12, 2009 from  
[http://www.providersedge.com/docs/km\\_articles/Creating\\_a\\_K-Sharing\\_Culture\\_-Gurteen.pdf](http://www.providersedge.com/docs/km_articles/Creating_a_K-Sharing_Culture_-Gurteen.pdf)

It is often said that it is essential to create a "Knowledge Sharing Culture" as part of a Knowledge Management initiative. An isolated knowledge management programme looked after by a privileged few is a paradox in itself and will not survive for long. Only effective collaboration and communication which spans across the whole company structure will give knowledge management the boost it really needs. In order to enrich a company's current culture David Gurteen believes that change must start at the individual. Every employee has a sphere of influence along with their own individual knowledge, and this is where he believes a knowledge sharing culture can begin. This article identifies that true knowledge sharing starts at the individual level. Provides excellent insight into how the cultural issues of the individual along with the organization impact knowledge sharing. This article meets the criteria for selection by focusing on content relevant to the topic of how organizational cultural factors impact knowledge sharing. Specifically, the author introduces the concept of the paradigm. He defines a paradigm as a way of thinking, perceiving or viewing the world. In order to create a knowledge sharing culture the author introduces the fact that employees need to view the world in which

they work in a different way. An employee's perceptions in the organization shape in part his professional culture; the beliefs and values the employee brought with them to the organization.

Mr. Greengard has been the principle director of Gurteen Knowledge Consultancy since 1993. Mr. Greengard also led Lotus Notes international product design from 188-1991.

Hall, H. (2001). Input-friendliness: Motivating knowledge sharing across intranets. *Journal of Information Science*, 27(3), 139–146. Retrieved April 13, 2009 from  
<http://jis.sagepub.com/cgi/content/abstract/27/3/139>

The value of an intranet for knowledge management (KM) is largely dependent on the caliber of the content and tools that it provides to its users and its ultimate application in business operations. For many organizations, there is a particular dilemma regarding the development of internally produced intranet resources for KM applications. Employees will not feel encouraged to provide content until they believe that what they provide will be used and they will not use an intranet if it does not provide useful content. This paper considers strategies for making intranets input-friendly': how can organizations extract the content needed to add to the body of internally produced resources from their employees? The discussion explores factors that encourage intranet contributions. These include enabling conditions such as the provision of appropriate tools, the development of organizational KM culture and reward systems. The paper makes reference to studies drawn from the academic literature in business studies, information systems, organizational science and sociology, as well as to practice in case study organizations. Article that reports on the use of intranets and the challenges faced by organizations encourage participation. The article shows a direct relationship to the cultural issues that impact knowledge sharing in general as well as those same issues impacting use of knowledge sharing technology.

While the focus of the study is on cultural factors that promote or impede knowledge sharing this article warrants inclusion due to its overview of how these factors also impede knowledge sharing through technology usage.

Dr. Hazel Hall is Reader based in the Centre for Social Informatics in the School of Computing at Edinburgh Napier University where she teaches modules on knowledge management (KM), business information sources, information delivery and research methods at undergraduate and postgraduate level. As well as holding a doctorate and a master's degree in information management, Hall's background includes qualifications in French and Italian language and literature from the Universities of Birmingham, Nantes and Paris Sorbonne. Hall's main research expertise lies in information sharing in online environments within the context of knowledge management. Her doctoral thesis considered the role of the intranet in knowledge sharing.

Hsiu-Fen, L. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of Information Science*, 33(2), 2007, 135–149. Retrieved April 12, 2009 from <http://jis.sagepub.com/cgi/content/abstract/33/2/135>

Numerous scholars and practitioners claim that motivational factors can facilitate successful knowledge sharing. However, little empirical research has been conducted examining the different kinds of motivation (extrinsic and intrinsic) used to explain employee knowledge sharing behaviors. By integrating a motivational perspective into the theory of reasoned action (TRA), this study examines the role of both extrinsic (expected organizational rewards and reciprocal benefits) and intrinsic (knowledge self-efficacy and enjoyment in helping others) motivators in explaining employee knowledge sharing intentions. Based on a survey of 172

employees from 50 large organizations in Taiwan, this study applies the structural equation modeling approach to investigate the research model. The results showed that motivational factors such as reciprocal benefits, knowledge self-efficacy, and enjoyment in helping others were significantly associated with employee knowledge sharing attitudes and intentions. However, expected organizational rewards did not significantly influence employee attitudes and behavior intentions regarding knowledge sharing. Implications for organizations are discussed. The main theme of this article discusses the impact of employee motivation and the types of incentives currently employed to promote knowledge sharing. Motivation is directly impacted by an organization's culture which makes the theme of the article suitable for review and inclusion.

Hsiu-Fen Lin is a professor at the National Taiwan Ocean University and is a regular contributor to the Journal of Information Science. The Journal of Information Science is an international journal of high repute covering topics of interest to all those researching and working in the sciences of information and knowledge management.

Ipe, M. (2004). Knowledge sharing in organizations: an analysis of motivators and inhibitors.

*Academy of Human Resource Development International Conference*, 399-406.

Retrieved May 8, 2009 from [http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/1b/d9/14.pdf](http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1b/d9/14.pdf)

Knowledge sharing has been identified as critical to the management of knowledge in organizations. However, in practice, problems with knowledge sharing have proved to be a major barrier to the effective management of knowledge. This paper reports on research that identified four motivators and five inhibitors of knowledge sharing within one organizational context. The paper further addresses power and organizational politics as factors impeding

knowledge sharing as well as trust, reciprocity, shared language and a host of other factors. In addition, the paper addresses additional research questions pertinent to this review including, individual level factors that impact knowledge sharing, as well as organizational cultural factors that have an impact.

Minu Ipe is a Faculty Associate at the W.P. Carey School of Business and a researcher with the Center for Advancing Business through Information Technology at Arizona State University. She completed her Ph.D. at the University of Minnesota. Her current research interests include examining knowledge intensive business processes and understanding the evolving knowledge needs of organizations as they respond to disruptive influences from the external environment.

Janz, B., & Prasarnphanich, P. (2003). Understanding the antecedents of effective knowledge management: the importance of a knowledge-centered culture. *Decision Sciences*, 34(2), 351 – 383. Retrieved May 4, 2009 from <http://0-search.ebscohost.com.janus.uoregon.edu/login.aspx?direct=true&db=buh&AN=10948217&site=ehost-live&scope=site>

Within the context of knowledge management, little research has been conducted that identifies the antecedents of a knowledge-centered culture—those organizational qualities that encourage knowledge creation and dissemination. In this study, the existing literature on organizational climate, job characteristics, and organizational learning (in the form of cooperative learning theory) are linked with the current thinking and research findings related to knowledge management to develop a theoretical model explaining the relationships among organizational climate, the level of cooperative learning that takes place between knowledge workers, and the

resulting level of knowledge created and disseminated as measured by team performance and individual satisfaction levels. The study goes on to empirically test the proposed research model by investigating the climate of organizations, and seeks to understand the linkage between a set of organizational and individual characteristics and knowledge-related activities found in cooperative learning groups and the resulting work outcomes. The hypothesized research model is tested using LISREL with data collected from 203 information systems (IS) professionals engaged in systems development activities. The paper concludes with a discussion of the implications the results have for future research and managerial practice.

The focus on cooperation and autonomy as two important factors in facilitating knowledge sharing is one of the primary themes of this article. Again, the literature review's primary research question is the review of organizational cultural factors that impact knowledge sharing or which cooperation and autonomy are two factors that have been identified within several of the references in the literature reviews data corpus.

Dr. Janz is an Associate Director for the FedEx Center for Supply Chain Management in the FedEx Institute of Technology and Associate Professor of MIS at the Fogelman College of Business & Economics at The University of Memphis. In addition, he is the co-founder of the University's Center for Managing Emerging Technology.

Brian's research has been published in book chapters as well as many academic and practitioner journals as including *MIS Quarterly*, *Decision Science*, *Journal of MIS*, *Personnel Psychology*, *Journal of Database Management*, *Journal of Information Technology Management*, *Information and Management*, *Journal of Global IT Management*, *Cycle Time Research*, *Journal of Strategic Performance Measurement*, and the *Journal of Education for MIS*. In addition, Dr. Janz serves on the editorial review boards of numerous journals.

Dr. Pattarawan Prasarnphanich is a professor of Management Information Systems at Sasin, one of the top business schools in Southeast Asia. Her research specialty is knowledge management. Dr. Prasarnphanich has authored several journal articles on knowledge management as well as presented at conferences such as the IEEE International Conference on Digital Ecosystems and Technologies. She holds a Ph.D. in Management Information Systems from the University of Memphis, an MBA from the Virginia Commonwealth University and a BS in Statistics from Chulalongkorn University in Thailand.

Kaser, P., & Miles, R. (2001). Knowledge activists: The cultivation of motivation and trust properties of knowledge sharing relationships. *Academy of Management Proceedings*, 1-6. Retrieved April 12, 2009 from <http://0-search.ebscohost.com.janus.uoregon.edu/login.aspx?direct=true&db=buh&AN=6133693&site=ehost-live&scope=site>

In the main, the creation and transfer of knowledge is a voluntary, intrinsically satisfying social process. In firms, new insights about products and processes emerge interactively, usually within trusting, satisfying relationships among organizational members. Increasingly, firms are attempting to gain competitive advantage by employing knowledge activists to facilitate the knowledge creation and transfer process. However, our research suggests that efforts to hierarchically shape knowledge processes and relationships are difficult at best and may be counterproductive. Our research analyzes the outcomes of several knowledge activists' efforts to increase knowledge sharing within various units of three major firms. We analyze these outcomes using a conceptual framework that extends that of Osterloh and Frey (forthcoming) and specifies both the motivation and trust characteristics of alternative knowledge sharing

relationships. The case studies suggest that the motivation and trust properties essential to knowledge sharing can migrate upward or downward as the result of management actions.

The paper's main theme focuses on the relationship between trust and sharing and that an organization's ability to achieve a high level of knowledge sharing the sharing parties have to be both intrinsically motivated and have a high degree of trust. This focus on trust, motivation, intrinsic and extrinsic incentives provide relevant research into synthesizing the research questions for this literature review.

Philipp Kaser is a professor at the Institute of Management at the University of St. Gallen in Switzerland. Raymond Miles is Professor Emeritus and former Dean of the Hass Organizational Behavior and Industrial Relations Group at the University of California Haas School of Business. Dr. Haas holds a Ph.D. in organizational behavior and industrial relations from Stanford University.

Khalil, N., (n.d.). Knowledge management: does organizational culture matter? Retrieved May

20, 2009 from <http://www.fppsm.utm.my/files/Jurnal/JK08/801.pdf>

Individuals and organizations have begun to appreciate the increasingly important role of knowledge in the present competitive environment. For years organizations have coded, stored, and transmitted knowledge. However, the current advancement of information technology has made the tasks much easier to accomplish. Through information technology, the task of capturing, storing, and sharing the organizational knowledge can be done more systematically and efficiently. However, we believe that the utilization of information technology alone in the knowledge management does not guarantee its success. The author argues that the success of knowledge management, in particular the creation and sharing of tacit knowledge is also

influenced by organizational culture. It is hypothesized that certain dimensions of organizational culture encourage the creation and sharing of tacit knowledge. In this paper, the author discusses knowledge, knowledge management, knowledge management system, knowledge sharing and creation, and national and organizational culture. Finally, the author provides four propositions; 1) tacit knowledge sharing is higher in organization's that are collaborative, 2) tacit knowledge sharing is higher in organization's that work well in teams, 3) tacit knowledge creation is higher in organization's that value innovation and 4) tacit knowledge sharing is higher in organization's that value innovation. This paper's exploration of organizational values and their impact on knowledge sharing provides valuable insight into answering the question of organizational values and how they impact knowledge sharing which is relevant to this literature review.

Dr. Khalil holds a BSc. Economics and Industrial Management from Carnegie Mellon, a MSc. In Public Management and Policy from Carnegie Mellon and a Ph.D. Business Administration from Souther Illinois Carbondale.

Kim, E. (2007). An integrated literature review of knowledge sharing through cultural lenses.

Retrieved May 8, 2009 from <http://www.eric.ed.gov/ERICDocs>

[/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/43/d5/fb.pdf](/data/ericdocs2sql/content_storage_01/0000019b/80/43/d5/fb.pdf)

This paper presents an integrative review of literature on cultural dimensions that have been suggested as facilitative and inhibitive to knowledge sharing in organizations. Content analysis was conducted on articles related to national, organizational and professional culture and knowledge sharing process. Based on a review of existing literature in this area, this paper presents a conceptual framework that identifies cultural factors that significantly influence knowledge sharing process. This paper describes the impact that organizational cultural factors

have on knowledge sharing. This paper provides support for the hypothesis that organizational culture influences employees, which in turn influence their motivation for creating and sharing knowledge.

Eunjee Kim is a Ph.D. candidate in the Human Resource Development Center at the University of Illinois at Urbana-Champaign.

Li-Fen, L. (2006). A learning organization perspective on knowledge-sharing behavior and firm innovation. *Human Systems Management*, 25, 227-236. Retrieved April 13, 2009 from  
<http://0-search.ebscohost.com.janus.uoregon.edu/login.aspx?direct=true&db=buh&AN=23065923&site=ehost-live&scope=site>

Sharing knowledge and firm innovation are the crucial ways to sustain competitive advantage. This study builds a nested model to test the relationship between learning organization, knowledge-sharing behavior, and firm innovation. Data gathered from 254 employees were used to examine the relationship of the learning organization to employees' knowledge-sharing behavior and firm innovation. The results indicate that open-mindedness, shared vision and trust have positive effects on both knowledge-sharing behavior and firm innovation. While commitment to learning does not show significant relationship on knowledge-sharing behavior and firm innovation. Communication has significance on firm innovation but not significance on knowledge-sharing behavior.

This paper looks at the roles that trust, shared visions and communication play in knowledge sharing. This paper provides support in identifying factors that influence knowledge sharing and is thus relevant to this study.

Dr. Li-Fen Liao is assistant professor in Information Management at Ching Yun University. Her current research focuses on Knowledge Sharing in R&D Department: According to Social Power and Social Exchange Theories.

Loraas, T., & Wolfe, C. (2008). Knowledge sharing: the effects of incentives, environment, and person. *Journal of Information Systems*, 22(2), 53-76. Retrieved April 14, 2009 from <http://0-search.ebscohost.com.janus.uoregon.edu/login.aspx?direct=true&db=buh&AN=34946011&site=ehost-live&scope=site>

We study factors that promote knowledge sharing in a professional service firm. We performed two laboratory experiments with MBA students acting as participants. Our results indicate that an incentive must be considered sufficient to promote full knowledge sharing regardless of the incentive's type (monetary or nonmonetary). However, we find that the nonmonetary incentives used in our experiment were not deemed sufficient when participants self-determined incentive sufficiency. Additionally, when the peer environment promoted knowledge hoarding, knowledge sharing dropped the most when incentives were initially deemed sufficient. Finally, we find that competitive individuals are active sharers of valuable, proprietary knowledge only when their competitiveness is team-oriented. To promote knowledge sharing, our results suggest careful monitoring of perceived incentive sufficiency, especially in the case of nonmonetary incentives, and a culture that directs employee competitiveness between teams.

This paper describes the effects incentives have on the promotion of knowledge sharing within a professional organization. The paper does provide support to the challenges faced by organization's wishing to employ incentives to facilitate knowledge sharing.

Christopher Wolfe is a CPA and holds a Ph.D. in Business Administration and is a professor in the Mays Business School at Texas A&M University. Tina Loraas holds a Ph.D. and is a professor at the School of Accountancy College of Business, Auburn University. Dr. Loraas is a professor of Accounting at Texas A&M University and is President of the American Productivity and Quality Center.

McDermott, R., & O'Dell, C. (2001). Overcoming cultural barriers to sharing knowledge.

*Journal of Knowledge Management*, 5(1), 76. Retrieved April 14, 2009 from <http://0-search.ebscohost.com.janus.uoregon.edu/login.aspx?direct=true&db=lxh&AN=5476398&site=ehost-live&scope=site>

Culture is often seen as the key inhibitor of effective knowledge sharing. A study of companies where sharing knowledge is built into the culture found that they did not change their culture to match their knowledge management initiatives. They adapted their approach to knowledge management to fit their culture. They did this by: linking sharing knowledge to solving practical business problems; tying sharing knowledge to a pre-existing core value; introducing knowledge management in a way that matches the organization's style; building on existing networks people use in their daily work; and encouraging peers and supervisors to exert pressure to share.

Recently a large global company set up a sophisticated web site for employees stationed overseas to share knowledge. It had areas for chat, document storage, and messages from the company's leadership. It was cleverly segmented so you could look up information in many different ways, even browse through different views. When the designers interviewed potential users during the development process, most said a Web site for sharing with their peers was a good idea. The designers expected people to load lots of documents on to the site. But even though it was

interesting, easy to use, and had many features, hardly anyone visited it. Most document areas were empty, except for the seed information the designers entered. Potential users said that they liked it, but just didn't have time for it. The Web site designers felt that they hit the "culture" wall. While there may have been many reasons people did not use the site, the designers, like many facing failed knowledge management efforts, felt that cultural resistance was the primary one. Even though people said sharing was a good idea, the site designers felt that sharing was not built into the culture enough for people to actually take the time to do it.

This paper illustrates that knowledge sharing is directly linked to the core values of the organization and looks at how organizations need to nurture those values that provide a positive and supportive environment for sharing. The paper provides support to the fact that organizational cultural factors impact knowledge sharing.

Richard McDermott is one of the leading thinkers, authors and consultants on designing knowledge organizations and building communities of practice. For nearly two decades, he has worked with engineering, professional service, sales, and manufacturing firms to maximize the productivity of knowledge workers. He was the subject matter expert for two national studies of best practices in knowledge management; one on creating a knowledge-sharing culture and another on institutionalizing communities of practice. He is also a frequent speaker at international conferences. Prior to starting his consulting practice, Richard worked in the Corporate Education department at Polaroid, where he designed career development programs for technical professionals and experienced first-hand the dilemmas of being a knowledge worker. He was a Research Assistant at the Harvard Business School and a faculty member at Lesley College, teaching management, organizational behavior, and organizational change.

Pandya, K., & Soley, M. (2003). Culture as an issue in knowledge sharing: a means of competitive advantage. *Electronic Journal on Knowledge Management*, 1(2), 205-212. Retrieved May 7, 2009 from <http://www.ejkm.com/volume-1/volume1-issue-2/issue2-art20-soley.pdf>

In order for companies to remain competitive they must be able to utilise their knowledge of customers, products, services and resources. This can be instilled in the culture of the organisation, and this becomes paramount when the organisation deals in international markets. This research paper focuses on five main attributes, most pertinent to this study, of culture (identified by Terpstra and Sarathy, and by Gesteland). These attributes are technology and material culture, religion, language, education, and business ethics. The primary data comprised of interviews from six different e-Businesses.

This paper identifies and defines specific organizational cultural factors and how they may be misunderstood thus impacting knowledge sharing in the international business markets. This paper supports the hypothesis that organization's need to mitigate those factors negatively impacting knowledge sharing while nurturing those factors that provide a positive sharing environment.

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Schein, E. (1986). What you need to know about organizational culture. *Training and Development Journal*, 30-33. Retrieved April 15, 2009 from <http://0-search.ebscohost.com.janus.uoregon.edu/login.aspx?direct=true&db=f5h&AN=9072670&loginpage=Login.asp&site=ehost-live&scope=site>

The author advises human resource development professionals on how to manage organizational culture in the United States. Diversity in the definition of organizational cultures; Role of culture management in the development of on-the-job training programs; Need for knowledge of human learning.

This paper identifies the many facets of organizational culture and the various roles they play in impacting knowledge creation and sharing. The paper supports the hypothesis that organizations need to better understand those factors that impact knowledge sharing in order to effect long-term changes.

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## Review of the Literature

The review of the literature presents a synthesis of collected research focusing on what impact organizational cultural factors have on knowledge sharing. Questions addressed include:

(a) What is the relationship between data, information and knowledge and how it impacts knowledge sharing? (b) What is the importance for an organization to create and sustain a knowledge sharing culture? (c) What is culture and how does it impact knowledge sharing? (d) What is organizational culture and what role does it play in knowledge sharing? and (e) What organizational cultural factors (social and motivational) have an impact on knowledge sharing?

The Review of the Literature is organized in a thematic model; each theme addresses specific factors that have been identified as having an impact on knowledge sharing.

### *Theme #1: Defining Data, Information and Knowledge*

*Definitions.* The globalization of the world's economy has accelerated the need for companies to better understand how organizational knowledge is created and shared. (Alazmi & Zairi, 2003). Companies that are able to effectively create, share and manage their knowledge can expect to reap significant benefits (Alavi, Kayworth, & Leidner, 2006). Yet, to understand why knowledge sharing has grown to be so critical for organizations it is important to first understand what knowledge is, and how it differs from information and data.

Data may be defined as the 'raw material', unstructured facts without meaning, often collected in pieces and stored in databases, (Davenport & Prusak, 1998). Information is defined as data that has been 'organized' so that when communicated it has meaning to the recipient. Information is data endowed with relevance and purpose, (Blumentritt & Johnston, 1999). Knowledge is information, originating from the human mind that includes reflection, synthesis and context (Davenport & Prusak, 1998). Knowledge encompasses an individual's experiences

and understanding. It is a fluid mix of values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information (Davenport & Prusak, 1998).

*Relationships.* The key to understanding the relationship between data, information and knowledge is to understand where they reside (Liew, 2007). Liew (2007) theorizes that information resides in some type of storage media (database, print, video, etc.) in the form of data, or in the human mind as knowledge. Liew (2007) explains why many use the term data, information and knowledge so interchangeably; data and information, or information and knowledge may occupy different space at the same time. Stewart states, “one man’s data can be another man’s knowledge, and vice versa, depending on the context” (as cited in Liew, 2007). Ford and Chan (2003) point out companies have long recognized the value in leveraging the data and information created within the organization. Knowledge, they note, is a much more nebulous resource than data and information. Organizations have discovered that information technology alone has not been the answer to harnessing knowledge. Gold et al. note that organizations have not clearly embraced the impact social and motivational factors have on the creation and sharing of knowledge. Companies that better understand social and motivational challenges have the opportunity to create and sustain a knowledge sharing environment and in doing so stand to achieve important competitive gains (as cited in Ford & Chan, 2003).

*Theme #2: Knowledge Types: Tacit, Explicit, Individual and Organizational*

Research has shown that an organization’s ability to effectively create an environment that is conducive to knowledge sharing is complicated by the fact that knowledge can take several forms. Harris notes that knowledge has been identified as an organizational resource that

when used can enhance not only the value of other capital resources but does not diminish in value over time (as cited in Chan & Ford, 2003).

Employees possess different types of knowledge. Nonaka suggests that there are two primary types of knowledge in an organization; explicit knowledge and tacit knowledge. Explicit knowledge refers to codified knowledge (knowledge that can be expressed in words, numbers, documents, multi-media, etc.) and can be easily articulated. An example of explicit knowledge would be a training manual, which contains knowledge on the procedures to accomplish a particular set of tasks (as cited in Chan & Ford, 2003). Nonaka goes on to explain that tacit knowledge is knowledge that has not been codified but has been gained through experience and as such is not readily articulated or documentable. Nonaka acknowledges that while both types of knowledge are valuable, tacit knowledge is more difficult to capture and share given that it 'lives' within the individual (as cited in Chan & Ford, 2003).

Nonaka identifies two additional types of knowledge that exists within the organization; individual and organizational knowledge (as cited in Chan & Ford, 2003). Organizational knowledge is characterized as being developed and created within groups of individuals (Alavi & Leidner, 2006). This development leads to a gap between the knowledge that an individual has and that of the organization. For the organization to effectively leverage its knowledge, it must first facilitate the sharing of individual knowledge and turn as much of it into organizational knowledge as possible (Chan & Ford, 2003).

### *Theme #3: The Need to Create a Supportive Knowledge Sharing Culture*

Chan and Ford (2003) state there are four processes that characterize effective knowledge management: a) generation, b) codification, c) sharing and d) application. Of these four, they note that knowledge sharing is particularly relevant since it captures the process of disseminating

knowledge from the individual to the organization. To accomplish this, organizations must create a culture and environment in which knowledge sharing can thrive. Chan and Ford (2003) note that knowledge sharing is one of the most challenging processes for a knowledge-based enterprise to support. Much of the knowledge management literature reviewed in this study focuses on organizational culture as having the greatest impact on knowledge sharing. Yet a greater understanding of this link between knowledge sharing and the various dimensions of culture in general and organizational culture in particular, along with more definition of the factors that impact knowledge sharing, is needed.

As the globalization of the world's economy continues, the complexity of doing business on such a scale has placed a spotlight on the growing importance of knowledge sharing (McDermott & O'Dell, 2001). At its most basic level, Davenport and Prusak (1998) note that knowledge sharing concerns the willingness of individuals within an organization to share with others the knowledge they have acquired through their respective experiences and or have created through their actions and efforts. The phrase, "willingness of individuals" is a key indicator, for organizational knowledge typically lives within the individual. Given that some portion of knowledge within the organization is codified, its exposure is still dependent on the willingness of the knowledge owner to share it (Davenport & Prusak, 1998). The environment in which these individuals interface plays a critical role in the facilitation of knowledge sharing. To underscore the importance of environmental conditions and how organizational cultural factors impact knowledge sharing, Nonaka points out that new knowledge, which has been identified as a business-critical need for sustainability, is not created without the existence of an environment that encourages the mutual sharing of knowledge between individuals (as cited in Chan & Ford, 2003). Bhagat states that if the organization loses its capacity to share knowledge, it loses the

opportunity to leverage one of its greatest assets; the specialized talents of its employees (as cited in Kim, 2007).

There are many ways an organization can inculcate a knowledge sharing culture. For example, a study conducted by Liebowitz and Chen for the American Productivity and Quality Center (APQC) found six key areas that facilitate and nurture an environment conducive to knowledge sharing: 1) the alignment of knowledge sharing with the organization's overall business strategy, 2) the role of human networks, 3) the role of the organization's leaders and middle managers, 4) the fit with the overall culture, 5) the relationship between knowledge sharing and the daily work routine of the organization's staff, and 6) the institutionalizing of learning disciplines (as cited in Khalil, n.d.). In a similar study conducted by McDermott and O'Dell, (2001) they concluded that companies can indeed create and sustain a knowledge sharing environment by linking knowledge sharing to practical work objectives, tying knowledge sharing to core values, using and exploiting existing networks and utilizing peers and managers to set an example of knowledge sharing efforts.

#### *Theme #4: The Impact of Culture on Knowledge Sharing*

Knowledge sharing, like communication, is carried out within a cultural context (Kuofie & Usoro, 2006). Given the importance of knowledge sharing and the challenges organizations face in creating a sharing environment amidst cultural barriers, a better understanding of what culture is, its complexity and its impact on knowledge sharing is warranted.

Culture seems to play a significant role in the understanding of how knowledge is created and shared as well as its overall value in the organization (Kim, 2007). Schein (1985) defines culture as the interaction of people and their environment, in which the construct of culture consists of a set of underlying norms and values of behavior, shared by a group of people.

Schein (1985) continues with establishing that culture exists at three basic levels: basic assumptions, values, and artifacts. Yet, one of the major challenges to focusing specifically on organizational cultural factors that impact knowledge sharing is the breadth of culture as a subject (Alavi, Kayworth, & Leidner, 2006). For example, cultural theorists have questioned whether organizations have a uniformed, homogenous culture or various mini-cultures each with their own distinctive norms and values (Alavi, Kayworth, & Leidner, 2006). Alavi et al. (2006) conclude this to be a very important question considering there could be either one, large dominant culture or multiple, local cultures at work influencing knowledge sharing practices.

Meyerson and Martin characterized the above question with their perspectives on what they termed, integration and differentiation of culture (as cited in Alavi, Kayworth, & Leidner, 2006). The integration perspective regards an organization's culture as a homogenous collection of values that acts as "social glue," holding the organization's potentially diverse group of employees together. In contrast, the differentiation perspective portrays an organization's culture as a mix of various local cultures with each mini-culture possessing their own set of distinctive values and practices (as cited in Alavi, Kayworth, & Leidner, 2006). According to Meyerson and Martin, this differentiation perspective portrays the organization's culture as an umbrella for a collection of subcultures (as cited in Alavi, Kayworth, & Leidner, 2006). In essence, the knowledge sharing practices of the organization could be significantly influenced by the task or technology used by employees within each mini-society. Regardless of whether an organization's culture is perceived as uniform and homogenous or consisting of many subcultures; the formative role of culture on knowledge sharing requires organizations to better understand the underlying factors that may be impacting its efforts (Kim, 2007).

*Theme #5: The Impact of Organizational Culture on Knowledge Sharing*

Before attempting to understand the impact of organizational cultural factors on knowledge sharing, defining organizational culture and its influence on knowledge sharing is necessary. According to Buellens, Kreitner, and Kinicki, organizational culture is, in effect, a byproduct of national culture (as cited by Kim, 2007). Buellens et al. infers that culture affects organizational behavior in two ways. First, employees bring their own individual societal cultures in the form of customs, values and beliefs to the organization and in turn, the organization's culture influences those customs, values and beliefs (as cited by Kim, 2007).

Schein (1985) views organizational culture as the way individuals do things. Core values and assumptions form the foundation of organizational culture. These values in turn directly impact the actions and practices of the individual, including the desire to share knowledge (Kuofie & Usoro, 2006).

De Long and Fahey, (2001) argue that organizational culture is the most frequently cited barrier to leveraging organizational knowledge. They identify three ways organizational culture impacts knowledge sharing. First, organizational culture shapes what knowledge is and what knowledge is worth sharing. Second, organizational culture defines the relationship between the employee and organizational knowledge. This is about the ownership of knowledge. Wasko and Faraj note that if organizations treat knowledge as a private good then reluctance to share increases significantly (as cited in Kim, 2007). Third, organizational culture establishes the context for employee interaction, determining how knowledge should be and will be shared in any particular situation. If this is true, then what specific organizational cultural factors impact knowledge sharing?

The selected literature reveals that there are six key social factors that impact knowledge sharing: trust, autonomy, power politics, care, competence leverage, and collaboration. Each is described below.

*Trust.* Davenport and Prusak (1998) note that hoarding knowledge, as well as looking upon knowledge offered by others as suspect, are natural human tendencies. For an organization to begin creating an environment supportive of knowledge sharing, a climate of mutual *trust* is essential (Hooff & Schipper, 2009). Davis, Mayer, and Schoorman define trust as the willingness of a person to be vulnerable to the actions of another person, with the expectation that the recipient of the trust will perform a particular action that is important to the giver, irrespective of the giver's ability to monitor or control the recipient (as cited in Liao, 2006). Baer and Frese note that successful cooperation requires the existence of a climate in which an employee feels safe in displaying behavior that can potentially put them in a vulnerable position (as cited in Liao, 2006). Delong and Fahey, (2001) note that trust and collaboration lead to a greater willingness among employees to share insights and expertise with each other.

According to Ford and Chan (2003), an employee's possible reluctance to share what they know can be attributed in large part to a lack of trust, or a sense that the knowledge recipient might not have their best interests at heart. Without trust, the guarding of an employee's reputation within the organization becomes of great importance. Not only does an employee choosing to share knowledge within an environment lacking in trust stand to lose their unique standing within the organization but any knowledge they share that is subsequently judged to be irrelevant could potentially damage their reputation (Hooff & Schipper, 2009). Thus, the importance of trust is crucial to knowledge sharing. Trust lays the primary foundation for all

social relations and therefore is a necessary requisite for an organization's contingent of knowledge workers to share their ideas, information and knowledge (Brink, 2001).

*Autonomy.* Another social factor that is recognized as crucial to impacting knowledge sharing is *autonomy*. Henderson and Lee define autonomy, also referred as "self-direction," "empowerment," or "self-management," is the extent to which an individual or group of individuals has the freedom, independence and direction to determine what actions are needed to be taken and how best to implement them (as cited in Janz and Prasarnphanich, 2003). Schein and Ulrich believe that employees want and need to be involved in the changes that will affect them (as cited in Brink, 2001). Nonaka believes that an employee's empowerment may improve their motivation to create and share knowledge because an empowered individual strives for personal development (as cited in Brink, 2001).

Cheney, Goldstein and Rockart identify autonomy as the single most desired job characteristic of knowledge workers (as cited in Janz and Prasarnphanich, 2003). Autonomy is viewed as a significant dimension of knowledge sharing, facilitating sharing among individuals and or groups of individuals (Janz & Prasarnphanich, 2003). Miles and Snow note that employees who enjoy an autonomous environment are more willing to share knowledge in order to achieve organizational objectives (as cited in Janz and Prasarnphanich, 2003). As a result, Schulz concludes that an organization may reasonably expect that enhancement of knowledge sharing can be, in part, attributable to higher levels of employee autonomy (as cited in Janz and Prasarnphanich, 2003).

*Power politics.* Another social factor that has proven to impact knowledge sharing is *power politics*. The phrase 'knowledge is power' is used frequently in an organizational setting (Ipe, 2004). Evidence suggests that individuals use knowledge as a means of control and or

defense and if an individual perceives that power comes from knowledge they would be less inclined to share (Ipe, 2004). In organizations that have a more competitive environment, e.g. those in which employees are rewarded for their performance; withholding knowledge can be interpreted as an act of control, or as an effort to distinguish themselves relative to their co-workers (Ipe, 2004). Empson and Weiss note that professionals guard their knowledge intently since they perceive their value to the organization is strictly related to that knowledge (as cited in Ipe, 2004). Ipe (2004) discovered that in this type of environment, enhanced reputation and personal gain is lauded more than knowledge sharing.

*Care.* Krough defines care, in an organizational context, as genuine interest of one employee to another, helping that person whenever needed (as cited in Brink, 2001). He continues that care for another individual provides a platform for knowledge workers to be more open to exchange with each other (as cited in Brink, 2001).

*Competence leverage.* Weggeman defines competence leverage as the ability of an employee to accomplish tasks (as cited in Brink, 2001). He further notes that competence leverage stimulates knowledge sharing because creation of new skills and transfer of knowledge is intentionally encouraged (as cited in Brink, 2001).

*Collaboration.* Jones notes that employees share activities, processes, develop products together and share responsibility (as cited in Brink, 2001). A study conducted by Long indicates that when norms and practices promote collaboration, these interactions are more likely to stimulate new knowledge; the product of employee knowledge sharing (as cited in Brink, 2001).

The selected literature reveals that there are two key motivational factors that impact knowledge sharing: incentives and motivation. Each is described below.

*Incentives.* Equating knowledge with power raises the question of how challenging is it to establish a knowledge sharing environment. O'Reilly and Pondy indicate that there is a positive relationship between incentives and knowledge sharing behavior between individuals (as cited in Ipe, 2004). Gupta and Govindarajan and Quinn et al. conducted several studies and discovered there is indeed a link between knowledge sharing and the quality and quantity incentives/rewards available (as cited in Ipe, 2004). Knowledge sharing does not come without participant costs (Gee-Woo, Jae-Nam, Young-Gul, & Zmud, 2005). Personal beliefs that expected benefits will outweigh these costs are important factors in determining knowledge sharing behaviors (Gee-Woo et al., 2005). Gibbert and Krause note that not only does knowledge sharing take time and effort, but doing so in an organization results in what they term as the "public good dilemma;" that is, any knowledge asset contributed for the good of the organization can be used by any other employee without the benefit of having to make a reciprocal contribution (as cited in Gee-Woo et al., 2005). Consequently, the lack of sufficient incentives becomes a common barrier to knowledge sharing (Gee-Woo, et al., 2005). Therefore, determining what incentives promote or impede employee tendencies to engage in knowledge sharing behaviors is important.

*Motivation.* Choi and Lee have noted that an organization can successfully promote a knowledge sharing environment by among other things changing employee attitudes and behaviors to promote a willingness and consistency in knowledge sharing (as cited in Hsiu-Fen, 2007). Motivation has been identified as a key determinant of general employee behavior, acceptance of information technology and the primary trigger for knowledge sharing (Hsiu-Fen, 2007). Given the inherent challenge of creating and nurturing a knowledge sharing environment, organizations must find ways to encourage employees to share knowledge. Vroom notes that the

more positive outcomes are perceived to be associated with a given action, the more inclined people will be to perform that action (as cited in Hsiu-Fen, 2007).

There are two broad classes of motivation – extrinsic and intrinsic. An employee's extrinsic motivation to share knowledge is based on the perception that the potential benefit (reward) received from sharing outweighs the potential cost (effort, time) involved in the exchange (Hsiu-Fen, 2007). Deci and Ryan reveal that extrinsic motivation focuses on goal-driven reasons, e.g. rewards or benefits earned when performing a task (as cited in Hsiu-Fen, 2007) .

Deci and Ryan explains that employee intrinsic motivation refers to an individual engaging in a knowledge sharing activity for the pleasure and satisfaction derived from the experience (as cited in Hsiu-Fen, 2007). For example, employees who engage in knowledge sharing can be satisfied by the fact that they have helped one of their colleagues or provided knowledge that is useful to the organization. Deci and Ryan note that both extrinsic and intrinsic motivation influences an individual's intention regarding a knowledge sharing activity as well as their actual behaviors (as cited in Hsiu-Fen, 2007).

*Extrinsic motivation.* From an extrinsic motivational perspective, an employee's behavior is driven by the perceived compensation or rewards of the task. Kowal and Fortier as well as Deci and Ryan noted the fundamental goals of an extrinsically motivated employee who shares knowledge are to receive organizational rewards or reciprocal benefits (as cited in Hsiu-Fen, 2007). Davenport and Prusak noted that organizational rewards can range from monetary incentives such as increased salaries and bonuses to non-monetary rewards such as promotions and job security (as cited in Hsiu-Fen, 2007). Blau noted that reciprocity has been highlighted as a benefit of individuals engaged in a knowledge exchange (as cited in Hsiu-Fen, 2007). Kollock

explains that the theory behind reciprocity behavior is the creation of a sense of indebtedness, leading for example, the knowledge contributor to expect reciprocal help from others, ensuring ongoing knowledge sharing (as cited in Hsiu-Fen, 2007). Reciprocal benefits may provide effective motivation to facilitate knowledge sharing (Hsiu-Fen, 2007). An organization's employees who believe they can obtain reciprocal benefits from their colleagues by sharing their knowledge then are more likely to look favorably upon knowledge sharing (Hsiu-Fen, 2007).

*Intrinsic motivation.* Deci noted that from an intrinsic motivational perspective, knowledge sharing behavior is evoked by the need for an employee to feel competence in mastering a task and the perceived freedom recognition brings within the organization (as cited in Hsiu-Fen, 2007). It is this competency or self-efficacy that motivates employees to share knowledge with their colleagues. Knowledge self-efficacy typically manifests in employees who believe their knowledge can help solve job-related problems and improve work efficacy. Workers who believe that they can contribute to organizational improvements by sharing their knowledge will ultimately develop more positive attitudes toward sustaining knowledge sharing (Hsiu-Fen, 2007).

Enjoyment in helping others has been identified as an intrinsic motivator (Hsiu-Fen, 2007). Organ noted that enjoyment is derived from the concept of altruism (as cited in Hsiu-Fen, 2007). He defines altruism as including discretionary behaviors that help specific others with organizationally relevant tasks or problems (as cited in Hsiu-Fen, 2007). Constant, Sproull and Kiesler determined that knowledge workers may then be motivated to share and help others within the organization by altruism owing to their sincere desire to help others (as cited in Hsiu-Fen, 2007). Wasko and Faraj concluded that employees are intrinsically motivated to contribute

knowledge because such actions are challenging, pleasurable and because they help others (as cited in Hsiu-Fen, 2007).

### Conclusion

Organizations must compete in an increasingly knowledge-intensive economy, in which knowledge is the most valuable resource. Management is challenged to understand what factors impact knowledge sharing in order to create a sustainable knowledge sharing environment. As Alazmi and Zairi, 2003) note, making knowledge available to the right people at the right time is crucial for an organization to build and sustain competencies. Yet, as the literature presented in this study indicates, for all the importance of establishing and nurturing an environment where knowledge can be easily shared, the factors with the most potential to have the greatest impact are not yet well understood in many organizations.

The purpose of this literature review is to identify organizational cultural factors that have an impact on knowledge sharing. The synthesis of the literature shows that knowledge sharing in an organization is a complex process. Organizations pursuing knowledge management in general and knowledge sharing in particular have traditionally focused on the information technology infrastructure (Davenport, Delong, & Beers, 1998). While information technology is important to the overall knowledge management endeavor, lack of attention to cultural factors in conjunction with information technology has proven to be roadblock to any sustainable success. This researcher has witnessed several deployments of information management and team collaboration solutions that have failed to meet their objective of facilitating consistent information/knowledge exchange. While there are many factors that can be attributed to these deployment failures (e.g. training, application champions, communication and support), the organization neglected to take into account the social and motivational drivers behind why an employee would share what they know regardless of what tool was available.

The literature indicates focus on three key social factors including trust, autonomy, and power politics is critical. Of these, it can be argued that trust is the most important of all. In addition, the literature indicates the need to focus on two key types of motivational factors; intrinsic and extrinsic.

As noted in the literature, knowledge sharing at its basic level is the willingness of an individual to share with others the knowledge they have (Davenport & Prusak, 1998). Employee willingness to share is crucial for as the literature indicates, there is a “cost” to sharing. This cost comes in many different currencies, most notably time and effort. With employees being challenged to “accomplish more with less”, time is an extremely precious commodity; one that individuals may be loath to spend on knowledge sharing.

While the literature paints a challenging picture for any organization to improve their knowledge sharing potential, establishing and sustaining a knowledge sharing environment is not unobtainable. McDermott and O’Dell (2001) point out that organizations that tie knowledge sharing to organizational objectives improve knowledge sharing. This researcher saw focus on improving natural search traffic to our brand sites increase 100% simply by tying this objective to each employee’s performance goals. Organizations should recognize that the true value of each employee is not just the amount of work they are capable of completing but rather the knowledge they create in the course of performing their work. Companies that are able to refocus in this way will then be able to create and sustain a knowledge sharing culture.

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