Knowledge by Narration: The Role of Storytelling in Knowledge Management

Kgothatso Anna Mamabolo

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Supervisor: Mr. Christiaan Hendrik Maasdorp
Department of Information Science

Declaration

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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Opsomming

Stories en vertellings word toenemend erken as areas van ondersoek in bestuurs- en organisasieteorie, maar dit is moeilik om te bepaal tot watter mate dit bruikbaar is vir organisatoriese kennisbestuur. Die tesis argumenteer dat, hoewel die bestaande literatuur oor organisatoriese stories gefokus is op stories as die oordrag van kennis, dit ook bruikbaar mag wees vir kennis-formalisering. Terwyl die meeste kennisbestuursisteme op eksplisiete kennis gefokus is, is die formalisering van versweë kennis, wat moeilik is om te identifiseer en bestuur, 'n groot uitdaging.

Die tesis steun op Becerra-Fernandez et al. se kennisbestuursraamwerk om so die vereistes vir kennisbestuur te bepaal en spesifiek die belangrike rol van versweë kennis in organisatoriese kennis prosesse uit te stippel. Daarna word die rol van stories in organisasies beskryf deur middel van 'n literatuur-oorsig wat die werk van Snowden, Denning, Boje en Czarniawska insluit. Die uitkoms van die oorsig is dat storie-vertelling in organisasies hoofsaaklik 'n informele proses is en dat pogings om dit te formaliseer nog in die beginfases is.

Die verskeie insigte oor die rol van stories in organisasies word dan teen die agtergrond van die kennisbestuursvereistes geinterpreteer. Daar word getoon dat die storie-vertellingsliteratuur amper uitsluitlik konsentreer op die area van kennis-oordrag en minder so in die areas van kennis ontdekking, -formalisering en -toepassing. Omdat kennis formalisering met die eksternalisasie van versweë kennis gepaardgaan en omdat versweë kennis makliker in narratiewe vorm uitgedruk kan word, word daar geargumenteer dat storie-vertelling ook tot kennisbestuur kan bydrae lewer as 'n manier om kennis te formaliseer.

Summary

Storytelling is gaining recognition as areas of inquiry in management and organisation theory, but it is difficult to ascertain to what extent it is useful for organisational knowledge management. The thesis argues that although the existing literature on organisational storytelling is focused on the knowledge sharing aspects of storytelling, it is also useful for knowledge capturing. Whilst most knowledge management systems focus on explicit knowledge, the capture of tacit knowledge, which is hard to identify and manage, is a major challenge.

The thesis uses Becerra-Fernandez et al.'s knowledge management framework to establish the requirements for knowledge management, and specifically highlighting the important role of tacit knowledge in organisational knowledge processes. Thereafter the role of storytelling in organisations is described by way of a literature review that includes the work of Snowden, Denning, Boje and Czarniawska. The outcome of this review is to show that storytelling is an informal process in organisations and that attempts to formalise it are still in its infancy.

The various insights about the role of stories in organisations are then mapped against the requirements for knowledge management. It is shown that the storytelling literature almost wholly concentrates on the area of knowledge sharing and less so in the areas of knowledge discovery, capture and application. Since knowledge capture involves the externalisation of tacit knowledge and because tacit knowledge is more easily expressed in narrative form, it is argued that storytelling can also contribute to knowledge management as a way to capture knowledge.

Acknowledgements

I would like to thank my mother for tirelessly encouraging me to complete this thesis. Thanks to my family and friends who motivated and prodded whenever I became despondent. Thank you to my supervisor Christiaan Maasdorp for reassuring me that this could be done. Last but not least, I would like to thank God because I know that without Him, this would never have been achieved.

Dedication

This thesis is dedicated to my late father- S.K. Mamabolo and my loving mother – C.K. Mamabolo

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1. Introduction

The hardest part of knowledge management is to extract and acquire tacit knowledge from people in a structured deliberate form that can be used for business improvement. The importance of using metaphors and stories as mechanisms for capturing and transferring tacit knowledge is increasingly being brought to the attention of organizations. In the past few years there has been an ongoing interest in storytelling as a component of knowledge management, but it has never really become a major focus. Only a few modern organizations which are characterized by a strong need for collaboration consider the significant role that stories can play in supporting collaboration. Unlike knowledge management, storytelling for organizational management has not been studied extensively. The role of stories in knowledge management is narrowly understood and thus far, has not been explored to its full potential in most literary studies. It is in line with these observations that this thesis has been formulated.

The main objective of the thesis is to attempt to answer the question of whether there is a role for narratives in knowledge management. The core question for the thesis is; can stories and storytelling support the successful implementation of knowledge management in the modern business environment. The context of the thesis is that there is a great potential role for stories in knowledge management. From a theoretical and practical view point, knowledge management is fundamentally about creating and sharing explicit and tacit knowledge for enhanced value of organisational processes. Of the two types of knowledge, tacit knowledge is the most difficult to manage, evaluate and measure because it is not tangible. The majority of literature and methodologies for the management of knowledge are technologically based and do not entirely support the tacit aspect of knowledge management. The use of technology in knowledge management is geared at reports, emails, documents which are all supportive of explicit knowledge. Knowledge sharing technologies are still concentrated on explicit knowledge instead of the sharing of tacit knowledge. Most organisational knowledge sharing programmes do not incorporate the value of getting people together to talk and communicate face to face on what they know about what they are working on, thus do not support telling of stories as an organizational management tool. Many organisations which have embraced the concept of the knowledge economy realize the value of tacit knowledge, however, most of

them have not yet figured out how to get the most value out of the tacit knowledge possessed by the employees. The lack of storytelling literature studies and limited literature searches when conducting research for the thesis demonstrates and confirms that organisations have not realized the value of stories and those that have embraced organisational stories do not have formalized storytelling processes and that the methodologies still need to be developed or improved.

The first sub-objective of the thesis is to analyze the role of storytelling from the point of view of, and in relation to Becerra-Fernandez et.al's[1] knowledge management framework solution of knowledge management. The view point of storytelling is examined through the literature of Stephen Denning and Dave Snowden who are both known for their interest and focus in storytelling for organizational management. David Boje and Barbara Czarniawska are briefly acknowledged for their story types, but not elaborated on in the thesis although they have both studied and shown an interest in the evolution of storytelling in organizations, because they do not cover storytelling from a knowledge management perspective.

Denning is widely known and quoted with regard to the Springboard story which he developed, named and utilized during his involvement in knowledge management and change management at the World Bank. While Denning has more recent publications based on his evolving understanding of storytelling as an emerging discipline, it is in his first book The Springboard: How Storytelling Ignites Action in Knowledge-Era Organizations[2] where he captured experiences that represent the foundation of his interest in storytelling as a management tool, and that is frequently referred to in acknowledgement of his contribution to organizational storytelling.

Snowden similarly, is quoted widely in literature and journal articles for his contribution and continued attempt to understand and highlight the importance of storytelling in organizations specifically in the management of knowledge. Snowden is described as an expert on tacit knowledge and one of the most perceptive observers of the way in which knowledge is used in organizations. Snowden has also researched extensively on stories and storytelling in the organizational context and within knowledge management. His article Story Telling: An Old Skill in a New Context, which was originally published in Business Review[3] amongst his

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[1] Becerra-Fernandez, I.et.al, 2004.
[2] Denning, S.
[3] Snowden, D. 1999

other published articles which bring to light the role of storytelling in knowledge management, will form a substantial part of the literature examined in this thesis. He is the founder of Cognitive Edge, a research network focussing on the application of complexity theory in sense making.

Boje is considered one of the leading scholars of organizational storytelling. He coined the term "ante narrative" and the concept has become one of his most significant contributions to organizational storytelling research. Czarniawska is known for her contributions to narrative analysis in anthropology of organizations. She has an interest in methodology, fieldwork techniques and in the application of narratology to organizational studies. Becerra et.al's book on Knowledge Management challenges, solutions and technologies forms the basis of discussion and examination of storytelling in knowledge management as it breaks down knowledge management processes and systems into components which are easier to study and discuss individually. The book also focuses on the use of stories in organizations and how that can be aligned to knowledge management.

The second sub-objective of the thesis endeavours to define whether there is a role for stories in knowledge management, in the context of Nonaka's theory of knowledge conversion model known as the SECI model[4]. The interplay between explicit and tacit knowledge and how that impacts the flow of knowledge in organisations is explored in detail as this forms the foundation of the thesis, and also because tacit knowledge is essential for exchange of narrative. Although Nonaka's model is not purely about narrative or stories, but rather about the process of knowledge creation, it is a relevant basis for discussing management of tacit knowledge – which encompasses storytelling in organisations. The context of which is how tacit knowledge is managed in relation to telling stories in organisations.

Part of becoming a member of an institution or organization is learning to tell the stories of that institution, and learning to tell your own stories in a way that is coherent with those of that group. Part of what one needs to know to be a member is what the stories of the group

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[4] Nonaka and Takeuchi propose a model of the knowledge creating process in order to understand and manage the dynamic process of knowledge creation. The model is known as the SECI model. The model is based on the spiral of knowledge where tacit and explicit knowledge interact in a continuous spiral process to create new knowledge. The main theme of the model is that if knowledge held by individuals is shared continuously, then it leads to interconnection and the creation of new knowledge. The model is divided up into four quadrants made up of socialization, externalization, combination and internalization which all deal with the interplay between tacit knowledge and explicit knowledge. The SECI model has the benefit of providing a framework for management of tacit and explicit knowledge and appreciates the dynamic nature of knowledge and knowledge creation.

are, what past events are judged to have relevance to the present, what values the stories exemplify and when is it appropriate to tell them. This is one very important way that people take on the values of the institution as their own. When participants bring a willingness to learn and engage in a process of collective imagining, a story can return the favour and carry them to a place where they can see new meaning for their work and lives[5]. Storytelling enables the management of large organizations to spring to a higher level of understanding so that the idea of knowledge sharing emerges in the collective consciousness as something that the organization obviously has to do. A story such as the Springboard story enables an audiences' leap in understanding so they can grasp how an organization or community or complex system may change[6].

The subsequent objective is about exploring why storytelling can be used as a tool in knowledge management. This thesis will explore ways of leveraging knowledge that resides in people's minds using Becerra et al.'s knowledge management processes of knowledge discovery, knowledge capture, knowledge sharing and knowledge application and KM systems and the role of these components in supporting organizational use of narrative. Because storytelling has been around since time immemorial it has an enormous ability to communicate and share knowledge across vast distances over long periods of time, making it a low cost natural way of transferring knowledge in any situation[7]. This ability and power of storytelling has not yet been tapped into by a lot of organisations. Sharing experiences and knowledge through stories is not yet acknowledged in many organisations as a powerful way to exchange and consolidate knowledge.

Knowledge management would benefit from the use of stories for the simple reason that stories work as a knowledge management tool.[8] Purposeful storytelling can achieve results in the modern organisation that traditional abstract modes of communication cannot[9]. Denning and Snowden's use of stories in organisational management is explored in order to highlight the potential benefit to knowledge management. The Springboard story which led to Denning's interest in the role of stories in organisations will be examined in relation to Becerra-Fernandez et.al's solutions framework of knowledge management. The story of the Zambian worker of the World Bank is used to show the interchange between the different

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[5] Denning, S. 2004 2

[6] Denning, S. 2001 199

[7] Snowden, D. 1999 30-37

[8] http://www.creatingthe21stcentury.org/intro5-why-storytelling.html

[9] Snowden, D. 1999 30-37

types of knowledge and highlight the importance of knowledge capture, knowledge sharing and making knowledge accessible over vast geographical distances. Snowden's experiences and studies in the knowledge management field are also elaborated on to show the role of stories in knowledge sharing, knowledge capture and knowledge transfer. His work in knowledge management and stories and work on the role of Communities of Practice in the capture and sharing on knowledge is acknowledged. How these stories can play a role in knowledge management will be discussed at length in the thesis.

Storytelling is a collaboration tool and modern day organisations need to collaborate in order to stay competitive. Sharing experiences through narrative builds trust, cultivates norms, transfer tacit knowledge, facilitates learning and generates emotional connections. Stories are relevant for communicating complex knowledge within organisations which may include awareness of values and norms, or solutions to workable problems[10]. Organizational storytelling is an emerging discipline in the study of management, strategy and organizational studies. It is seen as a powerful managerial tool and a key competency for the 21st century. Knowing how to deliver a story effectively combined with knowing the right story to tell, is a powerful communication influencing skill. It can be used to connect employees to strategy by providing understanding, belief and motivation in the personal contribution that employees can make.

In organizations people tell stories all the time and in most cases they are not even aware of doing that. Purposeful stories, which are told with a deliberate objective in mind, can accelerate learning and communication amongst members of an organisation[11] Stories convey meaning and convey tacit knowledge. Stories allow people to share and transfer what is in their heads, information that is not codified and that communicates best practice. It is claimed that narratives, in particular storytelling, fulfil multiple functions in knowledge management, such as effectively distributing uncodified knowledge and organic problem-solving competencies,[12] generating "thick descriptions" of contexts, thereby providing actors with an adequate understanding of the complex nature of practical solutions, thus setting up the basis for actionable knowing. Stories enhance learning and knowledge management is about learning.

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[10] Snowden, D. 1999 30-37
[11] Snowden, D. 1999 30-37
[12] Swap, W. Et al. 2001

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The thesis supports the statement by Snowden that "storytelling is an old technology with modern use."[13] Modern organisations are required to come to grips with the knowledge in people's heads so as to use it for their competitive advantage. This is more so in the case of experts leaving the organisation with the intellectual capital they have gained during their work in that organisation. Essential methodologies should be developed to ensure that the intellectual capital remains within the organisations because allowing these experts to tell stories of their work is one of the ways to draw on the intellectual capital. Telling of stories draws on aspects of human nature of which we are barely aware and makes use of a delivery system that is as old as civilisation itself[14]. Storytelling is technology free and does not require investment in hardware or software as it is essentially about capturing tacit knowledge that resides in people's heads. Storytelling is the ultimate low-cost high-return technology[15] because when you capture knowledge in people's heads, what is required is interaction which is in the form of face to face collaboration or virtual collaboration which still involves exchange of tacit knowledge. In addition purposeful storytelling can reach a large number of people very rapidly. Purposeful storytelling is a powerful mechanism for ensuring that knowledge is shared within an organisation and this is acknowledged as part of this thesis.

Denning and Snowden define organizational stories as detailed narrative of past management actions, employee interactions or other intra- or extra- organizational events that are communicated informally within organizations. Denning and Snowden concur that stories play a significant role in organizations characterized by a strong need for collaboration and that includes just about every organization that would want to succeed in the current business environment. Stories can be useful in the following four situations: new unexpected situations, situations that require feelings as well as thoughts, complex situations and situations where you need to help people "why"[16]. Stories are seen as being at the centre of an organization.

The knowledge management chapter provides an intensive view of the discipline, its characteristics and evolution. Various well known authors in the field – such as Peter Drucker David Skyrme, Ikujiro Nonaka and Karl Wiig are highlighted in order to provide a more

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[13] Snowden, D. 1999 30-37

[14] Stevedenning.com

[15] http://www.creatingthe21stcentury.org/intro5-why-storytelling.html

[16] http://www.creatingthe21stcentury.org/SpringboardStory.html

comprehensive view of knowledge management and set the foundation for the alignment of characteristics and qualities of knowledge management to that of storytelling. Knowledge is explored in the context of the types of knowledge that have been identified, where it can be found in organisations as well as how it is defined against information. In the context of the thesis knowledge management is defined at a high level as managing the corporation's knowledge through a systematically and organizationally specified process for acquiring, organizing, sustaining, applying, sharing and renewing both the tacit and explicit knowledge of employees to enhance organizational performance and create value[17]. The subsequent chapter on knowledge management provides a more detailed view of this definition. Knowledge management is about applying the collective knowledge of teams to achieve specific organisational goals. Knowledge management is understood and based on the idea that an organisation's most valuable resource is the knowledge of its people.

Knowledge management is not about managing all knowledge, as that is not possible, but rather about managing only the knowledge that is strategically important to the organisation. It is fundamentally about ensuring that people have knowledge when they need it, where they need it, how they need it. Thus – people being able to access the right knowledge, in the right place at the right time. What knowledge management does is to establish an environment that is conducive for the creation, sharing of both tacit and explicit knowledge, for purposes of learning and use of knowledge for the benefit of the organisation and all who work in it. Knowledge management helps organizations find, select, organize, disseminate, and transfer important information and expertise necessary for business activities.

There are many definitions of knowledge management out there and if one had to conduct a search on the internet one would come up with over 340000 hits, making knowledge management a discipline that is broad and difficult to define narrowly. Peter Drucker[18] whom many consider as the father of knowledge management best defines the need for knowledge management as follows: Knowledge has become the key resource, for nation's military

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[17] Allee, V. 1997

[18] Peter Drucker was a management consultant, writer and professor who explored ways in which human beings organize themselves and interact in the modern business environment. He wrote many books and articles in which he predicted most of the major developments of the 21st century such as privatisation and decentralization, the information society, marketing and innovation among others. He coined the term "knowledge worker" in the late 1950s which represents the knowledge era where a growing number of people in organizations use their brains rather than their hands. These knowledge workers he defined as people who work primarily with information or those who develop and use knowledge in the workplace. He held the view that employees are an asset and not a liability, and that people are an organization's most valuable resource and that a manager's job is to prepare people to perform and give them the freedom and the resources to do so.

strength as well as for its economic strength   … is fundamentally different from the traditional resources of the economist – land, labour and even capital … we need systematic work on the quality of knowledge and the productivity of knowledge … the performance capacity, if not the survival, of any organization will come increasingly to depend on those two factors. Becerra-Fernandez *et.al* in the knowledge management solutions framework further define knowledge management in the form of four main activities which are focused on discovering, capturing, sharing and applying knowledge for successful organizational management[19].

These definitions argue that the most fundamental resource for today's organizations is the combined knowledge residing in the heads of all in the organization. This acknowledgement then leads to the next logic for the thesis which is the definition of tacit knowledge which in the case of the thesis will be closely aligned with the use of narrative. Early studies by Michael Polanyi[20] on the concept of knowledge distinguish between two types of knowledge, i.e. tacit knowledge and explicit knowledge. Tacit knowledge is defined as knowledge that is in people's heads and thus personal in nature. Tacit knowledge is based on individual experiences, difficult to express and formalize and therefore difficult to share. Tacit knowledge indwells in a comprehensive cognizance of the human body and mind. It is difficult to communicate tacit knowledge to others since it is an analogue process that requires a "simultaneous processing"[21].This type of knowledge is transferred or shared by face to face communication and interaction. Explicit knowledge on the other hand is defined as knowledge that has been articulated, can be codified, stored and is tangible. It is transferred in the form of tangible organisational assets such as databases, documents and records.[22]

Because tacit knowledge exists within the minds, it cannot be reduced to the digital domain as a material asset or to be manipulated directly; however it expresses in the social realms as the response ability of individuals - productivity, innovation and initiative and teamwork – communication, collaboration and coordination. Tacit knowledge is like the submerged part of an iceberg; it constitutes the bulk of what one knows and forms the underlying framework for making knowledge explicit. Tacit knowledge is integral to the entirety of a person's

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[19] Beccerra-Fernandez *et al.* 2004

[20] http://en.wikipedia.org/wiki/Tacit_knowledge

[21] Polanyi, M. 1966 3

[22] Polanyi, M. 1966 3

consciousness, is acquired largely through association with other people and required shared activities to be imparted from one to another. Tacit knowledge is un-embodied, floating, held in memories or in the day to day business practices of a small number of people, but is not formally encoded or available for dissemination or emulation[23]. Explicit knowledge on the other hand is easy to manage and is usually the initial building block for knowledge management interventions in most organisations.

Linde[24] distinguishes social knowledge and within it, individual tacit knowledge and tacit knowledge held by a group or an institution. Of individual knowledge, language is the most tacit form of tacit knowledge because one knows how to speak, but cannot articulate how one does it, or the rules that govern usage of the language. Individual tacit knowledge consists of one's identity and history. People use narrative to construct their identities. Knowledge about one's identity as a group member, and the practice of working as a group member and the practice of acting as a member of the group one belongs to, is also easily expressed in narrative. Knowledge about how one does their job is also tacit and can in most circumstances be conveyed by narrative. Institutional knowledge is explicit knowledge, for example databases, procedures, forms and so on, but also has some elements of tacit knowledge, for example knowledge about work practices and when and how to use these knowledge resources. This kind of knowledge is held by the institution as a whole rather than by the individual who comprises it.

According to Wiig[25] the business called knowledge management has emerged over the last decade as a result of many intellectual, societal and business forces. Some of its roots extend back for millennia, both in the west and the east, while others, particularly those associated with cognitive and information sciences are quite recent. Globalization of business also plays an important role. In the modern global economy one of the greatest challenges of knowledge management is how to share tacit knowledge effectively over great distances and across different time zones. This form of collaboration requires a great deal of mutual understanding, common paradigms and trust. The thesis supports the idea that storytelling is fast emerging as one mechanism for facilitating this. The use of narrative for sharing tacit knowledge forms the core of this thesis. Snowden[26] views storytelling as a uniting and

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[23] Polanyi, M. 1966 4

[24] Linde, C. 1993

[25] Wiig, K. 1999

[26] Snowden, D.1999 30-37

defining component of all communities. He further states that the quality of storytelling and its conformity or otherwise with desired corporate values is one measure of the overall health of an organization. Stories exist in all organizations; managed and purposeful storytelling provides a powerful mechanism for disclosure of intellectual or knowledge assets in companies, and can also provide a non-intrusive, organic means of producing sustainable cultural change; conveying brands and values; transferring complex tacit knowledge. The principles behind Snowden seeking the value of stories in knowledge management is captured by the following three quotes by him: "Knowledge can only be volunteered; it can't be conscripted". "People always know more than they can tell, and can tell more than they write." "People know what they need to know when they need to know it.[27]" All these quotes apply to the concept of knowledge management of knowledge sharing, capture, application and discovery.

The "how" of storytelling in knowledge management in a latter chapter will be demonstrated via the four knowledge management processes and systems outlined by Becerra-Fernandez[28] in alignment with knowledge creation process as per the SECI model of knowledge conversion. The four processes are knowledge discovery, knowledge capture, knowledge sharing and knowledge application. The four processes will be aligned with the concepts of the SECI model of socialization, externalization, internalization and combination in order to identify where the processes and the SECI model combine to support storytelling. The overview of the process is that the discovery of new tacit knowledge relies on socialization as per the SECI model of knowledge conversion – the process of creating knowledge across the organisation through the use of narrative. Knowledge capture relies on externalization and internalization which both involve the use of narrative. Externalization translates tacit knowledge into explicit format and internalization is reliant on narratives because it encapsulates the process of learning by doing and face to face interactions. Knowledge sharing relies on the socialization as per the SECI model. Storytelling plays a role in knowledge application because it has a tacit context of face to face and hands on interaction and learning. The thesis expands and elaborates further on the potential of storytelling as per Becerra-Fernandez's four knowledge management processes.

Storytelling organisation is defined as 'collective storytelling system in which the performance of the stories is a key part of members' sense-making and a means to allow them

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[27] Snowden, D. 1999 30-37

[28] Becerra-Fernandez, I. Et al. 2004

to supplement individual memories with institutional memory. Organizational storytelling is a powerful communication and management technique as well as an essential leadership competency for all leaders. It is an interpretative methodology for deciphering a deeper understanding of organizational life – storied accounts representing a unique insight into how individuals make sense of their world[29]. In order to understand what we know and how we know it, and by implication how we make decisions, we need to understand the multi-faceted narratives of our day to day discourse[30]. The ability to pass knowledge through a story is a distinguishing feature of human evolution. Narrative or stories remain the principle mechanism for learning and knowledge transfer in organizations. Storytelling provides a natural methodology for nurturing communities because it builds trust, unlocks passion and is non – hierarchical

It should be noted that the thesis assumes that stories have not evolved or been studied enough and essentially and therefore, cannot be used to transfer all kinds of organizational knowledge. It is imperative to show that storytelling is a powerful tool, but that it is very difficult to use it as a management instrument given that the realization of the impact of stories, methods and initiative to support this are still in the infancy. It is apparent that stories cannot be used to teach core capabilities within an organization. The thesis does not explore other details of Becerra-Fernandez's knowledge management solutions and technologies in the book such as artificial intelligence, case based reasoning, data mining as they are not deemed relevant for this research.

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[29] Boje, D. 2008 8
[30] Snowden D. 2005 5

2. Knowledge Management Chapter

2.1 Background

During the last decade knowledge has come to the forefront in management and organisation studies. This interest has been driven by the recognition that knowledge is becoming ever more central in creating value for the organisation and more generally, for the entire post-industrial world. Knowledge is considered the most significant resource in the economy of the 21st century.[31] Industrial societies are transforming themselves into knowledge societies where knowledge and knowledge workers play a significant role. These societies are supposed to be organised around knowledge and its knowledge assets.[32] The notion of the knowledge society refers, not only to the high importance of knowledge, but also to the dramatic increase in the amount of knowledge available and its vastly improved accessibility. We are now living in a knowledge based society where knowledge is the source of highest quality of power.[33] In a world where markets, technologies, products, competitors, regulations and societies change rapidly, continuous innovation and the knowledge that enables such innovation have become important sources of sustainable competitive advantage. Hence today, knowledge and the capability to create and utilise knowledge is considered to be the most important source of a firm's sustainable competitive advantage[34].

According to leading management thinkers, the manufacturing, service and information sectors will be based on knowledge in the coming age, and business organisations will evolve into knowledge creators in many ways.[35] Peter Drucker is one of the earliest thinkers who noticed a sign of this great transformation. He coined the term "knowledge work" or "knowledge worker" around late 1950s.[36] He suggested that one of the most important challenges for every organisation in the knowledge society is to build systematic practices for managing a self-transformation. The organisation has to prepare to abandon knowledge that has become obsolete and learn to create new things through: continuing improvement of

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[31] Van Kroch and Roos, 1995
[32] Boisot, M. 1998
[33] Toffler, A. 1990
[34] Cyert, R. et.al. 1993
[35] Nonaka, I & Takeuchi, H. 1995. 43
[36] Drucker, P. 1993. 5

every activity; development of new applications from its own successes; and continuous innovation as an organisation process.[37] Drucker also points out that points out that an organisation has to raise productivity of knowledge and service workers in order to meet the challenge: The single greatest challenge facing managers in the developed countries of the world is to raise the productivity of knowledge and service workers. This challenge will dominate the management agenda for the next several decades and will ultimately determine the competitive performance of companies. Even more important it will determine the fabric of society and the quality of life in every industrialized nation.

In the knowledge economy it is generally acknowledged that for organisations to become successful and competitive they need to manage what they know. The knowledge economy makes use of technologies such as knowledge engineering and knowledge management to produce economic benefit as well as job creation. Other than the agricultural-intensive economies and labour-intensive economies, the global economy is in transition to a knowledge economy, as an extension of the "information society" in the Information Age[38]. The transition to this knowledge economy requires that the rules and practices that determine success in the industrial economy need rewriting in an interconnected globalized economy where knowledge resources such as know-how and expertise are as critical as other economic resources. The knowledge economy is the concept that supports the creation of knowledge by organisational employees and helps and encourages them to transfer and better utilize their knowledge in line with company or organisational goals[39]. This is because knowledge is a company's only enduring source of advantage in an increasingly competitive world[40].

Knowledge is dynamic, since it is created in social interactions among individuals and organizations. Knowledge is seen as being socially created and negotiated. Knowledge is a result of an evaluation process, which is guided by beliefs, experiences and values – personally and socially, as beliefs are not held in isolation. Knowledge is context specific as it depends on certain time and space. Without being put into context it is just information and not knowledge.[41] Information becomes knowledge when it is interpreted by individuals and given a context and anchored in the beliefs and commitments of individuals. Unlike explicit knowledge, human knowledge is context-bound and tacit in nature and there are limits to how

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[37] Drucker, P. 1993 7

[38] http://en.wikipedia.org/wiki/Knowledge_economy

[39] Drucker, P. 1991. 70

[40] Birkinshaw, J. 2010

[41] Hayek, F. 1945

it can be effectively articulated and transferred. Increasingly knowledge management is becoming focused on managing important knowledge that may reside solely in the minds of an organisation's experts and employees. Thus it can be argued that the most vital resource of today's enterprise is the collective knowledge residing in the minds of an organisation's employees, customers and vendors[42]. The main reason why people search for knowledge is because they expect it to help them exceed in their work. Knowledge is the most sought after remedy to uncertainty. Organisations are faced with the challenge of utilizing and managing this particular knowledge effectively to increase competitive advantage.

2.2 Characteristics of Knowledge

Knowledge cannot be easily stored. Knowledge resides in people's minds rather than in computers. Unlike raw materials knowledge is not coded, audited, inventoried and stacked in a warehouse for employees to use it when needed. Allee [43] defines knowledge in terms of the 12 qualities: knowledge is messy; it is self organising; it seeks community; it travels on language; it is slippery; it likes looseness; it experiments; it does not grow forever; it is a social phenomenon; it evolves organically; it is multi-modal; it is not easy to navigate. Knowledge is built by complex learning processes and results in highly individual mental models and associations that for some maybe quite different from the source knowledge.

Knowledge, unlike information is about *beliefs and commitment.* Knowledge is a function of a particular stance, perspective or intention.[44] Knowledge is about action – it is knowledge to some end. Knowledge, like information is about meaning – it is context specific and relational.[45] Nonaka's theory of organisation knowledge creation adopts the traditional definition of knowledge as "justified true belief". While traditional epistemology emphasizes the absolute, static, and nonhuman nature of knowledge, typically expressed in propositions and formal logic, we consider knowledge as dynamic human process of justifying personal belief towards the truth.[46]

Practical needs to know or particularly needs for operational understanding have been important since the battle for survival first started. Managing practical knowledge was

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[42] Davenport, T. and Prusak, L. 1998

[43] Allee, V. 1997

[44] Nonaka, I. 1995 58

[45] Nonaka, I. 1995 58

[46] Nonaka, I. 1995 58

implicit and unsystematic at first and still is. However the crafts-guilds and apprentice-journeyman- master systems of the 13th century were based on systematic and pragmatic Knowledge Management considerations[47].

2.3 Types of knowledge

2.3.1 Tacit or Explicit knowledge

It has been argued that knowledge exists in distinct forms and most Knowledge Management literature has mainly adopted Polanyi's 1966[48] distinction of explicit and tacit knowledge to define and explain most of its applications. Explicit knowledge refers to knowledge which can be articulated or formalised. Explicit knowledge can be expressed in formal and systematic language and shared in the form of data, specifications and manuals. Tacit knowledge on the other hand is highly personal and hard to formalise. Tacit knowledge is deeply rooted in procedures, actions, routines, commitment, ideals, values, and beliefs which are hard to formalise. Insights, hunches and intuition fall in this category of knowledge. Tacit knowledge is very difficult to articulate and transfer. It "indwells" in a comprehensive cognisance of the human mind and body. It is difficult to communicate tacit knowledge to others since it is an analogue process that requires a "simultaneous processing"[49]. All knowledge necessitates tacit components to a certain extent, because one is able to understand any form of formalised knowledge through the tacit components[50]. Tacit knowledge and explicit knowledge are complimentary and both essential to the creation of knowledge. Knowledge is created through the interaction between tacit and explicit knowledge[51]. Knowledge of experience tends to be tacit, physical and subjective, while knowledge of rationality tends to be explicit, metaphysical and objective. Tacit knowledge is

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[47] Snowden, D. 1999

[48] Michael Polanyi was a Hungarian physicist whose research was mainly done in physical chemistry before he turned into philosophy. In his book Personal Knowledge he wanted to underline that the intellect also in Science is connected with a "passion" contribution of the person knowing. Emotions are a vital part of a person's knowledge, but that does not make our understanding subjective. Polanyi's concept of knowledge is based on three factors: Firstly, true discovery cannot be accounted for by a set of articulated rules or algorithms; Second, knowledge is public and to an extend personal and emotional; Thirdly, the knowledge that underlies the explicit knowledge is more fundamental – all knowledge is either tacit or rooted in tacit knowledge. Polanyi states that "we know more than we can tell" and termed the "pre logical" phase of knowing tacit knowledge.

[49] Nonaka, I. 1995 8
[50] Polanyi, M. 1996
[51] Nonaka, I. Ryoko, T. Noburo, K. 2000

created "here and now" in a specific, practical context and entails "analog" quality.[52] Sharing tacit knowledge between individuals through communication is an analog process that requires "simultaneous processing" of the complexities of issues shared by the individuals. On the other hand explicit knowledge is about past events or objects "there and then" and is oriented towards a context-free theory.

There are two types of tacit knowledge – the technical dimension and the cognitive dimension. The technical dimension encompasses the informal and hard to pin down skills often captured in the term "know-how"[53]. An example of this is when master craftsmen develop a wealth of expertise at their finger tips due to years of experience. However they often have difficulty articulating the technical or scientific principles behind what they know. The "know-how" includes intuition, personal insights, hunches and inspiration derived from physical experience. The cognitive dimension consists of beliefs, perceptions, ideals, values and mental model so ingrained in us that we take them for granted. This dimension of tacit knowledge shapes the way we perceive the world around us.

Nonaka suggests that tacit knowledge is hidden and thus cannot be easily represented via electronics. The process of creating knowledge results in the spiralling of knowledge acquisition[54]. It starts with people sharing their internal tacit knowledge by socializing with others or by capturing it in digital or analogue form. Other people then internalize that shared knowledge and that process creates new knowledge. These people with newly created knowledge, then share their knowledge with others and the process begins again.

It is possible to convert explicit knowledge into tacit, as occurs for example, when an individual reads a book and learns from it, and is able to talk about the book, thus converting the knowledge into tacit knowledge in the individual's mind. This is an important narrative aspect of knowledge management in the transfer and sharing of knowledge. Similarly tacit knowledge can be converted into explicit knowledge as it happens when an individual with considerable tacit knowledge writes a book or manual formalizing thus codifying their knowledge. Organizational knowledge creation involves developing new content or replacing existing content with the organization's tacit and explicit knowledge. Through social and collaborative processes as well as an individual's cognitive processes (e.g. reflection),

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[52] Nonaka, I. 1995 60

[53] Polanyi, M. 1966 7

[54] Nonaka, I. 1995 73

knowledge is created, shared, amplified, enlarged and justified in organizational settings.[55] In management of the organisation, Drucker highlights the importance of tacit knowledge when he argues that a skill (*techne* in Greek) "could not be explained in words, whether spoken or written. It could only be demonstrated and therefore the only way to learn a *techne* was through apprenticeship and experience.[56] At the same time such methodologies as scientific and quantitative methods can convert ad hoc experiences into system, anectodes into information, and skills into something that can be taught and learned.[57]

The following table shows the stark differences between tacit knowledge and explicit knowledge:

Tacit Knowledge	Explicit knowledge
Knowledge is personal in nature and therefore difficult to extract from people.	Knowledge can be created and codified in order to create organisational knowledge assets.
Knowledge is transferred by moving people within or between organisations.	Knowledge is disseminated in the form of documents, drawings, databases and best practice models.
Learning can only be encouraged by bringing the right people together under the right circumstances.	Learning processes can be designed to ratify knowledge deficiencies through structured, managed, scientific processes.

The differences between Tacit knowledge and Explicit knowledge.

Nonaka & Takeuchi[58] propose the SECI model of knowledge creation process to understand the dynamic nature of knowledge creation and the effective management of the process. SECI views the creation of knowledge as a continuous process of dynamic interactions between tacit and explicit knowledge. The four modes of knowledge conversion interact in the spiral

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[55] Nonaka, I. 1994 14-37

[56] Nonaka, I. 1995. 44

[57] Drucker, P.1993 42

[58] Nonaka and Takeuchi 's SECI model presents a new theory of organizational knowledge creation, an explanation of why Japanese companies have been successful at continuous innovation, and a universal management model that converges Western and Japanese management practices. The model allows an easy understanding of how tacit knowledge maybe transformed into more explicit forms. The knowledge spiral explains the transformation of tacit knowledge into explicit knowledge and then back again as a basis for individual, group and organizational learning.
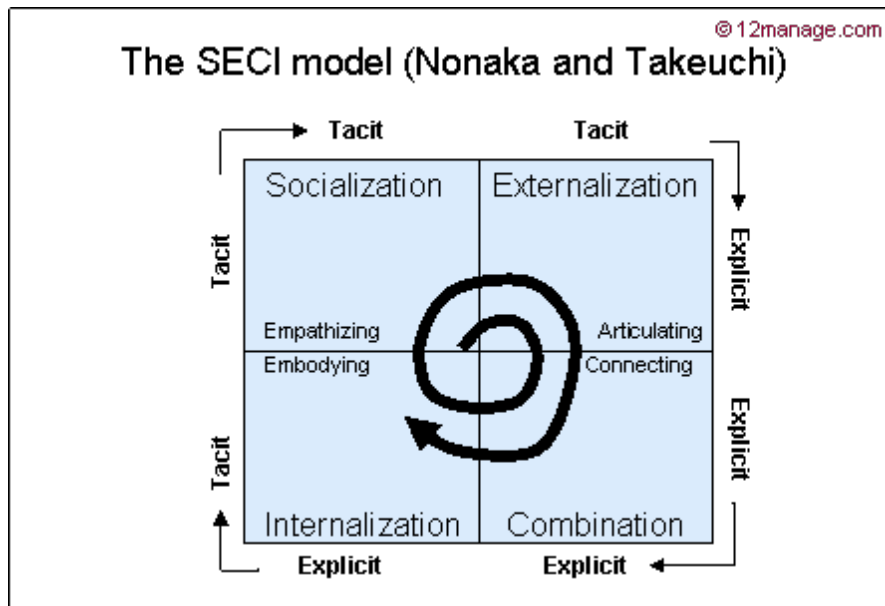
of knowledge creation. The spiral becomes larger as it moves through organizational levels and can trigger new spirals of knowledge creation. The model consists of three elements: SECI, Ba, and Knowledge assets.[59] The three elements interact with each other organically and dynamically. The knowledge assets of the organization are mobilized and shared in "Ba" and the tacit knowledge is converted and amplified by the spiral of knowledge through: socialization, externalization, combination and internalization processes. Socialization is about sharing tacit knowledge through face to face communication or shared experiences. A good example of this is apprenticeship. Externalization is about developing concepts which embed the combined tacit knowledge and which enable communication.

Combination is about combining the various elements of explicit knowledge for example building a prototype. Internalization is about learning by doing; the explicit knowledge becomes part of the individual's knowledge base and becomes an asset for the organization. The concept of "Ba" can be defined as shared context in which knowledge is created, shared and utilized through various interactions. There are four categories of "Ba": Originating Ba which enables people to interact with each other and with customers; Dialoguing Ba where tacit knowledge is used to forecast based on internal dialogue; Systemizing Ba where the forecasts are tested and the results are fed back to the organization; Exercising Ba where this information is used to improve the skill and ability to make the forecasts.[60] Knowledge assets are company specific resources that are indispensable to create value for the organization. They are the outputs, inputs and moderating factors, of the knowledge creation process. In order to manage knowledge creation and usage within an organization, the knowledge assets have to be mapped. The four categories of knowledge assets in the model are: Experiential knowledge assets which is about tacit knowledge common experiences; Conceptual knowledge assets where explicit knowledge is articulated through images and symbols; Routine knowledge assets where tacit knowledge is embedded in actions and practices and made routine; Systematic knowledge assets where explicit knowledge is captured and stored systematically.

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[59] http://paei.wikidot.com/nonaka-takeuchi-seci-ba-and-knowledge-assets

[60] http://paei.wikidot.com/nonaka-takeuchi-seci-ba-and-knowledge-assets

Nonaka's SECI model diagram

2.3.2 Personal knowledge approach

The personal knowledge approach to knowledge management derives from the fundamental assumptions that knowledge is essentially personal in nature and that knowledge is difficult to extract from the minds of individuals. This knowledge remains tacit in the minds of individuals. The personal knowledge approach recommends for knowledge management practices that focus on managing people as individual generators and carriers of knowledge. To manage personal knowledge of individuals requires that managers identify the kinds of knowledge possessed by various people in the organisation and arrange appropriate interactions between the individuals. The personal knowledge approach views the dissemination of knowledge in an organisation as a task that can best be accomplished by transferring the "knowledge carriers" from one part of the organisation to the other.

Furthermore the approach recommends bringing knowledgeable individuals together under circumstances that encourage them to share ideas as a way of stimulating organisational learning. These interactions are intended to encourage knowledgeable individuals to apply their knowledge constructively together, to share their knowledge in order to transfer knowledge from one part of the organisation to another, and create new knowledge that may be useful to the organisation. The main advantage of the personal knowledge approach is that it offers simple steps to begin managing knowledge. It can help identify what specific kind of

knowledge an individual has and thus assist managers in matching the individual expertise to the identified knowledge. The disadvantage is that individuals may claim to have personal knowledge that they do not actually have.

2.3.3 Organizational knowledge approach

Contrary to the personal knowledge approach, organisational knowledge approach assumes that knowledge can be made explicit. It can be articulated and explained by individuals who have knowledge with some coaching and prompting. Based on this the organisational knowledge approach generally advocates the creation and use of formal organisational processes to encourage and assist individuals articulate the important knowledge they have, thereby creating organisational knowledge assets. This approach also addresses the methods of disseminating organisational knowledge assets such as manuals, documents, databases and information systems. The organisational knowledge approach suggests that structured, targeted learning processes can be used to obtain specific forms of needed knowledge or improve the organisation's existing knowledge assets. Organizational knowledge approach focuses on designing organisational processes for generating, articulating, categorizing and systematically leveraging organizational knowledge assets. The fundamental advantage of organizational knowledge approach is that once an individual's knowledge is articulated in to explicit form, it can be used to disseminate that knowledge throughout the organisation.

Converting personal knowledge into organisational knowledge creates an asset that can be made available anytime and anywhere it is needed in an organisation. When knowledge is explicit, it is easier to codify and therefore easier to leverage than knowledge left in tacit personal form. The disadvantage of organisational knowledge arises when individuals lack the skill or motivation to articulate their knowledge. Organizations must find ways to systematically evaluate knowledge that has been made explicit by various individuals by bringing personal knowledge and organisational knowledge capture methods together.

Personal knowledge management initiatives that bring key knowledge workers face to face are likely to create a climate of personal trust and respect among individuals with important knowledge, as would be the case in well established Communities of Practice. The face to face meetings will stimulate exchange of ideas and telling of stories. By contrast, the organisational knowledge approach has the capacity to support efficient, faster dissemination

of knowledge through IT systems. This can create learning platform which enable the systematic sharing of new learning throughout the organisation.

2.3.4 Procedural or Declarative knowledge

Declarative knowledge or substantive knowledge focuses on beliefs about relationships among variables[61]. For example all things being equal, a greater price charged for a product would cause some reduction in its number of sales. This type of knowledge is facts. Declarative knowledge can be stated in the form of propositions, expected correlations, or formulas relating concepts which can be represented as variables.[62]

Procedural knowledge on the other hand focuses on beliefs relating sequences of steps or actions to desired or undesired outcomes. An example of such procedural knowledge is the set of justified beliefs about the procedure that should be followed in a government organisation in deciding whom to award a contract for a particular area.[63]

Declarative knowledge can be defined as "know what" and procedural knowledge may be defined as "know how".

2.3.5 General or Specific knowledge

General knowledge is knowledge possessed by a large number of individuals and can be easily transferred.[64] Specific knowledge on the other hand is possessed by a limited number of individuals and it is expensive to transfer. This knowledge is also known as idiosyncratic knowledge. Specific knowledge can be divided into contextual specific knowledge and technically specific knowledge. Contextually specific knowledge is knowledge of particular circumstances of time and place in which work is to be performed.[65] Contextually specific knowledge pertains to the organisation and the organisational subunit within which a task is performed.

For example the detailed knowledge that knowledge management professionals possess about the characteristics of a particular Community of Practice in which they are working is

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[61] Singley, M, Anderson, J. 1989

[62] Beccera- Fernandez, I. 2004 19

[63] Becerra-Fernandez, I. 2004 19

[64] Hayek, F. 1945

[65] Hayek, F. 1945

contextually specific. Contextually specific knowledge cannot be acquired through formal training, but instead is obtained from within that specific context. In contrast technically specific knowledge is profound knowledge about a specific area. It encompasses deep knowledge about the tools and techniques that may be used to address problems in the area. This knowledge is acquired as part of formal training and is enhanced by experience in the field.

2.4 Reservoirs of knowledge

In defining knowledge it is important to note that knowledge resides in several different location or reservoirs[66]. These encompass people, artefact and organisational entities. People and artefacts will be discussed briefly because they are relevant to the narrative aspect of knowledge. **Knowledge in people:** A considerable amount of knowledge is stored in people either as individuals or in groups. Due to the nature of most organisations a lot of knowledge resides in the individuals' minds and this is the main reason why these organisations are continually seeking ways to retain knowledge that might be lost due to the individuals retiring or leaving the organisation. Additionally considerable information resides within groups because of the relationship among members of a group. When individuals have worked together for a long time, they instinctively know each other's strengths and weaknesses and, understand the other's approach, and recognize aspects that need to be communicated and those that can be taken for granted.[67] Consequently groups form beliefs about what works well and what does not, and this knowledge is over and above knowledge residing in each individual member. Thus the collective knowledge is synergistic- greater than the sum of each individual's knowledge. Communities of practice are a good illustration of such embedding of knowledge within groups. **Knowledge in organisational entities:** Within an organisation unit, such as a department or an office, knowledge is stored partly in relationships among members of the units.

The organisational unit represents a formal grouping of individuals who come together, not because of common interest, but instead because of organisational structuring. Over time, as individuals occupy other roles in the organisation or leave, they are replaced by others, who will inherit some of the knowledge developed by their predecessors. This knowledge may have been acquired through relationships within that unit. An organization such as business

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[66] Becerra-Fernadez, I. 2004 25

[67] Skyrme, D. 2000

unit also stores certain knowledge, especially contextually specific knowledge. The norms, values, practices and culture within the organization, and across its organisation, and across its organisation units, contain knowledge that is not stored within the mind of any one individual. The various ways in which the organisation responds to the environmental events dependent, therefore, not only on the knowledge stored in individuals and organisational units but also in the overall organisational knowledge that has been developed through positive and negative experiences over time.

In order to reach a comprehensive understanding of knowledge, it is suggest that knowledge is tightly interwoven with an individual's personal dimensions (i.e. a complementary understanding of tacit or explicit knowledge), taking into consideration context, experience, values, social interaction and interpretation[68]. Accordingly, knowledge transfer and exchange is influenced by the view of knowledge adopted. To those who adopt the traditional view of knowledge as being either implicit or explicit neither the transfer nor the exchange of knowledge is seen as problematic, as knowledge is readily available in the objectified form[69]. This means exchange can take place without considerations regarding the context of the knowledge. The constructive view of knowledge on the other hand, takes the personal aspect of knowledge into consideration. This view advocates the complex and problematic nature of knowledge exchange, and therefore moves beyond the commonsensical and technocratic paradigm definition of knowledge.[70]

2.5 Knowledge versus Information

There is a fundamental distinction between knowledge and information. Most people think of knowledge as a recipe − a defined procedure − to deal with a concrete routine situation. However few situations are repeated − most situations are novel particularly in their detail. Information consists of facts and other data organised to characterise a particular situation, condition, challenge or opportunity. Knowledge on the other hand is possessed by human or is inanimate as in truths and beliefs, perspectives and concepts, judgements and expectations, methodologies and know-how. Knowledge is used to receive information − to recognize and identify, analyse, interpret, and evaluate, synthesise, assess and decide, adapt, plan, implement and monitor in order to act.

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[68] Meyer, E et al. 2007
[69] Hayek, F. 1945 519-530
[70] Meyer, E et al. 2007

Following this definition, then information and rudimentary knowledge may be codifiable and may exist outside a person's mind. The process of converting received information to knowledge is a complex one. To become knowledge, new insights are internalized by establishing links with already existing knowledge, and these links can vary from firmly characterised relationships to vague associations. Prior knowledge is used to make sense of received information, and once accepted for inclusion, internalizes the new insight by linking with prior or existing knowledge. Hence, the new knowledge is as much a function of prior knowledge as it is of received inputs. A discontinuity is thus created between the inputs and the resulting new knowledge. The resulting knowledge and understanding is formed by combinations of mental objects and links between them and allows for reasoning, planning, judgement and action.

Knowledge involves the processing, creation or use of information in an individual's mind. Information has little value and cannot become knowledge until it is processed by the human mind. Information is not knowledge, but it is an important aspect of knowledge. The process begins with facts and data, which are organised and structured to produce general information. The next stage involves organising and filtering this information to meet the requirements of a specific community of users, producing contextual information. Next, the individual assimilates contextual information and transforms it into knowledge. This transformation process is affected by the individual's experiences, attitudes and the context in which they work. The final stage of the continuum is behaviour – unless information and knowledge lead to an informed decision or action, the whole process becomes invalidated. [71]

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[71] Infield, N. 1997

David Skyrme[72] of David Skyrme Associates uses the following table to distinguish between information and knowledge.

Information	Knowledge
Tangible – Informs Humans	Human process – thinking/awareness
Processing changes representation	Processing changes consciousness
Physical objects	Mental objects
Context independent	Context affects meaning
Entity	Awareness and intuition
Easily transferable	Transfer requires learning
Reproducible at low cost	Not identically reproducible

Information versus Knowledge

As mentioned earlier, in organizations knowledge resides in various locations or reservoirs which encompass people – individuals and groups; artifacts – practices and repositories; organizational entities – organizational units, organizations and inter-organizational networks. The reservoir of knowledge in people is relevant to narrative and will be discussed in this thesis.

2.6 Knowledge Management

Knowledge management comprises of a various strategies and practices used in an organisation to identify, create, represent, distribute and enable the adoption of insights and experiences. Knowledge management has been an established discipline since 1995 with a body of both academic and professional journals dedicated to it. While the growth of knowledge management was fuelled in the mid 1990s by technology of the internet, the human dimension of knowledge has turned out to be fundamental for success. Knowledge management is a people based challenge which can be supported by technology. Many large companies have resources dedicated to knowledge management and it is a multi-billion dollar

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[72] Skyrme, D. 2000

world-wide market. Knowledge Management programmes are typically tied to organisational objectives such as improved performance, competitive advantage, innovation, transfer of lessons learnt and the general development of collaborative practices.

Knowledge Management is often linked to the idea of the learning organisation although neither practice encompasses the other.[73] Knowledge management is a discipline within an organisation that ensures that the intellectual capabilities of an organisation are shared, maintained and institutionalised. Knowledge management is the process of ensuring that information becomes knowledge and is made accessible. A survey by the Economist Intelligence Unit in 2005 found that knowledge management was rated as the area with the greatest potential for productivity improvement ahead of customer service and support, operation and production processes, strategy and business development and sales and marketing[74]. Knowledge management is the developing body of methods, tools, techniques and values through which organizations can acquire, develop, measure, distribute and provide a return on their intellectual assets. It is fundamentally about creating self sustaining ecologies in which communities and their artefacts can organically respond to, and confidently pro-act with, an increasingly uncertain environment. [75]

In general knowledge management focuses on an organisation and making available important knowledge, wherever and whenever it is needed. Peter Drucker[76] gives a more concise definition of Knowledge Management as the coordination and exploitation of organisational resources in order to create benefit and competitive advantage. These insights comprise knowledge which is either embodied in individuals or embedded in organisation processes or practices. The intention of knowledge management is to manage knowledge practically and effectively in order to reach broad operational and strategic objectives. The traditional emphasis in knowledge management has been on knowledge that is recognised and already articulated in some form. This includes knowledge about processes, procedures, intellectual property, documented best practices, forecasts, lessons learned and solutions to recurring problems.[77]

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[73] Wikipedia.org

[74] http://graphics.eiu.com/files/ad_pdfs/Tata_KnowHow_WP.pdf

[75] Snowden, D. 1999 30-37

[76] Drucker, P. 1994

[77] Becerra - Fernandez, I. 2004

An old adage states that effective Knowledge Management is 80% related to organisational culture and human factors, and is 20% related to technology[78]. This finding addresses the fact that knowledge is created in people's minds. In harnessing knowledge as an organizational asset, organizations must be aware of the three key fundamentals of knowledge management. First, Knowledge Management practices must identify ways to encourage and stimulate the ability of employees to develop and create new knowledge. Second, Knowledge Management methodologies and technologies must enable effective ways to elicit, represent, organize, reuse and renew this knowledge. Third, Knowledge Management should not distance itself from the knowledge owners, but instead celebrate and recognize their positions as experts in the organisation. This, in effect, is the essence of knowledge management.

The goal of knowledge management is to build and exploit intellectual capital effectively and in a way that adds value. This goal is valid for the entire enterprise, for all of the enterprise's activities and has considerable complexity behind it. The formalisation of knowledge management as a major discipline in the final decade of the last century has multiple sources in both theory and practice, but has been dominated by the division of knowledge into tacit and explicit elements popularised in the SECI model of Nonaka & Takeuchi.[79] The focus has been on the process of abstraction of knowledge from the heads of knowledge owners into some codified form either for use in the process, or to enable the knowledge to be internalised by other humans. As knowledge management developed in practice, the contrast between embodied knowledge and accessible databases proved too extreme. Narrative emerged as a tool for knowledge sharing providing an intermediate translation mechanism between the concrete and codified[80]. It is believed that narrative is a powerful and robust way in which knowledge may be shared, as this has been identified as one of the strengths of narrative, or stories.

Knowledge management is about acquisition and storage of workers knowledge and making it accessible to other employees within the organization. This is achieved by converting tacit knowledge to explicit knowledge using various technologies such as intranets, internet and databases. Knowledge management is also about distributing the right knowledge to the right users at the right time in order to add value. The field of knowledge management can be seen

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[78]Becerra - Fernandez, I. 2004 9

[79] Nonaka, I.1995 71

[80] Snowden, D. 2004

as an integral part of the concept 'intellectual capital". Roos et al [81] make the following distinction between knowledge management and 'intellectual capital' – knowledge management is about the management of the intellectual capital controlled by the company. However, too often the delineation between the two terms is unclear and seldom adequately addressed.

From the theory of the firm, two basic theories have emerged – resource based theory and knowledge based theory. Knowledge based theory of the firm suggests that knowledge is the only resource that provides sustainable competitive advantage, and therefore the firm's attention and decision making should focus on the knowledge and the competitive capabilities that can be derived from it. The firm is considered as a knowledge integrating institution and does not acquire nor create knowledge as this is the role and the prerequisite of the individual. Knowledge resides in and with individual people, the firm merely integrates the individually owned knowledge by providing structural arrangements of coordination and cooperation of specialized knowledge workers. That is, the firm focuses on the organizational processes flowing through these structural arrangements, through which individuals engage in knowledge creation, storage and deployment.[82]

There are three main undertakings that are quintessentially knowledge management, forming the basis of what is described as knowledge management. The first activity is the lessons learned databases. These databases attempt to capture and make accessible knowledge that would not have been captured in a fixed medium.[83] Lessons learned databases typically emphasize capturing knowledge that is embedded in persons and making it explicit and useable by the rest of the organisation. The second undertaking is expertise locators. The function of the expertise locator systems is to identify and locate those persons within the organisation who have expertise in a specific area. This is done through self identification, or information in employees CVs or by analysis of electronic communication from and to the employee. The third undertaking is Communities of Practice (COPs). Communities of practice are groups of individuals who have a shared interest that come together in person or virtually to tell stories, to share and discuss problems and opportunities, discuss best practice

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[81] Roos, J. et al. 1997
[82] Roberts, H. 1998
[83] http://www.kmworld.com/Articles/Editorial/

and talk over lessons learned[84]. Communities of Practice emphasize the social nature of learning within and across the organisation. This concept is elaborated further in the chapter 4 of the thesis.

2.7 Nonaka's knowledge conversion theory

An explanation of Nonaka's theory, as elaborated on earlier in the chapter, is important because four of Becerra's Knowledge Management sub processes which will be discussed in this chapter are based on Nonaka's theory. Nonaka and Takeuchi[85] argue that during shared activities, four modes of knowledge conversion can take place by the exchange of tacit and explicit knowledge leading to a spiral effect of knowledge creation. The four modes are socialization, externalization, combination and internalization. The socialization mode emerges from tacit to tacit knowledge conversion. In this mode, tacit knowledge is shared directly between individuals in joint activities through articulation, observation, imitation and practice. Knowledge conversion from tacit to explicit is explained by the externalization mode. This takes place through techniques such as metaphors, analogies and models.

Combination mode is a result of explicit to explicit knowledge conversion. In this mode, different bodies of explicit knowledge are combined and documented through meetings, conversations and networks. Internalization mode is described by conversion from explicit to tacit knowledge. This happens when individuals experience others' experiences that are available in explicit forms, such as reading a document or book. Nonaka and Takeuchi place importance on the externalization mode and that the key to knowledge creation lies in the conversion of tacit knowledge into explicit forms. Davenport and Prusak[86] support this argument by stating that difficult as it is to codify tacit knowledge, its substantial value makes it worth the effort. Having access to tacit knowledge is insufficient because when a person who possesses the knowledge leaves, the organization loses its knowledge capital. It is therefore important to make tacit knowledge explicit. Contrary to this, the codification of tacit knowledge is not an easy task, and therefore the codification process should be selective in order to prevent loss of knowledge. Those who emphasize socialization - rather than

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[84] Wenger, E. 1998
[85] Nonaka, I. 1995 61-73
[86] Davenport, T & Prusack, L. 1998

externalization argue that the key to knowledge creation lies in focusing on informal communities of practice[87].

2.8 Becerra's knowledge management processes model.

The thesis looks at a specific knowledge management framework model of solutions by Becerra et.al and how some of its components potentially support organizational use of narrative. Becerra et.al's knowledge management solutions refer to the variety of ways in which knowledge management can be facilitated. These solutions can be divided into four broad levels which are: Knowledge Management processes; Knowledge Management systems; Knowledge Management mechanisms and technologies; Knowledge Management infrastructure. These four Knowledge Management solutions are supported by the Knowledge Management systems and seven KM sub-processes[88]. Of the seven sub-processes Four are based on Nonaka's SECI model, and are focused on ways in which knowledge is converted through the interaction between tacit and explicit knowledge.

As mentioned earlier in this chapter Nonaka identified four ways of managing knowledge: socialization, externalization, internalization and combination. The other three Knowledge Management sub-processes: exchange, direction and routines are largely based on Grant[89] and Nahapiet and Ghoshal[90]. Knowledge Management processes are the broad processes that help in discovering, capturing, sharing and applying knowledge. Knowledge Management systems are the integration of technologies and mechanisms that are developed to support the four Knowledge Management solutions. Knowledge Management mechanisms and technologies are used in Knowledge Management systems utilizing a combination of multiple mechanisms and multiple technologies. Knowledge Management mechanisms and technologies in turn rely on the Knowledge Management infrastructure which reflects the long term foundation for knowledge management. Thus Knowledge Management infrastructure supports Knowledge Management mechanisms and technologies, and Knowledge Management mechanisms and technologies are used in Knowledge Management systems that enable Knowledge Management processes. Overtime, however, Knowledge Management infrastructure benefits from Knowledge Management mechanisms and

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[87] Nonaka, I. 1995 72
[88] Becerra, I. 2004 31
[89] Grant, R.M. 1996
[90] Nahapiet, J and Ghoshal, S. 1998

technologies as well as Knowledge Management processes. This thesis focuses on Knowledge Management processes and Knowledge Management systems and their relation to narratives.

2.8.1 Knowledge Management Process

2.8.1.1 Knowledge discovery

Knowledge discovery maybe defined as the development of tacit or explicit knowledge from data and information or from synthesis of prior knowledge. [91] The discovery of new explicit knowledge relies directly on combination, whereas the discovery of new tacit knowledge relies most directly on socialization. New explicit knowledge is discovered through combination, wherein multiple bodies of knowledge are synthesized to create new, complex sets of explicit knowledge. This process requires the reconfiguring, re-contextualizing and re-categorizing of existing explicit knowledge and data to produce new explicit knowledge. In the case of tacit knowledge, the integration of multiple streams for the creation of new knowledge occurs through the mechanism of socialization.[92] Socialization is the process of synthesizing tacit knowledge across individuals through joint verbal activities such as communities of practice or apprenticeship. Socialization entails sharing knowledge through face to face communication or shared experience. Therefore in knowledge discovery narration is highly utilized.

A good example of knowledge discovery is the water cooler conversations which helped knowledge sharing among groups at IBM. When IBM realized that there was always unintended exchange of information and knowledge sharing whenever people met at the water coolers, they placed water coolers in strategic areas around their building in order to encourage and support knowledge sharing[93]. However, transferring knowledge through personal conversation is being threatened by industrial age managers – who believe that people should stop talking and get to work - and the move to "virtual offices – where workers are encouraged to work at home or customer sites."[94] Knowledge discovery has strong relations to the use of narrative in knowledge management because Communities of Practice,

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[91] Becerra, I. 2004 33
[92] Nonaka, I. 1995 63
[93] Becerra, I. 2004 34
[94] Davenport, T.H and Prusack, L. 1998

apprenticeships and face to face interactions, involve exchange of experiences and stories. This forms the narrative aspect of knowledge management.

2.8.1.2 Knowledge capture

Knowledge exists within people, artifacts and organizational entities in either tacit or explicit form. It may reside in individuals' heads without the individual being able to recognize it or even share it with others. Knowledge capture is the process of retrieving either explicit or tacit knowledge that resides within people, artifacts, or organizational entities. The knowledge capture process benefits most directly from two Knowledge Management sub-processes of externalization and internalization.[95] Externalization involves converting tacit knowledge to explicit forms such as words, concepts, visuals or figurative language which includes narratives.[96] Externalization embeds the combined tacit knowledge in order to enable its communication. It also helps translate individuals' tacit knowledge into explicit forms that can be more understood by the rest of the group. Internalization on the other hand is the conversion of explicit knowledge into tacit knowledge. The explicit knowledge is embodied in action and practice, so that the individual acquiring the knowledge can re-experience what others have gone through. Alternatively, individuals could acquire tacit knowledge in virtual situations, either vicariously by reading manuals or other stories, or experientially through simulations and experiments.[97] Internalization is closely linked to learning by doing where the explicit knowledge becomes part of the individual's knowledge base.

2.8.1.3 Knowledge sharing

Knowledge sharing is the process through which explicit or tacit knowledge is communicated to other individuals[98]. Knowledge sharing means effective transfer so that the recipient of the knowledge can understand it well enough to act on it. Moreover, what is shared is knowledge instead of recommendations based on the knowledge. Knowledge sharing may take place across individuals as well as groups, departments or organizations. If knowledge exists at a location that is different from where it is needed, then either knowledge sharing or knowledge utilization without sharing is necessary. Sharing knowledge is an important process in

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[95] Nonaka, I. 1994 64
[96] Nonaka, I. 1995 65
[97] Becerra, I. 2004 33
[98] Becerra, I. 2004 35

enhancing an organization's innovativeness and performance. Depending on whether explicit or tacit knowledge is being shared, exchange or socialization processes are used. Socialization facilitates the sharing of tacit knowledge where tacit knowledge is created. Exchange on the other hand focuses on sharing of explicit knowledge and is used to transfer explicit knowledge between individuals, groups, and organizations. Essentially, the process of sharing explicit knowledge does not differ from the process through which information is communicated. Knowledge sharing via socialization is thus sharing of narrative.

2.8.1.4 Knowledge application

In knowledge application, the party that makes use of the knowledge does not necessarily need to comprehend it. All that is required is that the knowledge be used to guide decision making and actions[99]. The process of knowledge application depends on the available knowledge and the latter depends on the process of knowledge discovery, capture, and storage. Therefore, the better the process of knowledge discovery, capture and storage, the greater the likelihood that the knowledge needed for effective decision making is available. Knowledge application benefits from two processes that do not involve actual transfer or exchange between concerned individuals – routines and direction.[100] Direction refers to the process through which individuals possessing the knowledge direct the action of another individual without transferring the underlying direction to that person[101]. This process preserves the advantages of specialization and avoids the difficulties inherent in the transfer of tacit knowledge. The individual is directed by the expert and solves the problem based on the directions given, but does not acquire expert knowledge of the problem and solution, so that if a similar problem occurs in future he will not be able to solve it without calling the expert. On the other hand routines involve the utilization of knowledge embedded in procedures, rules and norms that guide behaviour. Routines make use of communication more than directions because they are embedded in procedures or technologies. Routines take time to develop and rely on constant repetition.[102]

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[99] Becerra, I. 2004 35
[100] Grant, R.M. 1996
[101] Becerra, I. 2004 35
[102] Grant, R.M. 1996

2.9 Knowledge Management Systems

In Becerra *et al's* framework, Knowledge Management systems utilize a variety of Knowledge Management mechanisms and technologies to support the Knowledge Management processes. Knowledge Management systems can be classified into four kinds: Knowledge discovery systems; Knowledge capture systems; Knowledge sharing systems and Knowledge application systems.

2.9.1 Knowledge discovery systems

Knowledge discovery systems support the process of developing new tacit or explicit knowledge. Knowledge discovery systems support the knowledge sub-processes of combination – which enables the discovery of new explicit knowledge, and socialization – which enables the discovery of new tacit knowledge through joint activities instead of written or verbal instructions. Mechanisms which facilitate combination include collaborative problem solving using narrative form, joint decision making, and collaboration creation of documents. Mechanisms that facilitate socialization include apprenticeships, brainstorming sessions, conferences, induction of new employees, cooperative projects across departments. Technologies facilitating combination include knowledge discovery systems, repositories of best practice and lessons learned and databases. Socialization can be facilitated by technology, although to an extent, by video conferencing and electronic support for communities of practice.

Knowledge can be discovered by synthesizing knowledge through socialization with other knowledgeable persons and by finding interesting patterns in observations typically embodied in explicit data[103]. Socialization is the synthesis of tacit knowledge across individuals through joint activities instead of written or verbal instructions and it enables the discovery of tacit knowledge through activities between masters and apprentices, that is, face to face knowledge sharing. Socialization is a common means of knowledge discovery which is pursued by accident or on purpose.

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[103] Becerra, I. 2004 33

2.9.2 Knowledge capture systems

Knowledge capture systems support the process of retrieving either explicit or tacit knowledge residing in people, artifacts or organizational entities. Knowledge capture systems rely on technologies that support externalization and internalization. Examples of mechanisms that enable externalization are the development of models or prototypes and the articulation of best practice and lessons learned. Learning by doing, on the job training, learning by observation and face-to-face meetings are some of the mechanisms that facilitate internalization. Technologies that support externalization include knowledge elicitation technologies, expert systems and case-based reasoning systems. Technologies that facilitate internalization include computer-based training and communication technologies.

Knowledge capture systems can be used to help elicit and store organizational and individual knowledge that is both tacit and explicit in nature. Knowledge can be captured using mechanisms and technologies, so that the captured knowledge can be shared and used by others. Perhaps the earliest mechanism for knowledge capture dates to the anthropological use of stories, the earliest form of art, education and entertainment.[104] Storytelling is the mechanism by which early civilizations passed on their values and their wisdom from one generation to the next.[105] Knowledge capture systems support the process of eliciting either explicit or tacit knowledge that may reside in people, artifacts or organizational entities. These systems can help capture knowledge existing either within or outside organizational boundaries, among employees, consultants, competitors or customers. Knowledge capture systems rely on mechanisms and technologies that support externalization and internalization. Both mechanisms and technologies can support knowledge capture systems by facilitating the knowledge management process of externalization and internalization. Knowledge capture mechanisms facilitate externalization – the conversion of tacit knowledge into explicit form – or internalization – the conversion of explicit knowledge into tacit form. The development of prototypes or models and the articulation of stories are some of the examples of the mechanisms that enable externalization. The importance of using metaphors and stories as a mechanism for capturing and transferring tacit knowledge is increasingly getting the attention

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[104] Snowden, D. 1999 30-37

[105] Snowden, D. 1999 30-37

of organizations. Technologies can also support knowledge capture, but they will not be explored in this thesis as they do not support storytelling in the context of the thesis.

2.9.3 Knowledge sharing systems

Knowledge sharing systems support the process through which explicit or tacit knowledge is shared with others[106]. This takes place through exchange – the sharing of explicit knowledge and socialization – the sharing of tacit knowledge. Knowledge management is concerned with developing applications that prevent the loss of corporate memory or organizational memory. This is the combination of explicit and tacit knowledge that may or not be explicitly documented. Organizational memory loss results from a lack of appropriate technologies for the organization and exchange of documents, a lack of adequate support for communication and the proliferation of disparate sources of information. Another factor contribution to loss of organizational memory is when individuals depart from the organization due to retirement or turnover. Organizational memory loss typically involves mostly tacit knowledge. A knowledge sharing system can help to organize and distribute organizational memory in explicit format, so that it can be accesses even after the original sources of knowledge are no longer with the company. This can be done through initiatives that ensure debriefing of experts especially when they leave the organisation; capturing of lessons learned in a structured format and encouraging Communities of Practice. Knowledge sharing systems utilize mechanisms and technologies that facilitate exchange and socialization such as chat groups, collaborations and lessons learned. The fundamental obstacle to knowledge sharing is typically a lack of demand for sharing of knowledge, not lack of supply of knowledge.

2.9.4 Knowledge application systems

Knowledge application systems support the process of some individuals utilizing knowledge possessed by other individuals without actually acquiring or learning that knowledge[107]. Mechanisms and technologies support knowledge application systems by facilitating routines and direction. Mechanisms facilitating direction include traditional hierarchical relationships in organizations, help desk and support centres. Mechanisms supporting routines include organizational policies, standards and work practices. Technologies supporting direction include expert knowledge embedded in knowledge systems and decision support systems and

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[106] Becerra, I. 2004 39
[107] Becerra, I. 2004 39

technologies supporting routines are traditional management information systems, enterprise resource planning systems and expert systems.

2.10 Knowledge management infrastructure

Knowledge management infrastructure is the foundation on which Knowledge Management resides and for purposes of this thesis infrastructure is an integral part of Becerra *et.al'*s Knowledge Management model and systems. It includes the following components which are relevant to narrative: organizational culture, organization structure, communities of practice, information technology infrastructure, and common knowledge. Organizational culture reflects the norms and beliefs that guide the behaviours of members of an organization and is an important enabler of Knowledge Management in organizations[108]. One of the critical challenges for organizations is that of organizational culture not encouraging knowledge sharing and knowledge transfer in organizations. A supporting organization culture helps motivate employees to understand the benefits from Knowledge Management and find time for Knowledge Management.

Attributes of an enabling organizational culture include an understanding of the value of Knowledge Management practices, management support at all levels, incentives that reward knowledge sharing, and encouragement of interaction for the creation and sharing of knowledge[109]. Cultures that stress individual performance and hoarding encourage limit employee interaction and support a lack of knowledge sharing. The success of Knowledge Management depends on the organization structure. The hierarchical structure of an organization affects people with whom individuals interact frequently and to whom they are likely to transfer knowledge and narrative. Organisational structure can facilitate Knowledge Management through communities of practice. A community of practice is an organic self organized group of individuals who are dispersed geographically or organizationally but communicate regularly to discuss issues of mutual interest. Communities of practice provide knowledge to a larger group of individuals than is possible within traditional boundaries. Through these, knowledge can be shared according to interest amongst peers and experts who maybe higher up in the organisational hierarchy. They also provide access to external

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[108] Becerra, I. 2004 40

[109] Armbrecht, F.M.R. 2003

knowledge sources; however they are usually not part of the company's formal organization structure[110].

Common knowledge represents another important component of the infrastructure that is relevant to narrative. It refers to the organization's cumulative experiences in comprehending a category of knowledge, activities and the organizing principles that support communication and coordination. In addition, common knowledge provides unity to the organization including a common language and vocabulary, recognition of individual knowledge domains, common cognitive schema, shared norms and elements of specialized knowledge that are common across individuals sharing knowledge[111]. Common knowledge helps enhance value of an individual expert's knowledge by integrating it with the knowledge of others. Common knowledge supports knowledge transfer within the organization, but impedes the transfer of knowledge outside the organization.[112]

2.10.1 Physical environment

The physical environment of an organization is an important aspect of knowledge management infrastructure and another important foundation for Knowledge Management and storytelling. Aspects of the physical environment include design of the building, size, location, type of offices and so on. The physical environment of coffee areas, cafeterias, and water coolers can foster Knowledge sharing and the exchange of narratives by providing opportunities for employees to meet and share ideas informally and encourage 'knowledge accidents'. The physical locations should be arranged in a way that maximizes the chances of face to face interaction among people who could potentially help each other.

2.10.2 Knowledge elicitation as a method for knowledge capture

Explicit knowledge is by definition already captured in an understandable form, therefore it is important to elicit tacit knowledge and then capture it in a form that makes it easily manageable. There are several ways to elicit knowledge by developing knowledge-based systems, reading books, observing others performing tasks, learning from experts. For this thesis, knowledge capture by eliciting knowledge from experts is significant as it involves tacit knowledge exchange. This is a process of capturing tacit knowledge from human

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[110] Wenger, E. 1999

[111] Nahapiet, J and Goshal, S. 1998

[112] Argote, L and Ingram, P. 2000

sources which involves narratives and telling of stories. The most commonly used knowledge elicitation process is interviewing the experts and eliciting their knowledge via several questions and answer sessions. The traditional interview process is preferred because it allows for the capture of tacit knowledge expressed in the subject's body language in a way that no machine is able to do. It is also a way for the interviewer to pick up nuances from the answers. Another knowledge elicitation process is facilitated groups meeting sessions where participants share their experiences, successes, challenges and ideas about what they are working on.

The manual knowledge elicitation process involves specifically eliciting knowledge from human sources – in the form of interviews - and not from documents, and representing it in some machine understandable way for storage and application. The main mechanism for knowledge elicitation is face to face discussions between the subject matter experts (SMEs) who possess the domain knowledge and the knowledge engineers who ask questions, observe the expert solving problems and determine what knowledge is being used. Knowledge capture then is the combination of knowledge elicitation and representation of knowledge in machine-readable form.[113]

2.11 Summary of chapter

This chapter introduced the concept of knowledge in its historical and evolutionary context; the study of managing knowledge which is knowledge management; Nonaka's proposed SECI model of knowledge creation process to understand the dynamic nature of knowledge creation and the effective management of the process; and Becerra et.al's Knowledge Management processes, systems and infrastructure. Nonaka's SECI model views the creation of knowledge as a continuous process of dynamic interactions between tacit and explicit knowledge. The interaction between tacit and explicit knowledge as discussed in the SECI model provides the initial link between narrative and knowledge management. Becerra et.al's perspective on systems and model for managing knowledge is also introduced. Features of the system introduce the relation between tacit knowledge or narrative and the management of knowledge.

Knowledge management processes and systems discussed in this are designed to elicit and store both organizational and individual tacit and explicit knowledge. The processes suggest

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[113] Becerra, I. 2004 181

the potential relationship between the management of tacit knowledge and narratives. The earliest form of knowledge capture dates back to the anthropological use of stories, and in the modern organisation knowledge capture is an important part of knowledge management. Storytelling is the mechanism by which early civilizations passed on their values and their wisdom from one generation to the next and in the knowledge era organisations are grappling with communicating tacit knowledge. That is the main reason why the importance of using metaphors and stories as a mechanism for capturing and transferring tacit knowledge is increasingly getting the attention of organizations.

In summary of Becerra-Fernandez et al on storytelling and the framework of solutions - Explicit and tacit knowledge affect the suitability of knowledge management processes. Knowledge management processes may have a greater impact on the value that one type of knowledge contributes to the organization, whereas other knowledge management process might affect the value of another type of knowledge. The knowledge management processes appropriate for explicit and tacit knowledge are directly based on the difference between the two knowledge types.

For knowledge sharing, exchange would be appropriate to help transfer explicit knowledge whereas socialization is needed for transfer of tacit knowledge. For knowledge capture externalization would be appropriate for tacit knowledge because it helps convert tacit knowledge into explicit, whereas internalization would be appropriate for explicit knowledge because it helps convert tacit into explicit knowledge for example, in learning. For knowledge discovery combination would be appropriate for integrating multiple streams of explicit knowledge, whereas socialization would be suitable for integrating multiple streams of tacit knowledge.

These recommendations are also based on the logic that a knowledge management process would contribute much to the value of knowledge if it is both effective and efficient for managing that knowledge. Some knowledge management processes might not contribute to the value of a given type of knowledge either because they are not effective in managing it - for example, combination and exchange would not be effective for managing tacit knowledge, - or because they are too expensive or slow or at a lower cost -for example, socialization would be too expensive and slow for sharing explicit knowledge, especially in comparison to exchange.

3 Storytelling chapter

An age old phenomena – storytelling – is gaining recognition in management of organizations because of its ability to communicate that which is difficult. The value of a story lies in its ability to convey complex and multi-layered ideas in a simple and memorable form to culturally diverse audiences.[114] Storytelling and stories encourage group interaction, communication, learning and conflict resolution in a subtle and non confrontational way. Stories are told in different settings in organizations in order to communicate values, norms, change and other organizational management aspects. Like stories, knowledge can have different value or meaning to different people or even to the same person at different times. In the knowledge economy, information has to be analyzed, understood, communicated and acted upon.

Research of narratives offers the potential to better understand the use of stories and storytelling as a knowledge management tool. It is no surprise that there is some controversy surrounding storytelling as a method of transferring knowledge in business. The use of storytelling in organisations has become almost a fad in recent years[115]. The idea of storytelling being used in business causes some disquiet among practical business people, information specialists, and many in knowledge management.

It is important to provide a definition of stories and narratives and the context that they will be used in this thesis. Story is defined as an account or recital of events or a series of events or incidents that is either true or fictitious.[116] It can be seen as plot comprising causally related episodes that culminate in a solution to a problem. It is written or imagined perspectivistically, from the viewpoint of a theoretical or participant observer and its incorporation of a coherence that is constructed from a chair of particulars[117]. The story is responsible for generating knowledge sharing, forming a powerful self reinforcing loop that motivates and directs. Narrative is anything told or recounted in the form of a story.[118] A narrative is a story that is created in a constructive format, for example - a work of writing,

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[114] Snowden, D. 1999 30-37

[115] Denning, S. 2004 3

[116] Boje, D.M 1995

[117] Boje, D. M, 1995

[118] www.onlinedictionary.com

poetry, prose or dance - that describes a sequence of fictional and non-fictional events. The narrative is not a story in itself, but rather the telling of the story – which is often why it used in phrases such as "written narrative" or "oral narrative." It derives from the Latin word "narrare" which means to recount and is related to the adjective "gnarus" which means knowing or skilled.

While a story is a sequence of events, a narrative recounts those events in detail, leaving some occurrences out and emphasizing some depending on perspective. Narratives thus shape the history – the series of events – the story of what happened.[119] Narrative is defined by Aristotle[120] as requiring 'imitation of an action that is complete in itself as a whole of some magnitude … Now a whole is that which has beginning, middle and end': the definition of coherent narrative. The word story can be used as a synonym of narrative, but can also be used to refer to sequence of events described in narrative. The narrative capability of humans is a unique, fundamental cognitive process, which is crucial to the interpretation and reconstitution of cultural, social and personal reality.[121] For purposes of the thesis, story and narrative are interpreted to have the same meaning and will be used interchangeably.

Storytelling can be broadly defined as orally communicating ideas, beliefs, personal histories, and life lessons. Storytelling is the preferred "sense-making" currency in organisations.[122] Notions such as the storytelling organisation, sense making, organisational culture and so on, have become common issues in our understanding of modern organisations as they refer directly or indirectly to the narrative nature of organisations. Organisations are social systems in which informal norms, stories and basic assumptions play an important role. Storytelling helps people define, secure and shape their existence in relation to both their culture and the universe. Stories are a natural part of organisational life and make up everyday communication. By their nature they are not construed consciously but rather evolve from events, extraordinary situations, successes and failures. Organisations are seen as being pervaded continuously by multiple streams of narration told by organisational members.[123] Storytelling has always played an important role in the evolution and survival of cultures. Since the beginning of time, elders in societies have used stories set in the past to define and reinforce cultural values and present behaviours. Recently the world is experiencing rapid

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[119] http://en.wikipedia.org/wiki/Storytelling

[120] http://en.wikipedia.org/wiki/Mythos_(Aristotle)

[121] Sinclair, J. 2005

[122] Boje, D. 1995

[123] Boje, D. 1995

and continual change and it is more important than ever to identify and expand the forms and applications of storytelling to help people and organisations to prepare for survival in an unfamiliar future. In the industrial age organisations, stories are told in order to reinforce cultural values and accepted behaviours aimed at indoctrinating their workers with corporate culture. Case studies are a formal method of storytelling in organizations. Many works of art and most works of literature tell stories. Indeed most of the humanities involve stories. A narrative can also be told by a character within a larger narrative. An important part of narration is the narrative mode, the set of methods used to communicate the narrative through a process called narration.[124]

Along with exposition, argumentation and description, narration broadly defined, is one of rhetorical modes of discourse. More narrowly defined, it is the fiction-writing mode whereby the narrator communicates directly to the reader. Narrative is a central mechanism by which social knowledge is conveyed. Narratives provide a bridge between the tacit and the explicit, allowing social tacit knowledge to be demonstrated and learned, without the need to propositionalize it. The challenge facing organisations is how to develop tools that will help manage and capture knowledge residing in people's minds as an important organisational asset. Narratives can be used in knowledge management as a way of eliciting and disseminating knowledge, and also to encourage collaboration, to generate new ideas and to "ignite change."[125]

3.1   Why storytelling?

The simple reason why storytelling is becoming a major factor in management is that it works.[126] Purposeful storytelling can achieve results in the modern organisation that traditional abstract modes of communication cannot. In organisations, storytelling is the preferred sensemaking currency of human relationships among internal and external stakeholders[127]. Storytelling is an old technology with modern use. It draws on aspects of human nature of which we are barely aware and makes use of a delivery system that is as old as civilisation itself. [128] Purposeful storytelling can reach a large number of people very

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[124] http://en.wikipedia.org/wiki/Storytelling

[125] http://en.wikipedia.org/wiki/Storytelling

[126] Denning, S. 2004 1

[127] Boje, D. 2008 51

[128] www.stevedenning.com

rapidly. Storytelling is technology free and does not require investment in hardware or software. Storytelling is the ultimate low-cost high-return technology[129].

Everyone is a story teller - it is something that we all know how to do. Though we tell stories all the time, we are not aware of it. Once we realise what we are doing we can all learn to become better storytellers and use storytelling for positive business results thus, making storytelling result oriented. The understanding of storytelling and the development of its technique allows everyone to get organisation and management results from storytelling. Storytelling has been touted as the best way to make the leap from information to knowledge and is the best way to capture and transfer tacit knowledge. Storytelling can be a useful tool for knowledge management because stories convey meaning, convey tacit knowledge and are a natural way of interpreting information[130]. Storytelling is a pervasive technique that triggers the memory of knowledge and a desire to acquire knowledge. Coupled with metaphor, it can convey complex ideas in simple memorable form to culturally diverse communities far more effectively than other mediums[131].

Storytelling has long been a feature of human societies, groups and organisations. Stories are pithy narratives with plots, characters and twists that can be full of meaning. While some stories maybe pure fiction, others are inspired by real events. Stories are told to inform, entertain, advise, warn or educate and are capable of invoking strong emotions. In and out of organisations people often recount experiences in story-like form and also listen to stories of others. Organisation theorists have become aware that much learning in organisations takes place through storytelling. This is sometimes referred to as narrative knowledge. Narrative knowledge is therefore about learning.

There is also awareness that we can learn a lot about stories that people tell about each other and about the organisation. Humans have been telling stories not only as a form of entertainment, but as a way to make sense of the world for a very long time – probably for as long as they have had language. People primarily think narratively rather than analytically or argumentatively. It is the participatory and inclusive nature of storytelling that makes stories particularly effective as a way of transmitting social knowledge, because the listener comes to participate in the construction of the story, and thus ends up having a stake in it.

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[129] www.stevedenning.com
[130] Denning, S. 2000 147-156
[131] Snowden, D. 2000. 147-156

Stories in their simplest form communicate complex meanings and are self-propagating. Self-propagation is an important concept for usable stories. An effective story spreads like wildfire through an organization, without altering its core. The fact that it is unpublished allows it to self-propagate as each storyteller can provide their own unique style or edge[132].

Narratives are a powerful and effective way to transfer knowledge in organisations. Narratives can be used to transfer complex contents of tacit knowledge.[133] People prefer to talk to colleagues about what they are working on and when that happens it results in the transfer of knowledge. A growing body of theory and practice in knowledge management, starting with Nonaka and Takeuchi, stresses the role of metaphors and careful choice of language as ways in which organisations need to get hold of corporate knowledge.[134] Recently narratives have come to feature prominently in organisational knowledge discourse and, more practically, in studies on knowledge management.[135] Some authors even claim that the main source of knowledge is narrative and therefore want organisational narratives to take the front seat in modern knowledge management. Tacit knowledge and narrative provide a potential dominant role in knowledge management.

It is claimed that narratives, in particular storytelling, fulfil multiple functions in knowledge management, such as effectively distributing uncodified knowledge and organic problem-solving competencies,[136] generating "thick descriptions" of contexts, thereby providing actors with an adequate understanding of the complex nature of practical solutions, thus setting up the basis for actionable knowing. Narrative is well suited to transmit the part of social knowledge that concerns history, values and identity. This is because narrative consists of events and evaluations: what happened, and what its moral meaning is. Stories or the narrative mode of thought is considered to build a special type of organisational knowledge that complements or may even outperform codified knowledge and analytical thought in organisations.[137] Narratives are viewed as a most promising feature in the future of knowledge management.

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[132] Snowden, D. 1999 30-37

[133] Snowden, D. 2000 147-156

[134] Ward, V and Sbarcea, K. 2001

[135] Snowden, D. 2000 147-156

[136] Swap, W. et al. 2001

[137] Schreyogg, G. and Koch, J. 2005

Stories provide a bridge between the tacit and the explicit, allowing tacit social knowledge to be demonstrated and learned, without the need to propositionalize ethics, specify in detail appropriate behavior, or demonstrate why particular heroes of the past are relevant today[138]. The reason for this is that stories do not only recount past events. They also convey the speaker's moral attitude towards these events: the protagonist of the story acted well, acted badly, is to be praised or blamed, can be taken as a model for the hearer's own behavior. These evaluations are sometimes explicitly stated within the story, but more often are suggested through the use of a single word or phrase. Indeed, it has been argued in the study of oral stories, that the most effective stories are those in which the evaluation is the least explicit. This argument is the equivalent of the familiar advice to novelists: "Show, don't tell"[139].

Furthermore, telling oral stories is a group process. The hearers are usually not passive consumers. Rather, they may agree, or disagree, or modify not only the speaker's account of what happened, but also what it meant to them.[140] Even within a formal organizational context, for example an annual meeting of a corporation, although listeners may have no opportunity to dispute publicly the CEO's account of what happened to the company and the meaning of these events, they certainly have the choice of whether to agree with the account and retell it, to mock it among their peers, or to ignore it as just one more piece of corporate rah-rah[141]. It is this participatory process which makes stories particularly effective as a way of transmitting social knowledge, because the hearer comes to participate in the construction of the story, and thus comes to have a stake in it. It may appear that it is easy to tell stories about almost everything, but in fact some kinds of knowledge are easier to convey as stories than others. Narratives are more suited to convey part of the history that concerns events, value and identity. That is because narrative consists of events and evaluations – what happened and what is the moral meaning. So, if narratives function superbly to convey institutional identity through the deeds of corporate or local heroes, then it is more suited to transmit the actual technical content of a given group or institution.

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[138] Snowden, D. 2000 147-156

[139] Snowden, D. 2000 147-156

[140] Polanyi M. 1966 2

[141] Denning, S, 2004 1-8

There are many uses for stories and more emerge every day as organisations realize the richness of the technique as compared with more conventional communication practices.[142] There are several reasons why storytelling is effective in organizations: they are engaging, easy to remember and people like them. This puts people in a frame of mind of willing to learn. Stories are interactive, but not invasive and people listen with relaxed awareness to stories and that bypasses their resistance to change. Stories represent underlying values or rule sets that provide the self-organizing capabilities of the communities that they represent. Storytelling is a pervasive technique that triggers the memory of knowledge and a desire to acquire knowledge. Coupled with metaphor, it can convey complex ideas in simple memorable forms to culturally diverse communities far more effectively than other mediums. Storytelling has provided a powerful tool in the knowledge management arsenal.[143] The quality of storytelling and its conformity or otherwise with desired corporate values is one measure of the overall health of the organization. Managed and purposeful storytelling provides a powerful mechanism for the disclosure of intellectual or knowledge assets in companies and it can also provide a non-intrusive, organic means of producing sustainable cultural change; conveying brands and values; transferring complex tacit knowledge.[144]

Tom Steward of Fortune Magazine said this about stories "If stories are powerful and if stories are going to be told – true or false, official and underground, flattering or humiliating – then leaders and managers need to be part of the process. First suss out how story rich a place is. A lack of storytelling betokens an environment where management is too controlling. Ask yourself whether the stories - about the founder, about the guy who got canned, about why the boss got her job – are ones that tell people to shut up or step up, that include or exclude. Is there room for mistakes in the company story?"[145]

In the past few years the use of storytelling has reached a cultural tipping point in many major companies and leading non-profit organisations and is the topic in management journals. The application of storytelling in organisations range from the highly practical such as how to handle a customer incidence, to highly visionary, such as how to create a culture of innovation. Leading research has shown the importance of narrative in branding, human capital and stakeholder management, innovation and change management. In almost every

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[142] Snowden, D. 2000 147-156

[143] Snowden, D. 2000 147-156

[144] Snowden, D. 1999 30-37

[145] Steward, T.A. 2001

aspect of management and organization, storytelling has a role. Stories form part of the common sense world in which intention, interpretation and interaction are all intermingled in any narrative. The narrator and listener assume shared context for any statement to have meaning. Stories carry with them the ambiguity and their meaning can be interpreted in different ways in different contexts.

Stories will always play an important role in organisations characterized by a strong need for collaboration. A detailed narrative of past management actions, employee interaction, or other intra-or extra- organisational events that are communicated informally within organizations and typically include a plot, major character, an outcome, and an implied moral[146]. Stories originate within the organisation, and typically reflect organizational norms, values and culture. Because stories make information more vivid, engaging, and easily related to personal experience, and because of the rich contextual details encoded in stories, they are the ideal mechanism to capture and communicate organisational managerial systems, norms and values.

Storytelling is a uniting and defining component of all communities. In knowledge management artificially construed stories are less effective than true ones. The stories told with intentions of knowledge sharing and knowledge transfer should be based on real experiences with the aim of generation organisational lessons learned. Storytelling is an effective tool that could be used to direct and inspire subordinates because it evokes visual imagery and emotions among the listeners.

3.2   Storytelling in organizations

In organisations storytelling has been identified as a means to:

Share norms and values: Prusak in Denning[147] argues that stories are powerful in conveying norms and values across generations within the organisation. These values and norms are derived from the organisations' past but also can describe its future. A key leadership role in organisation is to offer a compelling context and robust vision which can be accomplished through stories that emphasize the more empowering aspects of an organisation's past and

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[146] Swap, W et al. 2001
[147] Denning, S. 2001

place them in the context of the future, thus facilitating the identification of future opportunities.

Develop trust and commitment: Personal stories can expose one's competence and commitment to issues, as well as signal one's trust in and willingness to be vulnerable to others. In organisations stories of commendation or complaint about others serve to communicate their reliability and trustworthiness to others.

Support the sharing of tacit knowledge: Stories enable a more effective exchange of the embedded and embodied, highly contextual knowledge that can help solve difficult problems quickly. Sometimes wisdom and knowledge of the organisation which is built into the formal processes is not effective in solving problems that arise in the real world. In such instances the tacit knowledge that is based on experience built on practice comes into play. Stories about real life experiences at work convey such tacit knowledge in a more manageable and recognizable form.

Generate emotional connection: Denning[148] notes that stories have an inherent capacity to engage our emotions because they are about irregularities in our lives, things and situations that catch our attention by being different from what is expected. Stories of the unexpected prompt emotional response because they suggest a potential threat of not being able to control our lives, but simultaneously offer a way of understanding and responding to our futures. The emotional response makes knowledge and knowing valuable meaning that it can be easier to retrieve in future situations.

It has been suggested that the use of stories and storytelling to share knowledge represents an opportunity to leverage a traditional means of communication in organisations. Storytelling therefore, possesses a great potential as a tool in knowledge management. Swap et al. explains three ways in which stories can be used for making knowledge meaningful in organisations[149]:

The availability heuristic: when an event is made more available from memory, there is a strong tendency to believe it is more likely to occur or to be true.

Elaboration: The extent that people reflect upon and integrate information with what they already know, they will remember it better.

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[148] Denning, S. 2002

[149] Swap *et al,* 2001

Episodic memory: Stories are clearly episodic in nature. Episodic memories come from memorable experiences.

Availability heuristic, elaboration and episodic memory are a good way that stories can be used in knowledge management to turn factual information into something that is memorable; they can be attached to something people already know; and they can create an experience that is easy to remember[150].

3.3   Storytelling and Tacit knowledge

In terms of teaching-learning, there is a definite commonality between knowledge management and storytelling. Knowledge of greatest value in any organisation – expert knowledge - is often tacit. Tacit knowledge can be difficult to acquire and convey. Tacit knowledge is knowledge that we do not know that we know. Examples of tacit knowledge are how to ride a bicycle, how to knead bread, how one does their job etc. The term tacit knowledge is conventionally opposed to explicit knowledge, and can be used to describe knowledge which cannot be represented in explicit form. However when the notion of tacit knowledge is used in knowledge management, it is frequently used to describe any form of non-quantifiable knowledge, particularly the knowledge about social interactions, social practices and most generally how a group or institution gets things done. This type of knowledge is considered to be particularly problematic for knowledge management, because it is difficult to represent as propositions or rules. At the same time such knowledge is commonly and easily conveyed by narrative, although narrative exemplifies rather than exhaustively describes such knowledge.[151] Storytelling is certainly one of the ways of getting tacit knowledge out so others can use it and refer to it. It is important to acquire tacit knowledge from those people who have seniority and who have been with the company for some time. Storytelling is a way of capturing what is unique about an individual's experience and, what is unique per individual is tacit knowledge.

Knowledge management is essentially a teaching-learning interaction. Storytelling is one of the prevailing forms of communication and it possesses a great potential as a teaching-

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[150] Swap, W et.al. 2001
[151] Linde, C. 1993

learning tool.[152] Knowledge management can be used to improve the meaning of information and improve the transfer of narrative in business. This is made possible by the fact that storytelling is a natural way of learning, and a way for the brain to process information. Stories as metaphors are intrinsic to the construction of new knowledge and at the heart of the acquisition of meaning. Stories make information – especially large amounts of information - easy to understand. Stories are effective because they are easily stored in memory and therefore assist in the process of remembering. Memories are more easily stored and retrieved in story form, particularly when they encompass a goal, action and some kind of resolution. When it comes to purely listed, factual information, stories that promote elaboration and connections to the listener's personal experience, evoke clear visual images, are more memorable and therefore effective carriers of knowledge than less vivid, purely listed information. Narrative communicates a more meaningful sense of reality than the abstract and summative formations of most business plans.

The narrative capability of humans is a unique, fundamental cognitive process, which is crucial to the interpretation and reconstitution of cultural, social and personal reality.[153] Narrative is one of the most powerful ways of transmitting social knowledge - tacit individual knowledge. Consequently for this kind of knowledge it is important to understand and create social mechanisms for narration rather than focusing on archival storage. There are wide ranges of occasions on which particular, high valued stories are told and it is important for organisations to understand and foster these.

3.4   Snowden on storytelling

Snowden[154] has and is continuously conducting extensive research on the concept of storytelling in the organisational context and is of the opinion that at its most fundamental, the value of a story lies in its ability to convey complex multilayered ideas in a simple and memorable form to culturally diverse audiences. In contrast most communication, internal

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[152] Leblanc, S.M and Hogg, J 2006

[153] Kurtzman, J. 1999

[154] David Snowden is a consultant and researcher in the field of knowledge management. He is described as an expert on tacit knowledge and one of the most perspective observers of the way in which knowledge is used no organizations. He has also researched extensively stories and storytelling in the organizational context and within knowledge management. He has been one of the leading figures in the movement towards integration of humanistic approaches to knowledge management with appropriate technology and process design. Snowden developed the Cynefin framework, which is a practical application of complexity theory to management science.

and external, along with management consultancy practice tends to overcomplicate simple ideas. In using narrative in organizations we need to remember that use of the story requires passion; we need to balance analysis with emotional intensity[155]. The very power of a story can verge on negative aspects of propaganda and there is a need to create an ethic for story intervention that borrows from ethno-cultural experiments and investigation. If properly understood, the organizational use of a story is both a science and art, it has profound impact on human communities and it deserves serious and ethical treatment. Story is an old skill rediscovered for a new context and increasingly complex age[156]. It is about more effective communication, but can reveal culture, disrupt complacency and restore human value. It is important to remember that, like many aspects of our growing understanding of the role of knowledge in an organization, the use of stories is a rediscovery of a natural skill that has bound societies for centuries.[157] All cultures have stories in common, stories which carry a weight of meaning beyond the words themselves.

Snowden[158] distinguishes between two types of storytelling. Storytelling as a knowledge disclosure mechanism and storytelling meant to create meaning and understanding. Storytelling as a mechanism for disclosing knowledge can be a helpful tool for capturing tacit knowledge in an organisation. It creates a sustaining low cost means by which knowledge can be captured on an on-going basis[159]. Storytelling meant to create meaning and understanding creates metaphors to transfer knowledge in a more transparent way. Snowden also distinguishes a script and anti-story. A script is the official story of an organization. It is the norm of a particular organization, departure from which can lead to an individual being excluded, not belonging or being an outcast. Attempting cultural change is often about seeking to impose new scripts on the natural discourse of a community. An anti-story on the other hand is generally a cynical and spontaneous reaction to a script that is too far away from the reality of life within the organization concerned, or where the powerful originators or perpetuators of the script act in a hypocritical manner in respect of its underlying values. Anti-stories are present in every organization and range from initiative-weary cynicism to self-righteous indignation. It is better for organizations to attempt no change or communication through stories if it is likely to create anti-stories.

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[155] Snowden, D.2001 9

[156] Snowden, D. 2005 2

[157] Snowden, D. 1999 30-37

[158] Snowden, D. 1999 30-37

[159] Snowden, D. 1999 30-37

Factual stories are in fact "faction". This is the age-old facility of humans to change history to conform to current requirements. A factual anecdote is very rare and very easy to recognize as the pain and the passion will be visible in the storyteller's face. The vast majority of anecdotes are a mixture of fact and fiction in varying degrees – and thus faction. Moving to the purposeful construction of Story allows us to better understand and use various forms of story that exists within an organization. Anecdotal enhancement on its own always carries the danger of becoming a script and generating anti-story, especially where it is taken up too enthusiastically by the organization.

Snowden further distinguishes stories in the following manner – Anecdote which is a naturally occurring story. Anecdote may be captured in conversation, virtually or in a workshop. It may be fact, faction or fiction. In contrast, a story has been purposefully constructed[160]. Some anecdotes, particularly those told by a powerful storyteller, or those that have been told and retold many times in the context of training courses, can take the form of a story, but the key differentiator is the element of deliberate construction and intent. The anecdotes of a community provide the raw material for story by using characters, incidences and context from the anecdotal material captured from a community that it intends to influence. Constructing stories in isolation from this raw material can generate anti-stories as the construct is too far removed from reality.

The most fundamental requirement of anecdote capture is not to influence the anecdotes that one is told by a community. Structured interviews, questionnaires and workshops (which are all methods of eliciting tacit knowledge capture and discovery) will tend to produce anecdotes that conform to the script of a community – because individuals in large organizations soon learn to adopt camouflage behaviour as a survival technique. The implication of this is not ideal for knowledge sharing and knowledge transfer, because real knowledge sharing happens when people are honest and vocal about their experiences.

Anecdotes can be captured using anthropological observation, where by the observer becomes unobserved. The observer enters the community and blends in with the community in such a way that he is able to gather the day to day anecdotes as a part of the community by asking naïve, innocent questions[161]. Although anthropological observation is a very effective way of gathering anecdotes, it suffers from two restrictions. Firstly the anecdotes are only

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[160] Snowden, D. 2000 147-156
[161] Snowden, D. 2000 9

stimulated by events that take place or are recalled during the period of observation and in the case of project management - in a project lifecycle environment this is too restrictive. Secondly the capture of anecdotes is confined to fact or faction, but does not permit the use of fiction, which can be a useful disclosure device, particularly for those valuable and painful anecdotes of failure that are so important to the creation of a learning environment in organizations.

Anecdotes provide a means by which an organization or a leader creates a common identity by providing models and examples of good and bad behaviour. They have been common elements of effective leadership throughout the ages. Anecdotes purport descriptions of isolated incidences in the history of the individual or company that powerfully convey a set of values or desirable actions. The leader is often the protagonist in that story. Naturally occurring stories come as fragmented anecdotes[162]. Occasionally there could be a fully formed and developed story, but mostly they are anecdotal, often only a paragraph long when they are transcribed. Those with the most meaning are often the worst constructed. A story is always told in context from a context. When read it will trigger a reaction, but the reaction is not necessarily sympathetic to that which is experienced or intended by the storyteller. Each reader has their own context and situation.

Snowden states that purposeful stories have the following elements in common[163]:

- They are able to capture and hold the attention of the audience. They can be entertaining, painful or just arouse curiosity.

- A good story can be told to all audiences regardless of educational background, role or experience and all members of the audience will gain meaning according to their own interpretation.

- Good stories self propagate – they have a life of their own and are not linked with the storyteller.

- Stories and their metaphors can provide a new language for new forms of understanding. They can tap into the intellectual asset base of an organization and its environment.

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[162] Snowden, D. 2005, 4
[163] Snowden, D. 1999 30-37

Storytelling circles are sensibly formed around groups with some degree of coherence and identity in the organization: it may be common past experiences in a project environment or a common job function or aspiration[164]. The important factor is that the community has some common history or other reference from which they can draw anecdotes. This is a typical characteristic of communities of practice (COPs) in knowledge management. Within storytelling circles there are the following useful techniques for eliciting anecdotes[165]:

Alternative histories - More truth is achieved through alternative histories than through the official one. Alternative histories provide a powerful means by which a group can explore fictional space and stimulate the creation of a richer anecdotal space[166]. Any anecdote has number of turning points, where an alternative future was possible based on a small change in decision or environmental factors. Exploration of these alternative histories is a powerful source of truthful anecdote[167]. Historians create alternative histories as a way of better understanding what actually happened and to examine the values and motivations of those involved.

Metaphors - provide a powerful eliciting technique for anecdotes[168]. The use of metaphors can provide a common reference for the group that moves them away from the current concerns and prejudices into a safer space, but a space that is disruptive in the association of ideas that it stimulates. Metaphors can provide a language to sustain thinking within the group after the event itself.

'Fish tales or 'Dit spinning' - It's human nature to swap tales and experiences in a social setting and there is a natural tendency to escalate. If one tells a harrowing or amusing experience, the next person tells a better one, and so on. The desire to tell a better story overcomes the inhibitions of conforming to the original story[169].

Shifting of characters or context in a story can elicit a higher level of diversity in the anecdotal material.

According to Snowden if storytelling can be used to disclose knowledge, then it can be used to communicate it. Snowden developed a formal method or model for the use of stories

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[164] Snowden, D. 2005 6

[165] Snowden, D. 2000 6

[166] Snowden, D. 2005 7

[167] Snowden, D. 2000 7

[168] Snowden, D. 2000 8

[169] Snowden, D. 2005 7

through the lessons learned project, which was one of his first uses of story in knowledge management. His model is based on two fundamental insights:

- A distinction between an anecdote captured in the field through observation or the story elicitation techniques described previously.

- Recognition that the story represents underlying values or rule sets that provides the self-organizing capabilities of the communities they represent.

In order to understand what we know and how we know it, and by implication how we make decisions, we need to understand the multi-faceted narratives of our day to day discourse. The ability to pass knowledge through a story is a distinguishing feature of human evolution. Narratives remain the principle mechanism of learning and knowledge transfer in organizations.

Snowden distinguishes the following noteworthy seven characteristics of a story[170]:

- Stories convey simple ideas in a simple, consistent and memorable form.

- Story can convey a message in culturally diverse situations without loss of meaning or integrity.

- The use of metaphor provides a mechanism to challenge and disrupt "received wisdom" or hide bound tradition without excessive threat.

- A well constructed story is multi layered and its meaning unravels over time. A powerful story can be told and retold with new value revealed on each retelling and in unforeseeable circumstances.

- The traditional use of archetypes in story can assume a confessional character, which in turn permits the disclosure of failure and consequent stimulation of learning without the need for criticism or admission of responsibility.

- The anecdotes that arise naturally in a community reflect the underlying values, operating principles and beliefs that are the real culture of that community and which bear a fractal relationship to the organization as a whole.

- If a community is aware of the nature and use of story techniques, then story projects become ethically self-regulating, and pernicious use of story for character assassination and misrepresentation becomes more difficult.

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[170] Snowden, D.2001 2

Snowden defines three organizational story approaches:

Fables which are a means of delivering a consistent message through the medium of a restricted number of storytellers, to cultural diverse audiences. Storytellers use fables to propagate values and beliefs of a whole society, both through the direct and stated message or moral that is their conclusion and the underlying unstated messages and value transformation that arise from the interactions of the characters with themselves, with the environment and with the supernatural[171]. The basic message constructed in one culture using the form existing within that culture, is then told in another culture using a different form of the same story. The message is thus conveyed using channels already worn on the audience's brains through the stories of their childhood.[172]

Disruptive metaphor enables disruptive or lateral thinking preventing entertainment of attitudes and stagnant ways of doing things[173]. Metaphors allow conversation about painful things. Simple uses of metaphor can be found in books written for children, television series and commonly known historical situations. At its most sophisticated a metaphor can encompass game playing and involve significant change.

Archetypes have a long honourable tradition in storytelling[174]. They represent extreme aspects of human behaviour and the stories collectively allow humans to reflect on their own condition. Archetypes reveal attitudes, beliefs, values and culture. Archetypes that are extracted from anecdotes told naturally in a community resonate. By gathering anecdotal material from a community and stimulating high discourse levels in a workshop, archetypes that accurately reflect that community can be made to emerge. Archetypes can be used as a measure of culture or brand when used on employees and customers respectively. They can be used as a mechanism of introducing soap opera from stories into an e-learning environment. Just as a good teacher provides context to support the content that will follow, so story repopulates an e-learning environment with context to facilitate learning. Archetypes can be uses as a confessional device by admission of failure without attribution. By encouraging stories about archetypes in lessons learnt reviews learning is made available to

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[171] Snowden, D. 2005 3

[172] Snowden, D. 2005 3

[173] Snowden, D.2005 5

[174] Snowden, D. 2005 5

the wider community and not hidden or sanitized. Archetypes enhance system design – taken as a set, archetypes reflect the likely uses of a system.

Storytelling can be a powerful knowledge disclosure mechanism in large projects environments where knowledge is disclosed over timescales measured in years not weeks. It can be used to capture lessons learnt on the projects in narrative form. This is the easiest most obvious alignment of knowledge management to storytelling. The use of storytelling as a disclosure mechanism creates a largely self-sustaining, low cost means of capturing knowledge on an ongoing basis. This is in contrast with the conventional consultancy approach which requires constant measurement and intervention by expensive teams. Storytelling is a natural, organic process in which the organization is managed as a complex ecology, through a series of low cost interventions.[175]

3.5   Denning on storytelling

For Denning[176] in the broadest sense a story or a narrative is something told or recounted more narrowly, and more usually, something recounted or told in the form of a causally linked set of events; account; tale. It is the telling of a happening or connected series of happenings, whether true or fictitious. The use of story is focused on catalyzing change in the organisation. Denning describes or distinguishes stories in the context of Springboard stories. A Springboard story is a story that enables a leap in understanding by the audience so as to grasp how an organisation, community or complex system may change[177]. A Springboard story has an impact not so much through transferring large amounts of information, but through catalyzing understanding. It enables the listener to visualize from a story in one context what is involved in a large scale transformation in an analogous context.

Springboard stories are told from the perspective of a single protagonist who was in a predicament that is prototypical of the organisations' business. The predicament of the explicit story is familiar to the particular audience, and indeed, it is the very predicament that the change proposal is meant to solve. The stories have a degree of strangeness or incongruity

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[175] Snowden, D. 1999 30-37

[176] Stephen Denning was program director in knowledge management at the World Bank, where he spearheaded the bank's knowledge program. He now works part time with the World bank and consults with other organizations on knowledge management and storytelling. He invented the "Springboard Story" which describes how storytelling can serve as a powerful tool for change management and knowledge management.

[177] Denning, S. 2001 xviii

for the listeners, so that it captures their attention and stimulates their imaginations. In the springboard stories the world described is familiar to the listener, which enables a quick transition to that world. Through the narrative format of the story, listeners are invited to and unconsciously do, live the life and situation of the protagonist. Immersed in the story, it is as much the listener's identity as that of the protagonist that is examined and observed in the co-created virtual world[178].

The Springboard story introduces a real person, with a specific identity, in a real-life environment and situation that is very similar to that of the audience. Through the narrative nature of Springboard stories, listeners also journey through the triumph and affirmation of the protagonist, experiencing what it would be like to be in that role in the situation experienced in the created world. Due to the familiarity of the situation, easier analogous action and application in the real world of the listener is facilitated. Inside the world of the story, the audience's lives "appear as through the lens that makes sense, as though the hazy fragments of experience for once come suddenly into focus".[179] This focus facilitates the remapping of their lives to the universe, with clearer links between the two. Stories fill our lives in the way that water fills the lives of fish. Stories are so all-pervasive that we practically cease to be aware of them. Springboard story should be short and simple. The narrative format invites the listener to enter the world that they are co-creating. The springboard story facilitates an even more significant role in the creation, by creating only limited detail about the story-world. Listeners are required to provide the "missing" elements to fully create the world and complete the story in their own minds.

Although Denning notes that he effectively "stumbled" onto the use of story to effectively communicate significant changes in an organisation, this finding does not appear to be unique. According to Human Resources Management storytelling can be used effectively at a time when an organisation is about to undergo huge changes, and when those at the top need managers and other employees to envision what the organisation will be like and their role in it, after the changes. Human nature tends to make us apprehensive, maybe even downright scared of change, with the consequent reluctance to go for it enthusiastically. In the absence of a time machine to let people see that future organisational change is not a bad thing after all, the nearest you can get to it is their own imagination, fired by a "story-like" explanation

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[178] Denning, S. 2004 1-8
[179] Denning, S. 2001

of what is involved[180]. Denning uses storytelling as a tool for sparking change and moving organisations towards innovations like knowledge management.

The World Bank[181] is the environment where Denning introduces the use of Springboard stories to communicate proposed change ideas, and to motivate people to action that supported the change ideas. Springboard stories contributed to a successful transition through the significant organisational change and a successful, sustainable organisational transformation at the World Bank. In the current economic environment knowledge and information are growing as a requirement from clients. This change in focus to knowledge and the movement of information requires a change in structure and operational divisions. Finding effective methods of sharing knowledge within and across teams is becoming crucial for the survival of the organisation.

Denning distinguishes between three forms of storytelling. The first is linked to change management, whereby the purpose is to move an organization forward through a transformation by enthusiasm and spontaneity. He suggests using a true life experience told in a minimal fashion and launched off a "springboard" into the recipient's imagination. This important step allows the listeners to imagine how the picture may or even should look. The technique involves talking about how the organization could change if relatively small but successful incidents were extrapolated across the organization in the future. The second form of storytelling helps to encourage people to work together. Storytelling can accelerate the development of trust within a group more rapidly than other techniques. This is very crucial in the development of communities of practice in knowledge management and also for knowledge sharing in general. This form of story requires a lot of context and needs to be a story that is personally moving, which then sparks other stories from other members of the group. The third form of storytelling is the knowledge sharing story. One needs to talk about knowledge with sufficient detail to enable the listener to understand the context and background within which the knowledge was created. Denning developed a framework of narrative for knowledge sharing based on theories of cognitive psychology and neuro-physiology in a very pragmatic way.

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[180] Van der Rede, L. 2007 33

[181] The World Bank is an international financial institute providing loans to developing countries for capital programs aimed at poverty alleviation.

The timing of the story is also important in successful storytelling[182]. The virtual journey that listeners take when a story is the medium of communication has an impact on the successes in terms of the timing of the storytelling. According to Denning's experience, Springboard stories worked best when introduces at the outset of engagement with the audience. This is so that the listener sees everything else in the presentation through the prism of a living story. This can be attributed to the fact that the listeners have projected themselves into the mental location described in the story and can see everything constructively, creatively and be able to generously fill in the missing links. As partners in the idea with the presenter, they can join in bringing the idea to life, since they are listening to everything as participants. Denning begins his presentation with a few slides to remind his audience the objective and subject at hand, thus overall knowledge sharing. This has been the case since knowledge management acquired official acceptance as a central organizational strategy. Knowledge management has become something that everyone had to reckon with and cope with[183].

The use of story as proposed by Denning is focused on bringing about change in the organization. During attempts to communicate, introduce and successfully sustain organizational change in the World Bank, Denning developed the view that stories were the only medium that worked to achieve his objectives. Denning discovered that as a powerful leadership tool – storytelling often succeeded in inspiring and motivating people when hard logic failed.

Denning distinguishes the following components of a story:

- In a story there is always a single prototypical protagonist and the predicament.
- One should be able to establish the strangeness of the story.
- There should be resolution of the predicament embodying the change idea.
- The audience should be able to extrapolate the story to complete the picture.

According to Denning[184] the explicit story must be relatively brief and have only enough texture or detail for the audience to understand it. The objective is for the audience to discover and co-create their own mental story in their own terms in relation to their own

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[182] Denning, S. 2001 199

[183] Denning, S. 2001 108

[184] Denning, S. 2001 197

context and not to get caught up in the explicit story. The aim is to get the listener's attention to focus on joining the dots between the implicit story and their tacit understanding.

The story must be intelligible to the specific audience. Thus the audience needs to understand enough about the protagonist and the initial incidence for them to be hooked by the problem story or the conflict. The story must provide just enough information for the audience to understand and follow its meaning without getting lost in the story.

The story should be inherently interesting. There should be an element of strangeness in the story. In order to capture interest the actions described might be difficult, with a predicament that cannot be handled in the usual manner, or unexpected events happen in an otherwise normal sequence of occurrences.

The story should spring the listener to a new level of understanding by epitomizing or embodying a change idea. For the story to be effective with large numbers of the audience, it must be an easy mental leap from the facts of the springboard story to offer new input into the various versions of the organizational life story that the members of the audience are carrying in their heads.

The story needs to spring the listener out of the typical negative, questioning, sceptical frame of mind, and into a positive attitude of wanting to understand the explanation of the change idea. For this to happen the listener must be in positive frame of mind and a 'happy ending' is most likely to achieve this effect.

The story should embody the change message that is close to the surface of the explicit story, which the audience can discover on its own and make into its own change message.

The change message should be implicit. If the audience is sceptical, resistant and unreceptive, one should let the listener discover the implicit change message so that it becomes the audience's own idea and therefore more meaningful to them.

The listener should be encouraged to identify with the protagonist in such a way as to enable them to see things from another perspective.

The story should deal with a specific individual or organization. People are more likely to project onto a single individual than onto multiple individuals or groups.

The individual should be a central figure in the business of the organization. That is, the protagonist should be prototypical of the organization's main business. E.g. If the principal business is mining, the protagonist should be someone in mining.

The story should be true and plausible. The apparent superiority of a true story over a wholly invented story in terms communication is palpable.

The story should be tested over and over before being tried out on a large group in a high risk setting.

Similarities between Snowden and Denning's storytelling

There are more similarities than differences in the way that stories are used in the thesis as per the two main authors.

Denning's stories are about knowledge share and knowledge transfer and involve a lot of socialization and internalization. Snowden emphasizes knowledge capture sharing and transfer and externalization.

Both Denning and Snowden agree that organisational stories should be true and plausible in order to be meaningful. In their studies of storytelling mechanisms, the stories told in this case should be based on real experiences with the aim of sharing or transferring real lessons learned. In knowledge management artificially construed stories are less effective than true ones. Denning and Snowden go on to distinguish three forms of storytelling for leadership. They both identify knowledge sharing stories. This form of story involves detail in order to help the listener to understand the context and background within which the knowledge was created. Knowledge sharing stories have evolved from the idea that often the most important information in an organization often comes from experience, lives in people's heads and is transmitted through the stories they tell each other. These stories differ from other forms of story because they have no hero and no plot. They are about problems and how they were successfully or unsuccessfully solved. They are about the problem, the solution and a detailed explanation. This form supports knowledge sharing and is very pertinent in knowledge management environment as it allows for the flow of tacit knowledge throughout the organization.

Denning and Snowden identified another form of story as a parable, which is a form of story that allows the leader to transmit values to the organization. Parables are often about values

and are one-dimensional without much detail. They are not true stories even though they are presented as true stories. The facts are less important than the truth of the values being communicated and the message that it is a desirable value in the organization. Denning cautions however, that the value being conveyed must be consistent with the leader's actions. These stories can be used to communicate mission and vision of the organisation as per Snowden's opinion.

Another form of story identified by Denning and Snowden is a story that fosters collaboration and is about a situation that the listeners has experienced, and serves to elicit more stories from those present. The initial story must be moving enough to unleash the narrative impulses in others. This story can be used to set objectives for a group, giving analogies or examples of how the group should work together in order to communicate the desired results and for group learning about what works or does not work. This form of story encourages people to work together and quickly develop trust within the group. This form of story requires a lot of context and should be personally moving so that it can spark other similar stories from the group. This type of story is supported by Communities of Practice in that it involves sharing and exchange of knowledge and experience and it supports internalization.

3.6   Boje on storytelling

Boje defines a story as 'an oral or written performance involving two or more people interpreting past or anticipated experience[185]. Storytelling organisations is about how people and organisations make sense of the world via narrative and story[186]. Narratives shape our past events into experience using coherence to achieve believability. Stories are more about dispersion of events in the present or anticipated to be achievable in the future[187]. These narrative-coherence and story-dispersion processes interact so that meaning changes among people, as their events, identities and strategies get re-sorted in each meeting, publication and drama.

Boje[188] further states that a story can be seen as plot comprising causally related episodes that culminate in a solution to a problem. It is written or imagined pespectivistically, from the

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[185] Boje, D 2008 262

[186] Boje, D. 2008 4

[187] Boje, D. 2008 4

[188] Boje David is one of the leading scholars of organizational storytelling. He invented the term "antenarrative" which is defined as the double move of a bet (ante) or a before (ante) of story on its way to narrative. The concept of "antenarrative" is one of Boje's most significant contributions to organizational storytelling research.

viewpoint of a theoretical or participant observer and its incorporation of a coherence that is constructed from a chair of particulars. In contrast to a story an anti-story is another story that arises in opposition to the earlier one. Thus, a story that has significant impact in a group or organisation will give rise to related stories as well as anti-stories. Anti-stories aim at understanding the original story that can arise to negate or counter stories of official goodness, or to undermine the original story. The relation between story and anti-story constitute an internal dynamic, the output of which, nevertheless, emerges systematically as story.

Antenarratives are prospective (forward-looking) bets (antes) that an ante-story (before-story) can transform organisation relationships. Forward-looking antenarratives are the most abundant in business, yet the most overlooked in research and consulting practices. These fragile narratives, like the butterfly, are sometimes able to change the future, to set changes and transformations in motion that have an impact on the big picture. Antenarratives seem to bring about a future that would not otherwise be. The key attribute of antenarratives is they move from context to context, shifting in content and refraction as they jump-start the future. They are also discarding (forgetting or choosing to ignore items previously acquired in the other context)[189].

Boje highlights the following attributes of a story:

Endurance – stories endure, they may change at times but the essence of the story endures. Stories are salient because they are funny, clever and moving. Stories help in sense making and their capacity to explain. A story makes sense if it is logical and it's true to narrator's experience.

Founding story is defined as a sentence or paragraph that answers the question, where did we come from.

Emergent story - can be defined as absolute novelty, spontaneity and improvisation without past or future. Emergent stories are conceived in the here-and-now co-presence of social

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His handbook on the subject claims to be the first volume to offer a systematic examination of non-traditional enquiry in the field of management organizing and approach.

[189] Boje, D. 2008 14

communicative intercourse of narrative-memory prisons ready to capture and translate emergence[190].

Boje defines a living story theory as the emergence, trajectory, and morphing of living story from antenarrative-conception to the death of decomposition and forgetting to tell anymore.[191] Living story is neither being nor non-being; it is a form of haunting. The living story is in-between dead and alive, between forgotten fragments and revitalizing those into one's own life. Living story is collective on-going, simultaneous, fragmented, and distributive storying and restorying by all the storytellers reshaping, rehistoricizing and contemporalizing. The living story is made up of a complex collective-weave of many storytellers and listeners who together are constructing the dynamics that reduce living story opposed by antenarrative forces of more amplifying- transformation[192]. Living stories are trajectory antenarratives changing in the moment becoming reinterpreted, restoried, told differently in each situational context, just plain unstable, as versions proliferate and emerge. Living story is all that happens to all the people, simultaneously, in all the space-time horizons where "storying" is going on.

A living story is one where stories move to enter the culture of a social collective like an organisation and become dismantled[193]. Here stories are fragmented and its shreds are collected together with those from other stories, perhaps disparately, arbitrarily and spontaneously over time by uncoordinated individuals in the collective. These shreds can become dynamically transformed indirectly through metaphor, or directly as local patterns of knowledge or myth (whether or not false knowledge), both of which can underpin new perceptions in the social collective. Living stories not only have relativistic temporality - i.e. bridging past into present, - there are times when a story can be told for example seasonally according to relevance. Secondly, living stories have a place and places have their own stories to tell. Finally, living stories have owners, and one needs permission to tell another's story of a time or a place.

Dead narratives can be resurrected. Living story is not necessarily positive. Each living story is related to many dead narratives. A living body of stories remains part of day – to – day discourse. Dead stories are the forgotten ways of telling. These ways of telling cease to exist.

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[190] Boje, D. 2008 55

[191] Boje, D. 2008 239

[192] Boje, D. 2008 240

[193] Boje, D. 2008 240

Remnants and fragments of dead ways of telling stories maybe recoverable in archives. We can contact retirees or people who just left an organisation. Beneath the flowing lines of living stories in conversation there are these dead stories. Dead stories are like old bones poking through the skin[194]. To study the living story is to investigate dead stories. Forerunners to contemporary story chatter were once living in day-to-day discourse; or stories were retrospectively imagined to have been told. There is an ambiguity and relativism with living stories. The living sense making currency of stories will eventually fail to circulate, and pass from collective memory. When a person dies all that remains are story fragments. The dead are kept alive in stories retold by friends and enemies, until they too pass away[195].

Boje[196] is of the opinion that "to suppose that anything remotely resembling a whole coherent story with beginning, middle, and end that occurred in a place is non-sense." We encounter living story fragments that occur here-and-there, now and then. Living story fragments suggest beginnings long forgotten, or purged from collective memory. Endings are illusions. Stories are more apt to begin in the middle and die before they end. Story fragments clearly appear in organisation dialogue, debate, and discourse. The fragments can be related to earlier less recalled, or collectively forgotten story fragments. The living and dead story fragments are interdependent. They happen simultaneously. Dead stories are background to what is foreground in living ways of telling. There is a world of forgotten story fragments inseparable from living retrospective ways of telling. Living story inquiry is not just about recollection, it is about taking a critical view to ante narration[197]. Storytelling organisation is defined as 'collective storytelling system in which the performance of the stories is a key part of members' sense-making and a means to allow them to supplement individual memories with institutional memory. Acts of retrospection, reflexivity and emergence are inter-animating in the day-to-day communicative interaction of people in the Storytelling Organisation.

3.7   Czarniawska on storytelling

Czarniawska states that stories are at the heart of our day to day discourse and our sense making abilities. They form part of a common sense world in which intention, interpretation

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[194] Boje, D. 2008 241

[195] Boje, D. 2008 241

[196] Boje, D. 2008 241

[197] Boje, D. 2008 241

and interaction are all intermingled in the narrative. The narrator and listener assume a shared context for any statement to have meaning. Stories carry with them ambiguity and their meaning can be interpreted in different ways in different contexts. Narratives create meaning and is a meaning making tool for all humans at various levels of literacy.

For Carniawska[198] the solution to how to interpret the meaning-making tool aspect of narrative is to examine story as genre and its focus on drama and autography. Boje[199] also takes a stand linked to drama, where the organisation is assumed to be multiplicity of stages on which different plays are acted out by organisational member simultaneously. Boje sees narrative occurring in fragments, with fully developed stories seen as unusual. Czarniawska[200] sees the narrative introduced in organisational studies in four forms:

- Research that is written as a story or tales from the field
- Collecting stories in the work place – field stories
- Seeing life as story making and organizational theory as story reading.
- Reflection that is a form of literary critique.

Czarniawska states that narrative enters organization studies in at least four forms: organizational research that is written in a story like manner – tales from the field; organizational research that collects organizational stories; organizational research that that conceptualizes organizational life as story making and organizational theory as story reading (interpretative approaches); and a disciplinary reflection that takes the form of literary critique. Organisational narratives, as the main mode of knowing and communication in organizations, are an important focus for organization researchers. Their construction and reproduction must be documented and their contents must be interpreted. Narrative form of reporting will enrich organization studies themselves, complementing, illustrating, and scrutinizing logical form of reporting.

For Czarniawska, narrative in its most basic form requires at least three elements: an original state of affairs, an action or an event, and the consequent state of affairs. For the three

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[198] Czarniawska Barbara is an organization theorist who is best known for her contributions to constructive theory in management studies, as well as storytelling and narrative analysis in anthropology of organizations. Her research takes a constructionist perspective on organizing, most recently exploring the management of overflows in for example news agencies. She is interested on methodology, especially in fieldwork techniques and in the application of narratology to organizational studies.

[199] Boje, D.M. 1991

[200] Czarniawska, B. 1997

elements to become a meaningful whole they require a plot. This is done by introducing chronology (and then…), which easily turns into causality (as a result of, in spite of). A story may contain an explicitly formulated point or else the readers are supposed to provide one. A basic narrative can carry a load of ambiguity and therefore leave openings for negotiating meanings. In narrative, the perceived coherence of the sequence (temporal order) of events rather than the truth or falsity of story determines the plot and thus the power of a narrative as a story. A story with an incomprehensible plot will need some additional elements to make sense, even though the two events may be true and correct. There are no structural differences between fictional and factual narrative, and their respective attraction is not determined by their claim to be fact or fiction. The greater part of organizational learning happens through the circulation of stories. The process of storytelling is a never-ending construction of meaning in organizations.

Can stories acquire a legitimate place in science?[201] After some resistance, the insights on which scientific knowledge is grounded in metaphorical thinking have been more or less commonly accepted (thanks to writers such as Kuhn, McCloskey and Morgan)[202]. Stories have a harder time gaining a legitimate place in science. Yet economics is full of stories and metaphors. Stories and metaphors cannot replace one another because they different tasks to accomplish.[203] A narrative is a mode of association, of putting things together (and, and, and), whereas metaphor is a mode of substitution (or, or, or). Alternatives to a narrative are lists and formal logic. An alternative to a metaphoric mode of substitution is for instance labelling - that is giving proper names to objects and phenomena[204].

Organisation narratives, as the main mode of communicating in organisations, are an important focus for organisation researchers. Their construction and reproduction must be documented and their contents must be interpreted. Narrative forms will enrich organisations studies themselves, complementing, illustrating, and scrutinizing logico scientific forms of reporting[205].

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[201] Czarniawska, B. 1998 6
[202] Czarniawska, B. 1998 6
[203] Czarniawska, B.1998 6
[204] Czarniawska, B. 1998 7
[205] Czarniawska, B. 1998 17

3.8   Summary of chapter

In summary storytelling has great potential for making knowledge meaningful in business. Storytelling is accentuated as the never ending construction of meaning in organisations.[206] Storytelling by its nature supports collaboration in organisations which is a requirement for knowledge management. The simple reason why storytelling is becoming a major factor in management is that it works and is shown to work through the examples given by Denning's experiences at the World Bank and Snowden's various experience including the IBM. Stories in their simplest form communicate complex meanings and are self-propagating. Self-propagation is an important concept for usable stories because that is how stories spread and easily disseminate. This context or quality of the story is what makes it an important tool for knowledge management. One of the important aspects managing knowledge is ensuing that the knowledge is easily disseminated and shared organization-wide. When a story is coupled with metaphor, it can convey complex ideas in simple memorable forms to culturally diverse communities far more effectively than other mediums. Story is an old skill rediscovered for a new and increasingly complex age[207]. A story is a very powerful tool, it is the natural and most sustainable of communication techniques developed by the human race[208]. Stories are not only about communication, but are a sophisticated way of understanding the underlying culture of a community and a means of disrupting that community to the point where real learning and innovation takes place[209].

Storytelling is a way of capturing what's unique, and what is unique in an individual is their tacit knowledge, which should be shared collectively in the organisation for greater value. Knowledge of the greatest value to an organization – expert knowledge is often tacit.[210] Throughout the thesis there is emphasis on the point that tacit knowledge – that is - knowledge in people's heads is difficult to convey and to acquire in most organizations. It is important for organizations to endeavour to acquire tacit knowledge from all members of the organisation, especially the senior more knowledgeable members of the organization who have been with the company for some time. They gain knowledge through their daily experiences in the organization and have more stories to tell. Expert storytelling supports the

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[206] Czarniawska, B. 1998 2

[207] Snowden, D. 2005 2

[208] Snowden, D. 2000 147-156

[209] Snowden, D. 2005 6

[210] Nonaka, I and Takeuchi, H. 1995

transfer of knowledge across large spaces. Tacit knowledge is knowledge that we do not know that we know and storytelling is one of the best ways to extracting tacit knowledge out of members of an organisation so others can refer to it. It is apparent too that the use of storytelling to convey tacit knowledge can improve an organization's knowledge management because knowledge management is about sharing experiences and knowledge so that others can learn from those experiences and use that knowledge to improve the organization.

Managed and purposeful storytelling provides a powerful mechanism for the disclosure of intellectual or knowledge assets in companies and it can also provide a non-intrusive, organic means of producing sustainable cultural change; conveying brands and values, thus transferring complex tacit knowledge. Snowden's storytelling circles are an example of knowledge management sharing of stories in a social context and setting. Storytelling can be a powerful knowledge disclosure mechanism in large projects environments where knowledge is disclosed over timescales measured in years not weeks. Stories can be used to capture lessons learnt on any projects in narrative form. Knowledge disclosure is an example of the most obvious alignment of knowledge management to storytelling. The use of storytelling as a disclosure mechanism creates a largely self-sustaining, low cost means of capturing knowledge on an ongoing basis. This is in contrast with what organizations usually resort to in trying to capture and share knowledge - conventional consultancy approach which requires constant measurement and intervention by expensive teams[211]. Storytelling is a natural, organic process in which the organization is managed as a complex ecology, through a series of low cost interventions.

The process of storytelling provides a constant platform for construction of meaning in organizations. The challenge facing organisations is how to develop tools that will help manage and capture knowledge residing in people's minds as an important organisational asset. Narratives can be used in knowledge management as a way of eliciting and disseminating knowledge, and also to encourage collaboration, to generate new ideas and to "ignite change."[212]

The four authors mentioned in this chapter concur on the idea that purposeful stories have great potential to support knowledge management – even though they disagree on various

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[211] Snowden, D. 1999 30-37
[212] Wikipedia

aspects of the story. The greater part of organizational learning happens through the circulation of stories. The process of storytelling is a never-ending construction of meaning in organizations.[213]

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[213] Czarniawska, B. 1997

4 The role of storytelling in knowledge management

This chapter has the objective to pull together the disciplines of Storytelling and Knowledge management in relation to Becerra et.al's key points of effective knowledge management as well as knowledge management systems and methodology as outlined in the knowledge management chapter previously. The chapter argues the role of storytelling in knowledge management and collates the two disciplines. Becerra's framework is somewhat based on Nonaka's SECI model and as such will be incorporated in the discussion in this chapter. As mentioned previously, this thesis explores the potential ways of leveraging knowledge that resides in people's minds - tacit knowledge - using Becerra et al.'s knowledge management processes of knowledge discovery, knowledge capture, knowledge sharing and knowledge application and knowledge systems and the role of these processes in supporting organizational use of narrative. There is a definite role for storytelling in knowledge management as developed and used by Dave Snowden, Stephen Denning, and to a lesser extend Barbara Czarniawska and David Boje. Storytelling has a potential considerable role to play in supporting knowledge management solutions as developed by Becerra Fernandez. Similarly Becerra et.al acknowledges storytelling as an effective mechanism for knowledge management as per key organisational areas identified by Denning and Snowden in their writings overall. Becerra also draws attention to areas in organisations where storytelling can be effective in the management of knowledge.

Storytelling plays a significant role in organizations characterized by a strong need for collaboration and teamwork. Stories originate within the organization so they typically reflect organisational norms, values and culture. Stories are the ideal mechanism to capture and share tacit knowledge because they make information more vivid, engaging and easily related to personal experience. Because of the rich contextual details encoded in stories, they have been observed to be useful to capture and communicate organisational managerial systems. Storytelling helps managers and employees to actively think about the implications of change and the opportunities for the future of their organizations. Listeners actively understand what it would be like if things were done in a different way, recreating the idea of change as an existing and living opportunity for growth[214]. Snowden believes that the story suggests a

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[214] Denning, B. 2001 96

radically different approach to managing change in complex management systems than many currently used management practices and will therefore provide future improvement of the role of knowledge workers[215]. Stories can ignite action in knowledge-era organizations as per Denning.

4.1 Becerra's framework in relation to tacit knowledge and story

In Becerra's model of knowledge discovery process, the discovery of new explicit knowledge relies directly on combination, whereas the discovery of new tacit knowledge relies most directly on socialization. Socialization is the process of creating knowledge across the organization through narrative in activities such as communities of practice or apprenticeship. In this instance the sharing of knowledge occurs through face to face interaction thus there's exchange of tacit knowledge. In knowledge management knowledge discovery is supported by outfits such as Communities of Practice (COP). Communities of Practice are elaborated on because they have recently become key components in the organizational learning toolkit and in knowledge management. Rumizen[216] dubbed them the "killer APP". Communities have been studied at great lengths in Anthropology, Sociology and Psychology because they form the core of the human social system. Communities of Practice provide a platform for sharing of knowledge in a collaborative environment where members can solve problems, test out new ideas, learn about new developments in their fields and build a sense of belonging with others in similar circumstances[217]. These communities consist of groups of people who have a mutual interest in a topic and regularly engage in sharing and learning based on their common interests or methods of working[218].

Communities of practice and storytelling enhance technology by allowing people to connect and interact when required – as occurs in the case of virtual communities practice. As mentioned in the knowledge management chapter Communities of Practice are formed by people who engage in a process of collective learning in a shared domain of human endeavour: a tribe learning to survive, a band of artists seeking new forms of expression, a group of engineers working on similar problem, a clique of pupils defining their identity at school, a network of surgeons exploring novel techniques, a gathering of first-time managers

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[215] Snowden, D. 2005 2

[216] Rumizen, M. 2002

[217] Rumizen, M. 2002

[218] Wenger, E. 1999

helping each other cope. In a nutshell – Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly[219]. The interaction and knowledge discovery process takes place via narrative communication as per Becerra and thus socialization as per Nonaka. Socialization is once more fundamental to narrative and tacit knowledge creation and discovery.

Knowledge discovery systems then support the process of developing new or explicit knowledge from data and information or from synthesis to prior knowledge, and support combination and socialization of knowledge, which all deals with narratives. In the case of tacit knowledge the integration of multiple streams for the creation of new knowledge occurs through socialization.[220] Socialization is the synthesis of tacit knowledge across individuals, usually through joint activities instead of written or verbal instructions. Socialization as a means of knowledge discovery is a common practice in many organizations pursued either on purpose or by accident. For example by transferring ideas and images, apprenticeships help newcomers to the organization see how others think as was observed in the water-cooler conversations which helped knowledge discovery and sharing among groups at IBM[221]. Conversations at the water cooler or in the company cafeteria are often occasion for tacit knowledge transfer. In the new economy conversations are the most important form of work. Conversations are the way knowledge workers discover what they know, share it with their colleagues and in the process create new knowledge for the organization.

The knowledge capture process as defined by Becerra benefits from the processes of externalization and internalization. Externalization includes narratives, visuals and concepts because it involves converting tacit knowledge to explicit forms. Externalization embeds the combined tacit knowledge in order to enable its communication and translates individuals' tacit knowledge into explicit forms that can be understood and be physically shared by the rest of the group. Knowledge capture systems therefore, rely on technologies that support externalization and internalization. These mechanisms and technologies can support knowledge capture systems by facilitating the knowledge management process of externalization and internalization. Internalization is heavily reliant on narratives as it consists of learning by doing, which requires face to face interaction and communication. Knowledge capture in its nature d is an anthropological methodology of using stories, to pass

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[219] Wenger, E. 1999
[220] Nonaka, I. 1994
[221] Becerra, I. 2004 45

wisdom and values from one generation to the next through metaphors and storytelling thus narratives.

Knowledge capture systems are used to harvest and store tacit and explicit knowledge[222]. Knowledge can be captured using mechanisms and technologies, so that the captured knowledge can be shared and used by others. Knowledge capture mechanisms facilitate externalization – the conversion of tacit knowledge into explicit form – or internalization – the conversion of explicit knowledge into tacit form. The development of prototypes or models and the articulation of stories are some of the examples systems that enable externalization because the knowledge in people's heads is presented explicitly.

The knowledge sharing process relies heavily on the use of narrative because sharing occurs more often in tacit format. Knowledge sharing is supported by socialization or exchange. Socialization facilitates the sharing of tacit knowledge where tacit knowledge is created as well as when tacit knowledge is not being created. Exchange on the other hand focuses on the sharing of explicit knowledge that is transferred between individuals, groups and organizations. Knowledge sharing is in essence sharing of narrative. Knowledge sharing systems support the exchange of knowledge and socialization. Knowledge sharing systems are aimed at preventing loss of organizational memory which occurs when individuals leave the organization. Organizational memory involves mostly tacit knowledge rather than explicit knowledge. In organisations which encourage knowledge sharing, retrospective learning is encouraged. Teams are encouraged to conduct post reviews of how work or projects were delivered. The sharing of information in retrospect is socialization because sharing is on a narrative basis where the teams are interacting face to face.

In the knowledge application process the individual is directed by the expert and solves the problem based on the verbal directions given by the expert where tacit knowledge is transferred. The knowledge application process involves tacit, face to face, hands on interaction. A good knowledge management example of this is the bread-making story of Japanese bakery and kitchen appliances product developers - where product developers at the Osaka based Matsushita Electric Company were hard at work on a new home bread making machine, but they were having trouble getting the machine to knead dough correctly[223]. Despite their efforts, the crust of the bread was overcooked while the inside was hardly done

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[222] Becerra, I. 2004 33

[223] Nonaka, I. 1995 104

at all. Employees exhaustively analyzed the problem. They even compared X rays of dough kneaded by professional bakers and dough kneaded by the machine, but could not obtain any meaningful data. Finally a software developer proposed a creative solution of using the Osaka International Hotel as a model since they had a reputation for making the best bread in Osaka[224]. The software developer trained with the hotel's head baker to study his kneading technique. The baker had learned the art of kneading bread through years of experience and the transfer of this tacit knowledge could only take place through a lot of imitation, observation and practice. She observed that the baker had a distinctive way of stretching the dough. After a year of trial and error, working closely with the project's engineers, she came up with product specifications that successfully reproduced the baker's stretching technique and the quality of the bread she had learned to make at the hotel[225]. The result was Matsushita's unique "twist dough" method and a product that in its first year set a record for sales of a new kitchen appliance. This innovation illustrates movement between explicit knowledge and tacit knowledge. The end point of the movement is "explicit knowledge" in the form of the product specification for the bread making machine. The starting point of the innovation is the "tacit" knowledge possessed by the chief baker at the Osaka International Hotel[226]. In this example of knowledge application the individual does not acquire expert knowledge to solve the problem, so that if a similar problem occurs he/she will not be able to solve it without the expert which involves a lot of narrative exchange and communication which is externalization. Knowledge that is applied in this context is created and expanded through social interaction between tacit and explicit knowledge.

Socialization is strongly supported by tacit knowledge and allows individuals to share experience and develop common mental models. This happens through dialogues - which are focused on narratives - and observation. The concepts generated through the socialization process are then externalized through the use of metaphors and analogy, which helps to "understand the unknown through the known" and bridges the gap between the image and a logical model[227]. The model derived from externalization, is systematized through "learning by doing" which involves transfer of tacit knowledge thus narrative. Nonaka also points out that knowledge management is a continuous and dynamic interaction between tacit and explicit knowledge and that conversion modes shift depending on the triggers. Taking this

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[224] Nonaka, I. 1995 104

[225] Nonaka, I. 1995 105

[226] Nonaka, I. 1995 105

[227] Nonaka, I. 1995 62

into account, Nonaka gives primacy to socialization and the dialect of internalization as externalization and complimentary in the understanding of learning knowledge creation[228].

4.2 Becerra-Fernandez outlines the key roles of a story in relation to the Knowledge Management Framework.

Becerra-Fernandez further acknowledges[229] that there is a key role for stories in the management of organizational knowledge in the context of Denning and Snowden's point of view on storytelling by pointing out the following key areas where storytelling can be effective in the management of knowledge. The key areas will be used to highlight the potential role of stories in knowledge management by referring back to Becerra's overall framework on knowledge management. The key areas are:

1. Igniting action in knowledge-era organizations[230]. Storytelling can help managers and employees to actively think about the implications of change and the opportunities for the future of their organizations. Listeners actively understand what it would be like if things were done in a different way, recreating the idea of change as an existing and living opportunity for growth.

2. Bridging the knowing-doing gap[231]. This view proposes that storytelling can exploit the interactive nature of communication, by encouraging the listener to imagine the story and to live it vicariously as a participant. Listeners perceive and act on the story as part of their identity.

3. Capturing tacit knowledge. Probably the line of reasoning is best captured in Denning's words: Storytelling provides a vehicle for conveying tacit knowledge, drawing on the deep flowing streams of meaning, and of patterns of primal narratives of which the listeners are barely aware, and so catalyzes visions of a different and renewed future[232]. Capturing tacit knowledge as is the case in settings where

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[228] Nonaka, I.1995 63

[229] Becerra- Fernandez, I. *et a.* 2004 282

[230] Becerra, I 2004 282

[231] Becerra, I. 2004 282

[232] Becerra, I. 2004282

knowledge transfers and knowledge sharing takes place in the form of narrative and stories.

4. Embodying and transferring knowledge. A simple story can communicate a complex multi-dimension idea, by actively involving the listener in the creation of the idea in the context of their own organization. Embodying and transferring knowledge such as in communities of practice[233]. These groups in the community are formed around shared interests and common identity as a point of reference for transferring and representing their stories and knowledge. Communities of practice share a concern or a passion for something they do and learn how to do it better as they interact regularly.

5. Fostering innovation. Becerra acknowledges Snowden's view that innovation is triggered by the interrelatedness of ideas. Storytelling enables listeners to easily absorb and relate knowledge, and that triggers innovation. Modern storytelling offers novelty to an age old skill of sharing and transferring knowledge[234].

6. Enhancing technology. Belonging to a community of practice or some other organizational network can enable individuals to interact with their neighbors and remain connected if necessary. In this instance tacit knowledge and making it tangible in the form of books, emails, audio visuals etc.

7. Individual growth. The world of storytelling is one that proposes avoiding adversarial contests and rather win-win for all sides i.e. the knowledge seeker and the knowledge provider. Stories provide individual growth which goes hand in hand with the learning that occurs when individuals share and transfer knowledge.

8. Launching and nurturing communities – such as in communities of practice. Gathering people for purposes of tacit knowledge capture, transfer and sharing as people come together to share experiences and stories of common interest.

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[233] Becerra, I. 2004 282
[234] Becerra, I. 2004 283

The four components that have been discussed in the points above are knowledge discovery, knowledge sharing knowledge capture and knowledge application. The key areas discussed focus on change management, identity, knowledge capture, transfer of knowledge, innovation, communities of practice and learning.

In line with Beccerra's key areas, knowledge discovery is aligned to stories by its capability in fostering innovation. Knowledge discovery fosters innovation in the development of tacit knowledge from data and information though socialization. Since socialization is about synthesizing tacit knowledge across individuals through joint verbal activities. Knowledge discovery can also be instrumental in the launching and nurturing communities of practice through socialization and thus sharing of experiences and face to face communication. This is because knowledge discovery plays a strong role in knowledge management and storytelling because of the narrative aspects of communities of practice. Knowledge discovery is one of the four components that have strong relations to the use of narratives in knowledge management through the exchange of experiences and stories by means of communities of practice, apprenticeships and face to face interactions.

In relation to the key areas outlined above by Becerra, knowledge sharing has a role the story by its capacity to embody and transfer knowledge. This is due to knowledge sharing involving socialization and the underlying interest with preventing the loss of institutional or organizational memory through effective transfer of knowledge. Institutional memory typically involves mostly tacit knowledge. Furthermore, knowledge sharing means effective transfer of knowledge so that the recipient of the knowledge understands it well enough to act on it. In effect then, knowledge sharing is related to story by its ability to ignite action in knowledge-are organisations when knowledge that is transferred leads to action. Knowledge sharing is an important process in enhancing innovativeness and improved performance. When knowledge sharing occurs, thus sharing of experiences and telling of stories, it enables the listener to absorb and relate the knowledge and that triggers innovation.

In relation to Becerra's key areas, knowledge capture has a role in the story of bridging the knowing-doing gap through internalization which is the conversion of explicit knowledge into tacit knowledge. This is because explicit knowledge becomes embodied in action and practice so the individual can re-experience what others have gone through. Individuals perceive and act on the story as part of their identity. Knowledge capture is related to the

anthropological use of stories for passing on information from generation to generation, thereby bridging the knowing-doing gap.

Knowledge application has a key but limited role in story of actual transfer or exchange of knowledge between concerned individuals in terms of the key areas discussed. The knowledge application process can occasionally involve tacit, face to face, hands on interaction which is socialization, however, the process mostly involves the use of explicit knowledge in the form of procedures such as those found in manuals, instructions and standards hence the limited role in the story.

It can be noted from the above discussion that the key areas of storytelling are not all well covered in the four components of Becerra's framework. This confirms the hypothesis that the role of storytelling in knowledge management is still a long way from being fully realised.

4.3 Denning on the role of storytelling in knowledge management.

Denning sees storytelling as ideally suited to communicating change and stimulating innovation because abstract analysis is easier to understand when seen through the lens of a well-chosen story[235]. Storytelling is natural and easy and entertaining and energizing.[236] Stories help us understand complexity. Stories can enhance or change perceptions. Stories are easy to remember and are inherently non-adversarial and non-hierarchical[237]. For Denning storytelling as defined in the famous Springboard story, is about catalyzing change in the organization[238]. The Springboard story enables a leap in understanding by the audience so as to grasp how an organization, community or a complex system may change[239]. The Springboard story introduces a real person, who has a specific identity, in a real life environment and situation that is similar to that of the audience[240]. Springboard stories are told from a perspective of a protagonist who was in a predicament, which may resemble a predicament currently faced by the organisation[241]. Denning's word of caution when using stories in knowledge management is that artificially construed stories ultimately will be less

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[235] Denning, S. 2001 xvii

[236] Denning, S. 2001 xv

[237] Denning, S. 2001 xv

[238] Denning, S.2001 199

[239] Denning, S. 2001 xviii

[240] Denning, S.2001 xix

[241] Denning, S. 2001 xix

effective than true ones.[242] Stories should not be made up to teach lessons or strategy – they should be real stories from real experiences. Storytelling can be counter- productive when the story being told is not true,[243] this is more so in organizational lessons learned stories and because stories are for organisational learning based on real life situations. Using narrative techniques to spread the word about the successes of knowledge sharing situations can inspire the organization to understand the implication of the change and get enthusiastically behind it.

4.3.1 A story that ignited action in knowledge-era organizations.

Storytelling can help managers and employees to actively think about the implications of change and the opportunities for the future of their organizations. Listeners actively understand what it would be like if things were done in a different way, recreating the idea of change as an existing and living opportunity for growth[244]. Denning's Springboard story is a good example of how to ignite action in knowledge-era organisations. It highlights how knowledge sharing and knowledge transfer performed through storytelling can be used to spark actions and change ideas within organisations.

Denning's World Bank story about a health worker in Zambia getting access to knowledge about malaria from a website of the Centre for Diseases Control in Atlanta, Georgia helped spark interest in the World Bank sharing its knowledge with internal and external clients. Denning "stumbled" on the Springboard story while he was searching for ways to implement knowledge management and change management while consulting for the World Bank. His colleague told him a story – the Zambian story of a health worker who logged onto the Centre for Disease Control website and got the answer to a question on how to treat malaria[245]. Denning thought that this was a neat illustration of how the idea of knowledge sharing across organisations was already working. The story is told in 1996 before and the web has not attained the widespread recognition as a potential purveyor of useful information that it will enjoy only a year later or so[246] The story illustrates how "know how" can be transmitted and shared across geographies at low cost. Denning relates the story as follows: Clearly the twenty-first century is going to be different. But how? The story of a health worker in Zambia

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[242] Swap, W. 2001

[243] Denning, S. 2001 39

[244] Denning, S.2001 10

[245] Denning, S. 2001 10

[246] Denning, S. 2001 10

offers the possibility of viewing the future, which I suggest is going to be like today. Thus in June 1995 a health worker in Kamana Zambia logged on to the Centre for Disease Control Web site and got the answer to the question on how to treat Malaria. This true story happened, not in June 2015, but in June 1995[247]. "This is not a rich country - it is Zambia, one of the least developed countries in the world. It is not even the capital of the country[248]. But the most striking aspect of the picture is this: our organization isn't in it. Our organization doesn't even have its know-how and expertise organized in such a way that someone like the health worker in Zambia can have access to it. But just imagine if it had! He goes on to say: And if we can put all these elements in place for the task teams, why not for clients? They have exactly the same needs as the employees. Imagine: if we do this, true partnership can emerge. Moreover, a whole group of stakeholders around the world who currently lack access to the intellectual resources of the organization will suddenly be in the picture. It will enable a different relationship with a wider group of clients and partners and stakeholders around the world. It adds up to a new organizational strategy."

This story is what led him to investigate and test the use of story to bring about change in the World Bank. Denning defines a phenomenon of the "two voices"[249] which are experienced during storytelling, which is useful to understand what happens when listeners need to make connections and complete the detail provided by the storyteller through the springboard story. During storytelling, the listener hears the voice of the storyteller telling the explicit story. At the same time, the listener hears their own voice in parallel with the storyteller's, thus creating a version of the explicit story in their own minds and in their own voice, making the story more real for them and fitting to the reality of their context. This process creates ownership of the story. However, completing the story in their own minds is not the same as that told by the storyteller. Their story is influenced by and interpreted according to their experiences and existing knowledge[250].

This story is about embodying and transferring knowledge. It helped communicate a complex multidimensional idea by actively involving the listener in the creation of the idea in the context of their own organisation. The story also fostered innovation whereby the Zambian worker used the information from the website to discover a new, innovative way of dealing

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[247] Denning, S. 2001 24

[248] Denning, S. 2001 24

[249] Denning, S. 2001 61

[250] Van de Rede, L. 2007 57

with Malaria. This in turn resulted in individual growth and learning which is yet another key focus area of effective storytelling in the management of knowledge. Based on the story here, it can be said that Springboard stories support knowledge discovery and knowledge sharing and knowledge application as defined by Becerra in the following explanation. The Zambian worker discovered knowledge on the treatment of Malaria in the process of combination as per the SECI model. The knowledge is shared with internal and external clients both explicitly and in tacit form and the clients applies the knowledge that has been shared with them to their work.

Knowledge discovery is defined as the development of tacit or explicit knowledge from data and information or from synthesis of prior knowledge.[251] The discovery of new explicit knowledge relies directly on combination, whereas the discovery of new tacit knowledge relies most directly on socialization. New explicit knowledge is discovered through combination, wherein multiple bodies of knowledge are synthesized to create new, complex sets of explicit knowledge. The Zambian health worker in the springboard story uses the Centre for Disease Control Website to discover explicit information which is prior knowledge for the health workers who contributed the information to the website. This process is about developing explicit knowledge, synthesizing and sharing it with fellow health workers in Zambia in narrative format of telling stories of what has been discovered. Thus the Zambian worker's knowledge is discovered though combination and socialization for internalization and communication to other health workers in Zambia. Knowledge sharing means effective transfer so that the recipient of the knowledge can understand it well enough to act on it. In this story other health workers who received the information can understand what has been transferred to them by the Zambian health worker and therefore act on it.

 In knowledge application all that is required is that the knowledge be used to guide decision making and actions. The process of knowledge application depends on the available knowledge and the latter depends on the process of knowledge discovery, capture, and storage. Therefore, the better the process of knowledge discovery, capture and storage, the greater the likelihood that the knowledge needed for effective decision making is available. In the case of the Zambian health worker, the available knowledge that has been discovered, captured and stored in the website is comprehended and used to guide actions and decision making around the issue of treating malaria.

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[251] Becerra-Fernandez. et al. 2004

Springboard stories should be true and plausible[252]. Here Denning concurs with Snowden's characteristics of stories. The apparent superiority of a true story over a wholly invented story in terms communication is palpable. This quality of the story supports knowledge discovery, knowledge sharing and knowledge transfer as happens in lessons learned initiative in knowledge management. Denning suggests using a true life experience told in a minimal fashion and launched off a "springboard" into the recipient's imagination. This important step allows the listeners to imagine how the picture may or even should look. The technique involves talking about how the organization could change if relatively small but successful incidents were extrapolated across the organization in the future. Denning's stories are about knowledge share and knowledge transfer and involve a lot of socialization and internalization. The Zambian Springboard story is plausible, but it does not answer how knowledge sharing will work in the World Bank.

4.4 Snowden on the role of storytelling in knowledge management.

In his article Snowden describes storytelling as an "old skill in a new context[253]". The new context is the emerging discipline of knowledge management that has arisen in response to the growing understanding that intellectual capital is the core asset of organizations and of society itself[254]. The old skill in this case is the human capability to tell stories since the beginning of time. As already mentioned in Snowden's view on stories, like many aspects of our growing understanding of the role of knowledge in organizations, the use of stories is a rediscovery of an important natural skill that has bound societies for centuries. Storytelling has many purposes of entertainment, teaching, understanding and cultural bonding. Stories can convey complex meanings across culture and language barriers, in a way that linguistic statements cannot. Storytelling is an old skill but lately it is applied to the management of knowledge, in particular knowledge sharing in knowledge era organisations.

It is still early days in understanding the use of stories in business and more especially in knowledge management however, organizations are beginning to understand that storytelling is not an optional extra, but something that already exists as an integral part of defining what that organization is about[255]. Snowden considers the organizational use of stories as both an

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[252] Denning, S. 2001 199
[253] Snowden, D. 1999 30-37
[254] Snowden, D. 1999 30-37
[255] Snowden, D. 1999 30-37

art and science. Snowden believes that 'narratives remain the principal mechanism of learning and knowledge transfer in organizations.' He emphasizes the use of storytelling with a purpose – which can be used to share knowledge, transfer knowledge and even for knowledge discovery – in order to create common identity and purpose. Snowden explores examples of storytelling with a purpose and draws some conclusions in the following discussion.

Snowden prescribes to two purposes of storytelling – as a knowledge disclosure mechanism and as a means to create meaning and understanding. The use of storytelling as a disclosure mechanism creates a largely self-sustaining, low cost means by which knowledge can be captured on an on-going basis through knowledge management interventions – in contrast with the conventional consultancy approach which requires constant measurement and intervention by expensive teams[256]. Knowledge disclosure techniques utilizing anthropology techniques have concentrated on direct observation of decision making, the exercise of judgement and problem resolution over time.[257] Whereby, stories have been told over generations in order to promote certain values and teachings. It is in these essentially human and community based activities that a few evidences of knowledge use can be seen. Because by looking at decisions that were made, we can ask what explicit and tacit knowledge was used, in context.[258] This knowledge disclosure mechanism has proved effective where timescales required to observe the knowledge disclosure are compatible with the required delivery time scales of the project. This has been the case in large project environments, where knowledge is disclosed over timescales measured in years not weeks.

A good example of knowledge disclosure in a projects environment is lessons learnt discussions whereby selected teams get together and retrospectively look at and share what they have learned using tacit knowledge and narrative in the form of experiences, intuitions, understanding issues in retrospect etc. The team that did not perform well in their project comprise of the most lessons that are valuable for corporate learning. The best performing teams on the other hand, stand the risk of propagating their lack of learning to new projects by telling stories of success without recognizing elements of luck or chance that were essential components of the success. This process is the easiest most obvious alignment of knowledge management to storytelling. These after action reviews and lessons learned best

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[256] Snowden, D. 1999 30-37
[257] Snowden, D. 1999 30-37
[258] Snowden, D. 1999 30-37

support knowledge discovery and knowledge sharing in Becerra's model because they are about transfer of best practice and sharing of knowledge. This represents socialization and combination in the knowledge management SECI model.

Storytelling as a means to create meaning and understanding on the other hand uses metaphors which are supported by stories that create an understanding of what is being defined and communicated. Metaphor is an established way of enabling people to see things in a different way. We generally understand by metaphorical reference to something that is already understood. By creating an association with another well-known story we can demonstrate how the errors in the metaphor are similar to the anti-story.[259] The understanding is achieved tacitly and then the explicit definition can reinforce established understanding instead of trying to create it. The metaphor allows people to understand at a deeper and less personally threatening, but still disruptive level[260]. Metaphors can provide eliciting techniques for anecdotes. The use of metaphors can provide a common reference for a group that moves them away from current concerns and prejudices into a safer place, but a place as disruptive in the association of ideas that it stimulates.

The two mechanisms – knowledge disclosure and metaphors - strongly support the knowledge capture process of Becerra's model in particular externalization which involves a high usage of narratives. In storytelling knowledge disclosure can create a sustainable low cost way of capturing knowledge on an ongoing basis[261]. Storytelling as a form of creating meaning and understanding creates metaphor for transferring knowledge. Metaphors also provide a language to sustain thinking within the group after the event itself.

Part of Snowden's storytelling methodology makes use of anecdote which is a short amusing or interesting story about a real person or incident. An anecdote is presented as being based on a real incident involving actual persons usually in an identifiable place. Overtime however, modification in reuse can convert an anecdote to a fictional story, one that is retold but is "too good to be true". For Snowden anecdotes provide a means by which organizations or a leader creates a common identity by providing models and examples of good and bad behaviour. Such stories purport or sometimes are descriptions of isolated incidences in the history of an individual or company that powerfully convey a set of values or desirable

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[259] Snowden, D. 1999 30-37

[260] Snowden, D. 2000 147-156

[261] Snowden, D. 2000 147-157

actions[262]. The leader is often the protagonist in such a story. The most fundamental requirement of anecdote capture is not to influence the anecdotes that one is told by a community.

Structured interviews, questionnaires and workshops (which are all methods of eliciting tacit knowledge discovery, capture and discovery) will tend to produce anecdotes that conform to the script of a community – because individuals in large organizations soon learn to adopt camouflage behaviour as a survival technique. The implication of this is not ideal for knowledge sharing and knowledge transfer, because real knowledge sharing happens when people are honest and vocal about their experiences. Effective knowledge sharing requires truthful narratives of people's experiences. Self-propagation is an important concept for usable stories. An effective story will spread like wildfire in an organization, without altering its core meaning. The fact that it is unpublished, allows it to self propagate as each storyteller can provide their own unique style.[263] Anecdotes' are ideal for knowledge management because they are rooted in truth and are unique events that serve to educate the listener and provide a purpose for doing. Anecdotes are the narratives and tacit knowledge that is created and shared informally among employees of an organisation and represents a good opportunity for knowledge management.

Denning also concurs with Snowden on this by stating that a story should be true and plausible[264] as mentioned earlier. Anecdotes must be drawn from a common history or reference in the community. However the traditional use of archetype in storytelling can assume a confessional character which permits the disclosure of failure and consequently the stimulation of learning without the need for criticism or admission of responsibility. Snowden also subscribes to storytelling circles which are formed around groups who have some degree of coherence and identity in the organization. These groups are defined as Communities of Practice in knowledge management, which were already defined earlier on in the thesis.

Snowden in his storytelling methodology further distinguishes between a script and factual stories. A script is the official story of an organization[265]. It is the norm of a particular organization, departure from which can lead to an individual being excluded, not belonging or being an outcast. Attempting cultural change is often about seeking to impose new scripts

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[262] Snowden, D. 2005 7

[263] Snowden, D. 1999

[264] Denning, S. 2001 198

[265] Snowden, D. 2000 147-156

on the natural discourse of a community. An anti-story on the other hand is generally a cynical and spontaneous reaction to a script that is too far away from the reality of life within the organization concerned, or where the powerful originators or perpetuators of the script act in a hypocritical manner in respect of its underlying values. Anti-stories are present in every organization and range from initiative-weary cynicism to self-righteous indignation[266]. It is better for organizations to attempt no change or communication through stories if it is likely to create anti-stories. Organizations should rather use stories of change such as Denning's springboard story.

Snowden further identifies three organizational story approaches for knowledge management as Fables, Disruptive metaphor and Archetypes.

Fable form stories are moral tales designed to create a context in which a message can be delivered. Fables are rooted in ancient practices of story[267]. They are long complex stories that are difficult to repeat verbatim, but which have a memorable message or moral. All cultures have such stories that are told by generations to their children to inculcate common values in the society. Like all good stories they do not attempt to deliver the message until the story itself has provided the context that will make the message acceptable. The building of context is fundamental to the effectiveness of this story. In fable the message is delivered at the end of the story, by which time the story has created a context in which the message is inescapable or unarguable. A fable can contain elements from multiple anecdotes from the organization and is not dependent on a single original story to deliver its message.[268] The story can emerge in a workshop through a process of telling and retelling which replicated the natural conditions in which powerful stories generate individually and collectively. Fables involve transfer and sharing of tacit knowledge and narratives of an organisation.

Disruptive metaphor is departure from a dominant script of an organization. Organizations and societies develop "scripts" or controlling stories that punish deviation. These develop and are enforced by ordinary people and are rarely imposed from the top, as a result they cannot be changed by dictate. Metaphors enable disruptive and lateral thinking and prevent entrainment of attitudes and stagnant way of doing things.[269] Disruptive metaphors support the telling of failure stories as opposed to success stories that most organizations would prefer

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[266] Snowden, D. 2000 147-156

[267] Snowden, D. 2005 3

[268] Snowden, D. 2005 3

[269] Snowden, D. 2000 147-156

to hear. This makes disruptive metaphors a good technique for knowledge management because stories of failure ensure elevated learning and innovation when shared with the organisation. In knowledge management disruptive metaphors can happen in retrospective learning workshops where organisations look back on how they failed at something. This is representative of the knowledge discovery and knowledge transfer and thus socialization.

Archetypes have a long honourable tradition in storytelling[270]. Archetype is a symbol or a prototype upon which others are patterned, copied or simulated. They represent extreme aspects of human behaviour and stories about them allow humans to reflect on their own condition. By gathering anecdotal material from the community and stimulating high levels of dialogue in a workshop, archetypes that reflect that community can be made to emerge. Archetypes are educational and increase learning because they are less threatening than the usual employee satisfaction surveys and other brand awareness strategies.

4.5 Boje on storytelling in organisations

Boje[271] sees a story as comprising of a plot of causally related episodes that culminate in a solution to a problem. He defines the storytelling organisation as 'collective storytelling system in which the performance of the stories is a key part of members' sense-making and a means to allow them to supplement individual memories with institutional memory.

In contrast to a story an anti-story is another story that arises in opposition to the earlier one. Thus, a story that has significant impact in a group or organisation will give rise to related stories as well as anti-stories. Anti-stories aim at understanding the original story that can arise to negate or counter stories of official goodness, or to undermine the original story. The relation between story and anti-story constitute an internal dynamic, the output of which, nevertheless, emerges systematically as story. Boje also supports the use of metaphors in telling stories in order to create a relation and understanding. As pointed out in Snowden[272], anti-stories aim at undermining the original story. An anti- story can arise as a negative or cynical counter to stories of official goodness, but it is not only limited to the situation of stories of official goodness. It also arises in response to negative or cynical stories where the intent is to undermine the original story.

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[270] Snowden, D. 2000 147-157

[271] Boje, D. 2008

[272] Snowden, D. 2002 100

Boje distinguishes between a living story and a dead story which are interdependent. Boje also states that to study a living story is to investigate a dead story. Stories are fragmented and do not have a beginning, middle or end. Story fragments clearly appear in organisation dialogue, debate, and discourse. Boje's perspective of storytelling supports knowledge sharing systems as defined by Becerra- Fernandez because it is focused on institutional memory or memories of the collective.

Boje is well known for coining the term Antenarrative – which has double meaning: ante as before and ante as a bet. Antenarrative is before the stability of a narrative and it is a bet that a prospective intervention will occur. Whereas narrative is about retrospect – what has happened in the past - antenarrative is future oriented – what is likely to happen in the future. This perspective is somewhat aligned with the concept of "lessons learned capture" in knowledge management which is about looking at a completed project in retrospect in order to ensure future best practice.

4.6 Czarniawska on storytelling in organisations

Czarniawska[273] sees organizational storytelling occurring in four forms as mentioned earlier in the storytelling chapter which are: Research that is written as a story or tales from the field; Collecting stories in the work place – field stories; Seeing life as story making and organizational theory as story reading; Reflection that is a form of literary critique. The four forms support knowledge sharing and exchange and thus socialization. Czarniawska introduces storytelling in organizations as tales from the field collected from the experiences of individuals in the organization. The four forms are also made up of reflection that is a form of literary critique which is essentially the process of capturing and using lessons learnt in work processes.

For Czarniawska a story is at the heart of our day to day discourse and sense making abilities. Stories require an original state of affairs, an action and a consequent state of affairs and a plot. A plot is created by introducing chronology which turns into causality. Czarniawska's definition of story is supported by Becerra- Fernandez et.al's knowledge capture process and thus facilitates externalization and internalization. Externalization embeds knowledge for communication, understanding and sense making within the organization. Narratives create meaning and are meaning making tools at various levels of human interaction.

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[273] Czarniawska, B. 2004

4.7 Summary of chapter

Of the four authors mentioned in the thesis, Snowden and Denning are the most practical in defining the probability of storytelling as an organization tool for knowledge management. Snowden's storytelling emphasizes the various ways of supporting knowledge sharing and knowledge transfer in an organization, while Denning emphasizes management of knowledge during times of change in an organization. Boje emphasizes sensemaking and the building of institutional memory. Institutional memory is made up of collective individual memory which is tacit and would therefore be distributed through knowledge sharing or knowledge transfer. Czarniawska emphasizes the stories deduced from workplace experiences. These stories would form part of Communities of Practice discussions and lessons learned discussions within knowledge management- which will be mainly about capturing and sharing tacit knowledge. The views of the authors are summarized and reflected on in the discussion as follows:

In summary, the objective of a story is for the audience to discover and co-create their own mental story in their own terms in relation to their own context and not to get caught up in the explicit story. The aim is to get the listener's attention to focus on joining the dots between the implicit story and their tacit understanding. Denning is of the idea that the story must be relatively brief and have only enough texture or detail for the audience to understand it. This is a form of knowledge creation and internalization as per Becerra- Fernandez's model. Denning's stories are about organisational change management, therefore they embody the change message that is close to the surface of the explicit story, which the audience can discover on its own and make into its own change message. For Denning the story is about creating a leap in understanding and catalyzing change. This type of the story supports knowledge discovery, knowledge sharing and knowledge transfer as happens in lessons learned initiative in knowledge management. In the context of knowledge management Denning's stories are about knowledge share and knowledge transfer and involve a lot of socialization and internalization.

Snowden emphasized purposeful storytelling – stories that are meant to help organisations create meaning and understanding to their members. Snowden also emphasizes storytelling for purposes of knowledge disclosure which is applicable in knowledge management and project teams – where they can learn and share knowledge by looking at their experiences and deliverables retrospectively with the aim of improving organisational knowledge

management processes. Knowledge disclosure is supportive of the process of knowledge capture and knowledge sharing and based on externalization as per Becerra-Fernandez's framework. As per Snowden, anecdotes' are ideal for knowledge management because they are rooted in truth and are unique events that serve to educate the listener and provide a purpose for doing. This is representative of the knowledge discovery and knowledge transfer and thus socialization.

Snowden states that stories are an old skill in a new context[274] – the context of organizations having to take cognisance of the changes occurring in organisations as they move towards collaboration and managing their know-how and attempting to share and capture knowledge of the employees, in a bid to capitalize on that for competitive advantage.

Boje emphasizes stories that are used for sense-making. He sees stories as fragmented but related episodes which result in a solution to a problem. Boje's perspective of storytelling supports knowledge sharing systems as defined by Becerra- Fernandez because it is focused on institutional memory or memories of the collective. Antenarratives are however more inclined to look into the future of what will happen and therefore does not really support or have a role in knowledge management. Knowledge management is not about predicting what could happen, it is about learning and building up on organisational knowledge as a mechanism to help better decisions based on what is known.

Czarniawska also sees storytelling as a tool for sense-making in organisations, by looking at the original state of affairs, an action and a consequent and a plot to the story. Czarniawska's definition of story is supported by Becerra- Fernandez et.al's knowledge capture process and thus facilitates externalization and internalization.

The thesis notes that the key roles of a story are not all well covered in the four components of Becerra's framework. This shows that the role of storytelling in knowledge management is a long way from being fully realised. It is important to remember that, like many aspects of our growing understanding of the role of knowledge in an organization, the use of stories is a rediscovery of an important natural skill that has bound societies for centuries. All organisations have stories in common, stories which carry a weight of meaning beyond the words themselves, they require to find ways to leverage the telling of these stories to leverage organisational learning and sharing of knowledge

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[274] Snowden, 1999 30-37

5 Conclusion

Can the use of storytelling or narrative be a useful component of knowledge management? The answer is yes, storytelling can be very useful for knowledge management. Why would storytelling be a good tool for knowledge management? The answer is that storytelling makes complex information meaningful and easy to understand. Storytelling has the ability to convert tacit knowledge to explicit knowledge, and makes information easier to manage. How can storytelling be used in knowledge management? Storytelling can be used in knowledge management to capture and organise and share tacit knowledge that is in people's heads. Are there limitations to the role that storytelling can play in knowledge management? Yes there are limitations because storytelling as it is defined currently, emphasizes mainly support of sharing and transfer of knowledge and does not pay much attention to other knowledge management processes of knowledge capture, discovery and application.

Storytelling and the use of narrative is a useful component of managing knowledge more specifically tacit knowledge. As it has been mentioned throughout the thesis organisations are faced with huge challenge of retrieving and managing knowledge that is in people's heads. This knowledge is the most crucial to organisations because it resides in people's experiences, skills, intuitions, values and know how, and yet it is the most difficult to capture in a useable format and it is the most likely to be lost when people move around within the organisation as well as externally. Thus far organizations that have realized the importance of managing knowledge are doing so mainly in the context of explicit knowledge and relying on technology or systems to manage knowledge instead of in the context of relying people and what they know. The technologies and methods used for management of knowledge are concerned with the capture and use of knowledge in its tangible form, rather than in tacit form - probably because it is easier to manage in that format. Those organisations which have knowledge management functionality currently are focused on implementing initiatives of knowledge sharing and knowledge transfer which are mainly about making knowledge accessible written or digital format. The majority of organizations have not yet found ways to structure themselves for supporting free flow of tacit knowledge, thus the support for narrative is still lacking.

The organization is considered as a knowledge integrating institution and does not acquire nor create knowledge as this is the role and the prerequisite of the individual[275]. Knowledge resides in and with individual people - the firm merely integrates the individually owned knowledge by providing structural arrangements of coordination and cooperation of specialized knowledge workers. That is, the firm focuses on the organizational processes flowing through these structural arrangements, through which individuals engage in knowledge creation, storage and deployment.[276] For knowledge management to succeed in organisations the collective knowledge of individuals should be harnessed and made accessible to the collective. Stories can support the successful implementation of knowledge management in organisations if they are focussed on the tacit aspects of knowledge.

Storytelling is a potential useful tool for knowledge management because it has the ability to circumvent the complexities of knowledge and the management thereof. As mentioned in the chapter on knowledge management, in order to reach a comprehensive understanding of knowledge, it is suggest that knowledge is tightly interwoven with an individual's personal dimensions (i.e. a complementary understanding of tacit or explicit knowledge), taking into consideration context, experience, values, social interaction and interpretation. Accordingly, knowledge transfer and exchange is influenced by the view of knowledge adopted. To those who adopt the traditional view of knowledge, neither the transfer nor the exchange of knowledge is seen as problematic, as knowledge is readily available in the objictified form. Hence knowledge exchange and knowledge transfer is most commonly managed first in the establishment of knowledge management in organisations. This means knowledge exchange can take place without considerations regarding the context of the knowledge. The constructive view of knowledge on the other hand, takes the personal aspect of knowledge into consideration. This view advocates the complex and problematic nature of knowledge exchange, and therefore moves beyond the commonsensical and technocratic paradigm definition of knowledge.[277]

As knowledge management is evolving in its development as practice, the contrast between embodied knowledge and accessible databases is proving to be too extreme and not aligned. Snowden in support for the role of storytelling in knowledge management observed that

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[275] Nonaka, I. 1995 8

[276] Roberts, H. 1998
[277] Meyer, E et al. 2007

lately narratives are now emerging as a tool for knowledge sharing providing an intermediate translation mechanism between the concrete and codified.[278]   It is recommended that narratives are a powerful and robust way in which knowledge may be shared, as the ability to communicate knowledge simplistically has been identified as one of the strengths of narrative or stories.

In concluding on the question of how storytelling can be used in knowledge management it is acknowledged that the opportunities presented by stories are dependent on how the organization views the complexity of managing knowledge. Organisations currently use documents, databases and complicated power point presentations slides to communicate and convey messages to organisation members. These are not very effective and people forget the key aspects of what is being communicated because of information overload and because people are talked to rather than engaged with. However in the case of stories being shared, the meaning of what is being communicated lingers longer in people's minds and takes a while longer to forget. For these reasons storytelling should be integrated into organisational strategies and knowledge management methodology. Wiig[279] emphasizes this, that the business called knowledge management has emerged over the last decade as a result of many intellectual, societal and business forces. Some of its roots extend back for millennia, both in the west and the east, while others, particularly those associated with cognitive and information sciences are quite recent. Globalization of business also impacts on the communication and management of knowledge.

Knowledge management has and is still to become an important business tool, its complexity is often vexing, and as a field, will still be under development for a long time to come. Significant change has already taken place in the workplace with regards to the management of knowledge, but changes to come are expected to be greater. As for other management directions, it is expected that knowledge management will be integrated into the basket of effective management tools, and hence disappear as a separate effort that it is currently. In line with this thesis it is suggested that one of these effective tools for managing knowledge will include storytelling in the near future. This is because in order for organisations to understand what they know and how they know it, and by implication how they make decisions, they need to understand the multi-faceted narratives of our day to day discourse[280].

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[278] Snowden D. 2001 1-7
[279] Wiig, K. 1999
[280] Snowden, D. 1999 30-37

The ability to pass knowledge through a story is a distinguishing feature of human evolution. Narratives essentially do and will remain the principle mechanism of learning and knowledge transfer in organizations for time to come.

Becerra-Fernandez's model falls short of realizing the full potential of storytelling in knowledge management. However, Becerra-Fernandez's framework if simplified and developed further could produce a good model for storytelling in knowledge management. The potential capability of Becerra-Fernandez's model in becoming a methodology for the use of storytelling in organisations is due to the framework being based on fundamental principles of knowledge management of discovery, capture, sharing and application of knowledge. Becerra-Fernandez framework model being built on the foundation of Nonaka's knowledge conversion model or theory is a good starting point, because the model takes into account the interchanges between explicit knowledge and tacit knowledge throughout the processes of combination, socialization, externalization and internalisation. By distinguishing between the two types of knowledge, Becerra-Fernandez's framework model manages to draw out the qualities of tacit knowledge and how it translates to narrative and how this is applied in terms of the four knowledge management processes of the model. In defining future direction and role for storytelling in knowledge management, it is suggested that in the key areas where storytelling can play a role -such as knowledge sharing and knowledge transfer - in knowledge management should be further interrogated and be better aligned to the framework so that they can be used as building blocks for a storytelling model. Knowledge discovery and knowledge application can occur through the telling of stories such as occurs in the face to face learning process even though in Becerra–Fernandez's framework model this is not fully recognised.

In terms of storytelling, Denning's storytelling is aimed at bringing about change and focuses to some extent on knowledge sharing and knowledge transfer. Denning's springboard story falls short of incorporating all aspects of knowledge management and those that are mentioned such as knowledge sharing and knowledge transfer and discovery are done so at a superficial level for the story to inform the knowledge management process or methodology. Denning's stories have a strong element of sharing knowledge, however they are more specifically about organisational change management and communication thereof rather than principles of knowledge management principles per se.

Snowden's managed and purposeful storytelling provides a powerful mechanism for the disclosure of intellectual or knowledge assets in companies, and can also provide a non-intrusive organic means of producing sustainable cultural change, conveying brands and values; transferring complex tacit knowledge. Snowden is the better positioned of the authors in his endeavours to define the role of storytelling to knowledge management. Perhaps this could be because he was initially more involved with the implementation of knowledge management in organisations and began using storytelling as part of his toolkit for knowledge management. His two mechanisms of stories – purposeful storytelling and stories as a knowledge disclosure mechanism[281] - which are for facilitating storytelling with a specific purpose and method of knowledge disclosure in order to creating meaning and understanding, capture key characteristic of knowledge management of learning – lessons learned retrospectively, reviewing and using failures for future improvements.

The potential role of stories in knowledge management is not fully realized. It is still early days in understanding the use of stories in the modern organization, but there is growing evidence from research that there are major benefits to be achieved from the use of stories in management and business. There is still no extensive study conducted on the role of stories in knowledge management. The understanding of the role of stories and potential methods to be implemented are therefore still lacking. There are ample untapped opportunities towards the development of methodologies, programs and technological solutions to support the integration of the discipline of knowledge management with storytelling. The study of this thesis and the selected authors in the thesis make very little mention -if at all- of a system or technology for storytelling, which confirms that storytelling as a system or tool for managing knowledge is still in its infancy.

Overall, the use of storytelling has been slow in reaching a cultural tipping point in many major companies, leading non-profit organisations and in management journals. The application of storytelling in organisations ranges from the highly practical, such as how to handle a customer incidence to highly visionary, such as how to create a culture of innovation. The limited research that has been conducted has shown the importance of narrative in branding, human capital and stakeholder management, knowledge management and innovation and change management. In almost every aspect of management and organization, storytelling has a role. In the current organisational environment where there is

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[281] Snowden, D. 1999 30-37

absence of modern technologies for capturing tacit knowledge, storytelling is the ultimate low cost high return technology.

Narrative and as such tacit knowledge is one of the important pillars of knowledge management and therefore deserves a larger role in the implementation of knowledge management. In regards to why storytelling can be used as a tool in knowledge management, it should be pointed out that stories can assist organisations reflect organisational norms, values and culture more easily in addition to conveying meaning to complex ideas in more memorable form than most mediums currently being used by organisations.

Organizations can organize or structure themselves with the objective of capturing the tacit knowledge and making it more explicit through knowledge management techniques such as Communities of Practice and lessons learned and structured knowledge sharing initiatives which involve face-to-face interaction and thus narrative. Storytelling techniques can be used to convey the usual facts and figures to make them more meaningful and easier to learn and remember. There is a potential that an interest in using stories as a management tool may be more than a management fad and fashion, but the use of stories as a powerful organizational tool is likely to accelerate as the recognition of their importance broadens. The greater part of organizational learning happens through the circulation of stories. The process of storytelling is a never-ending construction of meaning in organizations.

 It is still early days in understanding the use of stories in business and more especially in knowledge management, however, organizations are beginning to understand that storytelling is not an optional extra, but something that already exists, that should be tapped into and that is an integral part of defining what that organization is about. Storytelling by its nature and qualities is without a doubt one of the ways of getting tacit knowledge out so others can use it, refer to it and thus better manage their knowledge and that of the organisation. The challenges facing organisations today is how to develop storytelling tools and mechanisms that will help capture and manage knowledge residing in people's minds for organisational management and success.

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