PHILOSOPHY AND "KNOWLEDGE MANAGEMENT": TWO OF THE SAME KIND? AN ACCOUNT OF RECENT DEFINITIONS AND FUNCTIONS OF A CONCEPT OF BUSINESS PROFESSIONALISM

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ABSTRACT

The approach of our research circulates around the question how we can implement the contemporary idea of "knowledge management" into the history of the humanities and its academic background with its origin in Greek philosophy. This inquiry has a challenging question: The term "knowledge management" developed recently from professional areas and academic studies, which had lost the academic tradition existing prior to the 19th century in Western universities. With the assumption that the management of knowledge is possible contemporary corporate organizations present techniques in order to perform management in the contemporary business world handling persons and items in the interest of the management. The concept of knowledge has many layers. The heritage of the philosophical tradition of this concept in the contemporary business world we will discuss regarding its philosophical heritage and its contemporary state in universities and scholarly culture.

Keywords: Knowledge management, episteme, sophia, corporate organizations, wisdom, definitions of knowledge.

Resumen

«Filosofía y 'Gestión del conocimiento': ¿Dos casos de un mismo tipo? Una explicación de las recientes definiciones y funciones del concepto de profesionalidad en los negocios». El enfoque de nuestra investigación gira en torno a la cuestión de cómo podemos implementar la idea contemporánea de «gestión del conocimiento» en la historia de las humanidades y su trasfondo académico, que tiene su origen en la filosofía griega. Esta investigación tiene como objetivo ambicioso el término «knowledge management», desarrollado recientemente de áreas profesionales y estudios académicos que habían perdido la tradición académica existente antes del siglo XIX en las universidades occidentales. Desde el supuesto de que la gestión del conocimiento es posible, las organizaciones empresariales contemporáneas utilizan técnicas con el fin de realizar la gestión en el mundo contemporáneo de los negocios, las personas y los artículos. El concepto de conocimiento tiene muchos niveles. Discutiremos la herencia de la tradición filosófica de este concepto en el mundo empresarial contemporáneo considerando su herencia filosófica y su estado actual en las universidades y la cultura académica.

Palabras clave: Gestión del conocimiento, episteme, sophia, organizaciones corporativas, sabiduría, definiciones de conocimiento.



I. INTRODUCTION: "KNOWLEDGE MANAGEMENT" AS FIELD OF RESEARCH AND ITS DEFINITIONS

The corporate identity in the business world has created various definitions of "knowledge management" as a part of their corporate identity mainly depending on the profiles of the organization. In this introductory part we present definitions derived from the corporate identity of companies and institutions. "Knowledge management" is a term coined in the late 20th century to describe the specific subbranch of management dealing with knowledge in the business world. Even though the traditional fields of knowledge are the academy and the scholarly knowledge here created, the term finds its applications also in professional life; the term knowledge is here associated with the specific knowledge of the organization. Like in other forms of management, in "knowledge management" the aim is to provide planning, leadership, and controlling for the area of knowledge. Thus, "knowledge management" can have various forms end employ various media. In academic life the traditional area of the organization of knowledge under practical aspects was the field of rhetoric. Here the sub-discipline of topic was the field for the arrangement of the information, which would be later presented in the delivery of the speech. The topological arrangement of the aspects of the speech was also an aid for the memorization of the speech. On the contrary, in the contemporary understanding of the term "knowledge management" actually everything can be considered as manageable knowledge.

Media have an important impact of the storage and delivery process of "knowledge management". Traditional institutions like libraries can be considered as a kind of archetype for the storage and delivery of information. With the digitalization of media a high amount of information is in the 21st century available both in analog and digital format. The internet has become the largest digital provider of information and knowledge. In professional life the use of "knowledge management" is merging with traditional business communication sectors and IT. So the professional applications and the aim of conducting professional communication require a system of "knowledge management" meeting the needs of the institution. In practical realizations of corporate knowledge management is specified for the needs of the organization and comprises both technical media solutions and speech communication and written communication.

The question What is Knowledge Management? in the ABC of Knowledge Management of the FAO. Food and Agriculture Organization of the United Nations has the following answer:

"Fundamentally, knowledge management is about applying the collective knowledge of the entire workforce to achieve specific organizational goals. The aim of knowledge management is not necessarily to manage all knowledge, just the knowledge that is most important to the organization."



¹ ABC of Knowledge Management. FAO. Food and Agriculture Organisation of the United Nations. MDG-F Culture and Development Knowledge Management Project. A Closer Look. UNESCO. March 23,

According to the European Committee of Standardisation, "knowledge management" is the

"planned and ongoing management of activities and processes for leveraging knowledge to enhance competitiveness through better use and creation of individual and collective knowledge resources." 2

Koenig wrote in *What is KM? Knowledge Management Explained* in *Knowledge Management World* (May 4, 2012):

"Knowledge Management, (KM) is a concept and a term that arose approximately two decades ago, roughly in 1990. Quite simply one might say that it means organizing an organization's information and knowledge holistically, but that sounds a bit wooly, and surprisingly enough, even though it sounds overbroad, it is not the whole picture."

Koenig here also wrote that "both definitions share a very organizational, a very corporate orientation. KM, historically at least, is primarily about managing the knowledge of and in organizations" and distinguished between three steps of "knowledge management":

First Stage of KM Information Technology

Second Stage of KM HR and Corporate Culture

Third Stage of KM Taxonomy and Content Management³

Levinson wrote in *Knowledge Management Definition and Solutions* as answer to the question *What is Knowledge Management (KM)*:

"Unfortunately, there's no universal definition of knowledge management (KM), just as there's no agreement as to what constitutes knowledge in the first place. For this reason, it's best to think of KM in the broadest context. Succinctly put, KM is the process through which organizations generate value from their intellectual



^{2015. &}lt;a href="http://www.unesco.org/new/en/culture/achieving-the-millennium-development-goals/knowledge-management/knowledge-management-a-closer-look/">http://www.unesco.org/new/en/culture/achieving-the-millennium-development-goals/knowledge-management-knowledge-management-a-closer-look/.

² European Guide to good Practice in Knowledge Management of the European Comittee of Standardisation discussed the aspects "Knowledge Management Framework", "Organizational Culture", SME Implementation', "Guidelines for Measuring KM", and "KM Terminology". European Committee of Standardisation. March 23, 2015.http://www.cen.eu/cen/Sectors/Sectors/ISSS/CWAdownload/Pages/Knowledge%20Management.aspx.

³ KOENIG, Michael E. D. "What is KM? Knowledge Management Explained." *Knowledge Management World*. May 4, 2012. March 23, 2015. http://www.kmworld.com/Authors/Michael-E.-D.-Koenig-5621.aspx.

and knowledge-based assets. Most often, generating value from such assets involves codifying what employees, partners and customers know, and sharing that information among employees, departments and even with other companies in an effort to devise best practices. It's important to note that the definition says nothing about technology; while KM is often facilitated by IT, technology by itself is not KM."⁴

According to the German Research Center for Artificial Intelligence, "knowledge represents the intellectual principal of any corporation. Its organization, structure and communication are essential for economic success, customer relations, and strategic planning."5 The International Council on Knowledge Management (ICKM) describes itself as follows: "ICKM has been established to promote Knowledge Management practice and methodology. Its objective is to transfer know-how between members of an active community. In particular, we support sharing of expertise, scientific endeavors, events to share knowledge and experience, and publishing of findings." In his Position Paper on Knowledge Asset Management of the Artificial Intelligence Applications Institute (AIAI) Macintosh wrote that "enterprises are realizing how important it is to "know what they know" and be able to make maximum use of the knowledge. This is their corporate knowledge asset. These knowledge assets reside in many different places such as: databases, knowledge bases, filing cabinets and peoples' heads and are distributed right across the enterprise." Macintosh gives the following definition of the functions of "knowledge management": "Knowledge management involves the identification and analysis of available and required knowledge, and the subsequent planning and control of actions to develop knowledge assets so as to fulfill organizational objectives."8 The contemporary definitions of "knowledge management" circulate around the application of knowledge for organizations. Thus, the structures or organizations decide about the actual format and contents of this type of corporate knowledge.



⁴ Levinson, Meridith. "Knowledge Management. Definition and Solution". *CIO*. March 23, 2015. http://www.cio.com/article/40343/Knowledge_Management_Definition_and_Solutions.

⁵ "Research". German Research Center for Artificial Intelligence. March 23, 2015. http://www.dfki.de/web/research/km.

⁶ "International Council on Knowledge Management (ICKM)". *International Council on Knowledge Management (ICKM)*. March 23, 2015. http://www.ickm.net/>.

⁷ MACINTOSH, Ann. "Position Paper on Knowledge Asset Management". *Artificial Intelligence Applications Institute (AIAI)*. University of Edinburgh. March 23, 2015. http://www.aiai.ed.ac.uk/~alm/kam.html.

⁸ MACINTOSH, Ann. "Position Paper on Knowledge Asset Management". *Artificial Intelligence Applications Institute (AIAI)*. University of Edinburgh. March 23, 2015. http://www.aiai.ed.ac.uk/~alm/kam.html.

II. THE HISTORICAL DIMENSION OF KNOWLEDGE

"Knowledge" and "Philosophy" and the Beginnings of a Scholarly Concept The process of the usage of stored information and their perusal and re-use is important for the understanding of the needs of information and the specific perspective onto the availability of knowledge in the 21st century. This process is a characteristic feature of the 21st century, since the amount of data available was never higher and the communication of information was never available in a wider network than in the 21st century. This "multiple-choice"-situation of life has been often used as an icon for the understanding of knowledge since the end of the 20th century. The area of sciences, which deals with knowledge, was philosophy. Among the most recent contributions to the topic "knowledge" is the work *The Postmodern* Condition, which was subtitled as a Report of Knowledge written by Jean-François Lyotard. Lyotard mentions here that the knowledge of his time is the knowledge of "computerised societies". Lyotard assumed that the status of knowledge is altering as "societies enter what is known as the "postindustrial age" and cultures enter what is known as the "postmodern age"." This process started in Europe after the 2nd World War. Lyotard also defined "scientific knowledge" as "a kind of discourse" stating that "it is fair to say that for the last forty years the "leading" sciences and technologies have had to do with language: phonology and theories of linguistics, problems of communication and cybernetics, modern theories of algebra and informatics, computers and their languages, problems of translation and the search for areas of compatibility among computer languages, problems of information storage and data banks, telematics and the perfection of intelligent terminals, to paradoxology. The facts speak for themselves (and this list is not exhaustive). These technological transformations can be expected to have a considerable impact on knowledge."10 So knowledge and its special appearance depend on the specific conditions of the society it uses. This assumption stands in the Marxist tradition of the theory that the existence determinates the consciousness ("Das Sein bestimmt das Bewusstsein"), since knowledge is for sure but one thing: a concept of our human mind. It was the philosophy of the Greek philosophers, which first developed the branch of epistemology as the field of studied about knowledge.

Taking a look at the words for knowledge in the European languages, we immediately directly see that the concept of "knowledge" in ambivalent: The Indo-European roots for words for knowledge in European languages we can trace back in Pokorny's lists of an European Proto-language to the etyma 376-782 gen-, gen-, gnē-, and gnō- for the meanings "ken", "know", and "recognize", etymon 1125-272

⁹ Lyotard, Jean-Francois. *The Postmodern Condition. A Report on Knowledge*. Ed. Manchester University Press, 1984. Tr. G. Bennington and B. Massumi. Marxists Achieve. March 23, 2015. http://www.marxists.org/reference/subject/philosophy/.../lyotard.html>.

¹⁰ Lyotard, Jean-Francois. *The Postmodern Condition. A Report on Knowledge*. Ed. Manchester University Press, 1984. Tr. G. Bennington and B. Massumi. Marxists Achieve. March 23, 2015. http://www.marxists.org/reference/subject/philosophy/.../lyotard.html.

u(e)id- for "vide", "see", "wit", and "know", etymon 788 for au- for "perceive", "understand", and "be aware of", etymon 8272 peu- for "repute", "explore", and "understand", and etymon 845 pret- and prot- for "understand". 11 So we have evidence that knowledge in different linguistic concepts existed in earlier hypothetical stages of the Indo-European languages as well as in a relative early natural language from that language family. The ancient Greek thesaurus shows various words for the concept of knowledge, which differentiate it. The desire for knowledge also depicting the state of ignorance is expressed in the noun adaemonie (ἀδαημονίη, "want of knowledge"), aidreie (ἀϊδρείη; "want of knowledge", "ignorance") as derivation from the Indo-European etymon 1125-272, and *anepistemosyne* (ἀνεπιστημοσύνη; "want of knowledge", "ignorance", "unskillfulness"). The term *episteme* (ἐπιστήμη) means "acquaintance". The terms phronis (φρόνις) for "prudence" and "wisdom" and sophia (σοφία) for "wisdom" express special conceptual aspects of knowledge from a perspective of a comprehensive understanding. Representations of the concept are isme (ἰσμή), eidema (εἴδημα), and eidesis (εἴδησις) as derivation from the Indo-European etymon 1125-272 for "knowledge". Practical aspects of knowldege are expressed in daemosyne (δαημοσύνη), idmosyne (ἰδμοσύνη), idreia (ἰδρεία), and idreie (ἰδρείη) for "knowledge" and "skill". The term phrade (φραδή) is in poetic language used for "understanding" and "knowledge". As an ability of the mind ekmathesis (ἐκμάθησις) stands for "thorough knowledge". The term empeiria (ἐμπειρία) is used for "experience" and "knowledge". The term akribia (ἀκριβία) stands for "exact knowledge". As a derivation from gnosis (γνῶσις) the term autognosis (αὐτογνῶσις) is used for "absolute knowledge"; the term epignosis (ἐπίγνωσις) is used in the New Testament for "recognition". The term gnomestos (γνωμηστός) is used for "knowledge" as derivation from the etymon 376-782. The term katamathesis (καταμάθησις) is used for "thorough knowledge" as a derivation from the Indo-European etymon 726-28 men- for "think". Terms in the Greek language, which clearly indicate the appreciation of knowledge, are *philepistemon* (φιλεπίστήμων) and philomathes (φιλομαθής) for "fond of knowledge", philosopheo (φιλοσοφέω) for "love knowledge", philosopheteon (φιλοσοφητέον) for "one must pursue knowledge", and *philosophia* (φιλοσοφία) for "love of knowledge". 12 Among the philosophers and thus in the tradition of philosophy the specific term for knowledge used was the term σοφία as the kind of knowledge the philosophers strived at, which actually meant the cleverness for the performance of a handicraft or skill. Aristotle in his *Metaphysics* (1005 b) defined it both as "wisdom of the physical phenomena" ("σοφὶα τις καὶ ή φυσική"). ¹³ The Indo-European etymon 845 pret- and pr \bar{o} t- for "understand" is

¹¹ Pokorny's Etyma. Ed. Jonathan SLOCUM. Linguistics Research Center at the University of Texas at Austin. June 23, 2015. http://www.utexas.edu/cola/centers/lrc/ielex/R/P0133.html

LIDDELL, Henry George; Scott, Robert. A Greek-English Lexicon Revised and Augmented Throughout by Sir Henry Stuart Jones with the Assistance of Roderick McKenzie. Oxford: Clarendon Press, 1940. Perseus Project. Tufts University. March 23, 2015. https://www.perseus.tufts.edu.

¹³ Aristotle. *Aristotle's Metaphysics*. Ed. W. D. Ross. Oxford: Clarendon Press, 1924. Perseus Project at Tufts University. March 23, 2015. http://www.perseus.tufts.edu/hopper/

the etymological source for perception in Indian philosophy. ¹⁴ As Chadha stated, classical Indian Philosophy "accepts perception (*pratyaka*) or perceptual experience as the primary means of knowledge (*prama*). Perception (*pratyaka*) is etymologically rooted in the sense-faculty or the sense-organ (*aka*) and can be translated as sensory awareness, while *prama*, on the other hand, is derived from knowledge (*pramā*) and, literally means "the instrument in the act of knowing." ¹⁵ The categories of knowledge management are a prerequisite for the determination of our state of knowledge. The Western philosophers developed concrete categories for the determination of knowledge. So the term hermeneutics covers both the first order art and the second order theory of understanding and interpretation of linguistic and non-linguistic expressions. Not only Western philosophers were interested into the classification of knowledge. In the *Analects* of Confucius is written that knowledge actually is the state of mind that someone has about an issue; thus it is not the concrete knowledge about something, but the state of the mind about the issue, which creates knowledge in the sense of the awareness of one's own state of mind:

【十七章】子曰、由、誨女知之乎、知之為知之、不知為不知、是知也。

【十八章】【一節】子張學干祿。【一節】子曰、多聞闕 疑、慎言其餘、則

寡尤、多見闕殆、慎行其餘、則寡悔、言寡尤、行寡悔、祿 在其中矣。

Chapter. xvII. The Master said, "Yu, shall I teach you what knowledge is?

When you know a thing, to hold that you know it; and when you do not know a thing, to allow that you do not know it;- this is knowledge."16



text?doc=Perseus%3Atext%3A1999.01.0051%3Abook%3D1%3Asection%3D980a>. Sharon Ryan. "Wisdom". *Stanford Encyclopedia of Philosophy*: March 23, 2015. http://plato.stanford.edu/entries/wisdom/>.

¹⁴ Pokorny's Etyma. Ed. Jonathan SLOCUM. Linguistics Research Center at the University of Texas at Austin. June 23, 2015. http://www.utexas.edu/cola/centers/lrc/ielex/R/P0133.html

¹⁵ Chadha, Monima. "Perceptual Experience and Concepts in Classical Indian Philosophy." *Stanford Encyclopedia of Philosophy.* Stanford University. March 23, 2015. http://plato.stanford.edu/entries/perception-india/>.

¹⁶ Confucius. *Analects*. The Chinese Classics. With a Translation, Critical and Exegetical Notes, Prolegomena, and Copious Indexes by James Legge. In Five Volumes. *Sacred Texts*. March 23, 2015. http://www.sacred-texts.com/cfu/conf3.htm

The deeper meaning of the Confucian sentence lies in the ability to understand, if one has the ability to understand and distinguish whether one has the knowledge about something or not. The ability to differentiate and judge about one's state of knowledge is the deeper insight into knowledge according to this Chinese philosopher. Now coming back to Lyotard's Report of Knowledge we can ask "What has changed since 1979?" Concerning the dominant philosophical associations of the concept "knowledge" in the 21st century, we find information in the Stanford Encyclopedia of Philosophy. Epistemology as the study of knowledge and justified belief is the main branch of philosophy dealing with knowledge. Fantl here wrote that it is common in epistemology to distinguish among three kinds of knowledge as (1) being able to apply knowledge while executing a skill, (2) knowledge as a fact for the representation of a real existing issue, and (3) knowledge about a special issue. In epistemology these types of knowledge are called "knowledge-how", "knowledge-that", and "propositional knowledge". 17 The analysis of knowledge, the synthesis of knowledge, and the value of knowledge is discussed in philosophy. In late European philosophy rationalism and empiricism developed as methods for obtaining knowledge though a method or knowledge through empirical experience. Special cases of knowledge due to their subject are self-knowledge, knowledge through prophecy and esoteric knowledge, omniscient knowledge, and intuition and knowledge through introspection. Prophecy involves disclosing information through intuition. This excursion into the past of knowledge by the meanings of words or the definitions of philosophers shows us one thing clearly: Knowledge was ever since an ambivalent concept with a wide variety of associated meanings and definitions. Lyotard identifies the knowledge of the second half of the 20th century as a linguistically communicated and in the media formalized knowledge. The last decade of the 20th century brought to us the term "knowledge management". What happened between the time of Lyotard's *Report on Knowledge* and the rise of "knowledge management"? What is the state of knowledge now? We will aim at answering the questions in the following sections.

III. CASE STUDIES OF COMMUNICATION NETWORKS

for "Knowledge Management" in Professional Organizations

1. Professional Profit Making Business Organizations

Usage of "Knowledge Management" for IT and Finance Business by *Oracle* and Banks:



 $^{^{17}\,}$ Fantl, Jeremy. "Knowledge How". Stanford Encyclopedia of Philosophy. Stanford University. February 23, 2015. http://plato.stanford.edu/entries/knowledge-how/.

The internet as knowledge provider can be distinguished into several areas. The internet as provider of knowledge also is connected with other digital means of communication. "Knowledge management" relies on corporate structures of the performance of the organization employing "knowledge management". Knowledge is here the knowledge, which is necessary for the organization according to its aims, vision, and mission and the derived need to distribute it. "Knowledge management" requires a meta-system for the storage and the delivery of the information. Concerning the internet, we can say that this is a meta-system of the storage and exchange of any information, which is recorded in the digital mode. The *Knowledge Zones* of the company *Oracle* have the logo "Connect. Participate. Collaborate". The function of the Knowledge Zones is described as follows: "The Oracle PartnerNetwork will empower your company with exceptional resources to distinguish your offerings from the competition, seize opportunities, and increase your sales."18 Obviously, these Knowledge Zones serve the aim to sell IT products. Oracle gives the following definition of Knowledge Zones: "Knowledge Zones are solution-focused pages designed to jump start your path towards sspecialization while guiding you to detailed information on how to develop, sell, and implement *Oracle* solutions. Dive into the *Oracle Knowledge* Zones today and discover the potential opportunity for your business". Knowledge Zones comprise the fields of "Database", "Middleware", "Applications", "Server & Storage Systems", and "Industries". 19 In How To Do Business With Us the company Oracle writes: "As referenced in the OPN Membership Application, Oracle partners are required to comply with the Oracle Partner Code of Conduct and Business Ethics". Oracle wrote concerning its applications and products for knowledge management:

"Oracle Proven Knowledge ManagementBy enabling searches across a wide variety of sources, Oracle's InQuira knowledge management products offer simple and convenient ways for users to access knowledge that was once hidden in the myriad systems, applications, and databases used to store enterprise content. Oracle's products for knowledge management help users find useful knowledge contained in corporate information stores." ²⁰

The term "Knowledge Zone" is the expression used for learning platforms for the sold products, which enable retail sellers of the products of Oracle to understand them. The company Oracle offers IT products, which are applications for the administration of the information by indexing them. The information can be retrieved by the search in the indexes. Oracle wrote concerning its applications and products for knowledge management:

¹⁸ Knowledge Zone. Oracle. March 13, 2015. http://www.oracle.com/partners/en/knowledge-zone/index.html>.

¹⁹ Knowledge Zone. Oracle. March 13, 2015. http://www.oracle.com/partners/en/knowledge-zone/index.html>.

²⁰ "Applications". Products. Oracle. May 23, 2015. http://www.oracle.com/us/products/applications/knowledge-management/index.html.

"The Source of Searchable Data For Your Enterprise To help users of their Websites find answers amid a growing mountain of online information, companies are turning to enterprise search (ES) or enterprise knowledge management (EKM). ES is designed to index large amounts of information with the goal of making that content searchable." ²¹

In the banking sector also the concept of "knowledge management" is known; but the companies themselves do not provide any IT solutions for the administration of their internal knowledge. The following case of the Asian Development Bank (ADB) entails a definition of "knowledge management" in the tradition of the topological structure of "person", "time", and "place", which are categories that meet in the performance of "knowledge management". Asian Development Bank (ADB) wrote about knowledge management: "Where large organizations make an effort to boost knowledge sharing, the solutions they fabricate can aggravate problems. Designing jobs for knowledge behaviors and recruiting people who are positive about sharing to start with will boost knowledge stocks and flows at low cost."²² Asian Development Bank (ADB) understands "knowledge management" as follows: "In ADB, knowledge management is about providing the right knowledge to the right people at the right time, and helping them apply it in ways that improve organizational performance. Toward this, ADB works to ensure that its knowledge continues to expand, is practical and usable to staff and member countries, and remains of the highest quality."²³

2. Governmental Organizations

"Knowledge Management" of *NASA* and *USAID* for Organizing an Organization *NASA* is an organization, which uses "knowledge management" for the processes of maintaining, processing, storing, and delivering the knowledge accrued in this organization. Therefore, a *NASA* Knowledge Management Team exists with the function "to identify and capture information". The terms "knowledge management" is used at *NASA* as follows:

"Knowledge management is getting the right information to the right people at the right time, and helping people create knowledge and share and act upon information in ways that will measurably improve the performance of an organization and its partners." ²⁵



²¹ "Applications". Products. *Oracle.* May 23, 2015. http://www.oracle.com/us/products/applications/knowledge-management/index.html>.

²² "Knowledge Management". *Asian Development Bank* (ADB). March 23, 2015. http://www.adb.org/publications/internal-knowledge-markets?ref=site/knowledge-management/publications>.

²³ "Knowledge Management". *Asian Development Bank* (ADB). March 23, 2015. http://www.adb.org/publications/internal-knowledge-markets?ref=site/knowledge-management/publications>.

²⁴ Knowledge Management at NASA. NASA. March 23, 2015. http://km.nasa.gov/home/index.html.

²⁵ Knowledge Management at NASA. NASA. March 23, 2013. http://km.nasa.gov/home/index.html.

The question *Why is Knowledge Management Critical to NASA?* is answered as follows: The agency is "constantly challenged to document and integrate its lessons to effectively manage the risk involved in space exploration and human space flight". By its nature, "NASA's employees have specialized knowledge". The agency's aim is "to share knowledge with each other and with the public" and "to ensure safe flight and respond to issues raised by the *Columbia Accident Investigation Board (CAIB)*." It is also stated that the "workforce in the Agency is aging, and it is essential that critical knowledge be captured and retained for future reuse." The question *What is Knowledge Management?* is by this organization answered as follows:

"Knowledge management is getting the right information to the right people at the right time, and helping people create knowledge and share and act upon information in ways that will measurably improve the performance of *NASA* and its partners. For *NASA* this means delivering the systems and services that will help our employees and partners get the information they need to make better decisions." ²⁷

The application of knowledge management for the needs of the NASA is described as follows:

"There are three priority areas where KM systems and processes can help *NASA*'s ability to deliver its missions:

- 1. To sustain NASA's knowledge across missions and generations KM activities will identify and capture the information that exists across the Agency.
- 2.To help people find, organize, and share the knowledge we already have KM processes will help to efficiently manage the Agency's knowledge resources.
- 3. To increase collaboration and to facilitate knowledge creation and sharing the Knowledge Management Team will develop techniques and tools to enable teams and communities to collaborate across the barriers of time and space." ²⁸

In the foreword of the *Strategic Plan for Knowledge Management* of *NASA* is written: "As we moved to a philosophy of applying the principles of faster-better-cheaper as appropriate, that era of apprenticeship and nurturing of the flow of experiential and tacit knowledge has become more fractured." In this *Strategic Plan for Knowledge Management* is written that "*NASA*'s knowledge, its intellectual capital, is the Agency's primary, sustainable source of competitive advantage. Phy-



²⁶ Knowledge Management at NASA. NASA. March 23, 2013.http://km.nasa.gov/home/index.html.

 $^{^{27}}$ Knowledge Management at NASA. NASA. March 23, 2013. http://km.nasa.gov/home/index.html.

²⁸ Knowledge Management at NASA. NASA. March 23, 2013. http://km.nasa.gov/home/index.html.

²⁹ Strategic Plan for Knowledge Management. NASA Knowledge Management Team. April 2, 2002. NASA. March 23, 2015. http://km.nasa.gov/pdf/53490main_KM_Strat_Final.pdf.

sical assets age, today's workforce is mobile, and technology is quickly bypassed. Our knowledge as an Agency, however, can endure. This knowledge is a fluid mix of experience and know-how that allows *NASA* employees to strive for and achieve the improbable day after day."³⁰ In the executive summary of the *Strategic Plan for Knowledge Management* of *NASA* is written:

"Knowledge management is getting the right information to the right people at the right time, and helping people create knowledge and share and act upon information in ways that will measurably improve the performance of NASA and its partners. This means providing access to information at the time people need it to make the best decisions possible for mission safety and success.

People + Information = Action

People — The employees of NASA and its partners, the public, the Government, and the technical community.

Information — Specific learnings that can be communicated between people (verbally, in writing, or through a method or process).

Action — A decision or task that measurably improves the performance of the Agency or its partners, another organization, or an individual.³¹

The organization *USAID* answers the question *What is Knowledge Management (KM)*? as follows: "The focus of *USAID*'s Knowledge Management Program is to connect people to the processes and technology that will help them to work effectively with partners to accomplish *USAID*'s mission. The KM principles of knowledge capture, sharing and application helps the Agency to adapt to rapidly changing events by incorporating lessons learned and past experiences into decision-making and program planning decisions." *USAID* has a *KM Strategic Framework*, which "seeks to synthesize and promote knowledge sharing activities and resources through a continuous learning cycle. The *Framework* supports current KM initiatives while providing guidance for the development of future KM processes and systems." *USAID* answers the question *What Does Knowledge Management (KM)*? as follows:

"Connects people to timely, relevant and accurate information Captures the creation of knowledge generated by *USAID* programs and staff expertise Applies captured knowledge, such as lessons learned and proven results, to replicate success



³⁰ Strategic Plan for Knowledge Management. NASA Knowledge Management Team. April 2, 2002. NASA. March 23, 2015. http://km.nasa.gov/pdf/53490main_KM_Strat_Final.pdf.

³¹ Strategic Plan for Knowledge Management. NASA Knowledge Management Team. April 2, 2002. NASA. March 23, 2015. http://km.nasa.gov/pdf/53490main_KM_Strat_Final.pdf.

³² "Knowledge Management Support". *USAID*. March 23, 2015. http://www.usaid.gov/results-and-data/information-resources/knowledge-management-support.

³³ "Knowledge Management Support". *USAID*. March 23, 2015. http://www.usaid.gov/results-and-data/information-resources/knowledge-management-support.

Provides an environment where information sharing, learning and collaboration are encouraged

Retains and shares institutional memory"34

Both agencies utilize "knowledge management" for the active performance of their work in order to improve the performance in a positive way. Both agencies work close to governmental state institutions; they record their own history of knowledge in order to facilitate the present and in the future coming performance of new tasks. "Knowledge management" means here the management of knowledge the organization has already achieved; the centralization of this knowledge and its sharing among members are the essential approaches to "knowledge management" in order to fulfill their aims and goals. Methods of the realization of the "knowledge management" are besides the stored knowledge the transfer from one person to another person within the organization.

3. Non-Governmental Organizations

Knowledge Management of the *World Health Organization* (*WHO*), the *Food and Agriculture Organization of the United Nations*, and *UNESCO* The *World Health Organization* (*WHO*) uses "knowledge management" both as a technical tool for the internal operations and as one of the aims to be presented to the public audience. Addressing the public audience about the health matters is one of the applications of "knowledge management" codified in its vision of the organization. The *World Health Organization* (*WHO*) answers the question *What is Knowledge Management?* as follows: "Knowledge management has many definitions but *WHO* uses the term to describe how the secretariat uses technology to enable people to create, capture, store, retrieve, use and share knowledge." In the corporate vision of the *World Health Organization* (*WHO*) is mentioned that "the vision of *WHO* knowledge management is a world with better and more equitable health outcomes." In the mission concerning "knowledge management" is mentioned: "Our mission is to improve the understanding and application of knowledge management in the pursuit of *WHO*'s mandate." "36

On the contrary, the *Food and Agricultural Organization* of the *United Nations* uses "knowledge management" only for the internal processes of the organization. The employment of "knowledge management" in the *UNESCO* refers to both the internal use within the organization and the external promotion of methods of "knowledge management" as aims of the organization. Therefore, the *UNESCO* employs several principles



³⁴ "Knowledge Management Support". *USAID*. March 23, 2015. http://www.usaid.gov/results-and-data/information-resources/knowledge-management-support.

³⁵ "Knowledge Management". World Health Organisation (WHO). March 23, 2015. http://www.who.int/kms/en/.

³⁶ "Knowledge Management". World Health Organisation (WHO). March 23, 2015. http://www.who.int/kms/en/.

for the maintenance of the flow of information. The Food and Agriculture Organization of the United Nations (FAO) writes in its ABC of Knowledge Management: "Knowledge management is based on the idea that an organization's most valuable resource is the knowledge of its people. Therefore, the extent to which an organization performs well, will depend, among other things, on how effectively its people can create new knowledge, share knowledge around the organization, and use that knowledge to best effect. (...) Let's be honest – knowledge management is surrounded by a great deal of hype. But if you can put the hype to one side, you will find that many of the tools, techniques and processes of knowledge management actually make a great deal of common sense, are already part of what you do, and can greatly help you in your job."37 The Food and Agriculture Organization of the United Nations (FAO) describes here the principles and processes of knowledge management as follows: "Creating new knowledge can equally be approached in a number of ways such as through training, hiring external resources, bringing different people and their knowledge together to create fresh knowledge and insights, etc. It is also about innovation – making the transition from ideas to action more effective" and as "ways with knowledge" the *UN* mention "collecting and connecting" and "people, processes and technology". 38 The UNESCO uses a knowledge management (KM) system, which is describes in the following release of the organization; the UNESCO wrote in MDG-F Culture and Development Knowledge Management Project. A Closer Look: "To capitalize on this multifaceted experience, *UNESCO* is engaged, in partnership with the MDG-F Secretariat, in gathering and building on the knowledge gained from these Joint Programmes (JPs) through their experiences, success stories and lessons learnt, as this is crucial both in terms of knowledge generation and in terms of knowledge capitalization, in view of informing future culture and development programming and policy. (...) Putting in place a knowledge management (KM) system involves enhancing the knowledge generated during the implementation of projects and programmes through a systematic, coherent and predefined approach. This includes the collection, recording, treatment, sharing and dissemination of information and knowledge."39 According to the organization's understanding of their activities, the "UNESCO supports actions designed to empower people so that they can access and contribute to information and knowledge flows" using the following means:

Capacity Building
Content Development

³⁷ "ABC of Knowledge Management". FAO. Food and Agriculture Organisation of the United Nations. UNESCO. March 23, 2015. http://www.fao.org/fileadmin/user_upload/knowledge/docs/ABC_of_KM.pdf.

³⁸ "ABC of Knowledge Management". FAO. Food and Agriculture Organisation of the United Nations. UNESCO. March 23, 2015. http://www.fao.org/fileadmin/user_upload/knowledge/docs/ABC_of_KM.pdf >.

³⁹ MDG-F Culture and Development Knowledge Management Project. A Closer Look. UNESCO. March 23, 2015. http://www.unesco.org/new/en/culture/achieving-the-millennium-development-goals/knowledge-management/knowledge-management-a-closer-look/>.

Freedom of Expression Media Development Memory of the World⁴⁰

The *UNESCO* uses the following terms for knowledge as a system and the formats of knowledge:

Knowledge as System:

Knowledge System Value of Knowledge Systems Knowledge Networking Knowledge e-Networking Knowledge Imperatives

Formats of Knowledge:

Content Matters
Content-of-Knowledge
Concept of Value
Knowledge Chain
Institutional Knowledge
Knowledge-as-Content

Choucri in 2007 wrote in *The Politics of Knowledge Management. Prepared for The UNESCO Forum on Higher Education, Research and Knowledge* that "early in the twenty-first century, everyone recognizes that the global economy is increasingly knowledge-driven. If there is a cliché that most aptly characterizes the competitive features of the world economy today, then it is the global race for knowledge" and that "knowledge" has served largely as implicit "variable" in the social interactions or in relations among nations and accorded little if any specific strategic importance." The holistic dimension of knowledge and its availability at unequal levels in the world as well as its usage as a tool of power is here addressed. We can add that any political dimension for the availability of knowledge also is reflected in the way any institution determinates and defines knowledge as a selected knowledge, which reflects its own



⁴⁰ MDG-F Culture and Development Knowledge Management Project. A Closer Look. UNESCO. March 23, 2015. http://www.unesco.org/new/en/culture/achieving-the-millennium-development-goals/knowledge-management/knowledge-management-a-closer-look/>.

⁴¹ Choucri, Nazli. *The Politics of Knowledge Management. Prepared for The UNESCO Forum on Higher Education, Research and Knowledge.* 2007. UNESCO. March 23, 2015. http://portal.unesco.org/education/es/files/54909/11966774055Choucri.pdf/Choucri.pdf.

interests and promotes it. Thus, behind the term "knowledge management" is a variety of interests, which contribute to the politicalization of knowledge in the 21st century.

IV. THEORY: TAXONOMIES, CATEGORIZATION, AND CATEGORIES OF "KNOWLEDGE MANAGEMENT"

Types of Knowledge in "Knowledge Management"

The development of systems of "knowledge management" for the corporate world requires individual solutions for an organization. Nevertheless, the system requires a superstructure of elements for the storage and retrieval of knowledge. Hunter wrote that "setting up a knowledge management system across an organization may sometimes seem like an impossible goal. Trying to systematically organize knowledge, whether documented or tacit, within a company calls for structuring of information that seems to cover anything that the company can potentially touch upon. This in turn calls for extensive meta-knowledge about the organization."42 According to Hunter, "the choice of categories also needs consideration. Normally, in taxonomies, each category is chosen so that there is the highest possible degree of resemblance between members of the category. Though this may need to be off-set against having the maximum distinctiveness from members of other categories."43 Categories are according to the Stanford Encyclopedia of Philosophy "a system of categories is a complete list of highest kinds or genera". 44 Categories are a means for the typology of entities. The process of categorization in the process of setting up the highest genera for the classification of information. So it is the counterpart of individualization. Knowledge management can be considered as an integral part of management or as a feature for any communication entity in professional life, which distributes its knowledge to others in reference to its function and rank within the units of the corporation. The three main functions of management are (1) controlling of practice of the organization, (2) decision making of the organization, and (3) plans for the organization. The concrete actions for these areas need to be communicated and thus require knowledge management. But applying the term "knowledge management" to a broader area of usages means that knowledge is gained and achieved, stored, and communicated for various purposes. The aims of management mentioned above refer to different times. So controlling of practice of the organization refers to the past, decision making of the organization refers to needs of the present state, and making plans for the organization refers to the future.



⁴² Hunter, Anthony. "Taxonomies." Devision of Computer Sciences. University College London. March 23, 2013. http://www0.cs.ucl.ac.uk/staff/a.hunter/tradepress/tax.html.

⁴³ Hunter, Anthony. "Taxonomies." Devision of Computer Sciences. University College London. March 23, 2015. http://www0.cs.ucl.ac.uk/staff/a.hunter/tradepress/tax.html.

⁴⁴ Тномаsson, Amie. «Categories». *Stanford Encyclopedia of Philosophy.* Stanford University. March 12, 2015. http://plato.stanford.edu/entries/categories/».

(1) Controlling of Practice of the Organisation Managemental Activity concerning the History
 (2) Decision Making of the Organisation Managemental Activity concerning the Presence
 (3) Plans for the Organisation Managemental Activity concerning the Future

The aspects of "knowledge management" in an organization are:

Distribution of Knowledge Form of Knowledge Form of the Media for Distribution

The knowledge of an organization must be handled in a structural format, which is communicated. Besides philosophy, ancient rhetoricians described ways to find, store, and represent the knowledge for persuasion in a speech. Rhetoric is a field of studies, which manages knowledge. The area of rhetoric, which was specialized in the storage and delivery of knowledge, was called topology. *Topoi* (Greek "places") or *loci* (Latin "places") are in the rhetorical system the seats of finding the material of a speech or the arguments. These *topoi* or *loci* also served for the memorization of the speech. The most generalized *topoi* or *loci*, which we can consider to be categorized, are as follows:

Time
Place
Person
Thing
Method
Rhetoric: Topological Categories

These topological categories reflect the usage of language as the reference model, when we consider them to be cognitive metaphors of the scientific methodology. Also philosophy developed categories as the most abstract collective features for the structure of the world around us. Since the book *Categories* of Aristotle the categories have been discussed by philosophers. Kant presents categories in his critical works. Categories are tools for the structure of our knowledge; they are analytical tools for the classification of information. Categories can refer to abstract values or qualities more abstract than the topological categories listed above. Knowledge can be shared according to categories. Like in the history of philosophy, the categories developed by philosophers changes. Definitions of categories in Aristotle's *Categories* depend upon four forms of predication , which are "substance", "quantity", "relation" for the questions "where?" and "when?", and positio-

ning for the states of having, actively doing, or being passively affected. In his *Categories* (1b25–2a4) Aristotle describes ten general categories as classifications of entities.⁴⁵

(1) Substance	οὐσία
(2) Quantity	ποσόν
(3) Quality	ποιόν
(4) Relation	πρός τι
(5) Place	$\pi o ilde{v}$
(6) <i>Time</i>	πότε
(7) Positioning	κεῖσθαι
(8) Having	ἔχειν
(9) Doing	$\pi o \imath \varepsilon \tilde{\imath} v$
(10) Being affected	πάσχειν

Philosophical Categories of Knowledge: Aristotelian Categories of the *Categories* Studtmann interprets these ten categories as (1) substance, (2) quantity, (3) quality, (4) relatives, (5) somewhere, (6) sometime, (7) being in a position, (8) having, (9) acting, and (10) being acted upon. ⁴⁶ In *Book* II (chapter 19) of his *Rhetoric* Aristotle lists the *topoi* as seats of the arguments. The four general seats of arguments are:

The Possible and Impossible Fact of Past Fact of Future
Degree

In chapter 23 of his *Rhetoric* Aristotle lists the twenty-eight topics.⁴⁷ In his *Topica* Aristotle describes the aim of the book as follows before he lists the *topoi*:

"Our treatise proposes to find a line of inquiry whereby we shall be able to reason from opinions that are generally accepted about every problem propounded to us, and also shall ourselves, when standing up to an argument, avoid saying anything that will obstruct us. First, then, we must say what reasoning is, and what its varieties are, in order to grasp dialectical reasoning: for this is the object of our search in the treatise before us". 48



⁴⁵ Aristotle. *The Categories*. Tr. E. M. Edghill. Project Gutenberg. June 222, 2015. http://www.gutenberg.org/files/2412/412-h/2412-h.htm.

⁴⁶ STUDTMANN, Paul. "Categories of Aristotle". *Stanford Encyclopedia of Philosophy.* Stanford University. February 23, 2015. http://plato.stanford.edu/entries/aristotle-categories/.

⁴⁷ Aristotle. *Rhetoric.* Book II. Ed. Lee Honeycutt. Eserver. March 12, 2015. http://rhetoric.eserver.org/aristotle/twoindex.html >.

⁴⁸ Aristotle. *Topics*. Tr. W. A. Pickard-Cambridge. MIT Classics Achieve. March 12, 2015. http://classics.mit.edu/Aristotle/topics.1.i.html.

The differences of the two topic systems of the works Categories and Rhetoric exemplify how topoi were specializes for the purpose they were designed for. In the case of the Rhetoric, they were the most abstract categories for the production of speech. For knowledge management categories serve as structures for the processes of finding, selection, disposition, storage or memorization, and exchange of knowledge. We propose the following places for the administration and management of knowledge:

Place of Finding Knowledge Place of Selection of Knowledge Place of Storage or Memorization Place of Exchange of Knowledge

Knowledge Management: Categories of Places for the Communication of Knowledge

A complex system for knowledge management entails the places above mentioned as places for the communication and transfer of knowledge. The implementation of knowledge management into systems of contemporary organizations can have different forms. We can distinguish between (1) knowledge management as a part of management, which is business communication, and (2) knowledge management as the management of knowledge from any point of an organization. Both of them have in common that they use standard features of management:

(1) Planning of Knowledge

Vision of Selection, Distribution, Research of Knowledge

(2) Controlling of Knowledge

Actual, Past, and Present Distribution of Knowledge

(3) Decisions about Knowledge Present Distribution of Knowledge

"Knowledge Management" as Area of Traditional Management Besides these areas of traditional knowledge, also from the perspective of the activities associated to knowledge we can describe the processes of knowledge management. Relevant knowledge must be found, arranged, distributed and analyzed, and stored. These areas are:

Invention / Discovery of Knowledge Distribution of Knowledge Storage of Knowledge



V. ANALYSIS: THE CORPORATION AS CONTEXT OF THE CONCEPTUALIZATION OF "KNOWLEDGE MANAGEMENT"

The Ideology of Poly-Semantics of Globalization: The Concept "Knowledge" in the 21st Century as Universal

When we consider "knowledge management" as historical term arising in the late 20th century as a historical term, we can also take into consideration the surrounding intellectual context. Here we find that perspective of describing a process as "knowledge management" arose from (1) the existence of multiple IT solutions as communication tools, (2) the various phenomena of globalization of communication, which can be simply described as a the potential of storing, (3) the processes of connecting and communicating information around the globe, and (4) the availability of tools and means of information, which required adequate formats of their application. Within the melting pot of the new technical possibilities, the academic tradition and aims of achieving knowledge, and the question of the structure of knowledge the creations of a network of ideas circulating around the concept of "knowledge" were made in various fields of organizations, in political organizations, economic enterprises, and in the field of education. In philosophy, the term data and its distinction between mind-data and sense-data is common; in this sense, we can consider the smallest units of information existing in the reality of our life. On the other hand, we have the concept as the smallest unit, which is forming the thought of our thinking. Knowledge also needs something, which is communicated in a specific form; knowledge of a thing x and a thing x are not identical. Thus, knowledge is a semiotic category. Any knowledge needs an "interface", which connects the mind-data and the sense-data as a communicative tool. So at the point that I am designing for a company or organization a "knowledge management" tool or establish the concept in this organization, the framework of the transmitted and exchanged data and information as well as the identification of data and information needs to be determinated according to the aims of the organization. The creation of meaningful names for elements of the distribution of knowledge is a common indicator for the processes and the extension of the concept "knowledge" since the late 21st century. So many non-governmental organizations promote the concept of the "knowledge society" as a socialization contrastively different from the society based upon labor. Also terms like "knowledge worker" were created as a typological description for any professional dealing with the value "knowledge". The new terms designed to describe any activities of "knowledge", persons or institutions related to "knowledge" are used is several branches of public life including politics, education, and economy. De facto under the term "knowledge management" the contents attributed to be "knowledge" are neither identical nor is their format standardized. The term "knowledge" is treated as a guaranty for universal contents, but, on the contrary, this knowledge is limited to the needs of the corporate aims.



The Metaphoric of Knowledge: The Imitation of the Real

The meta-language employed by the institutions that utilize "knowledge" in the contemporary corporate world reflects that the metaphorical expressions for corporate knowledge are taken from different conceptual areas, which serve as the imitations for real life events or experiences. This second-world-*mimesis* of reality is a feature, which can also be found in the digitalized world of the internet; here real events are also imitated in a metaphorical language.

"State" as Concept for the Organization of Knowledge Knowledge Society Knowledge Worker

"Body" as Place of Knowledge Corporation of Knowledge

> Corporate Identity Corpora of Knowledge

"Nature" as Receiving Object of Knowledge
Dissemination of Knowledge

Conceptual Areas and Related Terms for the Representation of Knowledge in the 21st Century

Rhetorical aims of the persuasion of metaphoric used in rhetoric are considered to be based upon the three factors of the motivation (movere), the delight (delectare), and the education (docere), which rhetorical speech entails. In our case the use of metaphors can also be explained as assistance for the creation of something, which does not exist at the time of its invention. Rhetorical devices like the metaphors used here can be created from the lack of present words for the description of something new. The problem is the non-equivalence between the words and the reality it aims to present. Within the corporate society such a use of metaphorical expressions is a means of the organization and refers to concrete elements of the corporate society and its persuasive intention; so it is an authentic usage. Vice versa, also knowledge has become a very metaphorical expressions, which actually represents ambivalent meanings in the corporate world.

The Production of Science: "Knowledge Management" as Subject of Studies The *Handbook on Knowledge Management* is an example for the employment of invented terminologies as basement for academic scholarship.⁴⁹



⁴⁹ Handbook on Knowledge Management. Ed. Clyde Holsapple. Berlin: Springer, 2013.

Knowledge Organization Knowledge Managers Knowledge Work Knowledge Field Knowledge Economy Knowledge as Strategic Asset Knowledge Attribute Knowledge Maps Knowledge Asset

Elementary Terms of "Knowledge Management" Organizational Knowledge Acquisition

Communities of Practice Sensemaking Processes Knowledge Flows Knowledge Creation

Knowledge Management Process Business Process as Nexus of Knowledge

Processes of

"Knowledge Management"

Knowledge Management Ontology

Organizational Memory Organizational Culture

Knowledge Resource The Intellectual Capital of Nations Strategic Performance Measures Knowledge Management Systems Leaders of Knowledge Initiatives Strategic Knowledge Managing

Context of Networks

Knowledge Sharing Proficiencies

Constitutional Points in the Network of "Knowledge Management"

The Lexical Semantic Field of "Knowledge Management":

The Creation of an Inventory of Neologisms in the Business Dictionary and Q-Finance

The following examples demonstrate how "knowledge management" in contemporary management logistics is associated with a framework of terms and concepts. In the *Business Dictionary* the following definition of "knowledge" is given:

- "1. General: Human faculty resulting from interpreted information; understanding that germinates from combination of data, information, experience, and individual interpretation.
- 2. Law: Awareness or understanding of a circumstance or fact, gained through association or experience".50



⁵⁰ "Knowledge". Business Dictionary. March 23, 2015. http://www.businessdictionary.com/ definition/knowledge.html>.

In the *Business Dictionary* the following definition of "knowledge management" is given:

"Strategies and processes designed to identify, capture, structure, value, leverage, and share an organization's intellectual assets to enhance its performance and competitiveness. It is based on two critical activities: (1) capture and documentation of individual explicit and tacit knowledge, and (2) its dissemination within the organization".⁵¹

The semantic framework of "knowledge" extends here with the following erms:

Knowledge Asset Knowledge Base Knowledge Based System Knowledge-Based Pay Knowledge Base Management System

Knowledge Capital Knowledge Creation Knowledge Economy Knowledge Structure

Knowieage Sirucia Knowledge Map

Knowledge Management System

Knowledge Work Knowledge Worker

General Elements of "Knowledge Management"

Knowledge Based Community (KBC) Knowledge Based Manufacturing Knowledge Process Outsourcing (KPO) Chief Knowledge Officer (CKO) Customer Knowledge Management (CKM) System of Profound Knowledge (SoPK)

Six Sigma Body of Knowledge (SSBOK) Threshold Knowledge Test (TKT)

Elements of a "Knowledge Management" System

Types of knowledge are in the *Business Dictionary* listed as follows as related terms for "knowledge management":

⁵¹ "Knowledge Management". *Business Dictionary*. March 23, 2015. http://www.businessdictionary.com/definition/knowledge-management.html>.

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Scientific Knowledge Tacit Knowledge Informal Knowledge Explicit Knowledge Common Knowledge Tribal Knowledge Embodied Knowledge Product Knowledge Organizational Knowledge Personal Knowledge Constructed Knowledge Acquired Knowledge Holistic Knowledge Insight Knowledge Tacit Knowledge Imputed Knowledge Directed Knowledge Actual Knowledge Constructive Knowledge

Common Body of Knowledge

Empirical Knowledge

Expert System Learning Organization Knowledge Based System

Knowledge Worker

Know How Research Leverage

Proprietary Information

Knowledge capital
Human capital
Intellectual capital
Intrinsic value
Artificial intelligence
Intuition
Internalization
Instrumental rationality

Insider information

In the business portal *Q-Finance* "knowledge management" has the definition as "the coordination and exploitation of an organization's knowledge resources, in order to create benefit and competitive advantage." (*Q-Finance*) The above mentioned terms serve for such a coordination and explanation of knowledge. Like digital media, which create cognitive metaphors for the virtual reality of the digital media and especially the internet, these terms also refer to a conceptual reality, which is served as a meta-layer for the implementation of contents, which exists in reality. The different types of knowledge aim at the description of the type of knowledge in their socio-cultural settings and for an organizational structure of this knowledge.

^{52 &}quot;Knowledge Management". *Q-Finance*. March 23, 2015. http://www.qfinance.com/dictionary/knowledge-management.

VI. CONCLUSIONS: AFTER ALL: WHAT IS KNOWLEDGE IN THE 21ST CENTURY?

Since antiquity the understanding of the concept "knowledge" changed; even in one culture sharing one common language the terms for knowledge and their meanings can be different; an example is the Greek language. In the 21st century we cannot speak about a concept "knowledge" used in the ideal "knowledge management" any longer as we can for the semiotically congruent relationship between the linguistic terms for knowledge and their reference object in reality. In the 21st century the dominant category for the employment of "knowledge" is the *idea* with a certain background of an unspoken set values and aims. Such an idea is imposed on reality and an expression of existing structures of power. The idea is not "genetically" linked to a corresponding linguistic concept, but imposed unto the existing conditions of life, be it in a natural language or the social conditions. In the 21st century the understanding of knowledge is determinated by factors like its communicability and ability to be shared. Also the intended creation and production of knowledge plays an important part for the production mode of knowledge in the 21st century. In the "corporate culture" as the economic form of organizations the knowledge has also become the function to control, plan, and deciding about present issues; this framework of corporate identities and their formats also determinate the understanding of knowledge of the 21st century. Due to the meta-level of the approach of knowledge from an idealistic perspective, the vagueness of the idea of knowledge is part of the reception of the knowledge in the 21st century. Of course, we can also investigate into the concept "knowledge" in this time; but the conceptual aspect of knowledge would not meet the contemporary conditions of it. "Knowledge management" is a term, which shows us that knowledge is considered to be part of a process of a business. The spreading process of such an idea within a society has a wide impact on the understanding of "knowledge" in the society. It is the evidence that knowledge is considered to be the contents of a process, which aims at treating knowledge as an object of deals. Thus, it is manageable like any other subject of management. As subject of management, knowledge is undergoing the principles and rules of the established business processes or is subject of established processes, which serve the management of knowledge. In the business world of the 21st century the term "knowledge management" usually refers to the management of knowledge in corporate organizations. Corporate organizations hold what they consider to be knowledge and manage it. The function of knowledge depends on the type of organization: It can be specialized in knowledge as a product. Alternatively, "knowledge management" can be a side-product or elementary part of the organization. Knowledge management is a term, which transcends the limitations of a specific area, and so it also is a vague term, which allows communicating any treatment of an issue qualified as knowledge in the corporate world. Knowledge is here considered to be manageable and in this regard it is the aim of management to treat knowledge



in a way it can be used for the organization for the realization of its aims. Of course, at this point the question of the essence of knowledge becomes subjective and the concrete representational forms and contents as well as the structural implementation of information or data attributed as knowledge undergo the process of definitions by the organization.

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