Plato´s Cave, Knowledge Management and the internet: Some Theses

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Resumen. *La caverna de Platón, gestión del conocimiento e internet: algunas tesis*

La relación entre lo real y lo virtual no es sólo una cuestión de "ser o no ser", es también una cuestión de "saber o no saber". Una cara de lo Real y lo Virtual es la relación entre la información y la desinformación, entre el saber, el significado y los malentendidos.

Key words: Internet, conocimiento, real, virtual

Abstract

The relation between the Real and the Virtual is not only a question of "to be or not to be" but it is also a question of "to know or not to know". One side of the Real and the Virtual is the relation between information and disinformation, between knowing, meaning and misunderstanding.

Key words: Internet, knowledge, real, virtual

In my contribution I would like to discuss three questions:

1. Can we say (and if, in what sense) that the internet is a medium for information and knowledge (and not only a medium for communication, shopping and playing games)?
2. Can we say (and if, in what sense) that the old philosophical story of Plato's cave can tell us something about knowledge management in the present?
3. Are there some new approaches on how to build ontologies which distinguish themselves from the traditional generation of a hierarchical concept tree for searching and storing data in various Inter- (or Intra-)net sources?

The relation between the Real and the Virtual is not only a question of "to be or not to be" but it is also a question of "to know or not to know". One side of the Real and the Virtual is the relation between information and disinformation, between knowing, meaning and misunderstanding.

And if we have a look at the relationship between being, knowing and meaning, we will find ourselves in Plato's cave.
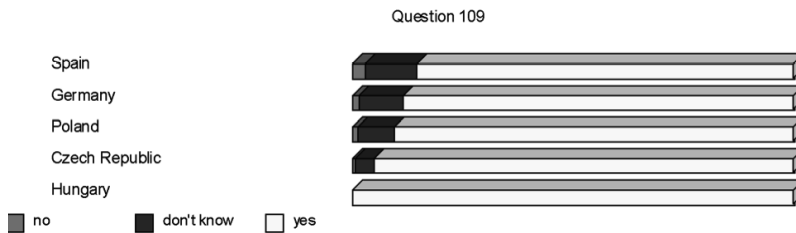
In this sense knowledge management (or more philosophical: the Kantian question of the necessary conditions of the possibility of a knowledge system) is a special aspect of the dialectic of virtuality and reality.
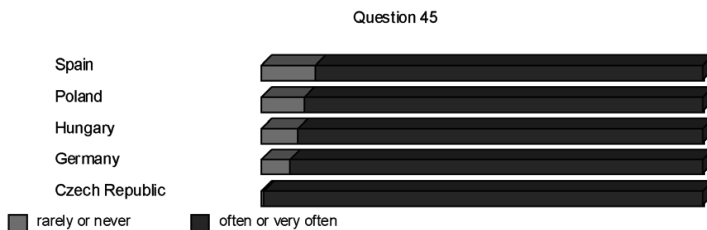
First question

If this is right our first question will be whether (and in what sense) the internet is a medium for information and knowledge (and not only a medium for communication, self-realisation, shopping and playing games)? I think that this is not only a theoretical but rather an empirical problem.

In order to follow this question, we want to have a look at a survey filled out by students from the Czech Republic, Germany, Hungary, Poland and Spain in the context of 2005's CultMedia project.

Motivation for using the internet: One gets information and news

Question 109

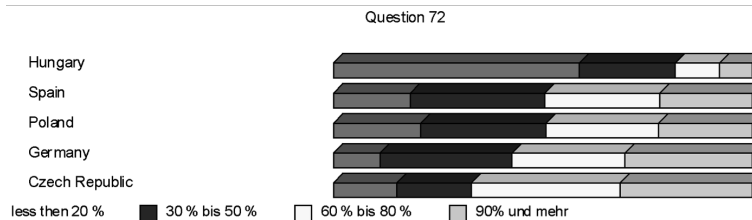Spain
Germany
Poland
Czech Republic
Hungary

☐ no   ■ don't know   ☐ yes

Searching in everyday life for information on the internet.

Question 45

Spain
Poland
Hungary
Germany
Czech Republic

☐ rarely or never   ■ often or very often

The first diagram refers to the motivation for online activities. Regardless of all differences (12 Per cent between Czech and Spanish students) we can see that the urge for information and news is a very important motivation for using the internet. More than 85% of the students indicated this.

Using the internet as an information medium (data in per cent)

Question 72

Hungary	
Spain	
Poland	
Germany	
Czech Republic	

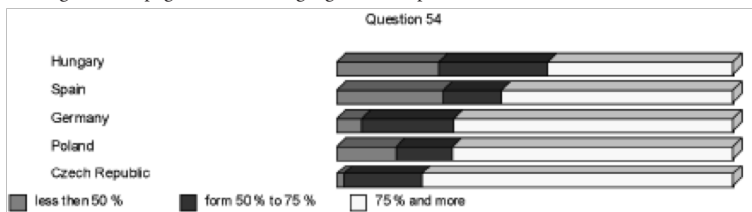less then 20 %   30 % bis 50 %   60 % bis 80 %   90% und mehr

The second diagram shows the search for information in the internet in everyday life.
More than 90% of the students (slightly less in Spain) are searching in the internet result-orientated for information in everyday life. Thus, the internet is a medium for result-orientated information search.
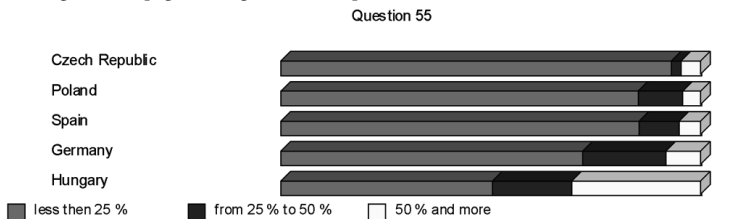
The next two diagrams show, to what extent the internet is used for studying and as an information medium.
More than 60 per cent of the students are using the internet for more than 50 per cent as an information medium. Only Hungary deviates from it (with approx. 24 per cent).

Visitig internet pages in native language (data in per cent)

Question 54

Hungary	
Spain	
Germany	
Poland	
Czech Republic	

less then 50 %   form 50 % to 75 %   75 % and more

Visitig internet pages in English (data in per cent)

Question 55

Czech Republic	
Poland	
Spain	
Germany	
Hungary	

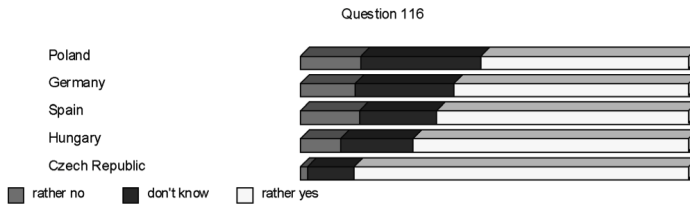less then 25 %   from 25 % to 50 %   50 % and more

On the following diagrams you find some data on the preferred languages for online activities.
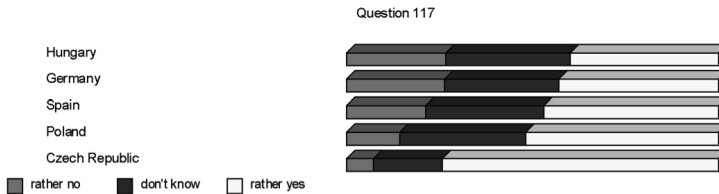
More than 70 % of the students browse through more than 75% of the internet sites in their native language. Exceptions are students from Spain (only 58%) and Hungary (only 46%).

This is reflected by the fact that only few internet sites in English language are visited. For approximately only 5 per cent of the students, every second internet page is in English. Here, German students deviate slightly (with 8,2 %) and Hungarian students substantially (with 30 %).
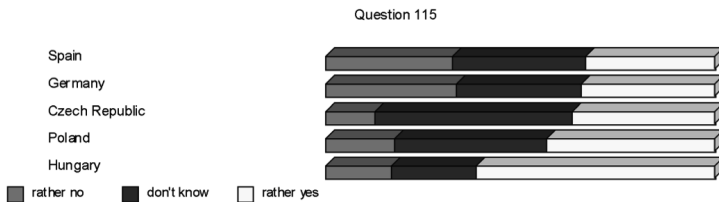
The internet is a perfect medium for getting questions answered.

Question 116

Poland
Germany
Spain
Hungary
Czech Republic

rather no   don't know   rather yes

The propability of a sufficient answer is higher than by any other medium.

Question 117

Hungary
Germany
Spain
Poland
Czech Republic

rather no   don't know   rather yes

One avoids errors by asking specifically for information.

Question 115

Spain
Germany
Czech Republic
Poland
Hungary

rather no   don't know   rather yes

Finally you will find some results from the survey concerning the role of the internet as knowledge medium (that means as a medium "*for getting questions answered*").

More than 60 % of the students are of the opinion that the internet is the ideal medium for getting questions answered. Deviants are here the students from Poland (with only 53%) and the Czech students (with more than 85%).

But if we ask for the probability of a sufficient answer through the internet, we get a different impression.

While the internet is seen as perfect for getting questions answered, the confidence into the quality of the answers is (with an average of 45%) lower. Scepticism is at approximately 20%. Only the Czech students substantially diverge from it with 74 % yes and only 8 % no.

The last table shows the students opinion about the possibility to avoid errors by asking specifically for information.

Here, a very ambivalent picture appears. While in Germany and Spain a rather critical view on the quality of internet information is prevailed (33% of the German and Spanish students don't consider it trustworthy), we find the lowest doubt among the Czech students (approx. 13%) and the highest confidence among the Hungarian (approx. 61%).

What can we finally summarize?

The internet is substantially used for result-orientated information research. Information research is an important motive for internet usage.

The internet is predominantly used as an information medium. The degree of the use as an information medium is, however, nationally very different. This is also expressed by the use of the internet for studying.

Also, university graduates predominantly use the internet in their native language (They are clients in a national linguistic net with bonds to an English linguistic environment).

Although, the internet is regarded as an ideal knowledge medium, there are large national differences regarding to the evaluation of the offered knowledge's quality.

Consequences

The use of the internet as an information and knowledge medium is culturally over-formed. It is also determinate by culture and not independent from the cultural context (nationality and language).

There is no context-free knowledge management independent from the everyday life of the people.

We must see the internet in its own dialectic of means, medium and environment (Mittel, Medium und Milieu).

Second Question

If this is right our second question will be the question whether (and in which sense) the old philosophical story of Plato's cave can tell us something about knowledge management in the present.

On the 2nd Conference on Professional Knowledge Management in April 2003 in Luzern (Switzerland) the first and only workshop on Knowledge Management and Philosophy, organized by Klaus Freyberg (Munich Reinsurance), Bertin Klein (DFKI, Knowledge Management Department, Kaiserslautern) and me, took place.
The starting points for this greatly successful workshop were 14 theses on Knowledge Management and Plato's "Parable of the cave".
   Wherein did the justification lie to confront IT-specialists with Plato? At that time we wrote for motivatation:

> Will we be able to understand each other over barriers of languages and cultures? Perhaps, images can help; Schroedinger considers them the main goal of science, Kuhn considers them able to organize paradigms. Thus, if we turn back to Plato, then only because of the expressiveness of his images. Hence, Plato is not our point, but a draft of a prototypical image for a discussion about the management of knowledge.

I think that there is a lack of theory in knowledge management. It has its reasons in the construction process of ontologies which is not sufficiently embedded in social and cultural contexts. Pointedly remarked: Formal ontologies produce only formal answers on content-related questions. Because the implicit and explicit ontologies - underlying the contents of the internet - determine the possibility of knowledge, we need a rethinking of ontology-construction. Hereby Plato's "Parable of the cave" can help.

Therefore let's have a look at the theses (with some additional comments).

Thesis 0

Plato's "Parable of the cave" is not a metaphor for the presumptuous-ness and the fictitiousness of any knowledge. It is the picture for the true position of the knowledge problem. We have a premonition of that it yields an idea of the contours of a yet missing theory of Knowledge Management.

Comment:

This means, that we will find all relevant points of a yet missing theory of Knowledge Management in Plato's allegory of the cave. We don't find the answers but the aspects a Knowledge theory has to reflect.

Thesis 1

To become familiar with the shadows is the beginning of all knowledge and its management.

Comment:
This is the starting point of Kant's "Critique of Pure Reason": Seeking the principles and conditions of the possibility of our knowledge and its representation.
We have to analyse the range of Knowledge representation and interconnection. We are in a field which can be described with complementary key words such as: Description versus construction, principles versus models, hard skills versus soft skills, linguistification, grammaticalization and lexicalization versus visualisation.

Thesis 2

However, Plato refers to the fact that a theory of the shadows always remains a shadow theory: Not the reorganization of the representation brings us knowledge, but the uncovering of the intrinsically structures of the underlying reality. We are not talking about the restructuring of texts. We are talking about the necessity of strengthening the position of the objects.

Comment:
This was the main point of Schleiermacher's Dialektik: "Knowledge is based on the conformance of the thinking with the being and the conformance of thinking in itself." (Schleiermacher 2001, S. 15 ff.)
   There is no controversy and no doubt among philosophers about the last condition, concerning the conformance of thinking in itself. But if a realistic view of the world brings additional structures for Knowledge constructing – we should be so pragmatic to have it. In the sense of Einstein the uncovering of the intrinsically structures of the underlying reality is the main way for a science of principles.

Thesis 3

But nevertheless: It is not the reorganization of the representations that brings knowledge but a more in Maieutike (intellectual midwife technique). The implicit knowledge (embodied/tacit knowledge) must be uncovered and made available in formal structures. We are talking about the necessity of strengthening the position of the subjects.

Comment:

This means, that we should stop building hierarchical trees and selling them as ontologies (something we often find among computer scientists) and that we should also stop constructing generative grammars and declaring them as a language structure of knowledge (something we find among linguists), but we should find out how to handle the embodied/ tacit knowledge and make it accessible via internet.

D. Murali (2006) remarks in the "Financial Daily" from May 29: "When given a choice between a person with high soft skills and low hard skills versus a person with low soft skills and high hard skills, go for the former."

Thesis 4

The Platonic bodies are the substrate of this world (Heisenberg): In the end, the way to the intrinsic structures of knowledge (in the objects and subjects) is only successful by means of formal sciences: We are talking about the construction of formal concepts of the sources of the shadows and the implicit knowledge.

Comment:

If we understand mathematics as the whole of thinkable formalizable structures of the world's possible structures, we are forced to conclude that formalization is the final goal in expressing the intrinsic structures of knowledge. In this context digitalization is one moment of formalization and the gate to knowledge management via internet.

Thesis 5

Knowledge is knowledge of humans for humans. Formalization and technicalisation of the knowledge must do their work under a surface of intelligibility.

Coment:

If formalization is the final mean of catching reality into knowledge structures, it is not the final way to access this knowledge. The human interface design is not only a facelifting for knowledge systems (in order to be able to sell it more easily) but rather a major problem of system architecture. Heidegger gives us here some substantial suggestions.

Thesis 6

According to Plato knowledge serves a purpose which lies neither in recognizing nor in controlling but in the acquisition of the ability to do the good.

Comment:
The Fall of Man, the separation from rationality and valuation has substantially damages human knowledge as knowledge for humanity. The consequence is our modern capitalism, which Max Weber (1988) called an "iron cage", a "shell as hard as steel" of rule-based, rational control and bureaucracy.
Knowledge management assessment could be a first step in a desirable direction.

Thesis 7

Knowledge is only in so far canonical as it is necessary for its self-expansion. It aims at the expansion of the competence, at the acquisition of dispositions for the enlargement of knowledge (Plato's education in arithmetic, geometry and dialectic).

Comment:
Development of competence, of dispositions for the enlargement of knowledge must be the main goal for Knowledge Management. Competence is the main concept which marks the shift from the technical system to the human. Knowledge Management should be Competence Management.

Thesis 8

Knowledge - in Plato's sense - is based on upbringing and education: not on persuasion but on social constraint for self-development. So that knowledge will become good, it also requires social bindings (back into cave).

Comment:
We are on the way to learn, that we should understand technology as a social phenomenon, a social construct. Knowledge management as technology is substantially a social phenomenon. The internet – the development of LINUX as well as the growing of wikipedias and weblogs shows that – should extend the social bonds of knowledge.

Thesis 9

Busyness is only a means; the good is the goal that leads to perfection. Translated: Efficiency is only a means, sustainability is the aim which forms the self-organization (as innovation = self-renewal ability of the enterprise and as competence = self-extension ability of the knowledge of the staff).

Comment:
We need a revision of the goals of Knowledge Management.

Thesis 10

The cultivation of the technology of Knowledge Management aims at a new culture (and not at the shareholder value): One must climb down again into the cave. Social Knowledge Management is a challenge.

Comment:
We don't get it cheaper: we need a cultural revolution to redesign technologies.

Thesis 11

Knowledge Management comes true only as a moment of a new practice, otherwise it remains a data- or information-management: away from the shadows.

Comment:
Without a new practice, and there we have to follow Marx (1973), we don't get a human based Knowledge Management for human development. We have to change the way of living to get a new science and technology.
If a knowledge management system is regarded scientifically as possible, technically as realizable and economically as feasible, it should be - in the first place - socially tenable and enforceable and humanly desirable.
The redesign of science and technology does not proceed from science and technology.
In this sense we have to understand the last two theses.

Thesis 12

The reality is essentially a social one even if it is physical. (There are the shadows of the people who carry the things which throw shadows.)

Comment:
This is the downside of the statement of Helmuth Plessner (1975), a philosophical anthropologist, who called human beings artificial by nature. The "law of natural artificiality" - he formulated - makes it inevitable to create artificial structures in the framework of which it makes sense and it is possible to accrue one's cultural competences and to have progress. "In this same framework human beings make their own (free) choices and have

to take their responsibility. At the same time the law of mediated immediacy leads us to the necessity to relativate and deconstruct our actions and their outcomes." (Ernste 2002) And this leads to the last thesis:

Thesis 13

"Behind the shadow" the problems only start: They are thrown by people who present the things and stage the world. What, however, do we know about the director, what do we know about OURSELVES?
Knowledge Management must aim at the conditions of the possibility and the arrangements of the reality of human actions.

After we broadly outlined the framework of a conception of Knowledge Management let's now have a look if there are already some new approaches to knowledge management. We want to reflect this only in the context of the first seven theses. The last seven theses are too big for now.

Third question

Are there some new approaches on how to build ontologies which distinguish themselves from the traditional generation of a hierarchical concept tree for research and storing of data in various Inter- (or Intra-)net sources?

Knowledge Management these days has become an entrepreneurial activity as well as an established academic discipline. Knowledge Management is enjoying a high profile and shaping the image of the information society to a large extent. "Ontology", a term taken from philosophy, has provided major contributions to the progress of this discipline.

The success story of ontologies within research on Artificial Intelligence and Knowledge Management, however, must not be over estimated. In many respects the current KM views are still too limited. The concept of knowledge is itself giving way, in ever wider areas, to the fashionable grip of Knowledge Management. However, knowledge management practices are often really just data management applications, and there is a considerable gap between formal models and real life processes. Fundamentals of Knowledge Management are still lacking, as is a theoretical framework for the overall process.

Here we see the potential of philosophy, being fed by the diversity of philosophical schools of thought and concepts, and in ongoing dialogue with IT specialists and practitioners.

Philosophy can deliver valuable heuristic approaches to the progress of knowledge management theory. Despite the plurality of approaches one can recognise a shift from a rather structural view on KM to a more process oriented perspective, from data management to knowledge management. This does not mean abandoning methodologies that have proven successful, but integrating these into a comprehensive general concept.

For illustration, five approaches can be noted, derived from different philosophical concepts, bound to throw new light on the ontological foundation of Knowledge Management, and to be interrelated and elaborated in this context. They represent genuine approaches to a fundamental theory of Knowledge Management, which shall be linked with existing concepts.

1. Based on Hintikkas epistemic logic, the differentiation between "knowing that" und "knowing which" leads to a Knowledge Management approach capable of separating different levels of knowledge and paving the way from a rather static perception of Knowledge Management to a more process oriented understanding. The transition from traditional "first-order logic" to "epistemic logic" allows for the elaboration of dynamic languages which enable modelling of the "coming to know something".
   (We find such a conception for example in the works of Markus Spies, Department of Knowledge Management at the Ludwig-Maximilian-University Munich, Germany.)

2. Supported and inspired by the 'Radical Empiricism' of William James, a completely new "non-logicist approach" to the problem of knowledge and its management has emerged. This gives rise to a fundamental revision of conventional ontologies. With concepts that are inseparably linked to experience, those of 'Observable', 'Dependency', and 'Agent', an interactive, partially formalised, and open computer model in the context of Empirical Modelling can be generated within which interactive real life processes become manageable. Such methods mean closer relation to real life business processes in the area of Knowledge Management.
   (This approach was developed by Meurig Beynon, Department of Computer Science at University of Warwick, Great Britain.)

3. As opposed to the predominant "pragmatic conceptualism", from the viewpoint "philosophical realism" a revision of the current approach to ontologies in the Information Technology sector arises. Against the background of a realistic methodology, that overcomes the orientation of philosophical knowledge concepts towards subject and linguistic issues, a methodological gain emerges, arising from the acceptance of the inherent nature of world besides the inherent nature of language and thinking. Hence the objects of knowledge, rather than the current linguisticl material about these

objects, get into the focus of Knowledge Management - with the principles of "realism", "perspectivalism", "adequatism" und "fallibilism". The "entrance of reality" into ontology opens new ways towards a theory of Knowledge Management.
(Barry Smith from the Institute of Formal Ontology and Medical Information Science at University of Leipzig, Germany, stands for this ideals.)

4. Based on the phenomenology of Husserl and Heidegger, a 'perspective' view of knowledge can be taken, which revitalises the philosophical problem of form versus content and throws new light on the procedural nature of knowledge modelling. Dealing with knowledge accepting that "the concept is the coming-to-be of the concept", modifies the approach to one of the key categories of Knowledge Management, the "tacit or implicit knowledge".
(In this context we would like to mention the works of John D. Haynes, Management Information System Department at University of Central Florida, United States.)

5. It seems to be obvious, that until a real artificial intelligence appears, nothing – except for humans, able to understand the meaning – would be able to realize the importance of a piece of news, of a link, of an article, etc.
So the thesis is that the future of knowledge management will be the history of the usage of human knowledge by algorithms and programs within the next years, and, because of that, the importance of weblogs and wikis will rise, because some types of them represent a collective pre filtered collection of knowledge and it would be a mistake not to make profit from them.
(As an example here we can refer to considerations from Zoltan Galantai, Head of the Cybermedia Research Group at Budapest Technical University, Hungary.)

Finally these five conceptions must be seen in the framework of a theory of process ontology (on the side of the objects of knowing) and in the context of a conception of competency (on the side of the subjects of knowing).

   (An interesting approach for the first we find in the works of Johanna Seibt from the Department of Philosophy of University of Aaarhus, Denmark. A promising conception of competency is being developed in the publications of John Erpenbeck from the Society of Qualification-Development-Management - QUEM - in Berlin, Germany.)

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