KNOWLEDGE AS LOVE

HOW METAPHORS DIRECT THE WAY WE MANAGE KNOWLEDGE IN ORGANIZATIONS

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Abstract

This paper presents the results of an exercise to assess the effects of metaphors on knowledge management. Knowledge is an abstract phenomenon with no direct referent in the real world. To think and talk about knowledge we use conceptual metaphors. The exercise shows that these metaphors greatly influence the problems we identify related to knowledge in organizations and the type of knowledge management solutions we propose. The *knowledge as water* metaphor used in this exercise – which reflects the dominant way of thinking in Western knowledge management literature – leads to the thingification of knowledge, resulting in a discourse about ways to formalize, manage and control knowledge. This discourse primarily serves the interests of management. In contrast, the *knowledge as love* metaphor used in this exercise – which reflects more an Asian way of thinking about knowledge – shifts the discourse from the topic of knowledge as a thing to the underlying preconditions for good knowledge work. These conditions include the facilitation of knowledge professionals, the quality of the relationships in the organization, and the quality of the organizational culture. This discourse is aimed at humanizing the organization instead of formalizing it and is more in the interest of employees.

Introduction

In many modern organizations, knowledge is considered an important phenomenon that requires management attention. However, unlike other issues related to the organization that require attention – like housing, equipment, or employees – knowledge does not have a direct referent in the real world. Knowledge is an abstract

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phenomenon that needs to be conceptualised before it can be considered, discussed or acted upon. Lakoff and Johnson (1980; 1999) have proven that we use metaphor to conceptualised abstract phenomena like knowledge and that we do this mostly at an unconscious level.

The choice of metaphor to conceptualise the phenomenon of knowledge is not without consequences. Metaphors provide cognitive and emotional structure and thereby constitute the way we see things. We do not first decide what characteristic of a phenomenon to highlight and then pick our metaphor. Instead, the metaphor allows us to bracket (Weick, 1995) the phenomenon in a certain way, and impose certain characteristics in a way that would not be possible without that particular metaphor.

The selection of metaphors becomes highly relevant in the context of organizational knowledge management. The way people look at knowledge will influence the problems they identify and the solutions they propose. For example, if management views knowledge as something that 'leaks away' when good employees leave the firm, it is likely that the solution of 'storing' knowledge in knowledge databases will be proposed. In this example, the underlying metaphor of *knowledge as water* (or any other fluid) directs the problems that are identified (it *leaks* away) and the solution proposed (it has to be *stored*). It is likely that different metaphors result in different diagnoses and solutions.

However, little is known about the impact of metaphors on the discourse about knowledge in organizations. Moser (2004) reports an workshop in which people were free in their choice of metaphors when discussing knowledge management and in a second stage analysed the metaphors they used. This revealed the underlying shared mental models that shaped the discussion on knowledge management. Some viewed knowledge management as a library, some as a canalisation system, and others based their contributions on a *knowledge as contested treasure* metaphor. By exchanging these views, a deeper, and shared understanding was reached that went beyond the mere understanding of facts to encompass conceptual thinking and emotional content. The models had considerable impact in the type of knowledge management suggested. Moser suggests that "(…) a new knowledge management tool should be based conceptually on central metaphor models that ideally represent the common denominator of a shared understanding of knowledge (…)" (Moser, 2004, p. 160).

However, it is questionable that in an organization such a common denominator will exist. Different world views and different interests between hierarchies within the organization may lead to different metaphor models of knowledge. Furthermore, little is know about whether it is possible to choose a metaphor for knowledge or knowledge management and have people use that metaphor to discuss it. What is the effect of the chosen metaphors on the problems that are identified and the solutions that are proposed? Are there differences between employees and managers? And, from a practical viewpoint, can we improve the quality of the diagnosis and solutions by introducing different metaphors? This paper describes the results of an exercise that was conducted at a Dutch central government body. The purpose of the exercise was to identify the effects of different pre-selected metaphors for knowledge on the discourse about knowledge related problems and solutions.

Participants first used the *knowledge as water* metaphor to diagnose knowledge management problems within their organization and proposed solutions. Then they did the same, but this time they used the *knowledge as love* metaphor. We found that the choice of metaphor had considerable impact on the problems that were identified and the solutions that were proposed. Furthermore, *knowledge as water* was

favoured most as metaphor to diagnose the situation, while *knowledge as love* was favoured for developing solutions.

In this paper I will first highlight the way metaphor works in conceptualising abstract phenomena. I will introduce a broad array of metaphors available to conceptualise knowledge. Then I will describe the methodology used to conduct the exercise. Finally I will present the findings and discuss their implications for knowledge management theory and practice.

How metaphor works

Joep Cornelissen, Cliff Oswick, and Philip Jones recently engaged in a debate about metaphors in organization theory and the process that makes metaphor work (Cornelissen, 2005; 2006; Oswick & Jones, 2006). This is a very important topic as insight into the mechanisms of metaphor can help us to understand the impact of metaphor on a psychological and sociological level, and on thinking and language. The debate centres on the question if metaphor is simply a matter of correspondence, highlighting the analogies in a source and target domain of the metaphor, or whether metaphor does more than that.

Oswick and Jones favour the correspondence theory, which states that individuals pick a source domain (the metaphor) that fits the characteristics of the target domain (the organizational phenomena under consideration) they want to highlight. Cornelissen presents the domains-interaction model as an alternative to the correspondence theory in order to draw attention to the fact that metaphors can produce new meanings that go beyond the similarity between the source and the target domain. According to this model, the process that makes metaphor work is a two-way process in which the target and the source concepts are aligned, and correspondence is constructed and created, rather than deciphered.

Both Cornelissen (2005; 2006) and Oswick & Jones (2006) discuss the conscious use of metaphor. Metaphors also work on a deeper, conceptual level of which we are often unaware. The Neurological Mapping model, as proposed by Lakoff and Johnson (1999; 2003), highlights the unconscious use of metaphor in theorizing and abstract thinking and has radical consequences for our thinking about social construction, language and truth. Both the correspondence and the domains-interaction model assume that the characteristics and the structure of the target domain exist independently of the metaphors used to describe them. Even in the domains-interaction model the first step is the identification of correspondence between the structure of the target domain and the source domain.

However, Lakoff and Johnson (1999) have shown that in many cases individuals unconsciously use metaphor to conceptualise and structure the target domain. Especially abstract concepts like *time*, *knowledge*, and *relationships*, get their structure from what they refer to as conceptual metaphor. It is impossible to think or talk about any of these concepts without using some type of metaphor. Lakoff and Johnson introduce the idea of *primary metaphors* that help to conceptualise subjective experiences using mental imagery from the sensor and motor functions of our body.

For example, we use the sensorimotor experience of affection as warmth (the warm body of our affectionate mother or father in our childhood) as the source domain when we conceptualise the subjective experience of a relationship (the target domain) as a 'warm' relationship. Lakoff and Johnson claim that we do not first decide what characteristic of a phenomenon to highlight and then pick our metaphor, but that the metaphor allows us to bracket (Weick, 1995), or highlight, certain

characteristics that would not be possible without the metaphor. Lakoff and Johnson (2003) describe how they searched for a way to conceptualise this bracketing process; a search in itself for the right metaphor. Oswick and Jones' metaphor of 'correspondence' and Cornelissen's metaphor of 'alignment and interaction' do not accurately describe this target creating, bracketing process. Lakoff and Johnson adopt the Neural Mapping Metaphor that they took from neural theory. According to neural theory, we have physical links in the brain that act as maps or mappings. Neural maps are learned via a neural learning mechanism that produces a stable system of primary metaphors that is part of our conceptual system and is independent of language. For an overview of the compelling evidence for Neural Mapping theory from second generation cognitive science and linguistics, I refer to Lakoff and Johnson (1999). Here I would like to focus on metaphors for knowledge.

Metaphors for knowledge

In a systematic metaphor analysis of three publications on knowledge management, Andriessen (2006) analysed 611 statements about knowledge. He found that at least 95% of the metaphors in the texts could be traced back to one of 22 underlying metaphors for knowledge. Dominant in two publications from the US was the idea of knowledge as something physical by the use of the *knowledge as stuff* metaphor. This metaphor revealed itself through the use of verbs like 'to transfer', and 'to share' knowledge. In the publications, different sub-metaphors were used that refer to different types of 'stuff' like *knowledge as a resource* (to 'use' knowledge or to 'store' knowledge), *knowledge as capital* ('invest' knowledge, 'value' knowledge), or *knowledge as a product* ('sell', 'package' or 'deliver' knowledge).

Andriessen's research indicates that in Western knowledge management and intellectual capital literature, the dominant way to conceptualise knowledge is to make it like a thing or a substance. This 'thingification' (Gustavsson, 2001) or 'reification' (Petrovic, 1983) is not uncommon in management thinking. Gustavsson (2001) shows that terms like 'organization', 'globalisation', and 'technology' are also examples of phenomena that are 'thingified'. Thingification makes it possible to treat a phenomenon as something objective outside of human beings and to manipulate and control it. In the case of knowledge, this controllability is further increased through the use of the *knowledge as resource* metaphor. This metaphor makes it possible to *economize* knowledge and to treat it in the same way as other organizational resources. The economisation of knowledge is further amplified through the *knowledge as capital* metaphor that puts places knowledge in the realm of economic assets that require a proper rate of return.

Savage (2005) states thingification of knowledge is undesirable and talks about 'knowledging' to highlight that knowledge is like a process. Gustavsson (2001) warns for the simplification that results from thingification and for the power thingification provides people who control the way the properties of the thing are defined, the way it is made trustworthy, and the way people identify with it.

Andriessen (2006) found that in a Japanese knowledge management publication the *knowledge as thoughts and feelings* metaphor was dominant. This metaphor allows for the distinction between 'tacit' and 'explicit' knowledge and also for the use of verbs like 'to articulate', 'to elicit', 'to express' and 'to verbalize' knowledge. The idea that knowledge is conceptualised differently in different cultures using different metaphors is further expanded in Andriessen and Van den Boom (2007), who show that in Eastern philosophy, the metaphors that are used to conceptualise knowledge are different from Western management literature. In Asia, knowledge is predominantly seen as spirit and wisdom, as unfolding truth, as illumination, or as

enlightenment of an underlying, deeper reality. Knowledge creation is seen as a continuous, self-transcending process. In Asian philosophy, strong emphasis is placed on the basic subjective nature of knowledge. Knowledge is not a thing or substance, knowledge is far more part of a process. Also rational thought is not disconnected from the emotional activity of the mind. Acquiring knowledge through examination and inquiry are dependent on knowing deeper drives and motivation of consciousness. In Asian epistemology knowledge is also dynamic and full-of-live as it emerges in social interactions among individuals, groups, nature and the surrounding social context. Asian thought is holistic and drawn to reality as an integral whole and to interdependencies and relations among objects and events. By contrast to Western modes of reasoning, Asian thought depends far less on categories, formal logic or isolated objects. Asian reasoning is dialectic, seeking a middle way between opposing concepts. By contrast, Westerners focus on distinctive objects and isolate these from their context, use attributes to assign them to categories, and apply rules of formal logic to understand their performance.

To summarize, across the globe very different metaphors are used to conceptualise knowledge. For example, Western metaphors for knowledge in knowledge management literature predominantly stress the objectification and controllability of knowledge; metaphors for knowledge in Asian philosophy predominantly emphasize the subjective, dynamic, interdependent, and emerging nature of knowledge. In the context of knowledge management efforts in organizations different conceptualisations of knowledge may have tremendous consequences. To explore this hypothesis, an exercise was conducted at a Dutch central government body.

The exercise

The exercise was conducted at a knowledge-intensive Dutch central government body employing about 300 employees. In two separate and successive sessions, a group of 13 employees and a group of 18 managers were asked to diagnose the state of affairs regarding knowledge in their organization and to come up with a number of solutions. In each session, this was done twice. The first time the participants were asked to use the *knowledge as water* metaphor. This metaphor was chosen to reflect the thinking about knowledge in terms of *knowledge as stuff*. The second time the participants were asked to use the *knowledge as love* metaphor. This metaphor was chosen to reflect the thinking about knowledge as something subjective, dynamic, interdependent, and emerging. At the end of both sessions the participants were asked to vote which of the identified solutions should be implemented. Participants prioritised the solutions by putting one or two small green stickers behind the solutions they considered most important. The day after the session, participants were sent the results of the workshop and they were asked to write down what each particular problem or solution meant to them. In addition, participants were asked to indicate which metaphor they thought generated the best diagnosis and which metaphor generated the best solutions. An overview of the structure of the exercise is shown in figure 1.
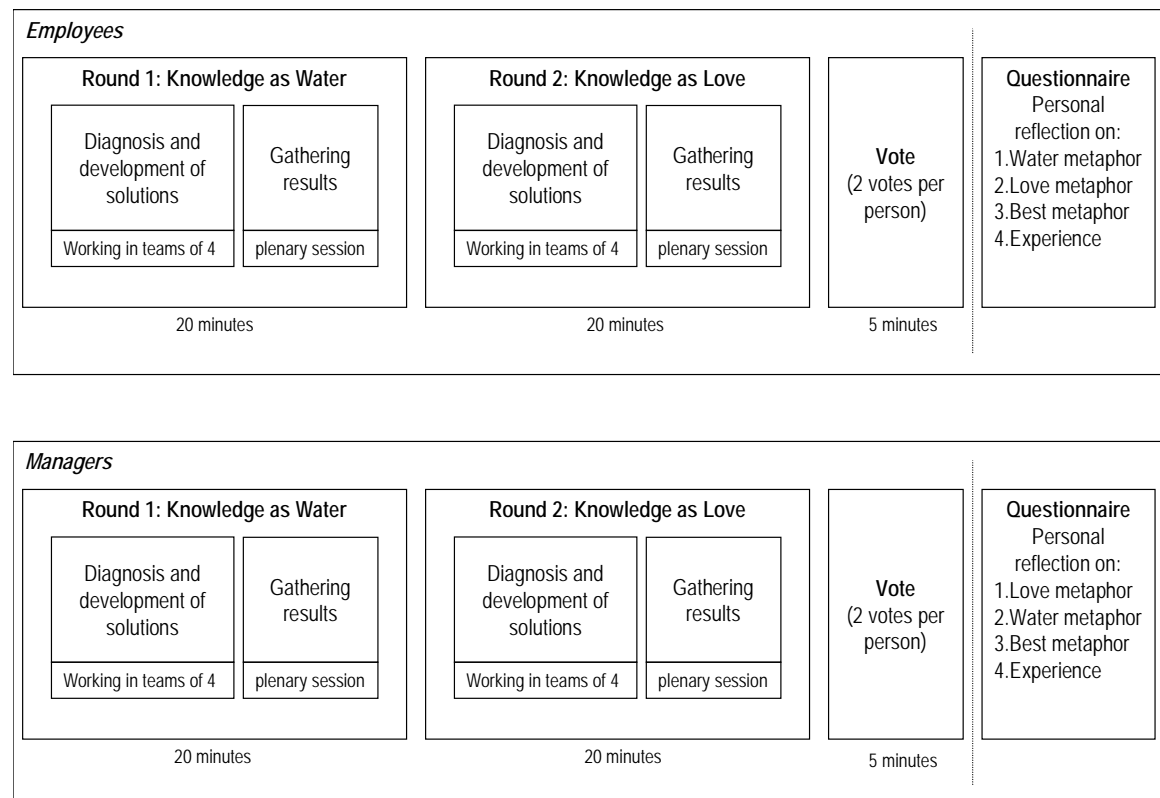
Employees			
Round 1: Knowledge as Water	**Round 2: Knowledge as Love**		**Questionnaire**
Diagnosis and development of solutions / Working in teams of 4 — Gathering results / plenary session	Diagnosis and development of solutions / Working in teams of 4 — Gathering results / plenary session	Vote (2 votes per person)	Personal reflection on: 1.Water metaphor 2.Love metaphor 3.Best metaphor 4.Experience
20 minutes	20 minutes	5 minutes	

Managers			
Round 1: Knowledge as Water	**Round 2: Knowledge as Love**		**Questionnaire**
Diagnosis and development of solutions / Working in teams of 4 — Gathering results / plenary session	Diagnosis and development of solutions / Working in teams of 4 — Gathering results / plenary session	Vote (2 votes per person)	Personal reflection on: 1.Love metaphor 2.Water metaphor 3.Best metaphor 4.Experience
20 minutes	20 minutes	5 minutes	

Figure 1: Structure of the exercise

Findings

Each workshop produced a list of problem statements and a list of solutions for each of the two metaphors. The questionnaire was returned by nine employees (75%) and eight managers (44%). In this paragraph I will first discuss the findings related to the diagnosis and then those related to the solutions. Then I will discuss the way the participants evaluated the exercise.

Diagnosis

At the first workshop, the employees came up with 20 knowledge-related problems in their organization. In round 1, the *knowledge as water* metaphor triggered eleven problem statements and in round 2 the *knowledge as love* metaphor triggered another nine. During the second workshop, the managers came up with 23 knowledge-related problems. Ten where triggered by the *knowledge as water* metaphor and thirteen by the *knowledge as love* metaphor. Table 1 shows the (translated) problems statements that were gathered during both workshops.

In round 1, the conversations focussed on the lack of knowledge sharing within the organization and between the organization and the outside world. In this round, knowledge was seen as something objective, as a thing, that was not always at the right place at the right time, but locked up in people, departments, or the organization as a whole.

Table 1: Problem statements identified

	Round 1: Knowledge as water	Round 2: Knowledge as love
1ˢᵗ workshop: Employees	• The knowledge is standing still • Knowledge does not flow • There are separate knowledge lakes • There are separate sources of knowledge • New knowledge gets frozen only ones a year • There is a large barrel of knowledge with only one tap • There is a large river of knowledge that is flowing too fast • Hydrocephalus • Our organization is like a luxurious swimming pool but our knowledge only bubbles locally • The lock gate is jamming so no knowledge flows to the outside world • The knowledge is situated in unconnected underground reservoirs	• Knowledge is blind • Knowledge exchange should be a reward in itself • There is a lot of good-fellowship • We lack quality time • There is not always a correct match between what we want to do and what we are told to do • We suffer from unrequited love • We suffer from rivalry and forced marriages • There are a lot of attractive but lonely singles • We suffer from in-breeding
2ⁿᵈ workshop: Managers	• We have invisible knowledge reservoirs • Old, brackish, still, stinking knowledge • Knowledge is leaking away • Our dykes prevent the dispersion of knowledge • Hydrocephalus, people keeping knowledge for themselves • Knowledge evaporates when project teams come to an end • Knowledge (like water from the tap) is taken for granted • There are many knowledge flows but they are not channelled • We must profit from sudden knowledge showers instead of putting up an umbrella • There are many flavours of knowledge that each require a specific approach	• Knowledge is not cherished • There is not enough sparkle • We only talk about the wedding certificate but not about our relationship • We lack an atmosphere of trust • The knowledge exchange is monogamous • Knowledge sometimes is oppressive • Our marriage sometime falls into a rut • Knowledge is treated without love • We suffer from narcissism • Confined knowledge • We suffer from unrequited love, we are turned down • The way to a man's heart is through his stomach: knowledge counts when it is measurable and can be easily handles • We spread STD's

In round 2, when the participants used the knowledge as love metaphor, the conversation shifted quite drastically from knowledge to the quality of the relationships between members of the organization and between the organization and the outside world. Knowledge as a thingified phenomenon was no longer the main topic of the conversation. Instead, the participants started to talk about relationships as a basis for their knowledge-intensive work. In this round, only nine out of the total 22 problem statements directly referred to knowledge. The other statements referred to lack of personal attention, good-fellowship, the number and quality of relationships, and passion and enthusiasm in work. These are all important prerequisites for successful knowledge-intensive organizations. So, in round 2 the conversation moved from the topic of knowledge itself to the underlying preconditions for good knowledge work.

In the questionnaire, all participants were asked to write down what the various problem statements from their workshop meant to them in practical terms. On average, employees produced 0.67 issues per *knowledge as water* problem statement and 0.52 issues per *knowledge as love* problem statement. Managers produced 0.65 issues per *knowledge as water* problem statement and 0.67 issues per *knowledge as love* problem statement. There are no significant differences between the two groups or between the two metaphors. This indicates that both metaphors were equally inspiring for generating issues.

The questionnaire showed that many of the problem statements gathered in the two workshops were multi-interpretable. For example, the statement 'Knowledge does not flow' triggered employees to identify five different issues:

- Within our organization, knowledge is not shared between people, departments and hierarchies
- There is so much knowledge in the organization that members can not digest it all
- Knowledge creation is stopped once a project is over
- The organization is self-centred
- Our policy that a project manager always has to be somebody from inside hinders the inflow of fresh knowledge

At the same time, different problem statements triggered similar issues, even across the two metaphors. For example, 'Knowledge does not flow' and 'We suffer from in-breeding' caused respondents to raise the issue of the self-centredness of the organization and the lack of knowledge sharing with the outside world. The issues mentioned in the questionnaire are summarized in table 2.

Table 2: Summary of issues put forward in the questionnaire

	Knowledge as water	Knowledge as love
Employees	- Within our organization, knowledge is not shared between people, departments and hierarchies - There is too much knowledge and information in the organization and it is difficult to retrieve it - There is not enough creation of new knowledge because of a lack of time, reflection, and procedures - Our policy that a project manager always has to be somebody from inside hinders the inflow of fresh knowledge - We want too much, there is not enough focus - The organization is self-centred and closed to the outside world	- People are too much focussed at their own topics and expertise and don't use other people's ideas, knowledge and expertise - Knowledge sharing is not recognized as important - There is not enough time for building relationships, sharing knowledge, and reflecting on the quality of our work - People's tasks do not always fit their capabilities and aspirations. - Some valuable people are not recognized as such and are stigmatised - The organization is self-centred and closed to the outside world. We need to share more knowledge with the outside world - The policy that we only recruit for the lowest positions in the hierarchy leads to lack of renewal and dilution of ideals and ambitions
Managers	- Within our organization, knowledge is not shared between people and departments - A lot of knowledge is not shared and used - Knowledge is not renewed - Knowledge is lost when people leave or teams are dismantled - People lack the skills and the time to share their knowledge - Knowledge is not organized, stored, managed, and made accessible. - Knowledge is not valued. - People are not open to other people's knowledge, are not willing to share it and are not encouraged to do so. - We are internally focussed and fear the outside world	- Knowledge is not appreciated and nourished - Knowledge is not shared - Knowledge is not used - Knowledge is lost, for example when people leave - We lack time to share knowledge - Too many people leave because they don't receive enough appreciation - There is an culture of distrust, and a lack of understanding, openness, empathy, and dialogue - We act formalistic, rationalistic, risk-avoiding and rule-based; we should be more emotional, creative and have more guts - We manage by numbers and not by competence - We are self-centred and internally focussed, we act pedantic and don't share enough with the outside world - We don't learn from the outside world and keep reinventing the wheel - Our added value is not recognized

During the workshops the *knowledge as water* metaphor activated conversations about knowledge as an objectified thing, while the *knowledge as love* metaphor made the conversation switch to relationships within the organization. In the questionnaires the same thing happened. In the part of the questionnaire about the

knowledge as water metaphor, respondents predominantly listed issues relating to the exchange and sharing of knowledge. To describe these issues, they used a number of metaphorical expressions that objectify knowledge. The most common expressions were 'to exchange knowledge', 'to share knowledge' (in Dutch the expression is 'to divide knowledge …'), and 'the knowledge is standing still'.

In the part of the questionnaire about the *knowledge as love* metaphor, respondents primarily listed issues related to the organizational culture and way of working, the quality of relationships, and the way people were treated within the organization. Especially among the managers, the *knowledge as love* metaphor evoked strong criticism about the lack of trust, openness, empathy and dialogue within the organization (see column three of table 2). This looks like a controversial issue because in the questionnaire this issue was enforced by four managers but at the same time explicitly questioned by two other managers. These are problems of quite a different level and magnitude then the knowledge sharing problems listed in the other part of the questionnaire. What is interesting is that, when describing these issues, some participants still used a number of metaphorical expressions that objectify knowledge, including 'to share knowledge', 'to use knowledge', and 'to exchange knowledge'.

Solutions

The employee workshop produced 20 solutions; 10 based on the *knowledge as water* metaphor and another ten on the *knowledge as love* metaphor. The workshop with managers was even more productive with 20 solutions based on *knowledge as water* and 13 based on *knowledge as love*. Table 3 shows the (translated) solutions that were gathered in both workshops.

The solutions that came from the employees are a plea for more time for knowledge sharing and reflection, more freedom to chose projects that suit their aspirations, more room for diversity and creativity, and more openness to the outside world. The employees signal a warning to management not to try to structure, manage and control knowledge. Instead, knowledge sharing should be facilitated and embedded in projects, processes, and the general way of working. The managers, on the other hand, proposed a number of solutions to deliberately manage knowledge through 'irrigation systems', 'knowledge taps', 'signposts', 'floodgates', knowledge 'maps' and strategies, and knowledge management. At the same time the critique of management about the lack of trust, openness and empathy in the organization as described above was reflected in a number of suggestions to improve the quality of the relationships within the organization.

What is striking is that many of the solutions suggested in round 1 remain abstract and metaphorical. Their meaning is clear in the source domain of water but what they signify in the target domain of knowledge is less obvious. The *knowledge as water* metaphor seems to stimulate the generation of ideas (30 in total) but seems less ideal for generating ideas that make sense in practice. The solutions suggested in round 2 were less metaphorical and more practical in nature. The *knowledge as love* metaphor led to fewer suggestions (23 in total) but these had more practical meaning. They were about changing the policies and rules of the organization, giving people more time for reflection and knowledge sharing, and influencing people's attitudes and behaviour. In the questionnaires, the solutions based on *knowledge as water* got a bit more concrete but not as much as those based on *knowledge as love*.

Table 3: Solutions identified

	Round 1: Knowledge as water	Round 2: Knowledge as love
1st workshop: Employees	• Build canals • Use effervescent tablets • Knowledge should meander. We should not canalise knowledge but give room for creativity • Make better use of all the small barrels of knowledge (our people) • Select and reflect on knowledge • Contact the right people • Time to do more in-depth research • Our managers should act as knowledge channels (but are they capable enough?) • Open up the floodgates • Exchange knowledge in projects, don't try to canalise it	• We should be allowed to choose our own partner • Express our preferences • Appoint formal and informal marriage brokers • Go out for a date more • Search for new friends in the outside world • Allow variety in people's passions and aspirations • Decrease the time pressure • Give people time and space to share knowledge • We should not try to manage and systemize knowledge • Allow time for knowledge
2nd workshop: Managers	• Create additional taps to tap knowledge • Build irrigation systems • Install signposts • Flush out and freshen knowledge • Throw knowledge away • Add oxygen to our knowledge • Before people leave the organization we should tap their knowledge • Prevent people from leaving to stop the leakage • Build a floodgate in the dyke • People with hydrocephalus should see a doctor • Organize gatherings to increase knowledge sharing • Increase the awareness about the importance of knowledge • Create a knowledge map and decide how to manage it • People should check the knowledge reservoirs before they start a project • Communicate more, maybe by moving everybody into one building • Knowledge management • Appoint lockkeepers • Appoint dike wardens • Reward knowledge sharing • By attracting people with specific competencies we can gather new knowledge	• Forster knowledge • Reward knowledge • Pay more attention to each other • Hire a marriage counsellor • Celebrate our wedding anniversary • Allow polygamy: exchange knowledge with more people • Get out of the rut by changing tasks and positions • Partner-swapping: job rotation within and outside of the organization • Increase knowledge sharing with the outside world • Love of our fellow-man • Show more guts • Share knowledge from the heart • Install anti-leakage policy

At the end of both workshops, participants were asked to vote for the solutions that they considered most important for the organization to implement. The results are shown in table 4. The priorities of the employees reflected their general concerns described above. Employees wanted more time to share knowledge and to reflect, and the opportunity to do work that matches their capabilities and aspirations. They cautioned management not to formalize knowledge management but to leave it to people working in projects. In contrast, managers prioritised a number of structured ways to manage knowledge, like the creation of irrigation systems, tapping knowledge and introducing knowledge management. They also expressed a strong wish for the organization to be braver and have the guts to do things out of the ordinary, and to humanize the organization by providing more room for empathy and emotions.

Table 4: Prioritised solutions per workshop

	Knowledge as water	# of votes	Knowledge as love	# of votes
Employees	Do more in-depth research	3	Allow time for knowledge	4
	Knowledge should meander. We should not canalise knowledge but give room for creativity	2	Give people time and space to share knowledge	3
	Exchange knowledge in projects, don't try to canalise it	2	Allow variety in people's passions and aspirations	3
	Use effervescent tablets	1	We should be allowed to choose our own partner	2
	Open up the floodgates	1	Appoint formal and informal marriage brokers	2
	Make better use of all the small barrels of knowledge (our people)	1	Express our preferences	1
			We should not try to manage and systemize knowledge	1
	Total	10		16
Managers	Knowledge management	3	Show more guts	9
	Build irrigation systems	2	Pay more attention to each other	5
	Increase the awareness about the importance of knowledge	2	Allow polygamy: exchange knowledge with more people	3
	Flush out and freshen knowledge	1	Share knowledge from the heart	3
	Add oxygen to our knowledge	1	Celebrate our wedding anniversary	2
	Before people leave the organization we should tap their knowledge	1	Increase knowledge sharing with the outside world	2
	Build a floodgate in the dyke	1		
	Reward knowledge sharing	1		
	Total	12		24

Evaluation of metaphors

In the questionnaire, participants were asked to indicate which of the two metaphors they thought was most suitable for diagnosing the organization and finding solutions. The results are shown in table 5.

Among employees, the knowledge *as water* metaphor was favoured for diagnosing the current situation. Employees who preferred this metaphor, argued that it allows for an accurate description of the current situation as it reflects the formal, rather technocratic way the organization deals with knowledge. One respondent preferred the metaphor because it better reflected the level of professionalism in the organization. Those employees that preferred the *knowledge as love* metaphor indicated that the metaphor points towards more fundamental, underlying issues regarding the culture of the organization. Two employees equally favoured both metaphors because they felt that combining the metaphors enabled them to look at the organization from different perspectives.

A majority of employees favoured the *knowledge as love* metaphor for identifying solutions. They felt *knowledge as water* referred too much to structure and management-based solutions while *knowledge as love* referred to more fundamental and important culture-based solutions aimed at facilitating and supporting people. In addition, they thought this metaphor better reflected the intangible nature of knowledge.

The managers that favoured *knowledge as water* to diagnose the situation either felt the metaphor better reflected the way their organization handles knowledge, or felt the metaphor was more clear and understandable. Those that favoured *knowledge as love* did so because they felt that knowledge is more then digital information, it is about people.

Managers who preferred *knowledge as love* to identify solutions said it offers better opportunities for developing creative solutions that are about people, not information. Those that preferred knowledge as water thought it was either more clear or created more diverse solutions. One manager thought each metaphor pointed towards a different important solutions; water towards the need to pull down the silos between the various departments and love towards the need to organize knowledge development and sharing. Overall, *knowledge as water* was favoured most a metaphor to diagnose the situation, while *knowledge as love* was favoured for developing solutions.

Table 5: Preferences regarding the metaphors used

		Knowledge as Water	Knowledge as Love	Both
Employees (n=9)	Diagnosis	44%	33%	22%
	Solutions	11%	67%	22%
Managers (n=8)	Diagnosis	38%	38%	25%
	Solutions	38%	50%	13%
Total (n=17)	Diagnosis	41%	35%	24%
	Solutions	24%	59%	18%

At the end of the questionnaire, respondents were asked to reflect on the exercise. All participants thought it had been an inspiring experience that was fun to do. Most thought it created a thoughtful and insightful conversation in which the organization could be analysed from new and multiple perspectives. At the same time respondents considered the workshop a good first step that needs a follow up to make the results more concrete. Some warned that more analysis is needed to determine whether a particular metaphor is more then just a funny metaphor and correctly reflects the situation within the organization.

Conclusions and discussion

The premise of this paper is that metaphors direct our thinking. The exercise described in this paper was set up to explore to what extent metaphors for knowledge direct the discourse about knowledge and knowledge management within organizations. The results are based on one case so they cannot be generalized. However, the exercise seems to indicate that the choice of metaphor strongly directs the conversation about problems and solutions related to knowledge in organizations.

The *knowledge as water* metaphor, that reflects the thinking about knowledge in terms of *knowledge as stuff*, seems to frame conversations about knowledge in such a way that knowledge is considered a thing that is not always at the right place at the right time. The *knowledge as love* metaphor, that reflects the thinking about knowledge as something subjective, dynamic, interdependent, and emerging, shifts the conversation toward the quality of relationships within organizations and other underlying prerequisites for successful knowledge work.

The thingification (Gustavsson, 2001) of knowledge in the *knowledge as water* metaphor provides the handles for managing and controlling knowledge. During the exercise, most solutions that came out of this metaphor were about more or less formalized structures and means to administer knowledge. These solutions were predominantly brought up by managers but strongly rejected by employees. The *knowledge as love* metaphor seems to produce solutions for improving the facilitation of knowledge professionals and the relationships and culture in the organization. These solutions are aimed at humanizing the organization instead of formalizing it. In the exercise, these solutions were brought up by both employees and managers.

The nature of the solutions evokes by both metaphors also seems to differ. The *knowledge as water* brings to mind abstract solutions that are concrete in the source domain of water, but remain abstract in the target domain of knowledge. The *knowledge as love* metaphor seems to bring about more practical solutions on how to improve relationships within the organization.

The exercise was limited in a number of ways. It took place in only one organization in the particular context of the Dutch central government. The participants were not a random selection of the population. Only 75% of participating employees and 44% of participating managers returned the questionnaire. And there was no opportunity for the researcher to check the validity of the problem statements that had been developed. Further research is needed to conduct the exercise in different settings and to check the results in the broader context of a knowledge management project. In addition, other metaphors might be used, for example, *knowledge as a conversation*, to position it in-between a thing and a process.

The validity of metaphorical problem statements is an important but complicated issue. Given the metaphorical character of the problem statements, assessing the extent to which they reflect reality is difficult. One cannot simply compare a statement like 'the knowledge in the organization does not flow' with reality to see whether it is true. The correspondence theory of truth fails us here and therefore validity is the wrong criterion. Instead we should adopt a pragmatic theory of truth combined with a social constructivist view of social reality. In this view, the reality of organizations is what its members construct it to be through language and action. Validity then needs to be replaced by the criterion of value. Those metaphors are valuable (not valid) that help people construct a better organizational reality. The question is to how to induce a conversation about knowledge in organizations that can help develop proper solutions.

Here the issue of power arises, because what may be better for one group may not be better for another. During the exercise, it was in the interest of the employees to promote solutions that would facilitate their work in terms of time, attention and enjoyment. The *knowledge as love* metaphor seemed to support that interest best. It was in the interest of some members of management to promote solutions that would give them means for steering, managing and controlling knowledge. This interest was best served by thingifying knowledge as in the *knowledge as water* metaphor. At the same time, part of the managers involved were also concerned about proper conditions for knowledge work and especially about the lack of trust in the organization.

If this turns out to be the case in other organizations as well, we may conclude that knowledge management literature that is primarily based on metaphors that thingify knowledge and the knowledge management practices that are based on this literature primarily serve the interest of managers. This effect remains largely unnoticed because the choice and use of metaphor is predominately an unconscious process (Lakoff & Johnson, 1999). Those that determine the metaphors of the discourse have the power and they can use it for their means. More alternative approaches for diagnosing and improving knowledge-related issues in organizations have to be developed so employees can be empowered to humanize their organizations. More research is needed to reveal the hidden metaphors in knowledge management literature & practice and their effects on knowledge management activities.

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