Knowledge Workers and the Realm of Social Tagging

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Abstract
Social tagging is a relatively new type of social software that stores user-generated textual keywords to describe a resource or aspects of that resource. In this paper we explore the mechanisms that social tagging can trigger to change the behavior of knowledge workers. We argue that social tagging has the potential to activate mechanisms of connection management and sociality in the context of knowledge work. To understand social tagging as a trigger for behavioral change, we explored the recent theoretical perspective of connectivism and connected knowledge. In connectivism connection making and sociality are key elements of knowledge work. Using this perspective we explore the realm of social tagging for knowledge workers.

1. Introduction

Research strives to increase the efficiency and effectiveness of knowledge workers in various ways. The use of Information Systems (IS) for knowledge work has been successful in some cases, but has also led to disappointment [20], [33]. To support knowledge acquisition and knowledge sharing, most organizations established intranets, data warehouses, or other static repositories. These IS allow the storage and retrieval of codified information, such as presentations, best practices and reports [23]. These systems were meant to support knowledge acquisition and knowledge sharing, such that the organizational knowledge would be more efficiently applied [2]. Often these systems are not aligned with the daily practice of knowledge work and as a result they are hardly used [23]. Most importantly, the information stored in these systems lack the context of its origination and use. Mainly end-products are stored without any linkage to related, up to date projects and people.

Knowledge acquisition and knowledge sharing are less supported by these types of systems [37]. In order to share knowledge, the explicit dimension of knowledge (e.g. reports and presentations) has to be extended with the tacit dimension made of context and experience. Context determines the quality of the knowledge sharing, and in turn, the knowledge acquisition process [16]. Knowledge is therefore shared best in a good conversation as it allows for rich embedded interaction [17]. However, most knowledge workers have limited idea of what colleagues are working on or what they know about and only have limited time for conversations. This is caused by geographical distance, structural boundaries [1], and a knowledge hoarding culture [7]. A resolution for this can be found in the use of ‘social software’.

Social software is considered to overcome the disadvantages of the current IS systems for knowledge work and to support knowledge application [19]. Social software is broadly defined as "all software that aims to simplify the realization and preservation of networks among people" [13]. Social software allows users to interact digitally, to create content collaboratively, and to structure information together. In the consumer market social software is found to support network formation and information exchange processes [35], which can help to act as a human filter to prevent information overload of other knowledge workers.

The goal of this paper is to assess the potential of a part of the social software suite, social tagging, to support knowledge work. We are not only concerned with the practical value of this tool, but focus mainly on the theoretical basis for this value. We specifically address the views of connectivism [29] and sociality [3]. We aim to identify the mechanisms by which social tagging triggers knowledge workers to adapt their (social) behavior such that they more collaboratively and more efficiently apply organizational knowledge.
2. Knowledge Management

Fahey and Prusak found that a working definition of knowledge is critical when thinking about the support for knowledge work [9]. We base our working definition on the analysis of Knowledge Management (KM) approaches and the views on knowledge that sustain them.

2.1. Views on knowledge

In her longitudinal assessment of KM literature, Jakubic [16] found that KM approaches are based on specific views with regard to the nature and origin of knowledge. She identifies two views, the commodity and the community view. These views are directly related to notions of explicit and tacit knowledge in the work of Nonaka and Takeuchi [21].

The commodity view on knowledge is “a managerial approach to knowledge, where knowledge is understood as a static organizational resource, as a commodity” [16, p. 12] also labeled social capital. The commodity view starts from the premise that knowledge is, or can be, made explicit by an individual. Knowledge (explicit knowledge) is considered as an asset or a resource of a company which can be stored and shared holistically. This commodity view is used in most mainstream KM literature.

The community view starts from the premise that knowledge is embedded in social context [16, p. 17]. The community view of knowledge assumes that knowledge is shared and constructed within organizations through a continuous process of dialog and interactions, and that knowledge is imbued with routines, standards, and with day-to-day practices [4]. This view considers knowledge to have both a tacit and an explicit dimension, but asserts that this knowledge can only be created and shared through participation in a social process. In this view, the role of individual knowledge creation is only marginal.

The KM approaches that have surfaced in the last ten to fifteen years are based on either of these two views on knowledge. The commodity view is apparent in KM approaches that focus on establishing IS were knowledge can be stored. The community view led to social KM approaches, such as job-rotation, fostering communities of practice, and knowledge sharing meetings. Both the commodity and the community view can be valuable when their limitations are carefully considered. However, given the complex nature and origin of knowledge, the KM approaches should be combined, linked, and intertwined, such that a practice emerges that embraces this complexity. This would pave the way for KM approaches that value the complexity of knowledge and therefore deliver value to knowledge workers [32]. In recent years, a new view on knowledge emerged that could be positioned at the centre of the dimensions of the nature and the origin of knowledge: connectivism. Figure 1 represents the identified views on knowledge with connectivism as a uniting concept in the middle. Next we will describe the connectivism perspective in more detail.

![Figure 1: Views on knowledge](image)

**Figure 1: Views on knowledge**

2.2. Connectivist view on knowledge

Connectivism as presented by Siemens [28], [29], [30], relates to social constructivism [43], but incorporates recent changes of the way people work with knowledge in his new concept on knowledge and learning. These changes concern changing communication patterns, increasingly distributed knowledge, and changes in the technology that supports knowledge work [41], [42]. Lastly it also provides for a different way of understanding knowledge, knowledge sharing and learning [11]. In Connectivism “to ‘know’ is to be organized in a certain way, to have a certain regularly occurring pattern of neural activity - and consequently, a disposition to behave [8]”. This understanding of knowledge as a distributed resource is also held by Polanyi [25] who considers the process of knowing as connecting fragmentary clues from memory which are integrated under categories. Connectivism transposes this neurological understanding to the practice of knowledge work. It therefore holds that knowledge resides in networks of distributed knowledge sources, such as people, the internet, and repositories. It assumes that knowing is making connections or the process of network development.

With regard to the tacit vs. explicit knowledge debate, connectivism holds that “knowledge possesses different states … along a continuum” [29, p. 18]. In this, Siemens follows the original work of Polanyi who considers all knowledge to have a tacit dimension. This means that knowledge can be embodied and therefore...
made partly explicit as long as it remains connected to the context in which it was created. When knowledge gets disconnected from context it becomes less valuable.

With regard to the origin of knowledge, connectivism holds that “knowledge rests in an individual; it resides in the collective [29, p.14].” Knowledge is perceived to originate in the interaction of people and information and therefore to be a social process. New knowledge is created when people create new connections and this is thus at the same time an individual process. Siemens [27, p. 6] acknowledges this paradox by emphasizing co-creation. Co-creation is a process in which the individual and the social blend and where knowledge is created through establishing connections with both internal and external knowledge. Building on the work of others in a co-creation process brings the individual input into the social context.

KM approaches that build on this view should focus on assisting knowledge workers to connect to relevant knowledge sources. Siemens states that KM should support the knowledge flow. This means that KM focuses on informal learning, co-creation, and communication, because together these processes provide the basis that is required to apply knowledge effectively [42]. For context to be visible, the connections between knowledge parts should be made visible in a network view. The process to manage this network should be supported at both the internal (individual) and the external (social) level. The individual should be supported such that the connection making (or structuring) effort is first of all useful for the individual itself. At the external level, the network management of each individual should be exposed to the network, such that the structuring effort becomes valuable for the whole organization. Overall, the most important task of such a KM approach is to provide a knowledge environment that supports knowledge workers to manage connections to knowledge objects and knowledge sources.

2.3. Connected knowledge

Based on the analysis of different knowledge views, we formulate a working definition of knowledge, which we term connected knowledge. The focus on connections between knowledge objects and knowledge sources provides a new dimension to the KM practice. We build our definition of knowledge on the widely accepted definition of knowledge by Tsoukas and Vladimirou [35, p. 979] who hold that knowledge is the “individual ability to draw distinctions within a collective domain of action, based on an appreciation of context or theory or both”. To this definition, we add the notion of connection making on the basis of our analysis of connectivism and emphasize the paradox of the nature of knowledge. Moreover, we extend this definition with the understanding that knowledge is a process (following [33], [16], [25]). In this process, connections are made between knowledge parts which exist distributed across a network of knowledge sources [29]. In following the definition of [36], we consider context to be very important. Context is required to assess the relevance of connections to information sources and thus to the formation of a knowledge network (also supported by [26] and [32]). Following [25] we contend that knowledge is personal - having a tacit dimension -, but at the same time connected - and thus social. The personal nature of knowledge is strongly linked to the importance of context. Connected knowledge is multidimensional (tacit and explicit, see [18]) and therefore even the most explicit knowledge has a tacit dimension; the contextual understanding of the knowledge parts (data, information and people) and knowledge sources. Through this analysis, we have come to understand knowledge as connected knowledge, which is:

The ability to draw distinctions, which are required for action, through a social process of contextually connecting distributed, multi-dimensional knowledge objects that are located throughout a network of knowledge sources.

Given this definition, knowledge is connected knowledge requiring IS for knowledge work that support the social process of connection management.

3. Supporting Connectivism

Huizing [14] discusses the role of subjectivism in IS support for knowledge management. Subjectivism is built upon the notions of human sensemaking, interpretation differences between people and the role of context as a lens through which experiences are perceived. “The domain of subjectivist, practice-based information management is 'sociality-centered-around-informational objects [14, p. 17]'”. These informational objects can be stored in IS and in human beings. Huizing argues the IS support for knowledge work should not reduce knowledge objects to themselves, but should “see them as contextualized tools for meaning, understanding and learning [14, p. 19]”. This understanding is well aligned with the view of connectivism and our working definition of knowledge. Supporting the emergence of sociality around informational objects is closely related to supporting the creation and management of
connections to knowledge parts in a social process. The creation of connections is a core element of sociality, because it supports the interaction that enables sociality to emerge. In conclusion, we argue that from this perspective, IS support for knowledge work has to provide for an environment in which sociality and connections can emerge and develop.

The work of Bouman et al. [3, p. 9] builds on the analysis of Huizing et al. [14] and their theoretical understanding of sociality is situated on the intersection of theories of social structure and situated experience and of theories of identity and social practice. As shown in figure 2, Bouman et al. explicitly value the duality and interaction of these theories. On the diagonal axis they therefore introduce ‘realms’ in which design spaces are identified that consider the co-existence and interaction of the adjacent theories.

The combination of all these perspectives on sociality is referred to as the realm of sociality. The dualities of theories create the following realms [3, pp. 10-11):

- The realm of enabling practice: social software should fit a social practice that already exists or that could exist. LinkedIn.com for example enables the real world process of social networking and supports managing your network relations.
- The realm of adaptation: social software should fit the daily practice of users, very much as an ingredient of that practice. Digg.com for example resembles the concept of ‘digging’, which is slang for appreciating something.
- The realm of building identity: social software should support users to build a (digital) social identity, such that they have a presence in the social community. Del.icio.us for example shows an image of a user’s mental framework by grouping the tags one uses in a tag cloud.
- The realm of actualizing self: social software should assist users in their self-actualization and self-reflection and it should challenge their creativity. Last FM for example provides the users with referrals to music one could be interested. It uses the music a user listens to find these referrals.

These realms are design spaces and can therefore be used to assess the ability of software to trigger sociality. We argued that sociality is one of the core elements in knowledge and knowledge work. Social software that aims to support knowledge work therefore has to acknowledge these design criteria.

4. Social Tagging

Social tagging is an element of Web2.0 or social software applications. Tagging has become a standard element of many blogs, wiki’s and websites. Tags are created by both owners and users to categorize or describe these media. Increasingly, tags and tag clouds are used to browse these media [31]. “Tags are free formed and user-generated textual keywords, that describe a resource or certain aspects of that resource, from the perspective of the individual [15].” Although exact applications differ, in general tags are added to resources once they are created or added to a repository. For example, when uploading photo’s on Flickr, besides a title and a description, users can add tags to describe the photo. Other services, such as del.icio.us, diigio.com and watvindenwijover.nl provide more sophisticated tag input fields, such as auto-completion on the basis of previously used tags and showing other users’ tags for a resource.

Although the tagging process itself is rather simple and straightforward, it enables an extensive list of functions. The main reason for users to apply tags is that it helps them organize their resources for their own purpose [12]. However, tags can serve several other tasks and functions.

4.1. Tagging functionalities

Tag clouds are groupings of the tags that are used to describe a set of resources (figure 3). Tag clouds help users to get a ‘gist’ of what the set of resources is about, to see what other users currently find interesting, and to search and browse for resources [27]. Moreover, tag clouds can also display the tags used by a single user and therewith show his or her interests and occupancies.
Tagging also assists users in determining and communicating about meaning [12]. Through adding tags, users describe their perception of the meaning of the resource. In this description process, users are not bound by expert-defined taxonomies, but are free in their choice for tags. This introduces the (collective) subjective indexing of users. This influence of the subjective perspective of users means that tagging essentially is sense making. Golder and Huberman define sensemaking as "the process in which information is categorized (enacted) and labeled, through which meaning emerges [12, p. 3]." This definition combines the individual choice of users with the emergence of collective meaning. On the one hand, the choice for tags is shaped by the individuals' own experiences, daily practices, needs and concerns. Because of this subjectivity in tagging, other users do not always directly comprehend the choice for specific tags.

On the other hand, [40] argues that sense making is also influenced by social factors such as belonging and identity. The meaning that emerges through sense making therefore becomes a shared or collective meaning. This is also in line with the theory of social proof. On the basis of this theory [6] poses that the choice for tags is not only determined by an individuals’ subjective understanding of the world, but also by the labels and categories others use.

The individual subjectivity in social tagging also supports users in serendipitous discovery of interesting resources [38]. This is often referred to as the long tail effect. Most of the tags a user chooses are obvious choices, which are also used by many other users. However, some tags describe the meaning of a resource from a different perspective that only a few other users would also choose. Through the exposure of these tags, other users might discover relations and resources they would never discover otherwise.

4.2. Drawbacks and benefits

The (minimal) effort of users to tag resources can create an easily browseable information structure. However, the users select the tags on the basis of their own mental model. The differences in the mental models of users can cause the shared vocabulary of tags to have little consistency [34], [39]. Several scholars have listed the causes of this inconsistency of emergent vocabularies and argued that these are serious drawbacks for social tagging. The five basic issues with an emergent vocabulary are [18]:

- Multilingualism: similar tags are not grouped when these tags are in a different language
- Polysemy: some tags can be relevant for very distinct resources, which limits their coherence
- Synonymy: similar resources tagged with synonymous resources are not grouped
- Basic level variation: users choose tags at different levels of specificity, which makes tag clouds messy
- Lack of hierarchy: there is no direct parent-child relation between tags, making it hardly possible to browse or suggest semantically related tags.

Much of the ambiguity caused by the basic issues with regard to tagging could be resolved in a social tagging system by showing informational and social context [10]. Context of an item can be observed by looking at all the tags that are used for this item, or at the other items that are tagged with the same tag. A personal tag cloud can provide the context of a user’s choice for specific tags. Moreover, through the community influence in social tagging systems, a shared meaning for tags emerges, which overcomes most of the drawbacks of tagging. "Users tag other peoples’ documents and therewith they extend the descriptive vocabulary beyond that of the author [18, p. 7]." The only drawback that remains is the lack of semantic relations between the tags, which limits the potential of browsing through and finding related items, beyond those that are tagged with the same tag.

Concluding, social tagging creates an information structure which can help users to explore and discover knowledge objects. In the following section we extend this analysis by formulating social mechanisms that social tagging can trigger. We formulate these mechanisms on the basis of our theoretical analysis of knowledge and sociality.

5. Social Mechanisms

Realist evaluation [22, 5] describes the regularity of social processes by formulating social mechanisms. "In the social reality social mechanisms determine the propositions on the basis of which people execute choice and have capacity to take action [22, p. 68]. In this section we aim to formulate the mechanisms that might be triggered by social tagging and therewith change the regularity of knowledge work. Realist
evaluation aims to formulate a number of social mechanisms based on theory, but at the same time remains open to the discovery of new mechanisms in practical evaluation research. The list of mechanisms we formulate in this section is therefore not claimed to be exhaustive, nor are all mechanisms mutually exclusive.

The combination of the view of connectivism on the value of connections and the design framework for sociality guides us in defining the mechanisms that can be activated by social tagging. The mechanisms here are propositions on how social tagging can support knowledge workers to efficiently apply organizational knowledge. We formulated these propositions based on the theoretical understanding discussed above, and on experiences and analysis with social tagging systems in practice.

The connectivist view on knowledge firstly emphasizes the value of contextual connections between knowledge objects and the serendipitous discovery of these connections. We therefore formulate the following two mechanisms:

- **The ‘seeing context’ mechanism.** Social tagging supports knowledge workers to see the context of distributed knowledge objects and sources.
- **The ‘serendipitous discovery’ mechanism.** Social tagging supports knowledge workers to serendipitously discover new information and people.

Secondly connectivism regards the effort of knowledge sharing as an individual and a social benefit. We therefore formulate two mechanisms that describe these benefits:

- **The ‘using insights’ mechanisms.** Social tagging supports knowledge workers to use the insights of other users more easily.
- **The ‘easy sharing’ mechanism.** Social tagging supports knowledge workers to easily share their insights about information and context.

The sociality framework of Bouman et al. [3] defines spaces software designers should consider for their software to support sociality. We therefore used this framework to formulate and structure mechanisms that social tagging has to trigger to support sociality. “Such mechanisms would acknowledge human motivations, like eagerness for exploration, curiosity, inquisitiveness, civilization, valuation of belonging, achieving self-realization, enjoying one-self [3, p.12]”. In the process of formulating these mechanisms we consulted the creators of this framework and collaborated with them to define the mechanisms.

**Enabling Practice:**

- **The ‘expectation’ mechanism.** Knowledge workers will use social tagging merely because they feel obliged by the social structure of the organization, which nullifies the potential impact on social processes.
- **The ‘influence’ mechanism.** The social tagging user community will influence the knowledge workers’ choice for tags, which makes these tags understandable for all users and therewith improves the communication about meaning.

**Mimicking Reality:**

- **The ‘fit’ mechanism.** Social tagging is used because it fits the social processes in the daily work of knowledge workers, which strengthens the impact of social tagging on these social processes.
- **The ‘freedom’ mechanism.** Social tagging systems give knowledge workers a free hand in their choice for tags, which makes these tags less comprehensible for other users and therewith complicate the communication about meaning.

**Building Identity:**

- **The ‘show identity’ mechanism.** Social tagging supports knowledge workers to show their identity, which improves the social interaction among them.
- **The ‘association’ mechanism.** Social tagging supports knowledge workers in feeling associated with their colleagues that also use social tagging, which improves social interaction among them.

**Actualizing Self:**

- **The ‘draw attention’ mechanism.** Social tagging supports knowledge workers to draw more attention to themselves or their expertise, which increases the potential for social interaction.
- **The ‘reflection’ mechanism.** Social tagging supports knowledge workers to reflect on their identity, which helps them to elicit their identity and in turn impacts the mechanisms ‘show identity’ and ‘draw attention’.

These mechanisms are considered in the Discussion section to assess whether social tagging through its design and functionalities could trigger these mechanisms, and link back to the connectivist perspective and the sociality perspective.

6. Discussion

Given these mechanisms we will discuss in this section the potential of social tagging to support knowledge work. First, we analyze social tagging from the perspective of connectivism to determine the fit of this software with our perspective on knowledge and knowledge work. Secondly, we analyze the potential of social tagging to support the emergence of sociality around knowledge objects.
6.1 Connectivist perspective

Connectivism holds that the knowledge required for knowledge work is embedded in a network of knowledge sources. This view on knowledge and knowledge work focuses on connection making and network management. Knowledge objects are argued to be connected when they have a shared property. By tagging, users add a property to these knowledge objects. When a user browses through tag clouds, the tagging system automatically connects knowledge objects with a shared tag. It is, of course, the user that has to connect the knowledge objects mentally and give meaning to the connections in order to act. However, the tagging system assists the user in making the connections more quickly by dynamically grouping knowledge with shared tags. The epistemological foundation of social tagging is therewith equal to that of connectivism.

Moreover, social tagging is also aligned to the connectivist view on knowledge. It regards the nature and origin of knowledge as paradoxes and dualities. Connectivism posits that the nature of knowledge is to some extent explicit and to some extent tacit and holds that the origin of knowledge is both individual and social. Social tagging is mainly concerned with explicit knowledge, but adds the tacit dimension by means of context and connections to people. Social tagging allows users to expose their knowledge objects and connect these to other knowledge objects and other people, blending the individual effort with the social.

Besides this theoretical alignment with connectivism, we evaluate the practical alignment by reviewing the mechanisms we defined in section 5.

- The ‘seeing context’ mechanism. In social tagging systems, tag clouds group digital resources on the basis of a shared tag. This grouping therewith provides the context of a resource, since related information and people are shown in their relation. This context can be extended by users, when they add notes to the combination of tag and resource. Lastly, context can be provided by the tagging system by showing users next to a tag cloud that are expert on the topic of a tag cloud.

- The ‘serendipitous discovery’ mechanism. One of the main strengths of tagging is that tag clouds are well suited for browsing interlinked and related tags and finding unexpected valuable resources and people. This support for serendipity is enabled by the freedom of users to tag all resources in a shared repository, even if they did not create the resource themselves. It is strengthened by the freedom to choose tags freely to categorize the resources in this shared repository.

- The ‘using insights’ mechanisms. Social tagging systems structure the insights and knowledge objects of all users such that they can be easily retrieved and used. The grouping and sub-grouping in tag clouds allow users to quickly discover and find the resources they need for work.

- The ‘easy sharing’ mechanism. Sharing your resources, insights and perception of context is supported by social tagging. No difficult procedures, authorization and such are required. A user simply clicks a context-menu item, adds a description and some tags and the resource is directly available for all other users.

In conclusion, from the perspective of connectivism, social tagging neatly fits both the theoretical and practical dimensions of knowledge and knowledge work. Based on this theoretical analysis, we argue that social tagging is a suitable element in the IS support for knowledge work. This hypotheses, however, still has to be tested in real-world implementations to assess whether the perception of users actually supports these theoretical findings.

6.2 Sociality perspective

When tagging is deployed in web applications it is often referred to as social tagging. The label ‘social’ is merely chosen because social tagging is part of the so-called ‘social’ software, but in this context the term stands for nothing more than distributed, asynchronous and collective knowledge. However, others [12] claim that social tagging systems actually trigger users to associate with other users and foster their effort to form groups. More understanding is required to support this sociality claim.

The basic process of tagging does by no means fit the definition and explanation of sociality used in this research. However, as we stated before, the basic process of adding tags to digital resources enables extended functionality which might be able to trigger sociality. Tagging data can for example be used to group users on the basis of the tags they use. Users can subsequently exploit these groupings by connecting to the different people in the groups. We review the mechanisms we formulated in section 5 to assess what elements of social tagging potentially triggers sociality.

- The ‘expectation’ mechanism. When social tagging systems are only used because knowledge workers have to, the potential effect on the emergence of sociality can be drastically reduced. This mechanism can be nullified by the support mechanism.
• The ‘influence’ mechanism. Social tagging systems show the tags other users when a user adds a resource. Therewith they influence the user’s choice of tags. When this mechanism is triggered, users are influenced to establish a shared vocabulary, which supports their communication about meaning.

• The ‘fit’ mechanism. Social tagging systems allow users to structure their own digital resources in their own way. This mechanism may therewith reinforce other mechanisms, since it creates an extra incentive to use the system.

• The ‘freedom’ mechanism. In social tagging systems, users are free to choose tags as they like. This freedom may disrupt communication about meaning, because the vocabulary is not shared. This mechanism disrupts communication and therewith hampers association mechanisms.

• The ‘show identity’ mechanism. Most social tagging systems allow users to create a personal profile page that is publicly visible. Social tagging systems extend the user profile on the basis of the user’s activities. Profiles allow users to express and build their identity. Profiles might therefore make users feel associated or even acquainted with one another, even without direct interaction.

• The ‘association’ mechanism. This mechanism is the core of sociality. It can be triggered by showing similarity between users, (automatically) create groups, and by allowing users to follow other users’ tagging behavior. On the basis of the tagging, browsing and commenting behavior of users, a similarity index can be constructed. The similarity index can be used to show a user other users that are related. This similarity might improve the feeling of association and induce users to connect to and communicate with other users. Groups can be provided a platform to interact on the topic by which they are grouped. Grouping people and enabling them to interact in a dedicated space might improve the sense of belonging between the users and foster social interaction. In some social tagging systems users can subscribe to the tags that another user applies. This following and being followed might create a sense of belonging and association among the users.

• The ‘draw attention’ mechanism. In social tagging systems, users have several ways to draw attention. First of all, their tagging behavior determines their expertise profile and this can draw the attention of other users. Secondly, users can actively react to other users’ tags, resources and notes. Lastly, most social tagging systems calculate the level of activity of users and rank the top five of active users which gives these users exposure and draws attention to their profiles.

• The ‘reflection’ mechanism. Social tagging systems can display individual tag clouds that show the occupation of a user. Moreover, it can track the tagging behavior over time and therewith allow users to reflect on their own and on other users’ development. This might also be triggered by profiles, when a user is now and then asked to update his/her profile. This mechanism can trigger self-realization and actualization.

In conclusion, several elements of social tagging can trigger the mechanism we formulated. Therewith social tagging theoretically has the potential to trigger the emergence of sociality among its users. As with the hypothesis of the support for connection management, this hypothesis of emerging sociality still has to be verified through case study research.

7. Conclusions and further research

In this paper, we described our research that explores the potential of social tagging to support efficient knowledge application in the context of knowledge work. Our goal was to identify how social tagging could trigger mechanisms that support knowledge workers to efficiently and collaboratively apply organizational knowledge. As is clear from the analysis in the preceding section, social tagging might trigger mechanisms of connection making and sociality. In our theoretical view on knowledge, both connection making and sociality are key elements of knowledge work. Therewith, we argue that social tagging is a suitable element of the IS support for knowledge work and can support knowledge workers to more efficiently and more collaboratively apply the organizational knowledge.

The limitation of this research is that it only concerns a theoretical assessment. We did not yet research practical implementations to realistically evaluate the formulated mechanisms, both in a quantitative and a qualitative fashion. Another limitation is that only a single perspective; connectivism is explored in relation to social tagging. Other theoretical foundations could lead to different insights on the mechanisms involved in social tagging.

Further research is required to study the practical implementations of social tagging to gain understanding about the mechanisms for connection making and the triggering of sociality. Such evaluation will not only focus on the final outcomes of social tagging activities, but especially on further understanding and confirmation of the mechanisms
discussed. Such research will be conducted both in a qualitative and in a complementary qualitative manner to confirm and understand the hypotheses with respect to the mechanisms of sociality and connection making. Finally further research is required to understand the role of social tagging as a mediator to go from knowledge sharing and access to knowledge activation.

References


