# Chapter X
# Knowledge Sharing Through Interactive Social Technologies:
## Development of Social Structures in Internet–Based Systems Over Time

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## ABSTRACT

*How do the Internet and new interactive Web-based tools, for example, wikis and discussion boards, affect people and their behavior in organizations? This chapter will show the emergence of social structures in Internet-based systems over time. Based on results of an empirical investigation of an Internet-based knowledge-sharing system, the author demonstrates the change of roles, expectations, and activities in online communities. Finally, the author sketches some essential process criteria for introducing online communities, which are extended parts of organizations (e.g., companies and institutions), characterized by a large size and supplemented the formal company.*

## INTRODUCTION

New buzzwords have become part of our daily lexicon: Web 2.0, social software, and social web, often used as synonyms. These concepts focus on new or existing software systems that are influenced by human communication and collaboration. Web 2.0 is heavily reliant on social interaction, so, social Web-based applications generate a human-centered design approach. Web 2.0 is, as O'Reilly (2005) said, a "*second generation of Internet-based services.*" The common idea is to enable people to collaborate and share information online in new ways, such as in wikis, communication tools, social networking sites, and, for example, in Folksonomies. Folksonomy consists of "folk" and "taxonomy."[1] Folksonomy is a 21st century practice of collaboration and taxonomy. People categorize content such as Web pages, online photographs, or Web links. However,

they do not do it on their own as a lonesome rider, they generate "tags" (labels) in collaboration with others. This social process is known as social or collaborative tagging. The underlying idea is that many Internet users find more suitable classifications and keywords than a computer or a limited number of people at a company can.

To describe such new concepts and new forms of Internet-based applications, it is appropriate to compare Web 1.0 and the newer Web 2.0. When we do so, we see, for example, that "personal Web sites" disappear and blogging becomes the favored interaction of Internet users. Individual publishing has evolved in the direction of participation. Wikis replace pure "content management systems." Whereas Web 1.0 was focused more on the downloading of prepared information, Web 2.0 transfers the process into communication about the information (for example blogs). The behavior of users is changing from being readers

*Figure 1. Shift from Web 1.0 to Web 2.0 (similar to O'Reilly, 2005)*

| Web 1.0 (mainly 1992-2002) | Web 2.0 (shift since 2003) |
|---|---|
| Encylopedia Britannica Online / German Brockhaus etc. | Wikipedia.com |
| Personal Websites | Blogging (e.g., IBM developerWorks Blogs[1]) |
| Publishing | Participation (e.g., pepysdiary.com[2] and many discussion boards) |
| Content management systems | Wikis |
| Directories (creating a taxonomy top-down) | Social tagging (Folksonomy': bottom-up), social bookmarking (e.g., del.icio.us[3]) |
| Telephone | Instant Messaging (e.g., ICQ), VoIP (e.g., Skype) |
| GPS non Internet-based | New location-based services (mobile devices, e.g., Dodge-ball[4]) |
| Newsgroups | Social networking (e.g., facebook.com and xing.com[5]) / online communities |
| → Download of information (download of prepared content): one-to-many users | → Communication & collaboration about the information, creating new knowledge: many-to-many users |

[1]    *Retrieved September 9th, 2007, from http://www.ibm.com/developerworks/blogs/*

[2]    *Pepysdiary.com site "is a presentation of the diaries of Samuel Pepys, the renowned 17th century diarist who lived in London, England. A new entry written by Pepys will be published each day over the course of several years; 1 January 1660 was published on 1 January 2003." (Retrieved September 9th, 2007, from http://www.pepysdiary.com/). People discuss Pepys' life and his diary entries by posting own annotations.*

[3]    *Del.icio.us is a social bookmarking site. By using tags, people can organize their own bookmarks and see what other people with similar tags have. This supports the idea to find information from the Internet easier. "Tags are one-word descriptors that you can assign to your bookmarks on del.icio.us to help you organize and remember them. Tags are a little bit like keywords, but they're chosen by you, and they do not form a hierarchy. You can assign as many tags to a bookmark as you like and rename or delete the tags later. So, tagging can be a lot easier and more flexible than fitting your information into preconceived categories or folders." Retrieved September 9th, 2007, from http://del.icio. us/help/tags*

[4]    *Dodgeball site helps to find friends when people are at different places: "Tell us where you are and we'll send messages to all your friends letting them know, so you can meet up. (...) we'll locate friends of friends within 10 blocks (...) find venue locations and broadcast messages to all your friends." Retrieved September 9th, 2007, from http://www. dodgeball.com/*

[5]    *"Facebook is a social utility that connects you with the people around you." Retrieved September 9th, 2007, from http://www.facebook.com/ Similar to Facebook (especially in USA), Xing.com is popular in Europe.*

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