Chapter 1
Internet, Collaborative Search, and Communities of Interests

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CONTEXT

With the arrival of the XXIst Century, some say that we now live in a knowledge society characterized by knowledge, expertise, creativity and innovation. For many economists, it becomes more and more crucial for our modern societies to produce, spread and share knowledge (David & Foray, 2003). For organizations, information is considered as the third factor of production (Schreyer, 1999), and many specialists have pointed the importance of competitive intelligence for an organization’s strategy (Kahaner, 1997). Nowadays, everybody agrees on the fact that knowledge production and sharing are the key elements for human emancipation.

From the philosophical schools in the Antic Greece to the academical world, the production and the share of knowledge were, and still are, based on collaboration between individuals. As stated by Aristotle in his Metaphysics, “the total is more than the sum of the parts”. With the widespread of Internet, and the availability of large amounts of information, many people claim that it will transform radically the way knowledge is produced. Several intellectuals, such as Lévy (1994), believe that a sort of collective intelligence will emerge from the cyberspace. Such hopes were reinforced while the Internet was transformed in something that many people call the Web 2.0 (O’Reilly, 2005). Without discussing the different existing definitions for this term, I want to stress the new role of the net surfers: from passive information consumers, they become active information producers.

This chapter proposes an introduction to the whole book. In section 2, I will briefly present the new knowledge sources emerging from the Web 2.0. This increasing amount of information is not manageable anymore on an individual basis: people need to benefit from searches and feedbacks from others (section 3) and increase their involvements in collectives (section 4). Section 5 proposes an overview of the next chapters. Nerveless, the new opportunities offered by Internet have several drawbacks highlighted in section 6. Finally, section 7 concludes this introduction.
NEW KNOWLEDGE SOURCES

Until the end of the XXth Century, the traffic on the Web was largely monopolized by a “few” sites (the main portals, several media, big companies and major universities). But, since the Web 2.0 phenomenon, the number of alternative knowledge sources has exploded. My concern is not to enumerate all these sources, but to emphasize some typical examples.

It is impossible to speak about these alternative knowledge sources without citing the free on-line encyclopedia Wikipedia and its 13,7 millions notices (in August 2009). In fact, several studies have shown that Wikipedia is not considered as an alternative source anymore, but as a reference for many net surfers. Its increasing use in students’ works illustrates its importance for the younger generations. Without detailing how Wikipedia works, it is important to underline the fact that the notices are written by many non-paid contributors, some of them being anonymous, and that the encyclopedia tries to ensure a given neutrality in the positions presented (at least for controversial subjects). Many notices are written by several contributors, so it makes perfect sense to present Wikipedia as a product of different collectives, each one editing several notices related to the corresponding interest.

The blogs are another important trend today on the Web. On the technical side, it is nothing more than a Web site working with technologies existing since the nineties. But, in reality, their authors share several practices, the most important being the massive use of hyperlinks (in particular to other blogs). These interconnections between blogs make them build a world of their own called the blogosphere. Authors such as Gillmor (2004) claim that they propose a new way for journalism where citizens write for citizens. The recent emergence of micro-blogs (where the size of the messages posted is limited to a fixed number of characters, usually 140), such as Twitter, has reinforced the role of blogging as a process of informing. Here also, it is possible to consider that the blogosphere is formed by different collectives, each one consulting and editing a specific cluster of blogs.

Other emerging sources of knowledge are social software, in particular those devoted to information sharing. Since the beginning of the Internet, the earlier communication tools (a particular type of social software) were heavily used by net surfers to discuss and share information. For several domains, Usenet is still today an interesting information source. But, the Web 2.0 has produced new softwares to share on-line resources: bookmarks (Delicious), scientific publications (CiteULike), pictures (Flickr), music (Last.fm) or videos (YouTube). All these applications implement the same approach: each user associates to a resource he or she founds interesting some tags. Since the tagging is public, everyone can see which are the resources associated with which tags. Since these resources are supposed to be relevant in a way or another (because someone has taken time to tag them), these software are powerful tools to access knowledge. Some researchers have shown that it is possible to cluster the net surfers into clusters based on the keywords they used to tag resources (Paolillo, & Penumarthy, 2007).

The important point is that the Internet provides a large amount of information written by different net surfers having different goals, origins, points of view, backgrounds, etc. Several people claim that the Internet will renew our democracies by making citizens aware of the fact that they are part of a “global village” to use the concept proposed by McLuhan (1967).

COLLABORATIVE SEARCH

These multiple knowledge sources provide an increasing number of information and it becomes impossible for the net surfers to manage them by
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