Chapter 7.16
The Generative Potential of Appreciative Inquiry as an Essential Social Dimension of the Semantic Web

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ABSTRACT

The mission of this chapter is to present a framework of ideas concerning the expected form of knowledge sharing over the emerging Semantic Web. Of specific interest is the perspective of appreciative inquiry, which should accommodate the creation of some appreciative knowledge environments (AKE) based on the peculiar organizational concerns that would encourage or better institutionalize knowledge work among people of interest in an organization. The AKE idea is extensible to the building of virtual communities of practice (CoP) whose meta-data requirements have been so much facilitated in today's Web technologies including the ideas of data ownership, software as services, and the socialization and co-creation of content, and it is increasingly visible that the AKE model of knowledge sharing is compatible for the need of virtual collaboration in today's knowledge-centric organizations. The author's investigation should provide a basis to think about the social dimension of today's Semantic Web, in view of the generative potential of various appreciative processes of knowledge sharing among communities of practice distributed throughout an organization.

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INTRODUCTION

In the late 20th century, Tim Berners-Lee (1999) had the idea of providing rapid, electronic access to the online technical documents created by the world's high-energy physics laboratories. He sought to make it easier for physicists to access their distributed literature from a range of research centers scattered around the world. In the process, he laid the foundation for the World Wide Web. Berners-Lee has a two-part vision for the working of the World Wide Web (http://public.web.cern.ch/Public/Welcome.html). The first is to make the Web a more collaborative medium. The second is to make the Web understandable and thus serviceable by machines. Yet, it was not his intention that someday his idea to link technical reports via hypertext then has actually revolutionized essential aspects of human communication and social interaction. Today, the Web provides a dazzling array of infor-

mation services designed for use by human, and has become an ingrained part of our lives. There is another Web coming, however, where online information will be accessed by intelligent agents that will be able to reason about that information and communicate their conclusions in ways that we can only begin to dream about. This is the Semantic Web (Berners-Lee, Hendler, & Lassila, 2001; Berners-Lee, 1998a, 1998b, 1998c; http://www.SemanticWeb.org), representing the next stage in the evolution of communication of human knowledge. The developers of this new technology have no way of envisioning the ultimate ramifications of their work. Still, they are convinced that "creating the ability to capture knowledge in machine understandable form, to publish that knowledge online, to develop agents that can integrate that knowledge and reason about it, and to communicate the results both to people and to other agents, will do nothing short of revolutionize the way people disseminate and utilize information" (Musen, 2006, pp. xii). This article is meant to provide a strategic view and understanding of the Semantic Web, including its attendant technologies. In particular, our discussion situates on an organization's concerns as to how to take advantages of the Semantic Web technologies, by focusing on such specific areas as: diagnosing the problems of information management, providing an architectural vision for the organization, and steering an organization to reap the rewards of the Semantic Web technologies. Of interest here is the introduction of the appreciative context of organizational systems development based on the philosophy of appreciative inquiry (Cooperrider, 1986; Gregen, 1990), a methodology that takes the idea of social construction of reality to its positive extreme especially with its relational ways of knowing.

THE TECHNOLOGICAL BACKGROUND OF SEMANTIC WEB

Most of today's Web content is suitable for human understanding. Typical uses of the Web involve people's seeking and making use of information, searching for and getting in touch with other people, reviewing catalogs of online stores and ordering products by filling out forms, as well as viewing the confirmation. The main tool of concerns is the search engine (Belew, 2000), with its key-word search capability. Interestingly, despite much improvement in search engine technology, the difficulty remains; namely, it is the person who must browse selected documents to extract the information he or she is looking for. That is, there is not much support for retrieving the information, which is a very time-consuming activity. The main obstacle to providing better support to Web users is the non-machine-serviceable nature of Web content (Antoniou & van Harmelen, 2004); namely, when it comes to interpreting sentences and extracting useful information for users, the capabilities of current software are still very limited. One possible solution to this problem is to represent Web content in a form that is more readily machine-processable and to use intelligent techniques (Hendler, 2001) to take advantage of these representations. In other words, it is not necessary for intelligent agents to understand information; it is sufficient for them to process information effectively. This plan of Web revolution is exactly the initiative behind the Semantic Web, recommended by Tim Berners-Lee (1999), the very person who invented the World Wide Web in the late 1980s. Tim expects from this initiative the realization of his original vision of the Web, i.e. the meaning of information should play a far more important role than it does in today's Web. Still, how do we create a Web of data that machines can process? According to Daconta and others (2003), the first step is a paradigm shift in the way we think about data. Traditionally, data has been locked away in proprietary applications,