Handbook of Research on Social Interaction Technologies and Collaboration Software:
Concepts and Trends

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Preface

We live in a time unparalleled in human history: a time of fundamental cultural, political, social, and economic change marked by an exponential growth in human powers to electronically collect, process, store, retrieve and disseminate information and create new knowledge. This sizable increase occurred during the second half of the 20th century with such landmark events as the emergence of the Internet in the 1960-70s, the introduction of personal computers in the 1980s, and the birth of the World Wide Web in the 1990s. It is not accidental that computers and the Internet are listed by National Academy of Engineering among the 20th century's greatest engineering achievements that transformed the world (Constable & Somerville, 2003). Computer-based information technologies (IT) have witnessed a remarkable expansion, penetrating all areas of people's lives – from personal to public. The last decade saw a shift in Internet innovations from information transmission and retrieval to interaction, collaboration and sharing, from "read-only" Web 1.0 with information and communication technologies (ICT) behind it to "read-write" Web 2.0 with social interaction technologies (SIT) enhanced by a variety of so-called "social software." A grand vision of the creator of the web Tim Berners-Lee who designed his invention "for a social effect – to help people work together – and not as a technical toy" (1999, p. 123) is coming to fruition.

As ICT matured, a shift towards SIT became inevitable. *Social interaction technologies* refer to an assortment of Internet-based tools and techniques aimed at initiating, maintaining, sharing, and distributing interactive and collaborative activities and spaces online. Social software, also known as collaboration software, represents digital electronic systems designed to advance social contact and interaction through computer networks. Social interaction technologies can be viewed as a result of change brought about by ICT. SIT now pose as agents of future change in their own right. Relying on SIT, the World Wide Web is evolving from its current shape towards the Semantic Web and semantic web technology (Berners-Lee & Hendler, 2001; Berners-Lee, Hendler, & Lassila, 2001; Berners-Lee, Hall, Hendler, Shadbolt, & Weitzner, 2006). SIT made possible the proliferation of social media powered by social software: thereby serving as a testimony that human society as a whole continues on the path of ingenious integration and adoption of information technologies by extending the existing system of checks and balances to secure free information exchange and promote new means of social connectedness.

The Handbook of Research on Social Interaction Technologies and Collaboration Software: Concepts and Trends focuses on the latest explosion of Internet-based collaboration tools and platforms reaching end-users; it explores their origins, structures, purposes, and functions; and it muses over how SIT can expand human abilities and powers. This broad spectrum of applications and services includes: online social networking, blogs, wikis, podcasts, web feeds, folksonomies, social bookmaking, photo and video sharing, discussion forums, virtual worlds, and mashups intended to advance interaction, collaboration, and sharing online.

Where the human community is found, diverse media of communication are also. Where computer-mediated communication is found, its benefits and drawbacks are also. Where social interaction technology is found, its contemporary and future challenges for the human community are also. Borrowing from V.L. Parsegian's sage work, *This Cybernetic World of Men, Machines, and Earth Systems* (1972, p. 13), while "the computer has advantages over the human system," its "picture is not altogether bright" because the computer brings "risks as well." Since they "require highly skilled human judgment for their use or misuse," computers "can compound human errors as well as reduce them." In short, to avoid undesirable consequences, we must value the edification of human intelligence.

In the broader sense of technology, Neil Postman, in *Technopoly* (1993, p. 18), asserted that a "new technology does not add or subtract something." Rather, a new technology "changes everything." He cautioned that inventions can have unintended results that are favorable and unfavorable, even when the intended effect is one of human benefit. To avoid a lopsided approach it is time to recognize that "understanding and fostering the growth of the World Wide Web, both in engineering and societal terms, will require the development of a new interdisciplinary field" (Berners-Lee, 2006, p. 769). The editors of this text and its authors have done their best to inform the reader on pursuing a path of wisdom and eschewing a path of folly with respect to social interaction technology and collaboration software. The joys and sorrows of social interaction technologies and collaboration software are noted with sanity and scholarship. Naïve optimism holds no sway in the learned writings of these authors. The promise of the *Handbook* is that it will generate dialogue among diverse scientists to enrich, in the words of Thomas S. Kuhn, "the entire constellation of beliefs, values, techniques, and so on shared by the members of a given community" (1970, p. 175).

DIVERSE PERSPECTIVES

The editors chose to select as many diverse perspectives on the subject of social interaction technologies and collaboration software as reasonably possible. Vehement efforts were extended to select suitable and learned authors from around the globe. The international celebrity of the authors is further enhanced by their varied academic fields. Overall, the *Handbook* presents state-of-the-art research on social interaction technologies and collaboration software as emerging fields of cross-disciplinary research and knowledge. It has been noted that "Web science, therefore, must be inherently interdisciplinary; its goal is to both understand the growth of the Web and to create approaches that allow new powerful and more beneficial patterns to occur" (Berners-Lee, 2006, p. 769). The *Hanbook* brings together experts from computer science, software engineering, management information systems, business and economics, knowledge management systems, marketing, public relations and advertising, law, journalism and media, communication, psychology, anthropology, social work, design, library and information science, and education. Additionally, the *Handbook* maintains a global approach. The contributors are scholars hailing from Australia, Canada, China, Germany, Greece, Finland, Ireland, Israel, Singapore, South Korea, Turkey, the U.K. and the U.S. with approaches from empirical, interpretive, historical, philosophical, critical, and other research perspectives utilizing both qualitative and quantitative methodologies. One can say that a world of authors and an array of research methods contribute to the extraordinary quality of the chapters addressing this contemporary and burgeoning topic in the socially and technologically converging fields of Web 2.0 communication.

TOPICS

Numerous authors cover varied and timely topics. To grasp the breadth of topics, please glance at the following extensive list: interactive and networked computing, mobile social services and the Social Web, social software and social media, marketing and advertising, various aspects and uses of blogs and podcasting, corporate added value and web-based collaboration, e-government and online democracy, virtual volunteering, different aspects and uses of folksonomies, tagging and the social semantic cloud of tags, blog-based knowledge management systems, systems of online learning, social interaction technology in ePortfolios, wikis in education and journalism, IT and the blogosphere in China, women bloggers on the web, parasocial relationships and romance in cyberspace, legal issues and social interaction technology, dataveillance and online fraud, neogeography, social software usability, social software in libraries and nonprofit organizations, and broadband visual communication technology for enhancing social interaction.

STRUCTURE OF THE TEXT

All sections contribute to the reader's enlightenment on social interaction technologies and collaboration software. The expertise, wisdom, scholarship, and talent of the authors are shared with the reader in three sections. Section I reviews Background and Development over chapters 1-12. Section II covers Concepts, Context, and Applications over chapters 13-30. And, Section III examines Issues, Viewpoints, and Perspectives over chapters 31-50. Finally, Selected Readings in the concluding section offer additional perspectives on social interaction technologies by featuring scholarly work recently published by IGI Global.

CHAPTER FEATURES

The organization of the chapter follows close to this format: abstract, introduction, background, body, future trends, conclusion, references, and key terms and definitions. The *abstract* presents a scholarly overview of the chapter. The *introduction* informs us of the direction of the chapter. The *background* contextualizes the information covered in the chapter. The chapter then develops its position and builds its case in the *body*. The *future trends* section projects the potential for the chapter's content. The *conclusion* reports that which the authors deduce from the study and its findings. The *references* section includes the relevant research sources. And, the *key terms and definitions* section delivers a selection of words (or phrases) and their definitions from the chapter authors.

CONTENT CONTRIBUTIONS

Section I: Background and Development

This section addresses general issues related to the origin and development of social interaction technologies (SIT) as a driving force behind the diverse (inter)faces of Web 2.0 and the technological frontier of the new millennium. As a tribute to the visionaries of the Internet and the World Wide Web, the section

opens with a chapter on the legacy of J.C.R. Licklider. In 1960, Licklider authored a seminal paper, "Man-Computer Symbiosis," that forever changed the history of computing and earned him a place in the Internet Hall of Fame. The remaining contributions discuss the growth of advanced web-based interaction technologies and their economic, social, political, and cultural implications for a variety of areas and activities ranging from Web 2.0 business and advertising models, to e-government, citizen marketing, mobile social networks, blogging, podcasting, virtual volunteering, and virtual teams.

The chapters in Section I will now be highlighted. In Chapter 1, Tomasello examines J.C.R. Licklider's legacy as a contributor to the development of modern networked computing. Caus, Christmann, and Hagenhoff, in Chapter 2, look into the opportunities and drawback of the mobile social web. In Chapter 3, Humphreys explains how mobile social networks allow users to connect with each other, share information, and create technologically enabled mobile communities. Baruh, in Chapter 4, examines the opportunities available for advertisers trying to reach consumers through social media. In Chapter 5, Brown explores "citizen marketing" or consumers voluntarily posting product information based on their knowledge and experience. Burns, in Chapter 6, affirms that the commercial future of podcasting appears to be in the area of advertising and broadcasting. In Chapter 7, Tai discusses the rise of the Chinese blogosphere. Hellsten, in Chapter 8, argues that the challenge of e-governance in developing countries resides in "good governance," accessibility, and user skills. In Chapter 9, Bohl and Manouchehri evaluate potentials, risks, mainsprings, and restrictions associated with the corporate use of Web 2.0. Widén-Wulff and Tötterman, in Chapter 10, express their view that social interaction technologies can successfully employ the previously untapped power of the web to utilize the collaborative creation of information and user-driven content. In Chapter 11, Mukherjee maintains that social interaction technologies create communicative possibilities that go beyond dyadic interactions and across physical boundaries, bringing a qualitative shift in the functioning of the Internet. And, Sofo, in Chapter 12, holds that social interaction technologies have made it possible for teams to exist in a virtual reality.

Section II: Concepts, Contexts, and Applications

The chapters in this section scrutinize the ways social interaction technologies enhance the powers of connectivity, interaction, and collaboration for individuals, groups, organizations, and society as a whole in local and global contexts. The contributions discuss the deployment of SIT applications in knowledge management, education, business, and commerce. A broad range of concepts are introduced and analyzed: using folksonomies for knowledge organization and sharing; creating metadata through collaborative tagging; social tagging as annotation; constructing technology enhanced social and personal learning spaces; the impact of SIT on self-expression and social identity formation; online social, romantic and parasocial interactions and relationships; generating online interactive spaces for women; social networking and online community formation.

The chapters in Section II deliver the following valuable information. In Chapter 13, Weller, Peters, and Stock discuss folksonomies as a novel way of indexing documents and locating information based on user generated keywords. Bitzer, Thoroe, and Schumann, in Chapter 14, focus on the classification of tags based on function and user motivation, examine advantages and disadvantages of folksonomies, and provide a review of current applications using collaborative tagging. In chapter 15, Pfeiffer and Tonkin conclude that social tagging may effectively be explored via a multidisciplinary approach linking knowledge representation and classification research and creating an open domain network. Laffey and Amelung, in Chapter 16, build a case that context-aware activity notification systems have potential to improve and support the social experience of online learning. In Chapter 17, Ragusa reports that in Australia, there is a continuing trend among institutions of higher education to utilize and optimize distance

learning as a method of delivery. McLoughlin and Lee, in Chapter 18, detail how a proliferation of Web 2.0 technologies generates a new wave of online behavior, distributed collaboration, and social interaction. In Chapter 19, Koh and Lim maintain that the instructional use of wiki-based classroom technologies can enhance student learning. Jackson and Grimes, in Chapter 20, survey the benefits and challenges of hybrid courses, which blend face-to-face instruction with online learning, and opportunities provided by the introduction of web-based social interaction technologies. In Chapter 21, Pelliccione, Pocknee, and Mulvany focus on the potential of electronic portfolios (ePortfolios) to engage and motivate the learners and presents a framework for the informed inclusion and adoption of social interaction technologies as a means to increase the effective use of ePortfolios. Sadowska, in Chapter 22, holds that Internet technology presented the women's magazine industry with new prospects for publishing and user interaction. In Chapter 23, Huang and Aaltio explore a relationship between social interaction technologies (SIT) and *guanxi*, a major Chinese informal style of networking, in the context of the careers of women managers in the information technology (IT) field in China. Donelan, Herman, Kear, and Kirkup, in Chapter 24, elaborate on how social interaction technologies present women with powerful tools to extend their network of professional contacts. In Chapter 25, Pedersen suggests that a need for validation and a strong financial stimulus should be added to the list of incentives for women bloggers. Guadagno, Eno, and Okdie, in Chapter 26, conclude that bloggers and blog readership appear to be steadily growing, making this area of online self-expression increasingly deserving of scientific inquiry. In Chapter 27, Robinson and Agne explain how parasocial interaction is the mediated manifestation of the relationship dimension inherent in television messages and used by audience members in much the same way it is used during face-to-face interaction. Crabill, in Chapter 28, explores how language convergence can function as a cue that facilitates situating social identity within online in-groups. In Chapter 29, Ben-Ze'ev theorizes the role of technology in creating potential possibilities for romantic relationships and focuses on the imagination, interactivity, reciprocity, and anonymity of cyberspace. And, Rea, in Chapter 30, argues that using rewards for accepted behavior creates a socialization continuum that stimulates players of MMORPGs to interact with one another.

Section III: Issues, Viewpoints, and Perspectives

This section details the practical advantages of social interaction technologies and discusses some of the issues pertaining to the unintended consequences of the uncritical application of these technologies. The expressed concerns entail the paradox of rapid technological change and slow creation of formal and informal societal checks and balances, legal aspects of user-contributed content distribution, issues of privacy and surveillance, and online fraud and marketing to children. Recognizing that SIT are having far-reaching and lasting effects on society, the contributors offer specific solutions and viewpoints that address such key issues as: the emerging role of SIT as enablers of political dialog and facilitators of civic interaction and online democracy; social media and participatory journalism; the use of social software by the nonprofit and public sectors; and, the role of new technologies in educational outreach. The chapters suggest diverse theoretical perspectives, approaches, and conceptual frameworks to ascertain the opportunities and benefits emerging from the SIT phenomenon.

The chapters in Section III offer a wealth of content as well. In Chapter 31, Sprague elaborates on legal issues that may arise from the increasing use of social interaction technologies. Azriel, in Chapter 32, details how ISPs and users are legally exempted from offensive materials through Section 230 of the U.S. Communications Decency Act. In Chapter 33, Uluç, Yilmaz, and Isikdag explain in detail how blogs and forums have emerged as innovative modes of political communication in Turkey resulting in a broad interchange of diverse political opinions in the political arena. Burns, in Chapter 34, maintains that

the future of wiki journalism depends on whether or not this novel news format can stand on its own. In Chapter 35, Baruh and Soysal investigate the relationship between disclosure of personal information in social media and two related trends: the increasing value of subjective or private experience as a social currency and the evolving nature of automated dataveillance. Kelshaw and Lemesianou, in Chapter 36, develop how web-based interaction offers unlimited opportunities for organizing across geographic, demographic, and contextual boundaries, with ramifications in professional networking, political action, friendships, romances, learning, recreation, and entertainment. In Chapter 37, Bouras, Poulopoulos, and Tsogkas elaborate on the educational dimensions of the XO laptop and the Etoys environment developed to empower teachers and students with the capacity for creative learning, exploration, interaction, and collaboration. Marsh, in Chapter 38, focuses on the issues pertaining to informal science learning through public outreach and the utilization of established and evolving web technologies. In Chapter 39, Gelernter narrates how neogeography shares the characteristics of other social interactive technologies as it represents a collaborative effort by the general public rather than professionals. Abbas, in Chapter 40, dwells on the applicability of social software in a library setting and examines the use of such innovative techniques as live tagging, social cataloging, and social bookmarking. In Chapter 41, Brown examines the immersive nature of interactive marketing, which can be found in blogs, chat rooms, virtual worlds, advergaming, and other forms of advertainment. Waters, in Chapter 42, discusses how nonprofit organizations are an essential part of the social, political, and economic landscape of contemporary society. In Chapter 43, Park, Jo, and Moon present a framework for understanding a blog-based KM system in an organizational setting, grounded in a socio-psychological approach and the application of social identity and symbolic interaction theories. In Chapter 44, Zhang suggests that social software is assuming a significant role in electronic business and has been utilized recently on a growing scale by companies in customer relationship management. Owen and Willis, in Chapter 45, investigate three important aspects of folksonomies: common design factors found in folksonomies, developmental patterns of mature folksonomies, and the identification of knowledge consumer behaviors that can act as metrics for the evaluation of a small-scale folksonomy. In Chapter 46, Kim, Breslin, Decker, and Kim analyze the structures of a folksonomy and synthesize a practical model of an effective folksonomy in the context of knowledge management. O'Donnell, Molyneaux, and Gibson, in Chapter 47, introduce an analytical framework that can be utilized by multi-disciplinary teams working with broadband visual communication (BVC) technologies to analyze the variables that hinder people's adoption and use of BVC. In Chapter 48, Kamthan describes the educational impact of Social Web applications in classroom activities pertaining to software engineering education. Berzins, in Chapter 49, argues that consumer education can be successfully utilized to enhance the ability of Internet users to detect and avoid fraudulent interactions and safely enjoy the many benefits afforded by the emerging social interaction technologies. And, in Chapter 50, Uden and Eardley justify how emergent Web 2.0 technologies present a range of opportunities and argue that social software usability should be viewed as a set of principles aimed to deliver more service-orientated applications.

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