Weblogs, Social Software, and New Interactivity on the Web

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Since its inception, the Internet has been regarded as a tool for communication—initially for strategic military communication and then for the exchange of research data by universities. When the World Wide Web was born in 1992, it added a graphic interface, which enhanced the Internet's ease of use and added interactive capabilities. The Internet has been described as the most significant medium for communication since the telephone.

One advantage of the Web over other forms of media is that users are active participants, whether they communicate by e-mail or browse Web sites for information. One major drawback is the lack of a central index. The Web resembles a library without a card catalogue. Each day terabytes of information are added to the Web, which has created an information explosion.

The way we gather information has changed over the past decade and continues to evolve. The Web is increasingly used for communication in addition to e-mail. Interactivity has taken on a new meaning, and in some respects Web communities have come into being.

This column describes the development and use of weblogs, including weblogs in psychiatry and medicine, as well as newsfeeds and social software, such as Friendster and online games.

Weblogs

Weblogs are best described as a personal publishing system with syndication. They are Web sites on which one individual—or several—publishes personal opinions, commentary, thoughts, and essays with links to interesting and supplemental information. Weblog editors often present their perspectives on topics currently in the news or journals or on books that they are reading. An editor with expertise in a particular area might evaluate the accuracy of information presented in a highlighted article, provide additional facts that he or she believes are pertinent, or simply add an opinion or differing viewpoint. Often interwoven throughout the weblog entry are links both to little-known corners of the Web and to relevant news articles. The weblog not only provides interesting reading but, by means of these links, allows readers to discover new facts, alternative views, or supplemental data that greatly enhance the reading experience.

A feature called a trackback link allows individuals who participate in a discussion to be notified when someone has added a comment. Many weblogs link to or feature comments about other weblogs, which builds a community discussion.

A brief history of weblogs

In 1998 only a handful of sites were called weblogs, and they consisted mostly of collections of interesting links to new Web sites. By early 1999 perhaps two dozen weblogs existed, which began to offer commentaries and opinions and to link to all the other weblogs. In this way a community began. By mid-1999 the first free build-your-own-weblog tool was launched, and suddenly there were hundreds of weblogs.

As software was created to make the process of posting information on the Web easier, hundreds turned into thousands. Weblogs have been described as providing a valuable filtering function. From the enormous volume of Web pages produced every day, the weblog editors choose some of the most interesting issues to present.

The added element is what the editor brings to these issues—a perspective that is often different from those of traditional media sources, links to information to enhance understanding, and an opportunity for open discourse. Important to "bloggers," as weblog editors are called, is the idea that traditional media impose a passive attitude—we consume media but we cannot participate. In the weblog world, participation is encouraged, as is extending the traditional boundaries of information.

Bloggers and weblog popularity

Currently there are more than 1.5 million weblogs worldwide. Although virtually every profession and topic area has spawned weblogs, many weblogs are focused on journalism, politics, and information technology. Weblogs in medicine, psychiatry, and neuroscience represent a small but growing group.

All the major presidential candidates have weblogs and use them to encourage voters. The President of the United States has a weblog, and probably by the end of this year all members of the U.S. Congress will have them. A weblog is now regarded as a must for communication, and this style of communication is becoming as powerful as traditional media without the constraints of time and money. Google, a popular Web search engine, recently bought one of the companies that make weblog software and has conducted a great deal of research on the process and popularity of weblogs. Many of the more popu-

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lar weblogs are indexed by Google. There are also specialized weblog search sites that track the interconnecting links to and from any weblog. Technorati (www.technorati.com) is one site that provides this service.

During the 2003 war in Iraq, many journalists who worked for traditional media started weblogs. They described the horrors of war, presented viewpoints on military successes, related battlefield stories, and disclosed their own feelings in a way that would never be part of the evening news.

*Weblogs in medicine
and psychiatry*
The first medical weblog, called Family Practice Notes, was started by a family practitioner. Others followed with names such as Medpundit, RangleMD, GruntDoc, and The Bloviator. Each has a different twist on medicine that is based on the editor's specialty or area of interest. A number of weblogs have been created by medical students and residents, who share their experiences and insights during training. Psychscape was the first weblog in psychiatry. Weblogs in psychiatry, psychology, and mental health can currently be found. An interesting weblog called Pulse offers a daily list of arti-

cles of interest, with links to journals and other publications in psychiatry and mental health. Several interesting weblogs in neuroscience, pharmacology, and other biological sciences have sprung up. Popular areas for weblogs are the crossover between medicine and technology—The Wireless Doc—and between psychiatry and technology—AATP Interactive and TechKno. One weblog, called Cinebrain, even explores the interface between psychiatry and the cinema. Links to these weblogs can be found at Psychscape.

There are Web sites where patients or consumers discuss personal struggles with psychiatric disorders. Such sites not only serve as a public journal or diary but also offer support and links to others who share similar concerns.

How weblogs work
The software needed to create and run a weblog ranges from simple to complex. Several major vendors offer software packages. Some software is free, and prices for other software range up to $40. The software is written as a template, because the publishing requirements are fairly simple-a title, the body of the weblog entry, and the opportunity to add html links and graphics. Two styles of software are available. One runs on a host computer, which uploads new "posts" to a Web site. The other runs on a Web site, and users can gain access to it by means of a Web browser. Most software packages offer a customizable choice of themes that provide a variety of colors and graphics.

Gathering data and disseminating information
Newsfeeds
An important new way of gathering information from the World Wide Web is a "newsfeed." A newsfeed provides quick access to news and information sources by means of a newsreader or a news aggregator. Rather than going to the New York Times Web site and other news Web sites, users can configure a newsreader to pull in the headlines and news that they wish to review or read. News agencies, publishers, and many other organizations now offer news-

feeds. The concept behind newsfeeds is RSS, or Rich Site Summary—or Really Simple Syndication—which is an XML-based format for content distribution. A newsfeed is a way to deliver content to the user without the user's having to find the content by traditional Web methods, such as search engines and Web directories. Instead of bookmarking various sites and returning to them daily, the user can set up a feed to route content from those sites to a news aggregator that resides on the user's desktop. Not all sites offer RSS feeds, but as this method of content delivery becomes more popular, the number of sites will grow.

Weblogs have made newsfeeds popular for two reasons. First, all weblogs produce an RSS newsfeed for each entry that the editor creates. The existence of a newsfeed allows readers to subscribe to a weblog and to make sure that they are informed as events occur and as news changes. Second, the creator of a weblog entry usually reviews the latest newsfeeds for topics or issues to address. Some weblog software has a news aggregator built into it so that information presented in the weblog not only is published on a Web site but also is syndicated through the RSS process. Although personal syndication of information is still a developing technology, it has generated a great deal of interest. It has already changed some aspects of publishing. Microsoft and others are changing Web browsers to include newsreaders. The U.S. government has a weblog (www. rssgov.com) focused on RSS and on developing ways to use RSS for emergency notifications and alerts.

Some of the popular news aggregators are Syndic8 (www.syndic8.com), NewsIsFree (www.newsisfree.com), AmphetaDesk (www.amphetadesk. com), and Awasu (www.awasu.com). They can be customized to gather newsfeeds of interest to the reader. Web-based aggregators also offer customization of newsfeeds.

Social software
Since the inception of the Internet, the interest in online communities has been tremendous, as evidenced by the popularity of bulletin boards,

discussion forums, and online communities, such as The Well. In increasing numbers, people are taking advantage of the ubiquity of the Web and the fact that it is available at any time of the day or night to communicate with others of similar interests.

On a simple level, e-mail can be considered social software when individuals send copies of an e-mail to several people and discussions result. Listserves allow a group of registered persons to read and participate in discussions that are disseminated by e-mail to the group. Weblogs are to some extent social software. Essentially social software supports a conversational interaction between two individuals or a group. The immediate "real-time" version is instant messaging or a chat room.

Social software is designed to create and manage a digital expression of personal relationships and to help people build new relationships. In business, collaborative or groupware software is project driven and a hierarchy is usually imposed on the interaction. In contrast, social software is based on supporting the desire of individuals to affiliate, to be pulled into groups, and to achieve personal goals through interaction. Examples of social software are Ryze, Friendster, and LinkedIn. Google has also become interested in the process and impact of social software. It recently released a social networking service called Orkut. Microsoft is also interested in these concepts and is hosting a social computing symposium later this year to explore the possibilities and to better understand the process.

Online game environments
Games have become extremely sophisticated, moving well beyond "destroy the aliens" or "beat the opponent" to involve the player in interactive environments in which cooperating, building, and interacting take place in virtual worlds.

One of the first complex interactive games was SimCity. The goal of the game is to build and operate a city populated by Sims, as the little virtual people are called. Players must deal with zoning, utilities, budget, water, power, land values, tourism, crime, disasters, pollution, and other issues

involved in running a city. They need to set up industrial, commercial, and residential zones with various density levels and then supply transportation, power, and water. The city must be a good place where people want to reside. When this goal is accomplished, the Sims will flock to the city to build houses, businesses, factories, airports, and so on. Tax revenues must be collected, and money must be carefully spent. Every imaginable factor, no matter how small, can cause Sims to be happy or sad. The city can be a shining citadel or a run-down slum, depending on the Sims.

The popularity of interactive games has led to the creation of many types of simulated games, which have evolved into multiplayer online environments. Hundreds and even thousands of people from around the world pay a monthly fee to log on and maneuver their way through virtual social worlds. They choose a character to become; design the character's appearance, personality, and skills; and guide the character's life, relationships, and career in this simulated environment. Unlike in the single-user CD-ROM version, the characters encountered in the multiplayer version are created and controlled by real people who are also online and playing the game.

Finally, interacting online has also taken on new meaning with wireless games that use cell phones as the medium of interaction. A multiplayer chase game called Can You See Me Now? is played simultaneously online (by the public) and in the streets (by assigned participants). Navigating through a virtual city as well as through real cities, participants mix reality with the virtual in an interesting way. A chat interface allows real-world and online participants to send each other text messages.

Summary
Marshall McLuhan said, "We shape our tools, and they in turn shape us" (1). The online environment is undergoing an interesting evolution. Clearly, we are taking advantage of this new connectedness to experiment with expanding our intellectual and social networks. Weblogs offer the possibility of transforming publishing and

traditional media into more personal and interactive experiences in which the individual is not just a passive consumer but an active participant. Weblogs in medicine and the neurosciences are unique publishing tools that are beginning to have an impact. Weblogs have become both personal and professional journals or commentaries that have morphed into a distinct style of communication.

Social software and online games are making an impact on our society, with hundreds of thousands of people participating every day. Technology can cause cultural change for better or for worse, and we are at an interesting and challenging point in the online evolution. Will clinicians begin to see patients who need treatment for depression resulting from a rejection of an online relationship? Most certainly. Mental health care providers need to be prepared and well informed about the possibilities. ♦

Reference

1. McLuhan M, Fiore Q: The Medium Is the Massage. New York, Bantam Books, 1967

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