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The Web Connector Model: New Implications for Social Change

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Abstract

This brief proposes a new theoretical construct for web-based social organizations. I developed this model while researching and analyzing emerging social network websites from 2004 to 2006. The suggested model incorporates the theoretical and empirical studies related to social networks and online communities. The model can be used to identify and evaluate web-based organizations that rely on social software and encourage online community formation and sustainability. The overarching goal of the study is to bridge the disconnected information pools and audiences coming out of academia, the mainstream news media, bloggers, and the Internet industry's insiders and analysts. The web connector is a new mechanism for social change.

Keywords: Web 2.0, Social Networks, Online Communities, Entrepreneurship.

Introduction

Today many millions of Americans use a new type of website for social exchanges in order to facilitate communications or execute transactions. This "web connector", a theoretical construct proposed and defined in a 2006 study of social network websites, enables timely and relevant interactions between individuals while enlarging the scale of social exchange processes, by way of online social search and social networking. Reports about the social impact of web connectors (such as eBay, MySpace, Match.com, Facebook, Craigslist, Flickr) are largely anecdotal.

The empirical research is sparse. Most researchers have focused their energies modeling the design of online communities, observing individual and social behaviors within a single website's online community, or employing social network analysis to measure the kinds of relationships in the community's social networks. (Rheingold, H., 1993; Garton, L., Haythornwaite, C., & Wellman, B., 1997; Kollock, P., & Smith, M. A., 1999; Wellman, B., & Gulia, M., 1999; Wellman, B., & Hampton, K., 1999; Horrigan, J., 2001; Adamic, L. A., Buyukkokten, O., & Adar, Eytan, 2003; Preece, J., & Maloney-Krichmar, D., 2003; Rosen, D., Woelfel, J., Krikorian, D., & Barnett, G. A., 2003; Boyd, D., 2004; Donath, J., & Boyd, D., 2004; Stutzman, F., 2005; Boase, J., Horrigan, J. B., Wellman, B., & Rainie, L., 2006; Boyd, D., & Heer, J., 2006; Stutzman, F., 2006) However there is little social science research on websites, functioning as social organizations and producing online communities.

This brief summarizes a study that I presented at the 2006 annual meeting of the American Sociological Association. Web connectors are social organizations, and the current social science research does not offer a thorough examination of their real world implications. As a starting point to fill this void, I examined three key questions:

What is the "web connector" model?

The web connector model is based on the assumption that a person making even a limited social connection will affect the status quo. There are several essential parts when describing a web connector. The following is an operational definition:

- The web connector provides a relatively simple means of interaction for users who seek to offer or obtain goods, services, or information.
- It is an intermediary offering peer-to-peer web applications that collectively make up an infrastructure for social exchange, networking, and diffusion processes.
- Over time, user-to-user interactions gradually generate a majority portion of the website content and the regulation of which is governed jointly between the host organization and the online community of users.
- Depending on the surrounding social and economic conditions, as well as site design and development, the web connector should excel in facilitating the discovery and coordination of context-based communications and transactions.

The web connector adds substantial value to online communities when executing two processes: discovery and coordination. Connectors make *discovery* more powerful and accurate through social search and trust-building applications. Joe Cothrel, an online community expert with Lithium Technologies, has suggested that "with these tools, a user not only finds that someone has something he or she needs – [he or she] also finds out something about the quality of that product and the likelihood this party will deliver it." (Cothrel, J., 2005) In terms of *coordination*, connectors are more efficient than other online community websites because they have the capacity to maneuver, or network, specialized communications and transactions for users in specific situations. Often social search and social networking applications are mixed together on web connectors and presented as a menu of "networking" features.

Why is a web connector appealing? The connector saves time and energy for people, offering effective ways to link up with others based on common needs, interests, and priorities. The model seizes on the low transaction costs of using the Internet. It also has the potential to forge weak (but important) contacts and to develop lasting relationships. The connector empowers the individual. The frequency, diversity, and informality of online social exchanges expose people to new perspectives and experiences. A diffusion process could lead to larger scale, possibly exponential social change. This study attempts to be a starting point for new research on websites as social organizations and online communities as social systems.

Which websites have pioneered the web connector model?

So far there have been two generations of web connectors. In the mid-to-late 1990s, the first commercial web connectors were those emphasizing online social search applications for pursuits like online dating (e.g. Match.com), online trading and classifieds (e.g. Craigslist), online auctions (e.g. eBay), and reunion (e.g. Classmates.com). A second generation of connectors gained national media attention in 2002-2003, offering explicit social networking applications for professional/career networking (e.g. LinkedIn), and for making new friends through mutual friends or interests (e.g. Friendster, MySpace, Facebook). For nearly all of these websites, word-of-mouth referrals have been an effective marketing tool. Connectors' registration numbers and business activities are sizable – they have social exchange applications that appeal to tens of millions of people and plenty of investors.

Do web connector trends demonstrate exponential social change?

Yes, web connectors experience exponential changes in website traffic over time. (see Tables 1 and 2) Each of at least five (almost six) connectors more than doubled user traffic growth from May 2005 to June 2006. Standout examples are Flickr (540 %), Tagged (286 %), and MySpace (236 %). Based on modeling methods and trend estimations, four connectors – Flickr, MySpace, MSN Spaces, and Facebook – showed strong exponential growth over the time period. LiveJournal was the only connector to substantially lose users. Volatility appears to be a nagging characteristic of relatively younger connectors like Flickr, Tagged, Orkut, Bebo, and LinkedIn. (see Table 3) Also suggested in the analysis, web connectors and online communities may need time to mature for attaining sustainability in terms of traffic trends. A web connector's age appears to be related to website traffic trends and volatility. New connectors may want to learn from the start-up experiences of first and second-generation web connectors.

Table 1. Which are the fastest growing Web Connectors?*

WEBSITE	MAY-05 to JUN-06 % Traffic Change
FLICKR	540.4 %
TAGGED	286.3 %
MYSPACE	236.0 %
MSN SPACES	177.7 %
ORKUT	145.8 %
FACEBOOK	97.5 %
LINKEDIN	74.6 %
FRIENDSTER	6.8 %
BEBO	-14.9 %
CLASSMATES.COM	-17.7 %
XANGA	-18.8 %
HI5	-29.0 %
LIVEJOURNAL	-44.4 %
U.S. Internet Usage	4.5%

* Raw data provided by comScore Media Metrix: http://www.comscore.com

Table 2. Does the Web Connector demonstrate exponential change?

WEBSITE	Based on trend estimation, did the web connector demonstrate exponential change over the observed time period? (Y/N) MAY-05 to JUN-06 % Traffic Change	Goodness of Fit Exponential Function (R^2)	Final Estimation
FLICKR	540.4 %	0.9083 = STRONG	Y
TAGGED	286.3 %	0.7826 = MODERATE	N
MYSPACE	236.0 %	0.9849 = STRONG	Y
MSN SPACES	177.7 %	0.8662 = STRONG	Y
ORKUT	145.8 %	0.6493 = MODERATE	N
FACEBOOK	97.5 %	0.8743 = STRONG	Y
LINKEDIN	74.6 %	0.6541 = MODERATE	N
FRIENDSTER	6.8 %	0.0047 = WEAK	N
BEBO	-14.9 %	0.0396 = WEAK	N
CLASSMATES.COM	-17.7 %	0.4598 = WEAK	N
XANGA	-18.8 %	0.6126 = MODERATE	N
HI5	-29.0 %	0.5325 = MODERATE	N
LIVEJOURNAL	-44.4 %	0.8416 = STRONG	Y

The evidence here is not conclusive, but the analysis does strongly suggest it would be a mistake to overlook the social implications of web connectors. Recent developing stories point to future areas for possible research and further examination:

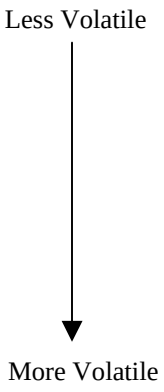
A. Social Values and Tradeoffs. Web connectors offer convenience of choice, reliability of personal judgment, efficiency of communications and transactions, and the potential for tapping into others' experiences and resources. What is the downside to these expanded freedoms? Issues of personal privacy and security have hit the headlines in 2006. Stories grow about pedophiles stalking on teen web connectors like MySpace ready to prey on vulnerable or overly trusting young girls and boys. A public reaction was inevitable. The U.S. House Committee on Energy and Commerce Subcommittee on Oversight and Investigation held several hearings from June 21-28, 2006, which included testimony from the Federal Trade Commissioner, federal and state law enforcement officials, and executives from Facebook, MySpace, Xanga, Google, Yahoo!, Microsoft, and market research organizations. Major concerns aired about the confidentiality of members' personal data and how websites monitor and enforce safety, rules, online community best practices, and adherence to the Children's Online Privacy Protection Act (COPPA). The Federal Trade Commission now has a "Facts for Consumers" bulletin for parents posted on the agency website. It is unclear which direction public policy will turn at this point, but it is possible state and federal government officials may seek to regulate web connectors.

B. Differentiation and Specialization. As web connectors evolve, they appear to be differentiating with respect to their organizational missions and focusing branding efforts on users' needs, interests, and priorities. This is happening in 2006. A sampling of new connector themes and organizing topics are related to: political campaigns and elections; religious expression and sharing; car and truck enthusiasts; female professionals; family-based networks; pet ownership; the World Cup; mental health issues; youth social initiatives; wedding preparations and references; and world travel. Many of these connectors will never

approach the size of an eBay, MySpace or Match.com. However they are likely establishing a core competency and competitive advantage based on substance, and not relying solely on the novelty of its web applications or timing of website launch. Many are also looking beyond usual demographic indicators like age or gender. Increased specialization should continue in the future, and the community scale of web connectors on average will probably shrink as the overall sector matures.

Table 3. How volatile are the Web Connectors in the sample?

WEBSITE	MAY-05 to JUN-06 Volatility*
MYSPACE	.0044
XANGA	.0052
LIVEJOURNAL	.0125
FACEBOOK	.0153
HI5	.0154
MSN SPACES	.0177
CLASSMATES.COM	.0180
FRIENDSTER	.0242
LINKEDIN	.0497
FLICKR	.0508
BEBO	.0636
TAGGED	.0885
ORKUT	.1097
U.S. Internet Usage	.0001



*Volatility defined here as the variance of "monthly percentage change" for a website over the fourteen month time period.

It is timely to discuss web connectors because of their booming participation numbers, traffic growth rates, and evident social resonance. This report tries to bridge the disconnected information pools and audiences coming out of academia, the mainstream news media, bloggers, and the Internet industry's insiders and analysts. Web connectors and their social applications continue to evolve and receive the public's attention. Website principals are increasingly emphasizing the value of market research and study of their users. As a result, rich datasets should become available to continue analyzing these new organizations and the behavior of their massive online communities.

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