

Social Software and Cyber Networks: Ties That Bind or Weak Associations within the Political Organization?

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Abstract

The 2004 U.S. Presidential election has tapped into the online medium to reach the growing demographic of online citizens. In the Democratic Party's primary season, the Howard Dean campaign organization proved to be phenomenally successful at incorporating the online medium into its fundraising and grassroots mobilization, going beyond the online organizing and fundraising success of campaigns of John McCain in 2000. Both the Dean and McCain organizations were praised for their use of the Web to organize at the "grass-roots" level as well as their accomplishment in raising money. The current paper examines the unique social network ties that are created through the use of social software (i.e. blogs, email, instant messaging, meetup.com), specifically focusing on its use by political campaigns to engage potential voters in what could be considered a growing electronic democracy. Media richness is also taken into account.

1. Introduction

Social software refers to various, loosely connected types of applications that allow individuals to communicate with one another, and to track discussions across the Web as they happen. Social software is not a new phenomenon, yet some of the newest uses of this media have brought both joyful devotion and woeful disdain.

Venture capitalists are betting millions on Internet companies that help people capitalize on these networks of friends. In fall 2003 alone, \$24 million was invested in Friendster, LinkedIn, and Tribe Networks [1]. Allen Morgan or Mayfield, a venture capital firm says, "Some liken the investments in social software companies to a return of the frenzied dot-com deals of 1999." He continues, "There are two huge differences: for one, always-on broadband connections are now commonplace, making the Internet much more consumer friendly. Secondly, consumers have adjusted to using the Internet for "important things, like buying stuff and dating" [1].

Recent commentary on this new media is a bit more varied in its sentiment:

"When we use e-mail, instant messaging, Weblogs, and wikis, we're potentially free to interact with anyone, anywhere, anytime. But there's a trade off. Our social protocols map poorly to TCP/IP. Whether the goal is to help individuals create and share knowledge or to enrich the relationship networks that support sales, collaboration, and recruiting, the various kinds of enterprise social software aim to restore some of the context that's lost when we move our interaction into the virtual realm."
-Jon Udell (*writer, InfoWorld*)

"Joe Trippi, architect of the [Howard] Dean insurgency, went mining on the Internet and tapped into a mother lode of youthful discontent. Dean meetups spread across the country, much as be-ins and sit-ins had in other eras -- only the meetups were a lot nerdier, and Web-driven contributions poured in."
-Ciro Scotti (*editor, Business Week Online*)."

The above quotes are contrary to the uneasiness that exists among academicians from multiple disciplines over the fear that society's fascination with all-things Internet is harming the way in which humans have relationships, develop community, build and strengthen ties in our social networks, and simply live. The downfall of real community and relationships has been promoted by sociologists as well as the anti-technology crowd.

The question over loss of community is not a new one; the Internet has simply added fodder for the discussion. Technology has always had a bad name in its expectation for negatively affecting society [47, 48, 49]. Wellman and Leighton [63] note the century of sociological debate that has taken place over whether community has become lost, saved, or liberated since the Industrial Revolution. Whitworth and de Moor [64] dispute that belief, declaring that a community is not just a set of individuals, but a form of self-sustaining social interaction that endures, and that social interaction can make use of several different channels, including the online medium.

This is more than a one-side debate. The Internet and related technologies have also been propagated as the

savior of our society by some, purportedly bringing people together in a variety of ways. The positive attributes of the Internet can be felt in our ability to communicate. Businesses, dating services, public interest organizations, clubs, and other like-minded groups have benefited from the explosion of social software over the past decade, but the paradigm that has best demonstrated social software's "coming of age" is that of U.S. Presidential politics.

The Internet also allows citizens to communicate across the country and the world, creating the sense of community and social connectedness to revitalize democracy [34, 54, 57]. Although utopian, the idea that the Internet may revitalize democracy has some giddy with anticipation while others wholly dismiss the idea.

This paper attempts to draw on the example of social software use in politics to demonstrate the potential successes and pitfalls that may occur through its deployment. The next section of the paper examines the social software phenomena by detailing some of the specific software that has played a role in online politics. The paper continues with a look at the application of social software in US Presidential campaigns. The paper then concludes with the development of several propositions that, based on our political example, addresses media richness of social software, the strength of ties developed through these channels, and the resulting networks that are shaped.

2. Social software

Social software is any software that supports group communications. The dynamics of social software are significantly different from traditional interactions. Social software allows emergent behavior to control the content of the information created. Individuals create the content, but other individuals read that content and look for information about particular topics. Critics scorn that all software is social and that collaboration and community are at the very heart of the internet, both its origins and its uses, but we do know that social software works for newcomers to the Internet: people wanting to build local knowledge, maintain long-distance family ties, coordinate clubs or societies, and share knowledge around offices.

Social software is the opposite of what groupware and other project- or organization-oriented collaboration tools were intended to be. Social software is based on supporting the desire of individuals to be pulled into groups to achieve their personal goals. The groupware approach places people into groups defined organizationally or functionally.

Most social software applications are grounded in the view that online social interaction is not a substitute for traditional face-to-face interaction but can potentially enhance it. For the most part, people do not use the Internet to interact with strangers: they e-mail people they

already know or maintain weblogs for their friends, families and associates to read. Social software is also not about bridging huge distances or creating new connections. E-mail and instant messaging are constantly used within organizations to connect people who are sitting a couple desks away [62].

Arnold [2] describes social software as less of a revolution and more of an evolution. For example, many of the elements in social software are familiar: instant messaging, chat, electronic mail, bulletin boards, and listservs. Some of the less familiar elements include Weblogs, RSS, networking, and meetup software. The next section details some of types of social software (Table-1).

Table 1. Conversational technologies	
▪	E-mail
▪	Static and database-backed web pages
▪	Discussion forum
▪	Internet chat/instant messaging
▪	Video and audio streaming
▪	Video and audio conferencing
▪	Weblog ("blog")
▪	Wiki
▪	RSS

2.1. Weblogs

A Weblog is a personal web page, kept by the author in reverse chronological diary form [4]. Bloggers are the authors who write Weblogs (i.e. "blogs"), which might be described as an online diary. Entries are often uploaded multiple times a day. Entries in blogs often stay within a certain theme and often link to other blogs, creating a unique mass communications environment [31].

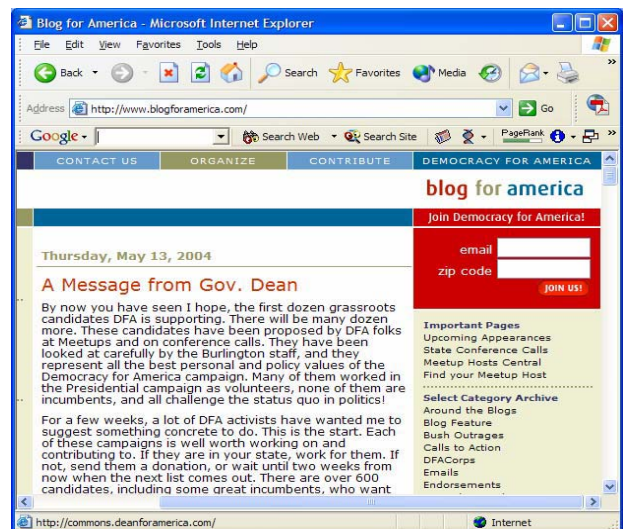


Figure 1. Blog for America

Like other media operators, bloggers tend to believe strongly in their tool. Unlike other media, blogs do not command a consistent or large readership. Except for the approximately top 0.001 percent of weblogs, blogs get traffic referrals from other blogs [31]. Weblogs provide an example of the social connections that can develop online.

2.2. Email

The first e-mail was sent around 1970 and by 2003 more than 100 million households in the U.S. alone had e-mail addresses [24]. Electronic mail, or e-mail is most often used as a one-to-one or one-to-many conversation tool and is the most essential IT based communication technology. In fact, e-mail is the most widely used communication tool after the telephone. According to a 2003 American Management Association report, "Email Rules, Policies, and Practices Survey," the average time spent working on email per day is one hour, 47 minutes. What's more, 31 percent of respondents said that they spend more than two hours a day on email [16]. Another study reports that 80 percent of business people prefer email for work-related communication. The reasons for preferring email over the phone include response flexibility, easy communication with multiple parties, paper trail, faster communication and easier global communications [35].

Recent research suggests that e-mail exchanges build trust more slowly than other forms of communication — but now a Cornell University study argues that the opposite should be true, because people are considerably more likely to lie over the phone and in face-to-face conversation than in e-mail [41]. The one glaring problem with e-mail is the continuing problem of spam. As spam increases, users are less likely to rely on e-mail [31]. Whether or not this forecast is accurate, e-mail has changed the way networks of people develop and are maintained.

2.3. Instant Messaging/ Chat

Instant messaging enables conversation modes from one-to-many to many-to-many and has been promoted through several free services including AOL, ICQ and Yahoo. IDC estimates that more than 400 million messaging accounts have been created, a majority for individual communication outside of the business setting [61].

According to filtering technology firm Secure Control, around 40% of employees at UK companies use instant messaging systems while in the office. Many use it because it is faster for communicating with colleagues than e-mail but, in the same survey, 31% used instant messaging to send messages to friends in order to avoid sending private messages via the corporate e-mail system.

According to figures from a Blue Coat Systems Inc. survey, only 36 percent of U.S. companies currently allow workers to use instant messaging. Aside from security concerns, this modest mode of communication is bringing out some surprisingly bad behavior from employees. The top ten instant message offenses are listed in Table 2.

Table 2. Top IM offenses in the workplace	
1. Gossiping about a colleague	77.8%
2. Commenting on senior management	63.9%
3. Making a negative comment about a customer	51.7%
4. Sharing work files	51.7%
5. Speaking about wanting to leave their job	48.9%
6. Discussing pay	48.3%
7. Using abusive language	42.8%
8. Using IM to conspire with a colleague while on a conference call	37.8%
9. Sharing music or video files	35.6%
10. Making sexual advances	29.4%
[34]	

Instant messaging and chat allow for a real-time communication with others. Its ability to support existing networks and create new networks is evident in its wide range of uses from friend and family communication to sexual, criminal, and terrorist exploitation.

2.4. Wikis

Developer Ward Cunningham named the “Wiki” for the Hawaiian word wikiwiki, meaning “quick.” The Wiki allows for rapid generation of new Web pages through a simple scripting language [60]. A Wiki is a collaboratively created and iteratively improved set of web pages, together with the software that manages the web pages. It is a multi-user system that allows any user to modify any other user’s web pages (unless specifically limited by access right settings) [62].

Wagner [62] concludes that organizations willing to embrace the “Wiki way” with collaborative conversational knowledge management systems, may enjoy better than linear knowledge growth while being able to satisfy ad-hoc, distributed knowledge needs. Wiki software runs on a server and lets users create and edit Web page content using any browser. Wiki software captures the informal but often critical forms of conversation such as those that might occur around the water cooler [21].

Wikis are different from weblogs and more akin to open-source software in that wiki let their users create new categories of information and allow editing of other people’s comments. A blog records the decision making process while a wiki will usually have the final decision recorded, not the work that went into reaching agreement [60].

2.5. RSS

RSS is an acronym for rich site summary, an XML-based format for syndicated Web content. XML.com states that "RSS is a format for syndicating news and the content of news-like sites (e.g. Wired), news-oriented community sites (e.g. Slashdot), and personal weblogs." Most anything that can be broken down into discrete items can be syndicated via RSS, including the "recent changes" page of a Wiki. When in RSS format, an RSS-aware program can check the feed for changes and react to the changes in an appropriate way.

Table 3. RSS 2.0 feed from Howard Dean website
<pre> <?xml version="1.0" encoding="iso-8859-1" ?> <rss version="2.0" xmlns:dc="http://purl.org/dc/elements/1.1/" xmlns:sy="http://purl.org/rss/1.0/modules/syndication/" xmlns:admin="http://webns.net/mvcb/" xmlns:rdf="http://www.w3.org/1999/02/22-rdf- syntax-ns#" <channel> <title>Blog for America</title> <link>http://www.blogforamerica.com/</link> <description>The Official Democracy for America Weblog</description> <dc:language>en-us</dc:language> <dc:creator>Blog for America</dc:creator> <dc:date>2004-05-13T08:38:55-05:00</dc:date> <admin:generatorAgent rdf:resource="http://www.movabletype.org/?v=3.0d1" /> <sy:updatePeriod>hourly</sy:updatePeriod> <sy:updateFrequency>1</sy:updateFrequency> <sy:updateBase>2000-01-01T12:00:00:00</sy:updateBase> <item> <title>A Message from Gov. Dean</title> <link>http://www.blogforamerica.com/archives/004433.html</link> <description> <![CDATA[<p>By now you have seen I hope, the first dozen grassroots candidates DFA is supporting. There will be many dozen more. These candidates have been proposed by DFA folks at Meetups and on conference calls. They have been looked at carefully by the Burlington staff, and they represent all the best personal and policy values of the Democracy for America campaign. Many of them worked in the Presidential campaign as volunteers, none of them are incumbents, and all challenge the status quo in politics! </p> <p>For a few weeks, a lot of DFA activists have wanted me to suggest something concrete to do. This is the start. Each of these campaigns is well worth working on and contributing to. If they are in your state, work for them. If not, send them a donation, or wait until two weeks from now when the next list comes out. There are over 600 candidates, including some great incumbents, who want to change this country, in nearly every state, and we will do our best to shine a spotlight on all of them.</p> <p>I also want to thank you again for your loyalty to change. It has been a lot of work to transition from a presidential organization to an organization which is using all we learned to continue to try to change this country by getting a lot of previously disillusioned or disinterested folks back into the political process by having us all stick together and speak out for real change, and against this administration's penchant for taking from ordinary Americans and giving to their cronies. I deeply appreciate that you hung in there while we made that change.</p>]]> </description> <guid isPermaLink="false">4433@http://www.blogforamerica.com/</guid> <dc:subject>Howard's Posts</dc:subject> <dc:creator>Howard Dean</dc:creator> <dc:date>2004-05-13T08:38:55-05:00</dc:date> </item> </channel> </rss> </pre>

RSS-aware programs are sometimes called news aggregators and are popular in the weblogging community. Many weblogs make content available in RSS, allowing you to easily keep up with weblogs you enjoy by checking their RSS feeds and displaying any new items [51].

2.6. Discussion Forums

Discussion forums are important in the online communication of knowledge and is the core technology for many online communities. Discussion forums are asynchronous online tools that capture the exchange of messages over time, sometimes over a period of days, weeks, or even months. Threaded discussion forums are organized into categories so that the exchange of

messages and responses are grouped together and are easy to find. A discussion board user posts a comment, question, or reply, then waits for others to respond to their post. These conversations are many-to-many, frequently with threaded discussions. Ezboard.com is one of the largest online community hosts with over one million communities using its site and related forums.

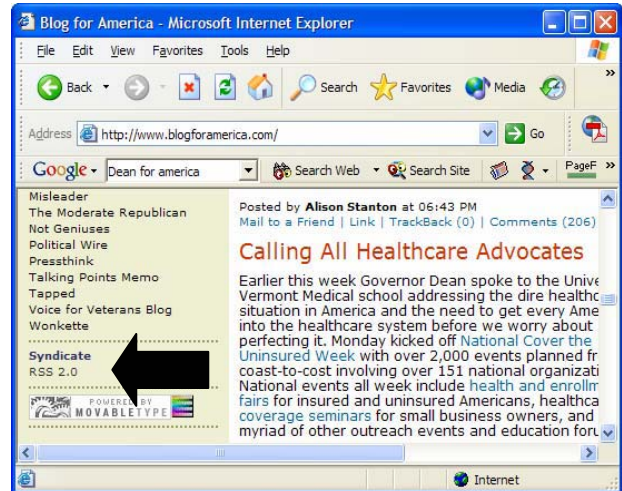


Figure 2. Howard Dean website RSS

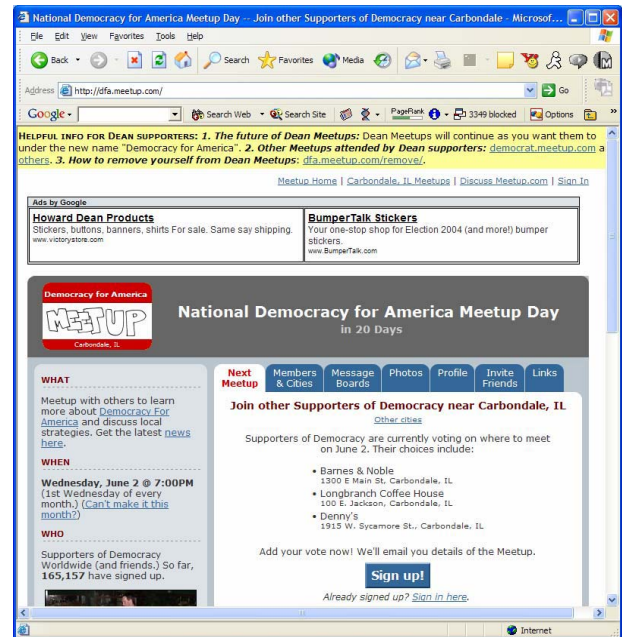


Figure 3. Dean's meetup.com website

2.7. Networking Websites

Social networking software connects people together based on similar or desired interests. Sites such as Friendster and Meetup have become dominant forces in this field. Meetup.com helps people get together with a

group of neighbors that share a common interest. Meetup is an advanced technology platform and global network of local venues that helps people self-organize local group gatherings on the same day everywhere. Meetups take place in up to 634 cities in 58 countries at local cafés, restaurants, bookstores, and other local establishments. Meetup has taken social networks from existing purely online to having the ability to meet face-to-face.

Next we will take a closer look at the online political organization and how Howard Dean's organization was the first to successfully utilize the multiple types of social software, such as Meetup.com, to build a large "grass roots" organization and go from obscurity to frontrunner in a presidential primary race.

3. Social software in presidential politics

The increasing use of the Web for political information and persuasion has been well documented [11, 12, 40]. Internet users are often believed to be "isolated geeks" yet recent studies have found Internet users to be model citizens for the most part, having high levels of self-efficacy [3], the belief that one has the power to manage prospective situations, which in turn could be their belief that they can influence government officials and the political process [5].

Those with high self-efficacy are more involved in politics and consequently more likely to vote and engage in other political activities [52]. Internet users are also more politically interested [33] and are more likely to vote than the general public [29, 38]. Although they express confidence in their power to influence government, Internet users do not believe in the government's ability to carry out policies, and report high levels of political distrust [33, 38].

By the 1996 and 1998 political campaigns, Internet-based politics had moved from a fuzzy fantasy world to the mainstream. One study of the 1996 U.S. elections found 75% of candidate sites used interactive features, such as e-mail addresses, on their sites [11], but none of the candidates at that time used the Internet to have public discussion with citizens. Kamarack's [37] analysis of the 1998 U.S. senatorial and gubernatorial races found most sites in the form of "brochure-ware", simply informative pamphlets in electronic form. Only a small number of candidates with Web sites solicited online donations [25].

During the 1996 presidential election all of the major presidential candidates had Web sites. The Pew Research Center found that approximately 20 million Americans (12% of the voting population) used the Internet to keep up with the campaign, and 2% listed the Internet as their primary source of political information [45]. The 2000 presidential election, for the first time, saw the Web as an important tool for candidates to raise campaign money and sign up volunteers [32].

In many ways the 2000 election provided a platform for political actors to experiment with new modes of communication. The Web also provided novel ways for citizens and other actors to engage in the electoral process with particular emphasis on information gather, production, and distribution. The Web also facilitated new organizational possibilities, contributing to a potential shift in the "structure of political opportunities" that may have allowed significant social or political change to flourish [15, 17].

The dominant conclusion of both users and contemporaneous scholars was that computer networking technology had the potential to dramatically alter the nature and shape of political discourse, and of democracy itself, by engaging and energizing new participants in the political process [20, 42]. The overwhelming example of success in this venue was Howard Dean in his bid for the 2004 Democratic Party Presidential nomination.

Howard Dean's prominence among the nine Democrats running for president was largely attributable to his campaign's early embrace of the Internet for organizing supporters and raising money. Even Dean's opponents conceded that he was the "first politician to take full advantage of the self-organizing networks of supports that sites like Meetup.com and Web loggers can provide [44]." The Meetup.com site suggests that over 180,000 people registered for Dean get-togethers through its site. Meetup.com was founded in 2002 as a Web site for strangers in the same area to meet and share common interests. Scott Heiferman, the chief executive, said: "We never thought it would be used for politics. We figured we would attract Lord of the Rings geeks and poodle owners."

Dean's Democratic presidential campaign focused attention on this emerging category of social software. Dean's campaign used Meetup and Weblogs to generate more than \$40 million in contributions. Dean also employed SocialText software and 400 volunteers for decentralized news analysis, clipping and annotating blogs, and traditional media posts. SocialText marries several social software precepts: the Wiki information store, automated authenticated blog generation and RSS output for change notification. SocialText's recategorization technology allows for broadcasting posts to multiple blogs and therefore RSS streams [21]. Dean also utilized other social software techniques through the following online channels: (1) Dean asked people to sign-up through Web site registration or petitions. The Dean campaign prominently asked people to sign up for updates or join petitions, requesting minimal information so the process was easy and fast for constituents. (2) Regular email was sent with compelling and consistent messaging. For example, Dean emailed more than 1.5 million messages in June 2003. Regular email communications seem to have impact if the content is relevant and reinforces key messages. (3) He gave constituents a voice.

Whether actual or just perceived, his supporters felt they had a “voice”. Dean created a dialogue with constituents through online surveys, polls and petitions, and he also used weblogs. Giving the supporters a voice which fostered engagement and inclination to contribute. (4) The organization actively asked people to forward messages; some call this “viral marketing”. (5) His communication created urgency within his supporters.

Howard Dean’s success has spawned an open-source political discourse. Howard Dean’s DeanSpace is free software that helps those in campaigns. The DeanSpace Web site lists what is included in the package. “It has a lot of nice community functions -- blogs, forums, photo galleries -- and it also has some features that apply specifically to campaigning. It has volunteer list management, voterfile integration, and the ability to easily and powerfully link your site with the official Dean campaign as well as other DeanSpace communities [http://www.deanspace.org/about].”

Howard Dean employed a variety of social software. Critics will say that Dean was not a success because his frontrunner status did not get him votes. We must remember there were a number of external factors and current events that effect citizens eventual vote. Although he did not successfully win his party’s nomination, we can not call his use of the Internet a failure. We must ask ourselves if we would have talked about Howard Dean at all if he had not employed a strategic campaign online. Might he have been a Dennis Kucinich, another Democratic presidential candidate who received nothing of the same publicity, organization, or support as that of Dean, although having similar ideologies and starting from a similar point of national obscurity. Some suggest that the Internet tends to attract those who are disconnected from the traditional political parties and are thus more independent or libertarian than nonusers [38]. Dean successfully tapped into that market, although it may not have been quite as large a following as it appeared in mass media or perhaps the Dean supporters were simply louder than the rest.

In his weblog at Corante, a “blogger” named Clay comments on Dean, “We know well from past attempts to use social software to organize groups for political change that it is hard, very hard, because participation in online communities often provides a sense of satisfaction that actually dampens a willingness to interact with the real world. When you’re communing with like-minded souls, you feel like you’re accomplishing something by arguing out the smallest details of your perfect future world, while the imperfect and actual world takes no notice, as is its custom” [7].

Whatever your opinion of Howard Dean, it is easy to observe that his use of social software helped tie distant and separate people together in a social network that accomplished quite a bit. Next, we discuss the nature of

ties within a network and the richness of the media being used to start, build, and strengthen those ties.

4. Strength of ties in networks

What are the implications of maintaining and forming interpersonal relationships online? Wellman and Hampton [62] remind us we must remember that communities are based on social exchanges rather than on spatial proximity. Whether online or offline, communities are networks, and not neatly organized into little neighborhood boxes. These networks furnish opportunity to find resources in various social circles, maneuverability to avoid the nature of being a single network member, and the uncertainty that stems from the limited scope, low density, and porous boundaries of any one network.

Some thinkers argue that social networks of friends, family, colleagues and acquaintances are one of our most important resources. Social networks are where we get our advice or job connections, but they are also where we turn when we need emotional support or a sense of belonging. This is important to organizations in that organizations that are rich in social capital, the institutions, relationships, and norms that shape the quality and quantity of a society’s social interactions, are finding it easier to collaborate on joint projects and are less likely to experience individuals “free-riding” on the efforts of others. The result is higher levels of economic vitality, trust and happiness [10]. Putnam documented the decline of social capital in the U.S. since the 1960s, while Fukuyama [18] noted the same. Few people get together in voluntary organizations, and there is uneven access to social capital in different neighborhoods, cities, and states. Putnam posits that there is a turn toward social networks, moving away from group participation.

Wellman [57] believes that the Internet’s incorporation into everyday life increases North Americans’ stock of social capital. Wellman concludes that the Internet’s design can usefully account for important social phenomena, including users’ characteristics like gender and skills, social relationships (strong/weak ties and specialized/broad ties), structural positions, social network structure (densely knit and loosely bounded), and social network composition.

5. Media richness

Computer networks (e.g. the Internet and foundation for social software) are the infrastructure of social networks. Research has shown that the Internet provides a medium that tends to satisfy entertainment, escape, and social interaction needs [14, 17, 39, 50]. Media richness theory provides a lens through which we can view this social interaction.

Media richness theory proposes that media differ in the ability to facilitate changes in understanding among communicators [8]. For example, face-to-face communication is richer (can better facilitate changes in understanding) than written memos [36]. Several studies have suggested that managers will be more effective and efficient when richer media are used for equivocal tasks and leaner media are used for less equivocal tasks [8, 9, 30].

Kahai [36] notes the popularity of media richness theory, yet its limited track record in supporting its own propositions. With traditional media (e.g. face-to-face, telephone, and written memos) media richness theory has performed as expected, but studies including new media (e.g. voice mail, e-mail, and videoconferencing) have shown interesting results [8, 19, 55, 56]. Computer-mediated communication has been shown to support emotional, nuanced, and complex interactions, contradicting early fears that it would be useful only for simple, instrumental changes [13, 46].

Studies have shown that pairs add media to their repertoire in an ordered sequence according to tie strength, starting with the group-wide medium and then adding other media [26, 27 28]. Guttman scaling showed conformity to a unidimensional scale, showing media is added in this order: unscheduled face-to-face meetings, scheduled meetings, e-mail, and then “other media (e.g., telephone, videoconferencing, fax), with the latter category used only by the most strongly tied communicators.

Could the strength of ties that begin online in a less rich communication channel start at a weaker point than those that begin face-to-face or richer communication channel? A further examination of the strength of ties is warranted.

6. Strong, weak, and latent ties

A tie is said to exist between communicators wherever they exchange or share resources such as goods, services, social support or information. Strength of a tie is normally assessed by looking at a combination of factors; frequency of contact, duration of the association, intimacy of the tie, provision of reciprocal services, and kinship have been used as measures of tie strength [43]. The degree of overlap of two individuals’ friendship networks varies directly with the strength of their tie to one another [22].

Haythornthwaite [27] argues that where ties are strong, communicators can influence each other to adapt and expand their use of media to support the exchanges important to their tie, but where ties are weak, communicators are dependent on common organizational established means of communication and protocols established by others.

Haythornthwaite [27] posited that when moving from offline ties to online ties some assumptions remain

important: (1) the characteristics of ties hold in the mediated environments as they do in the offline environment, (2) online exchanges are as real in terms of their impact on the ties as are offline exchanges, and (3) it is the tie that drives the number and types of exchanges, not whether the ties is maintained on or offline, or via any combination of the two. Just like offline ties, online ties are expected to be stronger when they show greater varieties of interaction and exchange or closer to the extent that they exchange emotional support.

Social software have developed settings to initiate new contacts, suggesting a different level of tie, a latent tie. A latent tie is described as a tie for which a connection is available technically but that has not yet been activated by social interaction. Social software adds means and opportunities for previously unconnected others to communicate, resulting in positive effects on weak ties and weak-tie networks, in particular by laying an infrastructure of latent ties (ones that exist technically but have not yet been activated) [27].

Table 4. Attributes of latent ties	
▪	Connection is available technically
▪	Not yet activated by social interaction
▪	Can be formed by computer or noncomputer means (email lists, web communities)
▪	Not established by individuals
▪	Is established by the organization, the community, or the administrators

Sproul and Kiesler [58, 59] suggested that the reduced cues of computer-mediated communication (CMC) work to the advantage of weak ties by reducing the social risks associated with contacting unknown and unnumbered others.

Based on Haythornthwaite [27], it appears that latent ties initiated online can develop into weak ties, and subsequently, strong ties. Going back to our political example, it is the weak and strong ties that are desired by the political organization because the strength of the tie can determine the level of commitment and support for maintaining the tie (Figure 4).

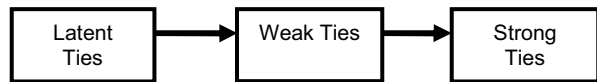


Figure 4. Development of ties [27]

Proposition 1: Latent ties initiated online will develop into weak ties, and subsequently, strong ties through the continued and frequent use of a variety of social software, thus,

Proposition 2: The use of multiple types of social software in communications presents a setting where ties can form.

Latent ties can be initiated fairly easily (e.g. ListSrvs, discussion boards, and newsgroups), building ties that would have likely never been developed otherwise. A conclusion can be drawn that those in a tie are more committed to the relationship and provide the best opportunity for organizations (i.e. political groups) to get the grass-roots supporters and dedicated workers it needs to mount a campaign.

Proposition 3: The Internet provides both political, as well as most other organizations, a quick, easy, and economical way to build ties.

The most basic of social software, e-mail, has been cited as reducing the “social overhead” inherent in beginning a relationship [27], supporting the notion of the ease of initiating online latent ties.

The richness of media helps determine the initial tie development [27]. Marsden and Campbell [43] found that “closeness” or emotional intensity of a relationship is on balance the best indicator of the concept of tie strength that we have. Research has shown that weaker, more casual friendships or work relationships engage in fewer, less intimate exchanges and share fewer types of information and support than those reporting stronger relationships. With more strongly tied pairs including in their exchanges a higher level of intimacy, more self-disclosure, emotional as well as instrumental exchanges, reciprocity in exchanges, and more frequent interaction [23, 26, 43].

Proposition 4: Media richness helps determine the development of ties.

Proposition 5: Richer rather than leaner media provide the best setting in which latent ties can develop into weak ties.

Proposition 6: Richer rather than leaner media provide the best setting in which weak ties can develop into strong ties.

Again, the key assumption is that the characteristics of ties hold in the mediated environments as they do in the offline environment. The social support given online is an exchange that adds to maintaining the tie, and is not neutral. Support for this assumption is found in the many studies that have found ties to flourish when supported by online information exchange, social support, work interaction and play [28].

Each of the Granovetter and Haythornthwaite studies assume these ties to be in a supporting role and not initiated and primarily online. The advent of Web-based social software has brought about new types of relationships, both synchronous and asynchronous that

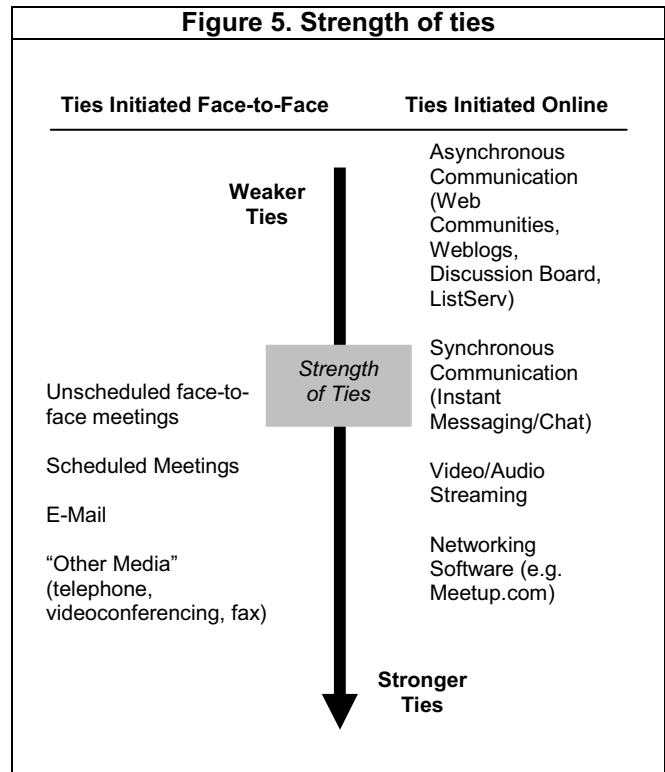
may never have face-to-face communication. Could the ability of social software to bring diverse people into relationships with others they may have never otherwise have met, negate the adverse effects of weak communication channels. In other words, these relationships and resulting networks that are being created online would not exist, thus,

Proposition 7: Solely online ties may take ‘longer’ and more frequent interaction to develop into strong ties than those relationships that are initiate in a face-to-face setting (Proposition 7) (Figure 5).

Proposition 8: Media richness helps determine the speed at which ties can develop and strengthen over time.

Proposition 9: Richer rather than leaner media provide the better setting in which latent ties can more quickly develop into weak ties.

Proposition 10: Richer rather than leaner media provide the better setting in which weak ties can more quickly develop into strong ties.



7. Conclusion

This paper has drawn on the example of social software to illustrate the opportunities that are available in the online medium as well as the cautions that must be adhered to. Media richness and social networking theory

were illustrated through the example of U.S. presidential politics. There have been great successes and continue to be huge limitations to these media but the evolving nature of software development continue to improve the communication channels of the Internet.

This paper is useful for political organizations such as those complex political organizations during U.S. presidential elections that attempt to develop some form of tie (*Proposition 1-2*) among potential voters to gain votes, monetary contributions, and/or volunteer support. The prevalence of social software now affords presidential candidates the forum through which a message can diffuse quickly and economically (*Proposition 3*). Within the variety of social software that are available, the level of media richness that each offers is expected to directly impact the ability of the candidate to develop a ties as well as strengthen existing ties (*Proposition 4-10*).

The political organization is just one of many examples that could be followed to illustrate that use of social software to tie people together. Howard Dean, although unsuccessful to win the Democratic party nomination for President of the U.S., used social software in a revolutionary way to develop network ties. This relatively new integration of social network theory and the Internet has immense opportunities for further research. This paper has attempted to be a stepping stone upon which more detailed and potentially empirical work can be conducted on networking through social software.

8. References

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