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Abstract

Social networking software is an emergent phenomenon of the information systems landscape whose novelty has ensured that it has largely eluded academic scrutiny. Given that social software is primarily within the province of the young at this stage, a playfully meandering exposition of its definition and quasi-philosophical ramifications will be delivered in essay form.

Keywords

Social software, blogs, online communities

HERALDING A 21ST CENTURY CONGREGATION

"It's a small world after all…" Originally penned by the Sherman brothers for the 1964 New York World's Fair in celebration of peace and the connectedness of people all over the world, the ode "It's a Small World" was sung by over 300 audio-animatronic dolls from 100 nations in an exhibit that eventually was transferred to Disneyland, becoming one of its iconic attractions.

Ironically, three years after the composition of these lyrics, the social psychologist Stanley Milgram conducted an experiment that gave rise to the "small world phenomenon" and the now clichéd phrase "six degrees of separation". His research suggested that it was, in fact, a small world because everyone on the planet could be reached through a short chain of social acquaintances, on average only half-a-dozen (Blass, T. 2004; Milgram, 1967; Milgram, S. 1977).

The small-world effect is not just a curiosity pertaining to social networks as it appears in many other networks, both natural and technological (Ball, Philip 2004; Barabási, A.-L. & Albert, R. 1999; Barabási, A.-L. 2002; Barabási, A.-L. & Bonabeau, E. 2003; Buchanan, M. 2002; Shulman 1998; Strogatz, S. H. 2004; Watts, D. J. & Strogatz, S. H. 1998; Watts 2003). A prominent example of this phenomenon in play is in the evolving structure of the World Wide Web. Adamic & Huberman (2001) observe that the large number of visitors that gravitate to a few websites cannot be due solely to the fact that people randomly find some kinds of sites more appealing than others. They note that website growth and popularity in fact can be explained mathematically via power law distributions. One salient pattern is the prevalence of many small clusters in the Web and few large ones. Denning (2004) notes that physical communication networks inherit structural similarities from their social

network counterparts. Innovations often have the property of only influencing small groups even though some affect the masses.

This emergent virtual framework can provide an affordance for "small world" behaviour. The Web as it stands today, has allowed global interpersonal exchange on a scale unprecedented in human history. As such the world has shrunk even more, turning us into a "global village", a term coined by Marshall McLuhan (McLuhan 1962) to describe how electronic mass media transcends distance and time barriers in human communication, enabling people to interact and live on a global scale. And now, there is a new digital revolution emerging that is radically changing the way individuals and companies interact: social software.

COLLECTIVE INTELLECT THROUGH COMMUNAL TEXT

Social software's manifestations are staggering: As of April 2006 over 75,000 weblogs (i.e., blogs) were created daily which equates to a new one every second (Sifry 2006), and the social networking site MySpace has more page views than the Google search engine (Rosenbush 2005). This has incited everyone from the media to entrepreneurs, venture capitalists to academics to pay attention. However, to the latter segment of the population, social software's meaning, relevance and ultimate purpose is still a mystery given the paucity of scholarly tracts devoted to the topic. Beyond the mere immediate self-gratification of file-sharing, blogs as social software liberate the means of production for the non-technical through the establishment of an inherently democratic critical mass.

Due to its scope, the actual definition of social software is as hotly debated as it is popular, with many incorrectly weighing the 'software' part more than the 'social.' Shirky (2003) defines the concept as being software that facilitates group interaction. Online tools that allow people to congregate in a virtual sense facilitate the transmission of new ideas and allied innovations. Tepper (2003) predicts that blogs have the potential to become the primary conduit for online interaction for the rank-and-file consumer.

Conventional software such as Microsoft Word may have collaborative features (e.g. track changes) but it is not primarily social in functionality. In particular, social software encompasses instant messaging, really simple syndication (RSS) feeds, internet forums, blogs, wikis, social network services (like MySpace), virtual libraries and even massive multiplayer online games. One vantage of social software is based on its use to support the innate desire of individuals to affiliate into groups in order to fulfil personal goals (Boyd, 2003). People coalesce in a virtual sense to form online communities by combining one-to-one (ie., email and instant messaging), one-to-many (i.e., web pages and blogs), and many-to-many (wikis) communication modes.

Now the problem with this definition (i.e. a mechanism for group interaction) is that it doesn't point to a specific communication tool or type of technology. If you look at email, it clearly sustains social patterns, but it can also support a broadcast pattern. For example, spam is email that is received by multiple recipients, but it is unsolicited and therefore these people are not going to be talking to one another. Similarly, if two people are emailing each other, they are having point-to-point and two-way conversation, yet not one that creates group dynamics. Thus email doesn't necessarily support social/group patterns, although it has the potential to do so. The same can be said with a weblog. If you publish something anonymously it's really broadcast. However, if a collective of LiveJournal users posts it, where there are four possible states of connection between one user and another then that is social (LiveJournal 2006). So again, weblogs are not necessarily social, although they can maintain social patterns. Nevertheless, the definition of Shirky (2003) is a palatable one, because it crucially recognizes the social disposition of the problem.

Clusters within humanity are in a constant state of flux. Predications of an assembly's utilitarian focus are difficult to outline. Consequently these chaotic attributes of group dynamics are equally difficult to substantiate in software. Accordingly there is a major difference between social software and software for socialization - one being a tool in service, the other a de facto instrument of control.

Common to most definitions is the observation that social software assists in community development through induction (Mahmud 2006). It is the product of a bottom-up metamorphosis in which membership is voluntary, reputations are earned by winning the trust of other members, and the communities' members themselves govern the convergence in which they exist. This marks a radical shift in the way software is developed and is in direct opposition to the traditional top-down approach of figuring out what people could use and trying to provide it. In the corporate setting, it's hard to imagine a person existing without being specifically assigned membership to

top-down groups (ie. your team or division), which is why workplace software known as "groupware" does not constitute social software.

By providing simple tools and a flexible framework, groups can form and self-organize rather than have structure imposed. It's not about control, it's about co-evolution: People engage in personal contact, interacting towards their own goals and influencing each other such that the whole is greater than the sum of its parts. This approach actually models the design of internet and is exemplified by Reed's law which states that a network becomes more valuable when more people use it (Reed 2001). The world is a sprawling mass of tentacled communications, where social dealings are hierarchies of emergent phenomena evolving from the individual, to a single group, then to many groups and, finally, to the universe (Boyd 2003).

Blogging is a good example of this dynamics, and given its' aforementioned statistics in terms of popularity, is one of the primary tools that is transforming group interaction. The group relations around blogging arise in many ways: authors post thoughts, others comment and even more add their opinions. Likewise, social software starts with individuals: People start with their own interests, biases and connections, and these become reflected in social relationships, from which a network of groups organically surface from the interchange. And consequently the blog developers add more features to blogs to support this group interaction. Essentially, this "portal" is created around the community, rather than the other way around.

So why is it becoming important now? An obvious response is that it is a result of technology and money, which is party true, however fundamentally the main catalyst is human nature. Over the past few millennia, the human impetus to socialize continues to drive many things on this planet, including technological achievement. For example, the road network was driven by a need for groups of humans to be in closer contact with each other via physical transportation. Likewise, the social tools that have arisen in recent times are bringing people together because they are available at a low cost, with high bandwidth and, moreover, provide an ease of use that has never been attained before. To put it in context, prior to the web there transpired hundreds of years of experience with (one-way outbound) broadcast media, from printing presses to radio and television. Prior to email, there occurred hundreds of years of experience with (two-way point-to-point) personal media - the telegraph and the telephone. But outside of the Internet, there was almost nothing that supported omni-directional conversation amongst many people at once. Conference calling via telephone was the closest approximation, yet this was cumbersome and practically useless for large groups (Schofield 2003). To reiterate, social software per se is simply a lubricant for human interaction.

Ubiquity is the other reason that social software is going mainstream given that people are increasingly seeking a dual-citizenship that straddle their bricks-and-mortar reality and the virtual nation of the Internet (Shirky 2003). For most of the developed world, the Internet is everywhere and people are online at home, in the office and now as mobile denizens. The offline and online worlds are beginning to merge into a whole that is leading to new patterns. It must be noted that it has nothing to do with technology, software does facilitate the connection (e.g., just like the road network), but it doesn't overwhelm the structural integrity of the underpinning social relationship.

INNOVATION SPANNING VIRTUAL BRIDGES

As it happens, the technological infrastructure enabling social software has been around for decades but its usage was clouded in ignorance. Shirky (2003) amusingly states, *"it took a long time to figure out that people talking to one another, instead of simply uploading badly scanned photos of their cats, would be a useful pattern."* Subsequently developers have moved away from the earlier web development mentality of Yahoo and Amazon that was obsessed with size and scale above all else. Scale has the potential to kill conversation leading to the technology being devalued itself. Small groups of people can engage in all kinds of interaction that large groups cannot, so today's tools are built with lightweight frameworks, loosely coupled, easy to extend and easy to break down so they can support group conversation or collaboration.

The primary constraint of social software is in the design process: Human factors allied with group dynamics introduce design complications that are not salient without considering the psychology of the user (Webb 2004). For this reason there are a few things that need to be accepted, the first being that you cannot completely separate technical and social issues. And as stated you also can't specify all social issues in technology. The group (which is a real construct albeit abstract in notion) is going to assert its rights somehow and a mix of social and technological effects will be a consequence. Equally it must be taken into consideration that members are different than users and it is important that these users have identity. Generally a pattern will arise in which there is a group of users that cares more than average about the reliability and triumphant capability of the group as a whole (ie. they have a high reputation or inherent karma), which is healthy because they become the core group and end up administrating the environment.

The Wikipedia enterprise has a similar system, with a volunteer "fire department" on call in a support capacity, namely, a group of people who take pride in the success of the venture. And due to the way wikis work, they have enough power to roll back malevolent graffiti and/or punish the transgressor. The smooth virtual coordination of quality control via leveraging the core group is the reason why it operates very successfully. The reason identity or 'handles' are necessary is because anonymity doesn't work well in group settings as "who said what when" is the minimum requirement for having a conversation. One further limitation of current social software is natural language capabilities. Aside from Wikipedia, which has entries in over 200 languages, much current social software is restricted by dialects. Therefore, people without the relevant language skills, are unable to access many forums, wikis and blogs on the Internet. Ultimately it must be remembered, as Horowitz (2005) aptly puts it, that social technology is "only as good as your relationships".

A NEW BEGINNING

Despite these issues and the vigorous debate surrounding what social software actually is, it is clear with the critical mass of millions of self-motivated and eager users of the Internet, that the bottom-up approach of social software is certain to be (if its not already), the "next big thing". Perhaps just as interesting as the way that social software is transforming group interaction - across different time zones or in the same room - social software is destined to have a huge impact on how businesses get at their markets. So the essential elements of social software will be incorporated into more conventional software, changing the way collaboration and communication is managed within and across businesses, and eventually transforming how companies sell and interact with customers. Kenneth Boulding, the economist, humanist and social scientist, once wrote: "We make our tools, and then they shape us." (Boyd 2002). That is in essence what social software is doing; it is changing the way that we socialize. It is of course, a small world after all.

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