

Network Technology and Networked Organizations

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The question of how civil society organizations can appropriate networked technology for social change needs to be addressed on both a technical level and to look at the social and organizational transformations needed to use the technology effectively. The process of creating new patterns and models of use for technology lags long behind the introduction of a technology. After a decade of use the web is starting to come in to it's own as organizations and forms of use arise which are native to the technology. This process of internalization of the use of the web can have as a profound effect on civil society organizations as email had in the last two decades. Organizations which don't adapt will continue to exist. Just as there are organizations which don't use email today. But they will in part be marginalized by new project and organizations which are able to use the technology to be more efficient.

In this memo I explore three more case studies which expand on the ideas in the Surman and Reilly report about how the internet being used for innovative research and observation projects. In part I believe they were skipped because the some of the most interesting projects lack the traditional 'organization' trappings of 'civil society'. They arose and formed as 'organizations' out of the network itself rather than being a traditional organization trying to use ICT. The three projects profiled here are by no means the only projects which embody new networked social / organizational forums.

The projects which tend to use network technology most easily are those which arise out of communities who have been online longest. Those are centered around the technical communities. Groups like indymedia, which are visible to and interact with NGO's and the globalization

movements have adapted many of their communications and technology patterns from the free software technical community.

These projects are pushing observation and research via the net in ways which weren't possible before. Creating a new form of research based on a semi-ubiquitous end to end network.

Mini-Case Studies for Internet Observation and Research:

Groklaw.net:

The site is run by a volunteer paralegal and focuses on tracking the SCO Linux lawsuits. For those who don't know, SCO, a long time unix software company has converted itself in to producing lawsuits. SCO's legal action is centered around changeling the legality of the GPL (copyleft) license and demanding that large corporate users, developers, and distributors of Linux pay hefty license fees. The cases have been widely followed within the legal and technical community as they explore the legality and strength of the free software and open source movements.

The Groklaw site is a series of articles and investigatory pieces related to this complex interplay between cutting edge technology and law. Each piece of research posted attracts hundreds of comments from technical experts and lawyers who pick apart the information. The end product is not a single report, or anything which can be shown to a foundation, board of directors, or government committee. It is rather an evolving stream of dialog, ongoing collaborative research, and an exploration of the issues which would be impossible in a traditional research context. From a traditional research perspective, the question to ask looking in to groklaw is could people from that community compile articles pulled together to form the discussion to create a report. The raw material is there, but the inclination of the community is not directed toward creating reports. Many journalists, wanting to understand the complex issues use the site to follow the story. In this

way the project has an extensive impact beyond it's getting mentioned directly in the press. The person coordinating the site is unpaid and the project covers costs from online donations.

Groklaw is an effect a network information hub. Controlled by an individual, it is a space for collaboration and synthesis of information about a complex topic. It's the kind of research project which would have been expensive to conduct in the past. Beyond that, the information produced would have been limited to a small group of people who a hefty sum for the report directly or it's publication in narrowly distributed journal.

Political State Report - PolState.com

Another research project similar to Groklaw is the Political State Report, www.polstate.com. Started by kos, a well known political blogger from San Francisco, It's a collaborative attempt at tracking and understanding state (departmental or provincial) politics within the United States. The site is run and maintained by a couple hundred political news junkies. These are people who write about and are interested in their local state politics, most of whom have blogs themselves. Each correspondent applies to get an account to publish news about their state. They identified with their political leanings (Republican, Democrat, Independent, Green, Libertarian), and links to their personal site. The articles focus on upcoming or recently finished electoral races, endorsements, court cases, poll results, and referendums. Attached to each article is a discussion about the merits and political fallout of the news. Unlike groklaw, posting is open to anybody who has gone through the process to give their name, information, and sign up to be a local correspondent. Once they have gone through an initial vetting process they have open access to publish news about their state. If there is abuse, it is caught by the network of correspondents who run the site before many end users notice.

The Political State Report isn't attempting to be a comprehensive update on the political situation in every state, rather it's meant to create a space for people quickly get a see the direction and power flows of local politics from a local perspective. The idea is a move away from the vision of the world where the state of everything can be known. Both Groklaw and the Political State Report are models of research in the form of 'issue tracking' where the goal is to understand and follow a flow of information and issues rather than to capture the reality in a comprehensive report. It's an embrace of understanding the world through many specific moments. The project couldn't exist if an organization tried to confirm or verify the quality of the contributors or their information. It would become stale, out of date, lacking soul. Rather the reliability, the 'trust' is build up from the ability to respond to and contest the accuracy of statements. It creates a reliability which comes from anonymous members of the multitude rather than any institutional form of control.

Wikipedia - the open encyclopedia

A large and participatory web based research project is Wikipedia. It is an attempt to construct a free, collaboratively written encyclopedia using a wiki as a technology platform. Wiki, quick in Hawaiian, is a form of content management system where all web pages within the wiki site can be edited by anybody. If you see something you want to change, click on the edit link, and you can edit the page through a web form. Wiki style programs allow publishing web pages in a markup simpler than traditional html. New pages can be created by simple stringing two words together with CapitalLetters. That word then becomes a link to create a new blank page. Most also have support for saving a version of the page after each edit, so if somebody deletes or tries to jam up a page it can easily be fixed. From this very simple technology extensive websites can be built. Wiki's are widely used within the technical and free software community as well as within

indymedia for internal organizing. Although the Cancun WTO and Geneva G8 and WSIS protest mobilization websites used them, wiki's are almost unknown within civil society organizations, even tech savvy ones.

The wikipedia idea is to transform the traditional notion of an encyclopedia from a closed repository of truth to an open collaborative project based on the contribution of users under a copyleft license. As would be expected, it has more depth than a traditional encyclopedia in some areas, and weaker coverage in others. For example if you looked in a traditional encyclopedia there would not be pages describing in detail hundreds of different programming algorithms.

Wikipedia's coverage of things like 18's century military and political leaders is weaker than a traditional encyclopedia. The Wikipedia idea is to have something which can eventually replace a traditional encyclopedia for the internet age. The traditional encyclopedia is encumbered by an organizational form and technical format which is unable to address the needs of an ICT saturated world.

The first argument that many people make when thinking of wikipedia is, "How can the information be verified?" (1) Anybody can put in some false facts, or even make up a period of history which never existed. In practice people abhor seeing factual errors. Nothing brings out responses and discussions in online communities like making a factually incorrect statement. People come out of the woodwork to correct errors because they like to demonstrate their knowledge and set the story straight. Given the right forms and incentives a tremendous amount of reliable research can be conducted this way.

The growth of wikipedia has been very interesting to watch. In the last 6 months it's sustained traffic has shot past that of Britannica.com. Clearly in terms of usage the site has been become widely accepted and used as a reliable source of information. It leads us to question where

the reliable information really lies. Within the traditional institutional based framework of knowledge and reputation says there should be no value in an encyclopedia which is written by an open group of self-selected volunteers who have no organizational or professional accountability.

The site is published by a core group of 800 people (2) and has a democratic decision making process similar to open source and free software development projects. The decision making is based on an informal model of working consensus with an occasional site wide voting on referendums and rarely used power of intervention by the site's founder. (3) Recently the project incorporated itself in the US as Wikimedia, a registered non-profit which legally owns the computers which host the site and which can receive tax deductible donations and grants from foundations. (4) The content of the site released under a free license, the GNU Documentation License, and therefore effectively not an asset. It is released in an easy to use format ensuring that if the power structures behind wikipedia were to ever become corrupted, anybody could easily start a parallel project. The project is coordinated virtually via mailinglists (5), irc chat (6), instant messenger (7) using the same technology and some similar organizational forms to the indymedia network.

Wikipedia and other large, successful wiki like projects succeed because they have replaced the old concept of a director with that of a community of gardeners. The WikiGardener is a person who tends to the information, keeping links together, adding references, reorganizing pages, and generally making sure the collective project remains useful. Like the indymedia concept of an editorial collective and open publishing, the WikiGardener comes in to clean up after the act of publishing and is not a gatekeeper who solicits or controls what information gets published. The gardeners of wikipedia themselves coordinate their actions to manage and grow the project. (8) The essential skills of being a gardener are different from that of a traditional

researcher or project manager. The task is that of fostering a community and space for a free flow of contributions. An idea of the general direction and path for future project development is important, but only so long as it remains vague. Growing collaborative projects requires being flexible about the directions the project takes and the contributions which flow in. It is also critical to create a buzz. If you can't be excited about a project and impart that enthusiasm to others then a collaborative bottom up research project will never take on a life of it's own.

Implications of network based organizations:

These network based projects approach research from a different perspective than their pre-network counterparts. There are sometimes reports produced by the projects, but the research is not solely about the final product. Research is the process of investigation, of debate, of discovering and creating links. The link is the fundamental concept that underpins the web and it can be a powerful force in transforming organizations. Like email, it is very simple, yet when used correctly it can transform longstanding processes. Traditional institutions loth to provide outside links on their websites. The argument is that these links are an endorsement, that by linking to another website or project we are saying we have looked over this organization and their work. Truth be told, linking does connote a bit of endorsement, but not the deep endorsement which might be implied if you published somebody's article in your newsletter. It's saying, there is a link of relevance, something which might be interesting information for you to read. The groups who are able to adapt to the new environment create websites which have space for both incoming and outgoing links throughout the site. They are using the web the way it was meant to be used.

A common example of failure to understand and use the internet is to look at organizations which say they want to encourage participation and discussion by installing a forum system. The problem is that a disconnected and compartmentalized forum system ends up being a ghetto, isolated and

neglected. On news sites like indymedia and freerepublic as well as research sites like the political state report and groklaw, the comments and discussion exist attached to everything. It means that the original author is taking a step down off of their pedestal and having a face to face discussion with people after their presentation. The 'comment widely model' can be contrasted to the traditional academic conference with the presentation of papers followed by a short question and answer session. (9)

Like with conferences, simply going to the other extreme and eliminating the speakers and direction doesn't work to foster effective collaboration. Communities, and especially research driven communities need people to act as points of direction. To shape and direct the growth of the conversation. The balance of power and openness, structure and fluidity, are critical to making a functional organization on the internet as much as they are in face to face collaboration.

On Using Blogs:

One model to move forward for CSO's engaged in trying to use the internet effectively is for them to consider giving their staff and members blogs. Blogs not as in a place to chat about family and post pictures of their cats. Rather, research blogs, a place to chronicle their ideas, research, and work. In addition to sending around links, articles, word files, and the like they should be posting them online. It opens up the informal knowledge networks and provides a way for people to stay aware of their community.

Blogs work for a couple of reasons. First they are informal. You can post something, link to something, muse about an issue and get feedback. As a medium if you make it clear it's a blog, then you aren't held to the same standards as a press release or a full report. Sure spellchecking and grammar are important, but the standards are much lower than is needed to produce something 'official'. In short, blogs work because they can be quick. Blogs are link intensive, meaning they

build off of the best aspects the web, making them like google candy. A blog entry which is linked to from other blogs, or an article which gets picked up and discussed by bloggers will rank much higher in google and as a result have longer staying power, than one which appears with only the official organizational link and gets lost in the thousands of search results which aren't on the first page. This will increase the impact of reports and other research beyond narrow publications. Blogs, when done effectively have a personal voice, they make people real, opening up and reducing formal barriers which prevent knowledge sharing and true collaboration.

One of Surman and Reilly's points when talking about the effect of network based communication is "the emphasis of data collection over analysis – we have created information producing culture and not an information synthesis culture." (Surman and Reilly 2003) The synthesis culture only comes to be seen when you realized the disparities of power within the internet. Some authors and websites become central focal points because of their selective limiting and organizing of information. It is a strong personal voice which attracts readers by providing synthesis. There may be hundreds of thousands of blogs, but most have a small group of readers personally interested in the person or issue being discussed. Power comes to rest in a relatively limited number of sources who are compiling, organizing, and synthesizing information from across the network. Unlike the traditional repositories of power, the networked power-holders have more limited monopoly like barriers to new players. The balance of hubs and smaller points of connection create a rich environment by which people can see the intellectual space.

On Using Wiki's:

Wiki's are also a remarkably effective tool when used for research and collaboration. They allow for easily constructed communal space. Like email and blogs their power lies in their informality and simplicity. People can understand the essential concepts very quickly. Wiki's encourage

people to contribute to the project rather than maintaining a distance between information producer and consumer. Effective wiki sites don't spring out of nowhere, but rather need nurturing which is done by 'WikiGardeners'.

When initially created it was assumed that Wiki's would not be useable for political projects. To date there have not been that many politically sensitive projects which have adopted using wiki's. In some cases, such as the indymedia wiki's (docs.indymedia.org), it's been necessary to implement a system where only people with username and password can edit the page. Usernames are widely distributed so as not to limit the essential accessibility of platform.

With a little care taken for security a wiki can be a transformative tool. Tim Berners-Lee, the inventor of the web, always advocated that web pages be as easy to edit and update as they are to read. The concept is not of a static reality but rather a much more collaborative medium. Wiki's are a powerful step in the direction of making the collaboration real. They share the power to speak with all participants. For many professionalized CSO's and NGO's this devolution of power brings with it unwanted democracy.

Democratic Implications of User/Network Driven Projects:

The power of the network is directly dependent in the creators' ability to share control. The more the participants see a site or project as theirs the more they contribute. This diffusion of ownership has consequences. The most striking of which is demands for democracy. No visitor to the Ford Foundation's or the New York Times website is going to get upset if they redesign their website without consulting their users. Yet nobody would think of transforming an indymedia site, Kuro5hin.org, dmoz.org, or wikipedia without a consultation process.

The decision making structure which arises within network based projects and organizations is mostly emergent rather than created by design. Although aligned with many of the radically democratic principles of the globalization movement the decision making forms are distinct. It's not direct democracy with everybody participating in the decision, nor is it representative democracy where decision makers are elected, nor is it really a one person one vote referendum style democracy. Rather it's a consultative process based on the principles of 'rough consensus and running code.'

Like corporations and governments, most NGO's operate with a top down organizational structure with very little democratic power given to the people at the bottom of the organization hierarchy, to say nothing of those outside the organization. When contrasted with the power model of most projects which have successfully used or grown up around ICT's it is easy to see why Corporations, Governments, and NGO's have been unable to adapt to really using this new technology. The US military has recently gone through a series of transformations of it's command and control structure which has worked on reforming itself based on a network model. During the invasion of Iraq, field units used MSN instant messenger (unencrypted) to communicate in real time and coordinate actions.(10) They often switched on the fly to using non-secure consumer technology because the expensive military communications system failed to accommodate the forms of communication needed or collapsed at critical moments. If one of the largest and most authoritarian institutions in the world can adapt to understanding and using network and collaborative technologies in a warzone then NGO's and CSO's should be able to do it as well. The conception of networked informal democracy has been created by the free and open source software communities. The principle is: "We reject kings, presidents and voting. We believe in rough consensus and running code." [David Clark (MIT)] This principle is derived from what

‘works’ when using networked technology and then goes in to shaping the future development of ICT’s. If you want to understand the future transformations of organizations and modes of production in globalization it is best to look at where the process has already happened. That’s within the technical community, which created the ICT’s in the first place.

Wiki’s, blogs, and other simple ICT’s such as instant messaging, only become effective when you realize that the primary transformation is social and organization not technical. There is nothing difficult or complex about the technology. Just as the printing press took period of more than a hundred years to cause a major reformation in the spread of knowledge and power within the Church, ICT’s of today will very slowly cause changes in the way we think and come to know the world. NGO’s are a very early example of a new kind of institution which has spread widely in the last decade. Their use of ICT’s are limited to the earliest technology, email, which has been around since the 1970’s. The web with graphics has been around since 1994, and we are just now, a decade later beginning to learn how to use it.

(1) Wikipedia, common objections to and critiques of Wikipedia -

http://en2.wikipedia.org/wiki/Wikipedia:Why_Wikipedia_is_not_so_great

(2) Wikipedians, the community of people who contribute to the

Wikipedia project - <http://en2.wikipedia.org/wiki/Wikipedia%3AWikipedians>

(3) Power structures of the wikipedia project -

http://en2.wikipedia.org/wiki/Wikipedia:Power_structure

(4) Wikimedia foundation which ‘owns’ the wikipedia project http://en2.wikipedia.org/wiki/Wikimedia_Foundation

(5) Wikipedia mailinglists -

http://en2.wikipedia.org/wiki/Wikipedia%3AMailing_lists

(6) Wikipedia irc chat -

http://en2.wikipedia.org/wiki/Wikipedia%3AIRC_channel

- (7) Wikipedia instant messaging -

http://en2.wikipedia.org/wiki/Wikipedia:Instant_Messaging_Wikipedians

- (8) About the Wikipedia project -

<http://en2.wikipedia.org/wiki/Wikipedia%3AAbout>

- (9) The same is true of publishing to the internet using PDF's. The format has advantages, it allows easy publishing online of documents which were designed and intended for dead tree printing. The limitations are also very real. The pdf file, like flash, is simultaneously part of the web and separate. It exists in a box, cut off from the wealth of a richly linked environment. The problem is in part technical, publishing software is configured to easily produce professional looking pdf's while the html export is substandard at best.

- (10) For accounts of communications technology used by the US military during the invasion of Iraq the best sources are the blogs written by the technicians in the field during the war. Unfortunately the url's are not available to me at the this time.