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Iterative and Digital: The Use of Blogs and Wikis in Social Science Research

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Alternatively labeled 'digital public space' by some, and decried as the 'extreme sports' of research by others, blogs, wikis, and other digital tools have become an extensive part of online life, as well as social science research. Their presence is so ubiquitous that they are used in fields as diverse as accounting and organ transplant (Bean and Hott, 2005; Sauer, et al., 2005). Through their iterative and participatory format, these tools have facilitated collaborative group research in new ways. This paper will serve not to develop a theory of this use of digital technologies, but will instead survey the practices that accompany these technologies, using my experience on the Mobile Digital Commons Network (MDCN) project as a touchstone. Indeed, it is method and process more than theory that have been changed in social science research by these emergent digital strategies.

Four main ideas will be explored by looking at other scholarly writing on blogs and wikis: the collaborative usage, especially for research teams, of these tools, the impact on knowledge production and authorship, a short exploration of the dominant trope that represents these more participatory tools as a new public sphere, less rigid than the traditions of academic publishing, and finally some failings or shortcomings of our particular use of these tools. The MDCN is a multi-disciplinary, multi-institutional project funded by Heritage Canada that researches the uses and practices of mobile technologies. This work has several components, easily divisible through the different stakeholders involved: the artists developing new media art and hoping to broaden the scope and appeal of their work, the engineers attempting to push the boundaries of mobile

technologies to include input from GPS receivers and Bluetooth components, the designers working to aestheticize everyday technologies and to incorporate mobility into design practice, and the social scientists attempting to develop methodologies with which to evaluate the design and implementation of mobile experiences. My role on MDCN is as a member of this last group, researching and evaluating the development of mobile technologies.

We are EMU, our attempt at an acronym that pins down our responsibilities. EMU stands for Evaluation-Mobility-Usability. EMU decided early on its life that it would use the MDCN TikiWiki site (www.mdcn.ca) as a communications, research, and evaluation tool. The TikiWiki was implemented by our community partners at Ile Sans Fils (ISF). While wikis are often described as a more collaborative form of technology, in my work researching the use of wikis I repeatedly encountered discussions of their weaknesses as dedicated research tools. Disadvantages include the learning of syntax, different visual cues from MS Word or other word processing programs, a basic and less visual design than other more dynamic web elements, and the requirement of group buy-in (Wei, et al., p.206). These disadvantages were overcome by the EMU group through simple methods: we met and were trained in the functioning and use of the wiki by our community partners at Ile Sans Fils; we committed to checking and using the wiki at least twice weekly, and we made a conscious decision to conduct all of our collaboration through the blog and the wiki. This commitment was, in fact, what made the wiki such a valuable tool for our team. In addition to this group buy-in, technical literacy and specific wiki functionalities made this tool exceptionally useful to our work. These functionalities will be briefly discussed.

The wiki was valuable for EMU's collaborative work in part because we were geographically separated, but also because we were working on diverse research areas. The built-in blog on our wiki was the easiest way to keep the entire team in contact, and up-to-date on everyone's research. The blog served as our day-to-day communication tool, with the shoutbox providing more

informal, immediate commentary¹. Without piling everyone's inboxes full of links and emails, the wiki was a place where we could check in, learn of new sites and research, and send messages back and forth. The entire site was, as others have called it, "a hybrid between journal, academic publishing, storage space for links and site for academic discourse" (Mortensen and Walker, 2002). Indeed, our blog acted as a filter, just as Mortensen and Walker describe: "To blog is an activity similar in many ways to the work of the researcher. A weblogger filters a mass of information, choosing the items that interest her or that are relevant to her chosen topic, commenting upon them, demonstrating connections between them, and analyzing them." In addition to the blog and shoutbox capabilities, the wiki offered our team the ability to store articles, files and images in the galleries of the site, as well as organize ourselves through the use of the built-in calendar. The most important functionality of the wiki, however, was its collaborative style of authorship.

To a certain extent, in large research teams, the collaborative style is inscribed in the team from its formation. In developing large-scale multi-disciplinary research communities, what is the process of community formation that will guide the team? Gardner et al. (2004), cite Wenger's theory of the formation of Communities of Practice (CoP). These communities are marked by participation, collaboration, and negotiation. For our specific CoP, there were a lot of assumptions brought to bear on the work. These assumptions came from many different directions, each formed and configured by the disciplines at work. The engineers, the designers, and the social science evaluators all spoke different languages, had different thoughts about creative practice, the nature of research, and of course, the best way to get things done. "A sustained mutual relationship which typifies an effective community of practice is our goal, and how to achieve this in a virtual environment is our challenge" (Gardner et al., 2004). This sustained relationship was perhaps better typified by the EMU team, as a

¹ The shoutbox is a function which allows users to leave short comments or posts that appear in a dedicated section in the right frame of the wiki homepage. This allowed our team to alert members to new items on the blog or file galleries, or to ask questions of other researchers.

smaller example. Our different skill sets, whether in research methodologies, game theory, web operations, or specific mobile technology, worked together in the information space of our wiki site. The wiki facilitated this collaboration through its self-authoring capabilities. In brief, the most powerful ability of the wiki is that anyone can edit and create web pages within the wiki site. This helped our collaborative process, because the entire team could individually post developments on the site, without having to route the changes through a specific webmaster or team member fluent in HTML coding. It is this different attitude towards information which truly separates the wiki from other internet technology².

In addition to keeping our inboxes free of clutter, our wiki created different ways of storing and thinking about data. As Tonkin (2005) writes, “Authoring a wiki on a given topic produces a linked network of web pages roughly analogous to a concept map, a visual technique for representing knowledge and information.” The usefulness of such visual representations was also seen when using “mindmapping” software to facilitate brainstorming and idea generation³. Nina Wakeford references these same strategies when working with INCITE, another multi-disciplinary collaborative research team. The team used ‘grey boards’ – large boards with ideas and suggestions tacked on in colour-coded pieces of paper – as a means of guiding research, but also as a way to communicate between skill sets: those who worked visually gained understanding through this specific representation of their thought patterns (Wakeford, p.231). This diverse toolbox of strategies can be deployed to facilitate collaboration – which in this case means effective communication between discourses and disciplines. The idea of linkages and connections is rooted within the structure and form of these new tools. Blogs use links between pages, sites, posts and articles to create virtual discussions of various issues: “Links are like roots, tendrils, reaching out between fragments, creating a context for bits and

² For a more comprehensive discussion of the technical capabilities of wikis, see Augar et al. (2004), Tonkin (2005), and Wei et al. (2005)

³ For a good example of mindmapping software, visit http://freemind.sourceforge.net/wiki/index.php/Main_Page

pieces that at first glance may seem to be unconnected fragments” (Mortensen and Walker, p.259). Wikis, through their internal link system, create a tree of pages that fills out as research is expanded and deepened. This was extremely true in EMU’s case - our resource nest’s (<http://www.mdcn.ca/tiki-index.php?page=resources>) visual structure enhanced its utility. However the decision to use this visual representation and mode of organization brings up very important issues of authorship and information architecture in new digital arenas.

To many people, digital technologies are democratizing the academic world. The ritualized forms and styles of academic writing and publishing necessarily limit their audiences (Mortensen and Walker, 2002; David; Wei, et al., 2005). These authors see new research methodologies as essential to revitalizing the academic community, making it participate in, and be accountable to, the world it inhabits. A wiki could be seen as analogous to a journal without editors, or perhaps more accurately, a journal which everyone can edit. I’m not sure that our blogging and wiki use re-formed the academic community of which the EMU group was a small part, but it did teach us different ways of communicating, staying on top of what everyone was doing, and it also allowed for a pleasant mix of the personal and the academic. As much as our name, our blog allowed us to be silly and rigorous at the same time.

My role as pseudo “information architect” was an interesting one, in that I saw firsthand the cluttered and chaotic possibilities of an iterative structure. Links and pages cropped up over night, pages were orphaned, abandoned, and deleted. However, once the team was consulted and the built-in capabilities of the wiki used to the fullest extent, a cohesive structure emerged that facilitated the use of the pages, both for reader and writer. “A major question is how navigation menus and information architecture can keep pace with the growth of the content when multiple people individually contribute to the organization of the site” (Wei, et al., p.207). This issue was addressed in our team through the use of the ‘structures’ capability of the TikiWiki engine. This tool represents the organization of pages within the wiki by linking them all together and displaying

the pages in a tree-shaped diagram. This allowed for a progressive and intuitive organization of a vast nest of resources collected by team members. It also allowed for a visual representation of what otherwise was an intimidating scroll through pages of text. The structures, akin to the nest home of the EMU flock, maximized the usability of our resources. Of course, we also chose to appoint one person to keep a watchful eye on our wiki, even though we were all active in creating content to varying extents. And while I nominally ‘controlled’ the organizational structure of the resource nest, the process was really guided by the entire team, as ways of structuring and using the data were debated and discussed before being implemented. Here, of course, the iterative structure of the wiki was invaluable, as changes could be made and removed without any loss of work. This ability of any team member to edit and change any page within the wiki was undoubtedly its most powerful function.

This relates in part to the relocation of knowledge production. The site of textual work, through the use of these digital tools, has been changed. All of EMU’s work done through this project is available at www.mdcn.ca. It is no longer located in our individual offices, homes, or computers. The wiki and all the files stored along with it, the blog posts, the ftp server, the emails – these represent the new digital archive of our academic work. This relocation of the site of work has led to scholars using the public sphere as the dominant theoretical metaphor to discuss digital technologies (Goldenberg, 2006). The style of blogs and wikis, constantly in flux and adapting to the comments of both “readers” and “writers” (while simultaneously blurring the lines between these two sites) definitely lends some credibility to comparing them to Habermas’ bourgeois notion. Indeed, if our public space is indeed becoming digital, then a blog is perhaps the closest thing we have to a *salon*. These authors see digital research tools as standing between the public and the private (Mortensen and Walker, p.258). Indeed wiki software does stand between the public and the private, as an open-source option for content management. Choosing a copyright-free software to run our website was an important choice for the MDCN. This is

because issues of knowledge production and ownership have been important since the beginning of the project.

An important qualification must be made here to this discussion. While the relocation of the archive to a digital space can definitely begin to reshape ideas of the democratic use of data, it is not an absolute frontier. Our team used the password protection and privacy functions of the wiki to ensure that not all of our work was completely public. While moving the information, we were not comfortable with allowing all of our communications and deliberations to be visible to non-team members. Supporting more democratic technology like wikis and blogs is important, but as a team we are also responsible to each other and building trust between team members is essential to positive work and relationships. We can also understand online presence as a public space, but here I would like to identify a site of one of our group's failings. While I feel through my work on MDCN that we made extremely effective use of our digital toolkits, and overcame significant barriers in the cross-talk between disciplines, the one major failing I would identify with regard to communicative strategies is our lack of external identity. Gardner et al. (2004), cite Wenger's theory of community formation. An important stage is the 'coalescing' stage, which can be greatly enhanced by the examination of information space. The community is built and enhanced through a communicated identity (p.3). Our communication was focused on other team members, not on the public, or the wider sphere of mobilities researchers. This inaugural issue of *Wi*, is in way I suppose, a step towards rectifying this lack.

All this is not to say that we should uncritically bow at the altar of technological innovation. Indeed, as I write this, the server is down, and I am cut off from my feathered friends, unable to access our collective work. Along with the lack of a public identity, we as evaluators were not completely successful communicating our work and our research to the rest of the team. The buy-in to the wiki was less convincing in other segments of the research team. Perhaps more face-to-face interpersonal contact is indeed a better strategy for collaborative work. However, as much as new research and collaborative team

work will be taking place in a technologically-saturated environment, it is important to note that technologies are natured in their use, from the more participatory and democratic, to the more hierarchical and hegemonic. If we understand technology as irrevocably a part of our lives as researchers, it is of critical importance that we identify those uses which enhance wider social goals, and make use of them specifically for our work. The characteristics of wikis and blogs identified by the authors that I have referenced – those of being iterative, democratic, open-structured, and aiding in participatory and collaborative work – are of this type, and as such should be the subject of further use and research. Are there other technologies or practices that encourage a participatory and collaborative style of work that can be taken up? Are there dangers to focusing on collaboration in academia (typically an individual's paradise)? Does it in turn influence the style of academic creation and work? How must we re-learn ideas of ownership in light of these new technologies? And finally, how are we to guard against an overly deterministic view of technology while at the same time embracing its positive qualities? Continuing to explore these questions in this way we can extend the tenets and theories at work in our research out into the real world where they can have a much greater impact.

Resources

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