

Introduction

Overview

Engagement infers a relationship between at least two parties. Engaged Scholarship looks to examine how to create a relationship between those in the “Ivory Tower” who study issues and those “in the trenches” who experience them. It is always the case that of the minimally two groups involved in any situation an Engaged Scholar wishes to examine, one group is always differentially advantaged compared to the other(s) (Van De Ven, & Johnson, 2006; Putnam, 2010). One such relationship is that of the large institution or corporation. Too large to allow every individual to have a personal relationship with every other individual at a meaningful level, these environments have, at the most simplistic, two levels. The “Executive” (Exec) who creates policy and attempts to set direction and the “Rank and File” (RnF) who are the ones who attempt to carry out the policy. At this most basic level, it would seem that the “Executive” level is certainly the more powerful, but in a world that is powered on information, it is perhaps the RnF who are more powerful as they are the ones who generate the data and do the work that the Exec require for their activities. To use an analogy from the military; the officers may give the commands, but it is the soldier who carry them out (Axelrod, 2000).

Within a large organization, the information generated by the RnF must be passed through a multitude of layers. While these layers act to aid in the division of labour required by the organization (a downward flow of information), they are also points at which the information generated by the RnF is filtered before passing further up the chain. With an ever increasing amount of information being created, the task of filtering this information is indeed becoming a challenge and there is a very real chance that important business intelligence is being lost. This creates a “bunker” effect as upper management is increasingly isolated (Cross, Borgatti & Parker, 2002) from the network of individuals who are perhaps the most knowledgeable with regards to any given situation, not allowing the organization to move in an agile manner as is necessitated by the world today (Choi & Hannafin, 1995; Van De Ven, & Johnson, 2006).

Ironically, the way to capture this information as it is being generated might be to take advantage of the “bored at work network” (B@W) (Shirky, 2010; Watts, 2010) and the increasing tendency for individuals to share all manner of information through the use of “Social Media” (SM), moving toward what McLuhan called “tribal man” and away from the “individual man” (CBC, 1960). The challenge, both practically and ethically then becomes, how to get employees to share their tidbits of information freely and without feeling that they might be endangering their own employment, or that of their colleagues, through their sharing (Borgatti, & Molina, 2005)? A potential solution to this challenge requires two parts, the first, and more important, part is to create policy, processes and a new narrative that employees see as being genuine, transparent and one that they are personally committed to while knowing that their concerns are indeed being listened to and not only being heard (Hawkins, 2010; Margolis, 2009; Margolis 2010; Cheney, 2008). This, with the additional element of being able to make choices based on their involvement, empowers individuals to participate (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2006). The second part, while still important is the creation

of a technology layer to create a vehicle that will enable this communication to take place.

Networks and the technological process

The B@W already communicates all manner of information within the workplace. From office gossip to job tips, information has moved around the office environment without the intervention of the Exec for many years (Cross, Borgatti & Parker, 2002). The introduction of the telephone, email and now social media have only accelerated this process. As each of these technologies have been introduced to the home and the workplace, they have been met with fear and trepidation as to how not only communication would change, but also the notion of professional and private space (Arceneaux & Weiss, 2010). With each new technology, the private life of individuals can intrude further into the professional space. People could call home with the telephone to talk to their family, the introduction of email allowed one person to send a message to many of their friends and now SM allows an individual to broadcast a message to the entire planet (or whoever is wanting to listen for the message). Seeing this as a waste of resources, Execs have tried to limit, or eliminate the “improper” use of these new tools (Broadbent, 2009), without regard for who might really be on the receiving end of the messages or how the use of new tools is indeed based on those tools that came before. If the Execs were to indeed examine the history of these technologies, as McLuhan suggested, they would find that it is only natural for media and it’s related tools of communication to have an impact on society (Social Media is not conversation, but it IS cool communication. | Guru Digital Arts College, 2010). It could also be suggested to the Execs that attempting to stagnate the adoption of new technologies that enable communication is not wise, and these restrictions might indeed be harmful to the institution. It might be the case that employees are just as likely to be using these resources to communicate with their informal work networks as well as their various private networks. In fact, they are more likely to be sharing with their work related networks rather than their personal networks as the shared context would make the communication more relevant (Licoppea & Smored, 2005; Choi & Hannafin, 1995; Cross, Borgatti & Parker, 2002; Rodan, 2010).

So if Christakis (2010), Broadbent (2009) and Cross, Borgatti & Parker (2002) are correct, the modern institution should start to look at ways to grow and support these networks as an institution that has a vibrant network culture is likely a to be more engaging than one that is hostile to supporting the strong and weak ties between individuals. Improving these ties can lead to a heather workplace (Cohen, Brissette, Skoner & Doyle, 2000; Burke, Marlow & Lento, 2010) for not only the RnF, but it can also help the Execs understand how information and expertise flows through the invisible networks that share information and expertise regarding similar tasks within the institution (Cross, Borgatti & Parker, 2002). Indeed, some organizations have already done this using the Community of Practice model (Communities of Practice, 2010). Xerox famously institutionalized the Eureka project, recognizing the expertise of its technicians (Brown & Duguid, 2000). Helping to nurture such an environment can also help an institution engender trust and loyalty among the RnF and adoption of institutional goals. By addressing the concerns of the RnF and reflecting their values (Stilz,2003; Rhoades, Eisenberger & Armeli, 2001) within the actions and policies of the institution, and allowing all manner of information to flow in a transparent manner (Rawlins, 2008) through formal and informal networks, while recognizing that knowledge is now being created anywhere and everywhere (CBC, 1960), it is possible for an institution to gather information that it would

otherwise lose to the ether of tacit knowledge.

So if an institution is to look at ways of supporting those networks that already exist as well as creating an environment to create additional networks; how, especially in a large institution can an individual possibly be expected to connect with the hundreds of other individuals who might share some manner of common interest?

Previous research (Eagle, 2008; Dunbar's number, 2010) suggests that the maximum number of people any given individual can maintain phatic communication with is between 150 and 231, the typical individual only maintains active contact with four or five people (UsageWatch | Observing the evolution of technology usage, 2010). While it does not appear that there has been any exploration as to the maximal number of groups an individual can participate in, it may be associated with the previously stated values of 150 or 231 (Dunbar's number, 2010), or to the dynamics that create tension within the network (Binder, Howes & Sutcliffe, 2009). Within this larger group, it is more than likely that an individual can and does maintain a number of smaller unique networks, some of which may overlap, others may be completely independent (Elgan, 2010; Palsule, 2010; Adams, 2010; Binder, Howes & Sutcliffe, 2009) each of which can grow as the participants within the network share information (Young & Quan-Haase, 2009) on topics of common interest (Adamic & Adar 2005; Rodan, 2010; Salganik & Watts, 2009; Smith M.K., 2010). These numbers correspond well with research into Social Media networks, suggesting that individuals can and do already maintain a small number of contextually based networks (Elgan, 2010; Palsule, 2010; Adams, 2010; Binder, Howes & Sutcliffe, 2009).

While technology may not allow people to necessarily maintain an increased number of networks, it does allow for the extension of one's ability to maintain those networks that already exist. Technology allows messages to be sent into the network with greater clarity and frequency (CBC, 1960; McLuhan, M., 2010). The increasing ubiquity of mobile devices has made it easier to produce this information (Hosera & Nitschke, 2010) and the increasing number of Social Network Analysis (SNA) tools have increased the ability of researchers to collect, and mine it to discover attitudes, consensus, stakeholders and connections (Choudhury, Mason, Hofma & Watts, 2010; Lim, Quercia & Finkelstein, 2010; Valente & Fujimoto, 2010; Wang, Carley, Zeng & Mao, 2007; Burke, Marlow & Lento, 2010; Mislove, A., Lehmann, S., Ahn, Y., Onnela, J., & Rosenquist, J. N., 2010; Eagle, Pentland & Lazerc, 2009).

Privacy, ethics and the people process

Once a system is in place that can facilitate the exchange of information, the challenge becomes creating an environment where the RnF feel safe to do so (Erickson, Smith, Kellogg, Laff, Richards & Bradner, 1999) and feel that their contributions are valued when submitted (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2006). These contributions, might not be what the institution's various Execs to want to hear, but if the institution wants to benefit from the data being generated, they must be willing and able to accept that these contributions may indeed have value and that the person or people behind those comments may have a valid reason for sharing those thoughts.

Laying the groundwork for this change in institutional narrative and culture requires a careful

study of the institution that is to undergo the transition while taking lessons from other institutions that have undergone similar transformations (Margolis, 2009; Putnam, 2010). To get the RnF in an institution to participate also requires very careful considerations with regards to privacy (Borgatti, & Molina, 2005;) and summarily the ethics of using the SM updates as research and business tools. While the virtues of returning research to those who might be able to use it outside the academy are one of many that are extolled by the Scholarship of Engagement (Boyer, 2004; Chevalier & Buckles, 2008; Barker, 2004a; Baker, 2004b), the return of information to the community that help create it does not come without ethical and privacy considerations (Borgatti & Molina, 2003).

One of many considerations, when one intends to use data that is public, such as SM updates, is that the data was not originally intended for research. And while SM networks such as Twitter are donating the corpus generated by their users to the United States Library of Congress (Stone, 2010) so that it may be used for research, the level of detail that a researcher uses must be carefully considered. Within the scope of a service like Twitter with billions of updates that can be used as a data set, anonymity may be a foregone conclusion. The same assumption can not be made in an institution that may number in the hundreds or thousands (Borgatti, & Molina, 2005), although, it is at this resolution that much of the research into the field of SNA has been done (Eagle, Pentland & Lazerc, 2009). Another consideration is personal disclosure required by networks (social and otherwise) to become a respected member (Walton & MacDonald, 2009). If these ethical considerations can not be addressed, then research into the various relationships must revert to one of direct observation, where the presence of the observer will have some manner of impact on the observations (Hosera & Nitschke, 2010)

The research proposal

My personal interest in this problem stems from being one of the RnF for many years inside a large Canadian university. Over my time there, I had the opportunity to see the institution from the very bottom as an transferring undergrad to the very top as an advisor to a Vice Provost. Along the way I saw many instances where the problems that people were dealing with were of institutional culture and communication. The Execs were not well connected with the RnF and if they were, those cases seemed to be the exception. In my final days at the institution, a rather striking example of the lack of transparency within the institution struck me as a problem that could be solved with some mix of technology and teaching. This problem is not unique to my former institution either. Any institution that is larger than a few hundred individuals starts to have issues with how well its internal communication network functions and how the edicts of the Exec can be carried out by the RnF.

This problem will require a interdisciplinary/transdisciplinary approach because the visualization of the network analysis is not enough to create change. It may be able to identify issues, but there needs to be a measure of policy and civic/employee engagement that must be undertaken to create a culture that will generate the data for the system to analyse. Finally, the students entering the workforce and into higher education are savy users of mobile and social media tools. They are emerging from the secondary education environment, where if they can start to see how their contributions to their school, society and workplace can in fact make a difference, there is a possibility of changing much more than a singular institution. To accomplish this task, experts from Computing Science, Business, Extension and Education will be required.

With my strong background in Education and Educational Technology, combined with my strong interest in visualization, engagement and social media, I believe I am able to bring together the tools required to explore the problems presented in this document and bring forward a research based solution that can be used by not only academia and corporate executives, but by those individuals that make up the RnF.

I have already discussed this idea with a number of sites who have agreed in principle that they would be willing to be case study locations for this project.

To that end, I present my preliminary research question:
How can the emerging social media tools, driven by increasingly ubiquitous mobile technologies be used to connect executive leadership with rank and file individuals within an organization in a meaningful manner

And a wireframe of the system that would need to be developed to address this problem.

