

e-Democracy driven by civil society: developing a theoretical basis to design for bottom-up participation.

Rean van der Merwe (PhD Candidate)

Computing Research Centre, The Open University, UK

Abstract: This short paper outlines initial ideas for a programme of research related to e-Democracy which commences in October 2008 and will be undertaken over the next three years. The research specifically intends to focus on factors in the architecture of online discursive spaces which may affect sustained and meaningful participation. It begins by describing the context as it relates to Community Informatics (CI). It then outlines the nature of one of the online communities that will be at the centre of the enquiry. Finally, it outlines four theoretical perspectives which seem to offer a route to analysis and sense-making, suggesting how a synthesis of these perspectives might contribute to original insights for CI.

Keywords: Community of practice, e-governance, e-participation, transaction cost, social capital, discursive action

Background and research setting:

The world-wide drive to establish “e-government” has initiated government-led efforts to re-invent participative governance within the online environment. The terms e-democracy and e-participation, which augment the concept of e-government, suggest the possibility for civil society to enjoy enhanced democratic access to and influence over government. In its most recent report on e-governance, the Department of Economic and Social Affairs of the United Nations coined the term “connected governance” to express the promise of “governmental promotion of collective action to advance the public good, by engaging the creative efforts of all of society” (Bertucci, 2008). They suggest a five stage hierarchy of e-governance “readiness”:

1. Emerging: A mostly basic online presence with mostly static information.
2. Enhanced: Governments provide more information on public policy and governance and make archived information available to citizens in the form of laws, reports, newsletters etc.
3. Interactive: Governments deliver online services, such as downloadable forms. Also show the beginnings of an interactive portal.
4. Transactional: Two-way interactions between ‘citizen and government’, specifically in terms of making transactions and applying for official certificates, id's etc.
5. Connected: Governments transform themselves into a connected entity

Only in the final stage - and only then after the further steps of “integrating connections vertically (between central and local government), horizontally (between agencies) and solving issues of interoperability” – does the model finally approach connections between governments and citizens, as well as connections among stakeholders. This suggests that developers of e-government pay relatively late attention to creating facilities for citizens to participate and be part of democratic decision making.

The same report calculates that the world average on the “readiness index” is 0.45 (Sweden being number one at 0.92). In Southern Africa, readiness appears to have stalled at 0.39 (p.26).

In response to this centrally driven or ‘top-down’ development of e-governance, civil society organisations have sought to develop ‘bottom-up’ online communities, often focussed on specific, potentially very local issues.

Amongst other case studies, this research programme will study an example of just such an initiative, launched in 2002 to promote information sharing between stakeholders in the western coastal areas of South Africa, Namibia and Angola. A targeted, donor funded project, the relevant community focussed strongly on sustainable development and the environment. The project attempted a web enabled approach to participation and governance focused not only on socially inclusive interaction of citizens with government, but also, significantly, on citizen to citizen networking, capacity building and knowledge sharing.

In 18 months up to June 2008 the community platform had served 103677 page-views and recorded 2200 unique monthly visitors – of these 57% were from within the region. More significantly, there were 650 registered members who had made 1855 message posts to the discussion list. The discussions involved members of civil society and NGO’s - as well as local and regional government, and frequently focussed on practical issues of governance: legislation to protect sensitive dune environments from damage by off-road vehicles; impact assessment for a proposed nuclear power station; how to best deal with (protected) desert elephants damaging farmers’ crops. The online platform appears to have successfully provided ground where all parties could participate in constructive dialogue and share solutions.

The approach did however have one particular shortcoming: though the project focused on an area with very low population density, its 650 members were hardly representative of civil society in the region. Of 650 members, 95 had made contributions in the year between 06/2007 and 06/2008 – fewer still had made more than five contributions in the time. A few key community activists used the opportunity to have an equal platform and stronger voice, but for the approach to have its intended impact, stronger participation was key.

The phenomenon is not unique to this community – a review of subject literature shows both asymmetry and sustainability (of contribution) to be well recognised concerns for developers of similar communities. Asymmetry arises when a small number of users contribute the bulk of communication or content (Beenen et al., 2004; Butler, 1999) whilst others (often an appreciable majority) are “lurkers” (Nonnecke and Preece, 2000) who contribute little, if at all. Sustainability is the problem of maintaining activity in the community. Many online communities share a life-cycle in which there is appreciable initial activity but subsequent dormancy (Beenen et al., 2004).

In the case of communities in the developing world, lack of computer or internet access is traditionally pointed out as the primary cause for low participation. The project tried to partly overcome this by providing free internet access points in towns, integrated with library or other public service – these access point were in practice however rarely used to access the online community. Consider that, by Sept 2007, Namibia had 80,600 internet users and South Africa 5.1 Million (Internet world stats, 2008). Facebook, an online social community, had 9435 Namibian members and over 680 000 in South Africa by July 2008 (Facebook, 2008). While access was an issue to consider particularly in disadvantaged communities, there was enormous potential none the less.

Possible Theoretical Approaches:

Gurstein, in relation to the notion of the digital divide, makes the point that providing access is not sufficient in its own right and proposes the concept of “effective use” (Gurstein, 2007) as a critical analytical framework for assessing technology implementation. In the context of participative governance, participation is by definition a first step toward effective use.

There are a number of complementary theoretical approaches one could follow to further investigate and understand participation in online communities. These include Wenger’s work on Communities of Practice (Wenger, 1998), Habermas’s Theory of Communicative Action (Habermas, 1984), a recent reinterpretation of Transaction Cost Theory (Cordella, 2006), and

framework based upon forms of capital needed for community development (Grimsley, Meehan and Tan, 2007). A brief summary of each is presented here, with an account of its potential contribution to CI.

1. Communities of Practice

Wenger's (1998) characterisation of a Community of Practice (CoP) captures the conception of a citizen driven online community well. It is a community which:

- defines its purpose or nature by a practice or topical focus;
- has a fluid, open social structure where membership is voluntary and defined primarily by participation;
- promotes the kind of "dynamic knowing" that requires the participation of people who are fully engaged in the process of creating, refining, communicating, and using knowledge;
- makes an impact to practice by retaining knowledge in "living ways".

The notion of CoP suggests a life-cycle of community development – which provides further insight to Beenen's observation of initial activity but subsequent dormancy (Beenen et al., 2004). A CoP will unlikely maintain its initial membership, rather when people do leave or become dormant, this reflects on their development within the CoP.

Wenger observes that "[t]o be sustainable social structures must maintain access to a pool of resources and support the social processes that convert those resources into valued benefits for the participants." But experience shows there is a paradox hidden in this formulation, for, as Butler (2001) has observed, as the pool of resources grows and becomes richer and more complex, so the 'costs' (cognitive effort, opportunity cost, etc.) of continuing to contribute to its evolution and governance become ever greater. A key to sustainability is to ensure that the value of membership outweighs the costs.

2. Rational 'Economic' Behaviour and Transaction Costs

This introduces the possibility of taking an economic approach to understanding the participation dynamics within an online community as a cost-versus-benefit equation. A similar approach has been used to characterise the dynamics within the open source software development community, and provides a useful point of comparison (Benkler, 2002).

Lerner, et al (Lerner, 2002) present a good overview of the range of diverse micro-motivations that drive free software developers. Other studies find common behavioral factors - e.g. that when users are set specific goals, and/or given feedback on their contributions, they are more likely to participate (Beenen et al., 2004; Cosley et al., 2005). A synthesis suggests a complex matrix of potential benefits of participation for users, where not all ends are equally valuable to all members.

Transaction cost theory in turn offers a model of costs associated with participation. As originally defined (Coase, 1937; Williamson, 1985 cited in Cifollili, 2003) transaction costs refer to the range of costs associated with making a transaction - from the costs of negotiating agreement, to the costs of coordination and the costs of motivation (or commitment). Such costs are determined either by human characteristics (bounded rationality and opportunism), or by the type of transaction (frequency, uncertainty, asset specificity) (Cifollili, 2003).

Cordella (2007) applied the notion to investigate the role of IT in lowering transaction costs within a business environment. His detailed definition gives transaction cost (T) as a function: $T = f(U, C, B, I, A, O, C)$, where: U is uncertainty, C is complexity, B is bounded rationality, I is information asymmetry, A is asset specificity, O is opportunistic behaviour, and C is coordination cost. He finds that, while IT can lower some aspects of transaction cost, it also rapidly leads to more information becoming available - causing information overload. Referring to this as co-ordination cost, effectively a new form of transaction cost, his analysis confirms the potential paradox noted by Butler (2001). Aspects of benefit and cost are interlinked in complex ways and change must be considered holistically.

Benkler (2002) questions applying purely rational actor economic models using transaction cost as originally proposed by Coase (1937), stating that

“ the emergence of free software as a substantial force in the software development world poses a puzzle for this organization theory. Free software projects do not rely either on markets or on managerial hierarchies to organize production...critical mass of participation in projects cannot be explained by the direct presence of a command, a price, or even a future monetary return...”

He coins the term “commons-based peer production” to describe a new model of economic production in which the creative energy of large numbers of people is co-ordinated, bottom up, without traditional hierarchical organization or financial compensation.

3. Social Actions and the Four Capitals

Jurgen Habermas (1984, cited in Klien and Huynh, 2004) developed a typology of social actions that further clarifies the nature of participation in this context. With “instrumental” and “strategic” actions” the actor pursues (their own) ends treating everything and everyone as a controllable object (which can be equated to rational economic behaviour). Two forms of “communicative actions” are concerned with achieving and maintaining common/mutual understanding. “Discursive actions” involve actors in a co-operative search for ‘truth’, clarification and justification of claims by providing reasoned evidence and clarification of message content to establish a shared understanding of goals and the rules of participation or engagement. Other communicative actions serve to ensure actors co-ordinate behaviour towards a shared goal and within the agreed terms of engagement. In a community, these forms of action are normatively regulated.

Habermas notes that instrumental actions are invariably parasitic on communicative action. When we speak of participation in a CoP, this includes communicative discursive interaction rather than actors purely being instrumental. According to Habermas, discursive action establishes the basis for joint decision making and agreeing future actions. However, this level of interaction requires some measure of consensus on values and norms – it requires common ground, which may be absent especially when an online CoP is first established.

Grimsley, et al (2007) suggest a model for sustainable community development in this context based on four forms of community capital as part of a ‘capital balance sheet’. The “four capitals” - Human, Social, Environmental and Infrastructural - potentially synthesize multiple aspects of our overall discussion of the factors driving participation.

Infrastructure Capital most simply comprises the infrastructure that facilitates the functioning of the community – in this case, in particular the infrastructure that provides members access to an online community.

Environmental Capital constitutes the facilities affording social interaction - a web based platform, blogs, wikis, SMS/txt, or any bespoke CI tools. In discussing interaction in the context of CI and online community, it is implicit that the platform is the underlying focus of our work insofar as it shapes community interaction through its functionality, or less literally, through “affordances” (Norman, 2002). It is at this level of analysis that Transaction Costs are particularly evident.

Human Capital represents the sum of the skills and knowledge in a community – a common starting point in discussions of online participation, particularly in the developing world. What is often neglected is that it relies on Social Capital, which inheres the existence of relations between community members (Coleman, 1990), to be realised. Social Capital captures the potential that resides in the complementary skills and abilities of community members. It makes the achievement of community ends possible that would not be attainable by individuals acting alone.

Directions for research

An initial goal of this research is to look for a synthesis, perhaps merely an interleaving, of these theoretical viewpoints so as to provide a conceptual lens through which the case organisations can be viewed with a goal of understanding, sense-making and possibly theory building. The intention is for this to lead towards the definition and validation of design principles for online discursive spaces.

Wenger's characterisation of CoP's provides a good basis for understanding purposeful group action – an alternative model to what has been characterised as the “networked individualism” (Gurstein, 2007) of online communities such as FaceBook or MySpace and a potential model for extending the social web to collaborative action. It was however developed in a very different environment – for collaborative groups with a working practice in common and may rely on entirely different dynamics to the system we have sketched in the introduction.

Earlier research (Van der Merwe, 2005) has shown that an economic approach, e.g. using the notion of transaction costs, provides a useful framework to further evaluate social design decisions such as might be derived from the theory of CoP. Transaction cost theory could however be said to relate to “hygiene factors” (Herzberg, 1959; Zhang et al., 1999), in this context. Though the theory might provide important insight into how a change (especially at interface level) could have adverse reactions, it has limited power to suggest factors to motivate participation.

In this regard, the four capitals framework presents a holistic view of the capital “balance sheet” of an online community which may elicit important design factors. It suggests not only the elements which combine for sustainability, but also introduces the notion of social value as a form of capital good, a resource. The requirement for social capital begs a number of questions: How is it first created in a community – is e.g. it imported or transferred? Putnam (2000) for example suggests paradoxically that “bridging” social capital between groups has in-group “bonding” capital as necessary antecedent. Can its existence be made more explicit – and how is it transacted during interactions?

By focussing on the nature rather than content of interactions, Habermas' typology of social action might help to understand at what level users are interacting to produce an understanding of “capital building” and “parasitic” actions - but once again introduces questions about how shared understanding is built in the first place. It too provides a holistic framework for looking at the communicative or social action capacity of CI tools and environments.

One particular design approach may provide a useful test case: Allowing users to self organise into topical, “organic groups” on a social platform appears to present the opportunity to evaluate relative “social” transaction costs, consider the impact of a stronger element of “practice” and better understand how trust or social capital is built and potentially “transacted” between groups.

References

- Beenen, G., Ling, K., Wang, X., Chang, K., Frankowski, D., Resnick, P. and Kraut, R. (2004) 'Using social psychology to motivate contributions to online communities.', In *Proceedings of CSCW2004*, Chicago, IL.
- Benkler, Y. (2002). "Coase's Penguin, or, Linux and "The Nature of the Firm"." *The Yale Law Journal* 112(3): 369-446.

Prato CIRN 2008 Community Informatics Conference: ICTs for Social Inclusion: PhD Colloquium

- Bertucci, G. (2008). 'United Nations e-Government Survey 2008: From e-Government to Connected Governance.' New York, United Nations.
- Butler, B.S. (1999), 'When is a group not a group: An empirical examination of metaphors for online social structure, in *Social and Decision Sciences*', Carnegie Mellon University, Pittsburgh, PA.
- Ciffolilli, A. (2003) 'Phantom authority, self-selective recruitment, and retention of members in virtual communities: The case of Wikipedia.', *First Monday*. [online], http://firstmonday.org/issues/issue8_12/ciffolilli/, [Accessed 5 February 2006].
- Coleman, J. (1990) *Foundations of Social Theory*. Harvard University Press, Cambridge, MA.
- Cordella, A (2006) Transaction costs and information systems: does IT add up? *Journal of Information Technology* 21: 195-202
- Cosley, D., Frankowski, D., Kiesler, S., Terveen, S. and Riedl, J. (2005) 'How Oversight Improves Member-Maintained Communities.', In *Proceedings of CHI 2005*, Portland, OR, pp. 11-20.
- 'Facebook', *Facebook*, [online], <http://www.facebook.com/networks/67109313/Namibia/>, [Accessed 10 July 2008].
- Grimsley, M., Meehan, A. and Tan, A. (2007) Evaluative design of e-Government projects: a community development perspective. *Transforming Government: People, Process and Policy*. Vol. 1, Issue 2, 174-193.
- Gurstein, M. (2007) 'What is Community Informatics (and why does it matter?)' *Polimetrica*, Milan (accessible at www.polimetrica.com/eu/it/org)
- Habermas, J. (1984) *The Theory of Communicative Action*. Boston, Beacon Press. (see <http://plato.stanford.edu/entries/habermas/>)
- Herzberg, F., Mause, B., and Snyderman, B. 'The Motivation to Work', New York, Wiley, 1959.
- 'Internet World Stats', *Internet World Stats*, [online], <http://www.internetworldstats.com/stats1.htm>, [Accessed 10 July 2008].
- Klien, H.K., Minh Q. Huynh (2004) The Critical Social Theory of Jürgen Habermas and its Implications for IS Research. In John Mingers and Leslie Willcocks, *Social Theory and Philosophy for Information Systems*, Chichester, John Wiley & Sons, pp 157-237.
- Lerner, J., Tirole, J.(2002) *Some Simple Economics of Open Source*, 50 J. INDUS. ECON. 197, 212-23 (2002).
- Nonnecke, B., Preece, J. (2000) 'Lurker demographics: counting the silent.', in *Proceedings of the SIGCHI conference on Human factors in computing systems*, April 01-06, The Hague, The Netherlands, p.73-80.
- Norman, D. A. (2002). *The Design of Everyday Things*. Basic Books.
- Putnam, R. (2000) *Bowling Alone - The Collapse and Revival of American Community*. New York, Simon & Schuster.

- Van der Merwe, R.D. (2006) 'Increasing participation in online communities through interface design', MSc. Thesis, Open University.
- Wenger, E., White, N. and Smith, J.D. (2005) *CEFRIO Book Chapter v 5.2* [online], <http://www.ewenger.com/pub/index.htm>, [Accessed 20 March 2006].
- Zhang, P., G. von Dran, R. Small, S. Barcellos (1999), Websites that Satisfy Users: A Theoretical Framework for Web User Interface Design and Evaluation, Proceedings of the Hawaii International Conference on Systems Science (HICSS 32), Hawaii, January.