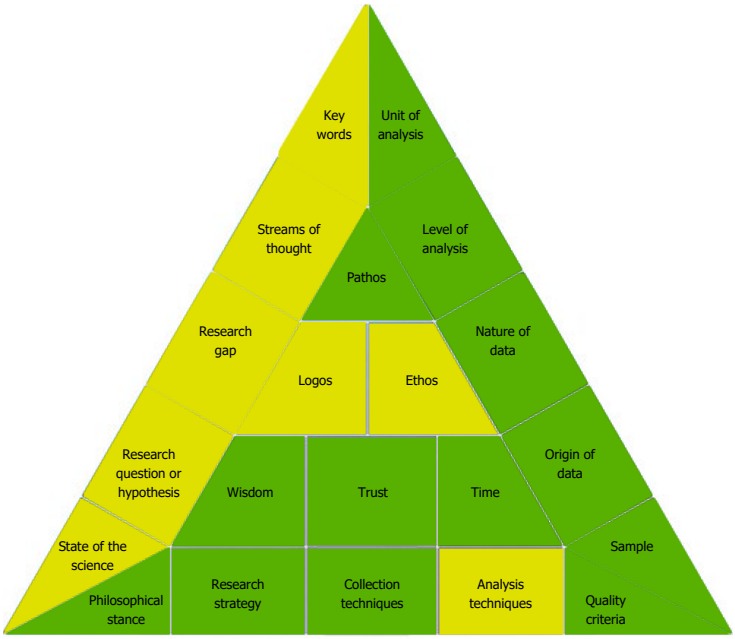
IDEAPUZZLE
DESIGN AND DEFEND YOUR PHD

# Cardoso.2013

**Author:** Ana Cardoso
**Date:** 2013-05-21 - 09:43:43 (GMT)
**Self-evaluation:** 81%




## Key words

**1/21. Theoretical question: which are the two main keywords of your research?**

My research focuses on the relationship between "information and communication technology" and "civic movements".
The title of my research design is "a study on the dynamics of civic movements enabled by information and communication technology".
Information and communication technology is a broad term that encompasses all kinds of technological artifacts that are applied in the storage, retrieval, processing and dissemination of data (Ralston 2000).
Civic movements blend characteristics of advocacy groups and social movements, and can be defined as collectives that attempt to promote change in society, acting with some degree of organization and pursuing their collective objectives through repertoires of action other than protesting or contestation (Snow et al 2004; Gamson 2004; Turner and Killian 1964).

Gamson, W. A. (2004). Bystanders, public opinion, and the media. In D. A. Snow, S. A. Soule, & H. Kriesi (Eds.), The Blackwell companion to social movements, (pp. 242-261). Oxford: Blackwell.
Ralston, A., Reilly, E. D., & Hemmendinger, D. (1993). Encyclopedia of computer science (Vol. 536). New York: Van Nostrand Reinhold.
Snow, D. A., Soule, S. A., & Kriesi, H. (2004). Mapping the terrain. In D. A. Snow, S. A. Soule, & H. Kriesi (Eds.), The Blackwell Companion to Social Movements (pp. 3-16). Oxford: Blackwell.
Turner, R. H., & Killian, L. M. (1964). Collective behavior. Prentice-Hall.

**Self-evaluation:** 50%

## Streams of thought

**2/21. Theoretical question: which are the two main streams of thought of your literature review?**

Scientific experts on my research topic originate in different disciplines. First, there is a stream of research that investigates the impact of new information and communication technology in certain kinds of collective action, such as activism and contentious politics. Experts in this field of research are Earl and Kimport (2011), Bimber, Flanagin, and Stohl (2012), Garrett et al (2012), and Bennett and Segerberg (2012).
Second, there is research in information systems discipline that investigates online communities and virtual organizing, and also the influence of computer-mediated networks on social dynamics. The experts in this strand of research are, among others, Wasko and Faraj (2000), Butler (2001), Lakhani and Von Hippel (2003), Jarvenpaa and Leidner (1999), and O'Mahony and Ferraro (2007).

Bennett, W. L., & Segerberg, A. (2012). The Logic of Connective Action. Information, Communication & Society, 15(5), 739-768.
Bimber, B., Flanagin, A. J., & Stohl, C. (2012). Collective action in organizations: interaction and engagement in an era of technological change. Cambridge University Press.
Butler, B. S. (2001). Membership size, communication activity, and sustainability: A resource-based model of online social structures. Information systems research, 12(4), 346-362.
Earl, J., & Kimport, K. (2011). Digitally enabled social change: Activism in the internet age. MIT Press.
Garrett, R. K. (2006). Protest in an information society: A review of literature on social movements and new ICTs. Information Communication and Society, 9(2), 202.
Jarvenpaa, S. L., & Leidner, D. E. (1999). Communication and trust in global virtual teams. Organization Science, 10(6 (Special Issue: communication processes for virtual organizations)), 791-815.
Lakhani, K. R., & Von Hippel, E. (2003). How open source software works:"free" user-to-user assistance. Research policy, 32(6), 923-943.
O'Mahony, S., & Ferraro, F. (2007). The emergence of governance in an open source community. Academy of Management Journal, 50(5), 1079-1106.
Wasko, M. M., & Faraj, S. (2000). "It is what one does": why people participate and help others in electronic communities of practice. The Journal of Strategic Information Systems, 9(2), 155-173.

**Self-evaluation:** 50%

# Research gap

### 3/21. Theoretical question: which is the main gap that your research addresses?

The focus of my research is a theoretical gap. There is a lack of theorizing about "uses of information and communication technologies to promote citizen participation and democratization" and about the role of information and communication technologies in complex social problems (Majchrzak, Markus and Wareham 2012).
Particularly, there is a limited understanding of how information technology enable grassroots' organizing and mobilization for collective action, and what is the appropriate combination of information technology capabilities to support the realization of the goals of emergent collectives. Also, the issue of the evolvement of online communities enacted by the varied technological solutions that support their needs is in need of further investigation (Johnson et al 2010).

Johnson, S. L., Butler, B., Faraj, S., Jarvenpaa, S., Kane, G., & Kudaravalli, S. (2010). New directions in online community research. In: Proceedings of the International Conference on Information Systems, paper 173.
Majchrzak, A., Markus, M. L., & Wareham, J. (2012). Call for Papers: MISQ Special Issue on ICT and Societal Challenges, MIS Quarterly

**Self-evaluation:** 50%

# Research question or hypothesis

### 4/21. Theoretical question: which is the main question or hypothesis of your research?

This project addresses the following broad research question: "How and why information and communication technologies support the unfolding of grassroots civic movements aiming at collective goals?"
More specifically, I aim at explaining in what ways the use of information and communication technologies (ICT) affects the structure and operation of grassroots civic movements over time. Therefore, this study focuses on inductive building of theory, and the expected outputs are propositions on the role of ICT in grassroots organizing, and a typology of the uses of ICT throughout the unfolding of a civic movement.

**Self-evaluation:** 50%

# State of the science

### 5/21. Theoretical question: which is the current answer to your research question or hypothesis?

This project's approach to the state of science is reductionist. The phenomenon under study, the relationship between information and communication technologies (ICT) and civic movements, is related to virtual organizations (Jarvenpaa and Leidner 1999) and online communities (Preece 2000). Moreover, it also relates to technologically enabled collective action (Earl and Kimport 2011; Bimber, Flanagin and Stohl 2012; Bennett and Segerberg 2012).
Currently, the answer to my research question cannot be found in virtual organizations and online communities literature, perhaps

due to the different nature of the phenomenon. Civic movements' phenomenon has some distinctive features, namely it aims at producing change at societal level whereas the aims of virtual organizations and online communities are usually bounded by organizational or communal goals. Nevertheless, there are similarities in terms of the use of ICT, in that virtual organizations, online communities, and civic movements use ICT to communicate and to coordinate group activities.
However, the literature on online communities and virtual organizations has paid attention mostly to the issues of sustainability of community, motivation of members to participate, success and governance structure of online communities, and trust building in virtual teams. These issues are not so central in civic movements because of the transiency and fluidity of its structure. Hence, the question of how ICT support the unfolding and affect the structure of civic movements over time remains largely unanswered by this body of research.
The current answer to my research question in the literature on activism and contentious politics is that activists leverage the affordances of ICT to create new repertoires of action, honing on the reduced need for co-presence and low costs of mobilization, which produce super-size or scale effects both in time (faster mobilization) and in number of people mobilized (Earl and Kimport 2011). Therefore, it is argued that the introduction of ICT fundamentally changes the infrastructure of social movements, and thus the role of formal organizations in the mobilization for collective action is diminished (Bimber, Flanagin and Stohl 2012).
In addition, research on the uses of digital media in contentious politics (a form of collective action) found that the introduction of digital media changes the core dynamics of the action, in that it becomes more based in individualized action frames - connective logic - and less dependent on collective organizing and framing of contention issues (Bennett and Segerberg 2012).
Hence, it seems that ICT facilitate individual involvement in activism and reduce the need for traditional civic movement organizations in mobilizing for collective action. However, the questions of how ICT support the unfolding of grassroots civic movements, and how ICT affect its operations over time are still unanswered.

Bennett, W. L., & Segerberg, A. (2012). The Logic of Connective Action. Information, Communication & Society, 15(5), 739-768.
Bimber, B., Flanagin, A. J., & Stohl, C. (2012). Collective action in organizations: interaction and engagement in an era of technological change. Cambridge University Press
Earl, J., & Kimport, K. (2011). Digitally enabled social change: Activism in the internet age. MIT Press.
Jarvenpaa, S. L., & Leidner, D. E. (1999). Communication and trust in global virtual teams. Organization Science, 10(6 (Special Issue: communication processes for virtual organizations)), 791-815.
Preece, J. (2000). Online communities: Designing usability and supporting sociability. John Wiley & Sons, Inc..

**Self-evaluation:** 50%

# Philosophical stance

### 6/21. Methodological question: which is the philosophical stance of your research?

The philosophical stance of my research is subjective research or, in other words, it's focused on values.
My research is ontologically based on the subjective side of reality. Epistemologically, I aim at building theory about values, and in terms of methodology I adopt a qualitative research strategy appropriate to study values. The specific term for the philosophical stance of this research is interpretivism.

**Self-evaluation:** 100%

# Research strategy

### 7/21. Methodological question: which is the qualitative, quantitative or mixed method of your research?

The research strategies implicit in my stream of thought are case study, ethnography, and grounded theory. My choice of research strategy is multiple, in-depth case study. An alternative strategy is grounded theory.

**Self-evaluation:** 100%

# Collection techniques

### 8/21. Methodological question: which are the data collection techniques of your research?

The appropriate data collection techniques for my research topic and philosophical stance are interviews, secondary data and documentation, and participant observation. I will collect data mostly through interviews, and secondary data and documentation, and, to a limited extent, will also use participant observation. Internet is an importance source of data for this study, given that most secondary data about the cases is available through this medium and the phenomenon has a strong component of online interaction within the collectives studied.

**Self-evaluation:** 100%

# Analysis techniques

**9/21. Methodological question: which are the data analysis techniques of your research?**

The typical data analysis techniques implicit in my philosophical stance and research topic are event analysis, content analysis, analytical induction, constant comparison, open, axial, and theoretical coding, analytical memo-ing, narrative, taxonomy, and discourse analysis.
I will use event analysis, content analysis, and analytical induction in this study. My analysis work is supported by HyperResearch, a qualitative data analysis software.

**Self-evaluation:** 50%

# Quality criteria

**10/21. Methodological question: which are the tactics of your research to ensure scientific quality criteria?**

The underlying quality criteria of this research are subjectivist. I adopt the following quality criteria for this research: the principle of contextualization, the principle of suspicion, the principle of dialogical reasoning, the principle of multiple interpretations, the principle of interaction between the subjects and researcher, and the principle of abstraction and generalization (Klein and Myers 1999).

Klein, H. K., & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. MIS quarterly, 67-93.

**Self-evaluation:** 100%

# Unit of analysis

**11/21. Empirical question: which is the unit of analysis of your research?**

The unit of analysis that operationalizes the relation between my theoretical keywords of "information and communication technologies" (ICT) and "civic movements" is the use of ICT by civic movements. This unit of analysis is a process.
I will compare the use of ICT by different civic movements and expect to build theory that explains how the use of ICT supports the unfolding of civic movements and affects its structure over time.

**Self-evaluation:** 100%

# Level of analysis

**12/21. Empirical question: which is the level of analysis of your research?**

The level of analysis that operationalizes the relation between information and communication technology and civic movements is organizational. I will collect data on the use of technology at civic movement level. Given that a civic movement is a collective (a group of individuals), and that use of technology is a two-party relationship with technology and human, I will need to interview participants in the civic movement to learn about their uses of technology. In my conclusions, I expect to build theory on how information technology impacts the structure and supports the unfolding and evolvement of civic movements over time.

**Self-evaluation:** 100%

# Nature of data

**13/21. Empirical question: which is the nature of the data of your research?**

The qualitative data collected in my research are text interview transcripts, documentation, and press content), audio (radio reportages and interviews), images (photos of events), video (reportages and news pieces from television), and multimedia (webpages and social media sites of movements). The quantitative data collected in my research are key figures and facts from the civic movements events as for example number of participants, number of partners, and impact on the communal and societal level (e.g. tons of trash collected, number of side events in the community).
This research is qualitative because the qualitative data is more useful to answer a "how and why" research question, like the one I ask in this study.

**Self-evaluation:** 100%

# Origin of data

**14/21. Empirical question: which is the origin of the data of your research?**

The primary data collected for my research is predominantly textual, namely interview transcripts. Secondary data include webpages, social websites, mass media pieces in different formats, photos, documentation, and technological artifacts.
For primary data purposes I have developed an interview protocol, a transcription protocol, and collected informed consent forms from the participants.
My primary data will increase the effectiveness in answering the research question. Conversely, my secondary data is useful in the

initial phase of this research because of its efficiency and low cost. It will help me to get acquainted with the events of the cases as they unfolded over time and to develop a strategy of inquiry more focused on the issues of most importance and on the key participants in these events.

**Self-evaluation:** 100%

# Sample

**15/21. Empirical question: which is the sample of your research?**

The sample in this study is for descriptive generalization and includes two civic movements, one based in Portugal and the other based in Estonia. Both of this cases have used varied information and communication technology since the movement's inception and have contributed to produce change at societal level. The cases in my samples vary in different terms: the structure at the beginning and the structure after the event organized by the civic movement; the logistics of the event; the availability of financial capital.

**Self-evaluation:** 100%

# Pathos

**16/21. Rhetorical question: which are the positive and negative emotions of your research?**

The positive emotions associated with streams of thought in my research topic include a better understanding of the role of ICT in civic movements that cause change at societal level. Particularly, my study will shed light on the uses of ICT by collectives that contribute to solving societal challenges. On the negative side, the use of ICT by collectives can also cause harm to the society (e.g. collectives of criminals) and thus the results of this research could be misused.
The positive emotions associated with my research are publications in academic conferences and journals, seminar talks and consulting for non-governmental organizations and civil society associations, and empirical support for regulations about citizens access to ICT.
In terms of negative emotions related to ethics and conflict of interest, I crafted carefully an information sheet and informed consent form for participants to be fully aware and informed of the implications of their participation in this study. These documents were scrutinized by experts in my departments, by colleagues, and by two acquaintances that participated in my pilot interviews.
Moreover, I considered possible conflicts of interest among the participants involved in this study and concluded that the risk of this kind of conflict is minimal for two reasons: the participants in this study are volunteers of a civic movement that involved thousands of people, which makes possible guessing of the identity of participants very difficult; this study assures anonymity, ownership and confidentiality of participants' data.

**Self-evaluation:** 100%

# Logos

**17/21. Rhetorical question: which is the scientific logic of your research?**

The scientific logic implicit in streams of thought in my research topic are inductive, abductive, and deductive.
The philosophical stance and research strategy adopted is interpretivism and in-depth multiple case study. The scientific logic implicit in my study is a balance between inductive and abductive logic. I will inductively build a model that maps critical events and uses of information technology and will use abduction to develop an understanding of the role of information and communication technologies over time. The inductive logic leverages analysis techniques such as coding, constant comparison, and the discovery of patterns. The abductive logic will render an interpretation of the roles of ICT in the unfolding and evolvement of a civic movement.

**Self-evaluation:** 50%

# Ethos

**18/21. Rhetorical question: which are the limitations of your research?**

The theoretical limitation of my research is the bounding of the literature, which depends on how the phenomenon under study - civic movements enabled by information and communication technology, is framed. The blurry nature of civic movements is problematic because it impacts the conceptualization of what we are studying (a social movement? an interest group?) and consequently the selection of related literature.
The main methodological limitation of my research is the absence of research strategies more rich for a longitudinal investigation, as for example ethnography. There are three main empirical limitations of this research: first, the case selection is based on opportunity criteria and thus it constitutes only a sample of possible cases; second, part of the data collected from interviews is retrospective, meaning that it refers to events that happened in the near past and demands an effort of recalling facts from the interviewees; third, some of the events unfolded some time before this study was planned and I can only rely on secondary data for this temporal interval.

**Self-evaluation:** 50%

# Wisdom

**19/21. Authorial question: which is your education and experience related with your research?**

My education is a 5-year degree in Economics and a 4-year degree in Management Informatics, and has given me the tools to analyze issues situated at the nexus of people, technology and organizations. My professional experience includes service as a volunteer for Portuguese and international non-governmental organizations, which is relevant and synergistic for understanding how civic movements operate given that people involved in these movements are also volunteers. Moreover, I have served as a moderator and as a contributor to different online communities and interest groups, which has given me an in-depth perspective of how these collectives operate.
I expect to reap the benefits from my academic and professional experience and to put them into use in this research project in two different ways. First, my experience as volunteer and as moderator and contributor of online collectives is helpful as a sensitizing device for making sense of the data collected. And second, I am particularly well-suited to investigate this kind of phenomena because my education combines social and technological perspectives of the world.

**Self-evaluation:** 100%

# Trust

**20/21. Authorial question: who are the partners of your research?**

My literature review is supported by my supervisors, by colleagues in my department, and by experts whom I have met in conferences and doctoral consortia. The research strategy is also supported by my supervisors and by experts, whom I met in doctoral consortia. My data collection is supported by key informants of my cases, whom I have contacted and met in order to negotiate access to the cases.

**Self-evaluation:** 100%

# Time

**21/21. Authorial question: which is your availability of time and resources for your research?**

I have full-time availability to conduct this research and I am financially supported by a scholarship of Fundação para a Ciência e Tecnologia, in Portugal. I also have the support of my husband for travel expenses when collecting interview data, and have financial support of my department to attend doctoral consortia and conferences. In terms of project management skills, I have a timeline with milestones and will use a combination of productivity software to manage my project. Moreover, my progress is monitored every year through detailed reports submitted to Fundação para a Ciência e Tecnologia and to the Director of my doctoral program.

**Self-evaluation:** 100%